Being a student in the 21st century - an autoethnographic narrative

by

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Submitted in partial fulfilment of the requirements for the degree Philosophiae Doctor

in the

Department of Humanities Education

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I declare that the thesis, which I hereby submit for the degree Philosophiae Doctor in the Department of Humanities Education, Faculty of Education, at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

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ABSTRACT

We are currently experiencing one of the most significant transformations in human history of which the tumultuous scope compels us to reconstruct our perceptions of almost everything – not the least of which is education. One of the most obvious reasons for this is that technology and the internet is providing instant access to an unimaginable abundance of knowledge and skills to which anyone can contribute without validation. Although this technology places extensive freedom and power in the hands of every individual, it creates a multitude of incompatible differences of interpretations of the world. This supercomplexity renders the future not only much less predictable than ever before, but also fundamentally unknowable. Despite the consequent disparate human condition of uncertainty it generates, our current dominating education practices insist that our refuge remains in acquiring existing knowledge and skills of past worlds rather than accessing a much more reliable source from which possible prosperous future worlds can be created. This study is a qualitative autoethnographic exploration of my life experiences from which I constructed my living theory of being a student in the 21st century. Since being a student is always future directed, my autoethnography could not escape the inevitability of contemplating how I am being prepared for what the future holds. The impetus came primarily from the increasing futility of existing knowledge and skills being the focus of education in the 21st century which can be transmitted, accessed and manipulated by sophisticated artificial intelligence technologies. The fundamental question to answer within this context where students learn what technology can already do is: How will being a student in the 21st century add value to what technology can already achieve? The answer to this question cannot be found in the difference in what humans *can* do and computers can*not* because, ultimately, we simply do not know. This study reveals a radically different and qualitatively efficient shift in what it means to be a student in the 21st century: it is found *not* in what we *know* (epistemology) or can *do* (skills) but fundamentally in *who we are* (ontologically) through pursuing our human authenticity.

Key terms: Autoethnography; *Being* a student; Operating system; Authenticity; Authentic learning; Facilitating authentic learning; Personal transformation of the highest order; Ethical imperative of self-management

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To whom it may concern:

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Yours faithfully,

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My Creator, thank you for endowing me with potential.
My life purpose is dedicated to You.

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To the humans of the 21st century and beyond...

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1.1 WHO AM I?

The Good News borne by our risen Messiah who chose not one race, who chose not one country, who chose not one language, who chose not one tribe, who chose all of humankind!

Nelson Mandela (1994a)

My name is Nadine Lida Broodryk, and I am a 36-year-old, white, Afrikaans woman living in the Gauteng province of South Africa – a land that "has always been characterized by cultural, racial, and political complexity and diversity" (Steyn, 2001:xxiii). I would like to welcome you at the start of my autoethnographic exploration and ask you to join me on my journey. As you probably assumed from the title of my thesis, this study is an autoethnographic narrative of my exploration of the question: What does it mean to be a student in the 21st century? Hence, I use self-reflection and writing to explore my anecdotal and personal experiences of being a student in the 21st century within the wider cultural, political and social context. For this purpose, I initially need to explore who I am – my culture – in order to prepare the corresponding context of this endeavour and as a proper introduction of myself and where I want to go with this study.

Since my study is "as an ultimate study of the self" it is, therefore, "appropriate to engage with deep philosophical questions of the nature of self and the position of self in relation to others" (Maydell, 2010:2). I have decided to initiate this process through the self-reflexive exercise of constructing my own culture-gram, using the culture-gram template of Chang (2008:173). The culture-gram contains differently shaded shapes interconnected with lines that indicate the categories and how they relate. Chang (2008:97-99) explains how to complete the culture-gram:

> The culture-gram contains different types, sizes, and shades of figures and lines connecting them. The figures are designated for four different types of information, and lines indicate connectivity among figures. All the figures connected by lines indicate they belong together in one category … The rectangles are reserved for categories corresponding to multiple realms of life … The diversity dimensions include nationality, race/ethnicity, gender, class, religion, language, profession, multiple intelligences, and personal interests … Each rectangle is connected to a shaded circle. In each circle, write down one most primary self-identifier of yours in that specific dimension. The self-identifier indicates that you have knowledge, skills, competence, familiarity, or emotional attachment to function as a member of this group … This self-identifier is a subjective labeling of yourself, based not on precise measurement but on personal

perception and desire. Fill the ovals that are linked to the shaded circle with your secondary self-identifiers in the same dimension. Repeat the same process with other dimensions … The final step of your culture-gramming is filling the center circle with three primary self-identities in the order of importance to you.

Figure 1 below depicts my culture-gram.

ETHNICITY

NATIONALITY

LANGUAGE

White

S.A.

Afrikaans

French Huguenot

English

GENDER

German

Afrikaner

Woman

English

RELIGION

Reformed Church

Spiritual

Daughter

Sister

Wife

Primary Identity
*Spiritual
*Student
*Intuitor

Christian

Educated

PROFESSION

Talker

Reading

Outdoor enthusiast

CLASS

Student

Emotional

Imaginative

Meditation

Middle

Interpersonal

MULTIPLE INTELLIGENCES

Intuitive

Art

INTERESTS

Figure 1: My culture-gram

Source: Chang, 2008:173

During the construction of this culture-gram, I became acutely aware of how many more and even other cultural 'selves' I could identify. I am in this sense truly 'multicultural' with many cultural 'identities', some of which I simply cannot 'escape'. However, for me, the most significant aspect of this exercise is that every one of us has such a multifaceted cultural identity – each individual notably different from the other. This also means that every one of us is expressing our multifaceted identities in the different roles that we are fulfilling in life. I and every other individual, therefore, have a 'covert' obligation to fulfil these roles to the highest level of authentic integrity and passionate, individual self-actualisation. At the same time, I must be acutely vigilant that every other individual, despite being different from me, has the same obligation and that it is indeed, ultimately the invaluable contributions of our individual, self-actualised and self-actualising diversities that constitute our common humanity and make it whole – irrespective of our individual or particular group's heritage.

The purpose of this chapter is an exploration of who I am – my culture. One's cultural identity is cultivated primarily through one's upbringing during childhood, usually at home and through the closest family members – parents and grandparents – providing one has the privilege of having them. Although one's learning is not formalised during these initial years, the amount of learning that takes place during this time is said to be comparable with the total amount of learning throughout the rest of one's life. All of us, therefore, are unmistakably a student during these childhood years and throughout life due to our inevitable and unintentional lifelong learning because we are born to learn (Smilkstein, 2011). The contribution of those years to the student that I am now is no doubt incalculably significant, even though my own recollection thereof may be relatively minute.

In order to provide a more comprehensive account of who I am, I sourced information beyond that which my memory bank could provide. I scrutinised photo albums and other documentary artefacts of the corresponding time in my life, and I re-visited the places where I grew up. I had meetings and interviews (including conversations) with the people who had played a telling role in my life in order to augment my memory and to fill the gaps in my recollection of my lived experience. As I engaged in this endeavour, I also realised that it would be almost impossible to produce a 'clinical' autobiography without recognising the wider context of my life, because context is indeed a substantial contribution to my self-knowledge and my self-identity (Samaras, Hicks & Berger, 2004:913) regarding who I have become and who I am becoming. Within this context, it is indeed, an essential part of my autoethnographic exploration of being a student from as early as conception – or perhaps even before …

In this chapter, I attempt to explore and thus expand on my primary identity, central to my culture-gram and relevant to the essence of my autoethnographic narrative.

1.2 MY CULTURE – MAKING SENSE OF GROWING UP

We cannot retrieve childhood, but it informs our very identity. So retrieving our
impression of childhood, writing memory, gives essence to our current dailiness as
beings-in-the-world.
(Allnutt, 2009:28)

During the 20th century, it was generally the male members of families in my culture who pursued a university qualification if funds were available. However, my dad, who was not academically oriented, chose to seek employment in the administrative offices of the South African Transport Services and later, started working in an administrative position at Sastel Pharmaceuticals (manufacturer of herbal products). He was the sole provider in our family when my brother and I were in school. He loved cooking, barbequing, reading, nature and gardening – which he did organically, although the concept was not known as such at that time. My mom was a dedicated student and after school, she acquired a BA degree in Afrikaans and German. Being the *female*, who was customarily *not* the gender to obtain a higher education qualification in those years, is an indication of my somewhat peculiar and untraditional home culture. Initially, she was an employee at the Department of Health and later, an assistant librarian at the Department of Foreign Affairs. She became a stay-at-home mom when she was expecting her first child (my brother), up to and until I enrolled as a first-year university student, when she became an after-school teacher.

My mom was instrumental in assisting me in my endeavour to recall my childhood years. It was especially the visual images that touched me because "the visual becomes a way of arriving at particular types and layers of knowledge or ways of knowing" (Pink 2012:7). Allnutt (2010:18) speaks of "a sort of vulnerability" in recognising images that penetrate you. One of the most astounding events regarding this, was when my mom came upon a sonar photograph of me, when she was in the 34th week of her pregnancy (Figure 2).
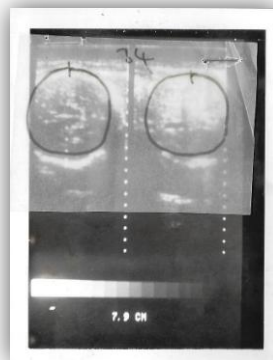
Figure 2: A sonar photograph of me

The discovery of this sonar photograph was synchronistic to say the least and was at the point when I was concerned about not being able to collect enough data for the purpose of my study. What makes it so significant though, is that this could be a photograph of you, or any other human being at that stage – indicating our *common* humanity.

In 1984, when I was two years old, we moved to Pretoria and occupied a house with a beautiful view of the Magaliesberg mountain range, one of the oldest mountain ranges in the world. This is where my brother and I grew up and where I spent most of my life. My mom and dad were the epitome of caring parents who loved us dearly and encouraged us to explore our environments freely, although under their careful supervision. Although my mom stayed at home to care for us, my dad was equally engaged in our development. We were constantly stimulated and encouraged to develop physically, mentally, emotionally and spiritually with a variety of self-made and factory-made activities and educational games, both inside and outside the house. We grew up with faith as our foundation, attending the Reformed Church from birth. Almost every room of our house had a bookshelf filled with books, and our living room resembled a library. We learnt how to read very early in life and to have the appropriate respect for books. We visited the public library often. In addition, we always had animals to care for in our house or garden.

The epitome of the wealth of my early childhood development can be summarised in one of my earliest memories. A tiny Cape sparrow must have fallen from a tree, and I rescued it from possible predators. My mom stood next to me, encouraging me to free the bird into its natural environment. For a few seconds, I considered keeping the bird all to myself, wondering in anticipation what would happen if I released it from the comfort and safety of my warm hands. Still, raising my hands, I threw the bird gently into the air. Without hesitation, the little bird flew up, up and away, disappearing into the bright, cloudless sky.

I found the many evenings in the garden stargazing with my mom to be intriguing, especially because the firmament seemed to be so mystically untouchable. However, it was my dad who instilled in me the adventurous spirit of discovering the unknown, with the inevitable risks involved. I encountered such outlandish experiences often, especially when I was alone. Our exciting holidays were catalysts for such experiences. I was only six months old when I was first taken to the Kruger National Park and exposed to the wonders of the wild, natural world as close-up and hands-on as possible with an acute investigative intention. From a very young age, during our 'sea holidays', my dad would take me in his arms and almost undauntedly rush into the breaking waves, while my mom would rather walk along the beach and collect shells. One of my most exciting experiences in this regard was when I was 21 years old; my father took me with him to swim among wild dolphins on the East Coast on one of those rare occasions that they appear near enough to the shore.

The following 'dress-up' photograph (Figure 3) is representative of the fun we had during our holidays. This is a rare family photograph with all four of us included. My mom was the photographer in our family (another cultural 'oddity') and, therefore, did not appear in many of our photographs – in those days, cameras with the option of delaying the shutter operation for taking 'selfies' were scarce. This photograph was taken on our way to the Kruger National Park. It was shot in a studio in a small tourist town in Mpumalanga called Pilgrim's Rest, where some of the first gold in South Africa was found. My dad, with his imposing bulky figure towering above us all as the Captain of the family is so characteristic of his bold and at the same time, protective leadership.

Figure 3: A rare family photograph
Source: Photo studio photographer

I also spent a great deal of time at my grandparents' home during weekends and some afternoons in the week when my brother and I went to their house. I do not remember my grandpa well – he passed away when I was only four years old. I do, however, have some vivid memories of spending time with him in his magical garden. Here I searched for fairies among the tree trunks overgrown with moss and between the ferns and orchids flowering in his wet, aromatic, tropical, underground nursery. The nursery is just visible in the background of the photograph below (Figure 4) showing my brother and I (around the age of three years old) standing next to my grandpa.

Figure 4: My grandpa, brother and me
Source: My mom

I ate the fruit from the trees in his garden and baked mud cakes beneath them. The grapevine next to his garage was the portal through which I could invite exquisite forest animals such as bunnies and butterflies into his garden. One day, as I approached the portal, I saw the most beautiful butterfly I could ever have imagined, right there under the grapevine! I remember that I was as amazed by its colour as I was by its size. It was huge! Sitting on the ground, it was not moving and on closer inspection, I found that it was … dead. I remember pondering its life and how upset and utterly disappointed I was about its death – again, a 'strange experience'. I could not imagine the role that this particular butterfly experience would play later in my life.

In sharp contrast to this natural wonderland created by my grandpa, my grandma's vibrant and professional outlook on our contemporary world was infectious. She was only 16 years of age when she passed matric, and the principal at her school immediately appointed her as the secretary. Small wonder that she eventually became the secretary at the primary school that my brother and I attended. During her 36 years of employment there, she was not absent a single day and thus, I saw her every day. She was not only very hard working but also very professional. When I reported sick one day at her office with a request to be sent home, she did not simply accept my complaint of a terrible tummy ache. She thoroughly interrogated me as to the probable cause of my condition before she determined the best medicine to give and then sent me back to class – tummy ache soon gone.

Figure 5 is a photograph that was taken at the annual school photograph session when I started school. I insisted that this photograph be taken with all three of us in it. As you can see, my grandma appears a little grumpy because she was upset that I had caused her to leave her station as secretary for the

purpose of having this photograph taken. It thus remains one of my 'favourite' school photographs because it reminds me of her unrelenting professionalism.

Figure 5: The school photograph of Granny, my brother and me
Source: School photographer

But it is when we went home with her some afternoons and visited her during weekends that my grandma's personality shone. First of all, her home was where I was exposed to technology. I discovered her transistor radio/cassette recorder combination on which I used to listen to stories (I still have it!). I also loved to record my own voice. My grandma was the first to purchase a video machine when they came onto the market, and watching videos became a fortnightly weekend event. She was also the one in the family who bought the first computer when they became available. I played games and was in awe of the strange world inside the screen and the fact that one could manipulate the 'things' inside. My grandma clearly became my inspiration to stay abreast of the newest developments in the world. But what was so unique is that our friends were always as welcome at her house as they were at ours. She was the perfect hostess who always entertained my brother, our friends and me by making sure that there was always enough to eat and drink. We absolutely loved spending time at her house and adored the occasional sleepovers there with her unbridled hospitality. It was probably her unspoken wisdom that I found so endearing, always doing the right thing in difficult situations. I loved her dearly and as a way of showing her this, I regularly gave her handmade cards and notes expressing how much I loved her. She also showed her love for me when I needed it the most by doing the same. The same as with my father, I had a very special bond with my grandma. As I am writing this, I remember the many friends that I invited to both my home and the home of my grandma to play with my toys and share the good times that I was having. My friends were always very dear to me, and I really cared about them. I could sense when some of them were not doing well for some reason, and I liked to comfort them with small handmade gifts. They also invited me to their homes. It was during these times that I learnt that I was just one among the many kids in the school

who had families like mine, houses like mine, toys like mine and parents (and grandparents) like mine.

However, I also realised that there were times that I needed to be alone. I am in fact, a loner, an introvert. During these 'me-time' periods, I was inspired by my own discoveries. I remember that I would think and talk to myself a great deal, sometimes thinking in silence, sometimes just mumbling by myself and sometimes talking out loud to myself or to 'someone' or to 'an audience' of some kind. I always lived life intensely – even when I was alone. My soliloquies were usually in places that had become 'sacred' to me and where I did not allow others, such as in the privacy of my room and the portal under the vine in my grandpa's garden.

One of the most significant things about my childhood as far back as I can remember, is that from time to time, I had strange experiences. These experiences did not resemble the general childhood fantasies of playful princesses and weird animals and happy times that my friends would share with me. My experiences were distinctly different in many respects and greatly surprised my mom and dad and one or two of my closest friends when I confided in them. Even now, it is difficult to describe these experiences exactly. I would feel a somewhat 'tingling lightness' throughout my entire body as if I were being physically transported into another visionary peaceful world beyond the Earth, where I was busy doing something very important that no one else could do and where I felt that I really belonged. Without any religious prompting and on more than one occasion, I said to my mom that the world we are living in is not the one where we are supposed to be. Throughout my childhood, I always felt that I was being prepared for this other world in which one thing was leading to something greater, and I could feel how I was being prepared for these greater things. Although I did not have the conception or the vocabulary at the time, this was a reference to living in a spiritual realm. What was so remarkable about these experiences, was that they could last for a relatively long period of time as I was contemplating what life held for me. Even at that time of my life, I realised that I would not suit a nine-to-five job, because my purpose on Earth – although not known yet – would require significantly more time than the limited period that a day job would allow on something that was all-encompassing and was much greater and wiser and more valuable and sustainable.

My longing to be where I am today was no doubt prompted by my family, particularly by my dad and grandma. I now realise that this forms part of the reason why I am since I can remember, being attracted to the unknown – with the reason being to search and to find that other world – the world that ultimately would reveal the meaning of my existence and my purpose.

The poster in Figure 6 was a gift from my dad when I was 11 years old. It expresses his inspirational relationship in my life that confirmed the deep-down feeling that I always carried with me, that I am destined for great things. The poster still hangs on my wall today.
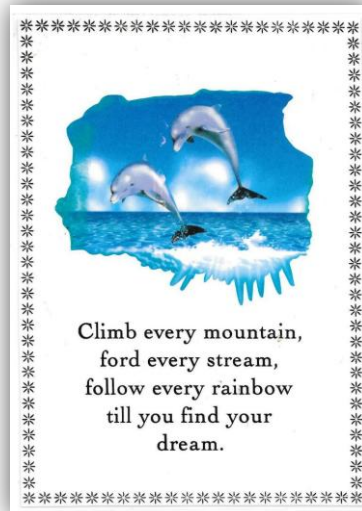
Figure 6: An inspirational poster from my dad

The way I could most easily explore this adventure was to throw myself into books. Reading about outstanding people who passionately lived a life of searching and finding, would reveal a whole new world to me. This would mean studying the work of David Attenborough, to me, the naturalist of all time, and Stephen Hawking, the astrophysicist of all time. The conversations and engagement I sought were precisely with people who inspired me in a similar way to those I read about. My relentless search for meaning eventually introduced me to a new inspirational world with new inspirational people who set me on "the road not taken" (Frost, 1916:9), with a transformational journey that made all the difference in my life, as you will discover in the substance of my autoethnographical narrative.

1.3   WHAT I AM LEARNING ABOUT MY CULTURE

I am in agreement with Makhanya (2016:92) when she shares what autoethnography can offer: "Using autoethnography as a research method has helped me understand my cultural heritage by reflecting on what was happening when I was growing up." The question is: What have I learnt about my childhood culture?

I conducted the Herrmann Brain Dominance Instrument (HBDI®) test some years back, and it indicated the prominence of spirituality, intellectuality and intuition in its analysis. My immediate recall of Gardner's (1983) theory of multiple intelligences, as featured in the culture-gram, confirmed a direct relationship with the intellectual and spiritual intelligences but not with intuition. However, on closer investigation and according to Gardner's (1983) theory, intuition is closely associated with

intrapersonal intelligence. Its core capacity is that of self-regulation for the purpose of accessing the deepest spiritual centre of the self:

> It is suggested that increased effectiveness in self-regulatory capacity and the resultant reorganization of memories sustained in the neural architecture facilitates a stable and integrated experience of self in relationship to others and to the environment, otherwise known as consciousness. The implications of meeting the increasingly complex demands of life with greater love, compassion, and kindness, thereby lifting consciousness is considered. (McCraty & Zayas, 2014:56)

This indicates that intrapersonal intelligence, self-regulation and intuition are all contributors to one of the most prominent 21st-century skills – empathy.

Wigglesworth's quote (2012) reinforces my belief about the significance of spirit and intuition in my life:

> Life is a process, an unpredictable and ever-changing stream. If you try to steer a perfectly straight course against the current of the stream you are likely to face continuing frustration as you run into rocks, get spun around by unexpected eddies, and struggle against the momentum of the water. Spiritually intelligent people understand this and learn to move with the flow of the life-process to draw on inner intuition, a sensitivity to their own bodies, and an awareness of the world around them to help them navigate. (Wigglesworth, 2012:92-93)

I believe that the combination of my primary identities coincide with the notion of autoethnography, since sense-making and identity are frequently entangled with spiritual outlooks (Ellis, 2004:98). Madison (2005) summarises the meaning of the recollection of our life experiences:

> The experiences in your life, both past and present, and who you are as a unique individual will lead you to certain questions about the world and certain problems related to why things are the way they are. It is important to honor your own personal history and the knowledge you have accumulated up to this point, as well as the intuition or instincts that draw you toward a particular direction, question, problem, or topic— understanding that you may not always know exactly why or how you are being drawn in that direction. Ask yourself questions that only you can answer: 'What truly interests me? What do I really want to know more about?' Madison (2005:19)

I need to recognise that this culture of mine, is labelled as a white Afrikaner privileged culture. There is no doubt that I am extremely privileged to have been born into and to have grown up in this culture. Who would not be? The autoethnographic question in this regard is, however, whether or not I have

earned or deserved this privilege. There is no way in which I, as a child, could earn or deserve my culture. And that applies to all children. Even if my whiteness afforded me the privileges of the culture that I was born into, the question is: What do I do about it? I have been born into this culture by default. I have grown up in a country in which many ethnical groups with their cultures live. As a child, they were different from me in several aspects: the most prominent feature being the colour of their skin, followed by their language, the geographical areas where they lived, the dwellings in which they lived, their relevant lesser wealth and the work they did. I am not an expert in child development, but even though children are naturally inquisitive, from their youngest years, they are primarily preoccupied with making sense of the world *as it is*. I had few non-white friends, not through choice or because of the mentioned differences, but primarily because the difference was so particularly pronounced by our physical (geographical) segregation. This is evident in the way that children pursue their natural propensity to associate with other children when they are in close proximity, irrespective of differences. This is demonstrated by the way in which the child of my mom's black domestic worker played with me and my friends during school holidays. I never experienced my parents, my family or my friends preventing association with 'non-white kids' in any way when the opportunity arose.

One of the most important things I had the privilege to experience in my childhood years, was the unconditional trust that I had in my parents in whatever they were doing. This is probably why they placed such a high priority on my honesty towards everyone, because it made me trustworthy in the way that I responded to what they wanted me to learn. My learning instilled that I needed to establish relationships with all the things and all the people around me *as they are*. Respect incorporated the many other associated values. I had to cultivate respect for my parents and grandparents (and all other elders) because of their authoritative example of expressing the value-based relationships that they expected me to cultivate. I learnt the meaning of responsibility in the small but essential chores that I had to execute – but perhaps even more importantly, all I did had to be at the standard (quality) that could and should be expected of a child at that particular age.

This was closely associated with the way in which I was acutely being made to *care* – for everything and everyone around me. With my dad as the sole breadwinner in an administrative job, money was never abundant. Wastefulness of any kind, therefore, was not tolerated in the way I cared for the things around me. I only learnt later in my life that the basis for the type of caring that I was expected to extend towards other people, is called empathy – as indicated earlier, the way in which my intuition allowed me to feel what/how others are feeling and how I could help them to feel better. If I broke my parents' or grandparents' trust (by deviating from their example of sustaining appropriate relationships in the way that they expected from me), I was held accountable in no uncertain terms in the way in which I was reprimanded with an associated punishment of some kind. When a repeated failure was deemed to be the cause of my disobedience, I may have even received corporal

punishment from time to time and when I did, I would know exactly why, and I accepted my punishment as justified. Although I may not have liked it, I never felt abused in any way, and I did not grow up to be a maladjusted adolescent or a violent delinquent. From my relatively limited experience at that time with children of my age from other cultures, I had no reason to believe that they had a different upbringing than me, regarding these values. In fact, I assumed that these 'universal' values would be part of any child's upbringing – although the labelling and practical particularities might differ.

As I am writing this, I realise the immense responsibility of parents – and for that matter, all other human beings occupying a position of authority – as undisputable role models of ethical integrity, to have only the best interests for everyone under their authority indiscriminately at heart.

Please do not idealise this account of my childhood. Neither my parents nor my grandparents were perfect and least of all, my brother and I. All of us made mistakes, and there were many disagreements. My brother and I sometimes rebelled against their parenting behaviour and decisions, especially when we thought that their different treatment of us was unfair. But I realise that it was their consistency over time that brought clarity of what is right and wrong, good and bad and that each have consequences. I am also fully aware that this knowledge defined the space in which I was free and safe to explore what my intuition compelled me to pursue as a purpose greater than myself.

1.4   MY FIRST EXPOSURE TO THE TEACHING AND LEARNING CULTURE

Moving from my home or family culture into a new culture – that of teaching and learning with the teacher and the student – exposed me to a new world. I visited my primary school grounds and classes to evoke memories. The very first photograph I took upon my return visit to my primary school, was of the place where I normally entered the school grounds (Figure 7). My Grade 1 classroom is the classroom to the right.

Figure 7: Entering the school grounds
Source: Own photograph

This photograph prompted feelings and memories about the general academic school day. I remember such a day as follows:

> *I was expected to attend class every day. We received homework frequently, most of which my mom also had to assess after the teachers had done so, so that the teachers could see that my parents also observed learning quality. Reports were handed out each term, which showed my marks for my subjects. I respected and obeyed my teachers. The classes were relatively small, about 30 learners or less per class. To accommodate us, chairs and tables were arranged in rows, and classes were presented by the teachers who made extensive use of the green- or blackboard, with photocopied assignments on which we had to fill in our answers. I wrote tests and examinations and prepared for these via studying for all my subjects by writing down what the teachers taught me.*

After my school visit, I arranged two respective face-to-face, semi-structured, audio-recorded interviews, one with the school secretary and one with the Deputy Principal. Because I am not alone on my autoethnographical journey, the narratives of the secretary and the Deputy Principal are relevant to my view of my school days, since the secretary was also a student at the school during that time and the Deputy Principal was a teacher of mine. I found that they support my experience of the classroom dynamics, where power-play suppresses the student to develop an own understanding.

I also asked them about the current school era to investigate any possible changes from the time when I was in primary school. From the interviews, it seems that today's lifestyle regarding the work hours of both parents, and the technology used by the student as an individual, play a significant role in the upbringing of today's children. I sensed that today's parents are less involved with their children's upbringing, although conversely, some parents expect their children to be top performers at all levels. It seems that the technological lifestyle removes children from a world where they can play physically, to where they sit with their cell phones in their hands, or in front of the computer, laptop or tablet. Another feature that surfaced from the interviews is the change in the curriculum. Much more work needs to be covered within less time. The standard has also dropped because of the decrease in the pass rate.

My own life experience as a primary school student, together with the other main findings from the interviews, revealed that students should have values such as showing respect towards themselves, their classmates and the teacher, and it seems that the teacher of today plays a very important role in instilling these values. Students should also be showing responsibility towards their own learning and be able to control technological devices, not the other way round.

In the senior phase of primary school, I had my very first encounter with politics. The year 1994 reflected the end of the apartheid era. "The signal was clear that whiteness in South Africa would never be again what it used to be" (Steyn, 2001:xvii). This saw the start of parallel medium schools in which different cultures would attend school together. It also implied the start of a new democratic life for all South Africans, soon referred to as 'The Rainbow Nation': a complex multidiversity of ethical life striving to merge peacefully under one African sun – with 11 official languages, the highest number of languages in any country in the world. I was then a primary school student in Standard 4 (now referred to as Grade 6) and would be sent off to high school in 1996. It was as if a bomb had been dropped between the senior phase primary school students. However, I soon sensed who had dropped this bomb – the parents. Some parents solemnly refused to send their children to the nearest high school because of other cultures joining us. I still recall the harsh words of certain boys so clearly. The words were so uncalled for that I was dumbstruck for some time. Why do I not feel the same about going to school with people of other cultures? Why am I so different?

1.5 ATTENDING A PUBLIC SCHOOL OF DIVERSITY

I decided to also visit the school grounds and classes of my high school, to evoke memories. After the first return visit in which I explored the school grounds, I arranged a face-to-face, semi-structured, audio-recorded interview with my former school principal, so that he could present me with his narrative on the years of transformation. The interview revealed that almost three times more non-

white students were allowed into the school than the initial number decided upon. The Principal confessed in the interview that the authorities "*did not have the heart to turn them away*". This played a huge role in many of the parents' decisions to rather enrol their children in neighbouring schools. However, he also commented that it was, surprisingly, some of the more traditionalist parents who insisted that their children should stay (or be enrolled) at the school. Although I was a student there at the start of those years of transformation, I was not even faintly aware of the reasons powering the transformation process or of all the challenges that accompanied it. I was simply a student attending high school in order to eventually enrol at university eventually to get a degree. And yes, although it was the first time I went to school with other cultures and did not know what to expect, apart from initial feelings of uncertainty, I soon realised that they were just like me.

My grandma set an example for me on how to treat other cultures. Once every week, on a Wednesday to be specific, her black domestic worker came to clean her house, and my mom and I sometimes joined my grandma and the domestic worker during the school holidays for morning tea – the four of us drinking tea from my grandma's Royal Albert tea set around her dining table. I also remember my grandma saying that she trusted her domestic worker in such a way, that she shared her deepest heartfelt confessions with her. My mom and I, to this day, still have contact with the domestic worker, phoning her every now and then to hear how she is doing or to congratulate her on her birthday. On her birthday, we meet up with her and give her a birthday card and some money as a present.

After contemplating these memories, I suddenly understood why I had felt different from most of my co-primary school students about going to school with other cultures. My grandma and mom are the reasons that I view all people (cultures) equally. I also solemnly believe this had an immense impact on why I have *empathy*. In relation to this, I want to refer back to my prime identity as given in my culture-gram (Figure 1). I really got along with the other cultures, and I honestly cannot recall any issues between different cultures during the time that I attended high school. On the contrary, I remember two of my coloured friends became prefects like me and slept over at my house because they had transport issues to and from their townships, which prevented them from being at school early enough for our responsibilities as prefects. I do not say that I am a completely empathetic being, I am only portraying how I handled the situation.

What is really outstanding for me within the narrative of my former high school principal, however, is the emphasis on the *responsibility* that the student should take, irrespective of the student's culture. Therefore, in order to be a student and to succeed in the responsibilities that come with being a student, the student needs to have a *will* to work hard – in other words, to learn. The former principal reported that non-white students came to the school with false expectations that they will do well in this city school, but he emphasised that this would only happen through hard work.

After my second school visit, I conducted face-to-face, semi-structured, audio-recorded interviews with current personnel members of the school. Upon contemplating the narratives of the current school principal, the deputy principal and a current school teacher (who was also a school student at the school during the same time as I was there), certain aspects emerged strongly from the interviews: Physically, the school has changed through the addition of security measures such as video cameras in the school isles and classrooms and the requirement of signing in with security guards at the main entrance. To me, this is an obvious indication of protection against danger. This came as a huge shock. The following explanation is taken from the interview transcript of the Deputy Principal:

> *Many of our children stay at school until seven o'clock in the evenings, the parents come only to fetch them then, and many of them go up the stairways and they gamble or they do things they shouldn't, and to prevent that, we put up trellises at each stairway and each teacher in that stairway has a key and you lock the gate during breaks.*

According to the interviews, it seems that the current education system does not make the students accountable for their actions, so this system does not aid in the development of the whole student. The role of the students' parents is questioned, since they are not involved in their children's lives. The role that technology plays in the classroom and in the lives of the students is also questioned, since it seems that both the teachers and the students are dependent on technology. The role of self-discipline and being responsible for one's own learning, featured more than once in the interviews and can be seen as the force driving the student to become someone who adds value to society, irrespective of their culture.

This reminded me again of when I was a high school student. I was an extremely hard worker who focused on giving my best to what mattered most to me: my school work. I honoured my work by maintaining responsibility for my studies. When exposed to certain situations, I would decline pleasurable opportunities (e.g. I declined a school holiday with my best friend to work on my school assignments – she was furious!). Despite identifying the need to develop into the best person I could be, unfortunately, the way I was being taught in general did not allow me to think or to be creative, but mostly only allowed me to 'copy and paste'. This belief is confirmed by a current teacher of my high school who also attended the school during those years:

> *To me, in that time, most of the teachers would either just read from a textbook and you sat with your textbook and read with them, or maybe have the projector and you had to write down notes … We just had to copy the work, read with them and that's it.*

I would like to conclude my high school phase by quoting the philosopher, Arnold J Toynbee (2016:3) on his view of responsibility and its connection to being a student in the 21st century: "As

human beings, we are endowed with freedom of choice, and we cannot shuffle off our responsibility upon the shoulders of God or nature. We must shoulder it ourselves. It is our responsibility."

1.6   BEING AN UNDERGRADUATE STUDENT

There was great concern after I finished school: There was not enough money to send me to university. This did not stop my father though, and he went to a great deal of trouble to make it possible for me to go to university. My father explored the loan options available, and he applied for a national study loan on my behalf, because I was still a minor at the time. The loan would pay my tuition fees. The application was approved! If it had not been for all my father's efforts in obtaining this loan, I would have never experienced a single day as a university student. For that, I will forever be grateful to him. Since there was no money to buy me a car, I am also very grateful to my 'lift' (a lady that used to work in the university library), for driving me to university and back home for all of my undergraduate, and even some of my postgraduate years.

I had been in love with nature since my childhood days, always being fond of the fauna and flora to which I was introduced by my parents and grandparents. So, it made sense to me that I should choose to explore nature even further by studying BSc Ecology at a formal higher education institution. My parents never pushed me in a specific direction and supported me in my choice of this university degree. In fact, they were very proud of me for choosing a BSc! I needed to write a compulsory entrance examination though, at the start of my first year at the university, because of my low matric Mathematics mark. The examination consisted of several tests involving Physical Sciences. I succeeded in these tests and got permitted to enrol for the BSc Extended Programme. This programme allows a student to do a BSc degree with all the normal, obligatory, three-year subjects spread over the course of four years.

As I sat on my return visit in my first Chemistry classroom, which was the very first class that I attended at university, I started to remember my university years in general. I recall the typical university undergraduate setup:

> *I am not usually expected to prepare anything when I go to my classroom, ranging from small rooms to large auditoriums furnished with desks and chairs that are mostly arranged in linear patterns. Here I wait for my lecturer to give a lecture for which the classrooms are particularly equipped with from low to sometimes very sophisticated high technology. The focus of the lecture – even if high technology is used – is dominantly knowledge centred and, in disciplines that have a practical component, skills are also taught and need to be applied. This is the daily routine until a test or exam needs to be*

written. When this happened, I needed to learn (memorise?) by mainly summarising the knowledge and skills that I had been taught and give as accurate an account as possible thereof.

In relation to my sketched scenario and as a confirmation thereof, I asked two lecturers to elaborate on their lecturing aim and approach. I conducted two respective face-to-face, audio-recorded, semi-structured interviews with a (now retired) Plant Science lecturer who used to be one of my undergraduate lecturers, as well as with one of my undergraduate lecturers in the subject of Molecular and Cell Biology. These lecturers confirmed that lecturing mainly involves repeating information from the transparencies/textbook – even when sophisticated technology is used – and then the students learn this by memorising the information given to them. Is this what it means to be a student…?

The second lecturer interviewed, also admitted that he sometimes answers his own questions because he cannot get the students involved enough to answer the questions themselves, and he cannot afford losing lecturing time by waiting for them to answer. He differentiated between the undergraduate years, because he believed that the different levels of undergraduate students needed to be taught differently. He referred to critical thinking as a quality only needed by students at the third-year level. This raises concern: Why is this essential quality not required in a first-year or second-year student, and why is it only necessary in a third-year student?

Regarding my fellow students, although I came from a conservative white neighbourhood, I did not find the interracial setup of the university strange, nor did I have trouble adapting in that way. In fact, one of my closest undergraduate classmates was an Indian girl. I also spent many of my final-year Zoology practicals working together with a black lady from Cameroon in Central Africa. Although I was raised in a conservative suburb, I was exposed to other cultures when I attended a fully integrated parallel medium school. I could see no difference between me and them as students. Black students constituted a sizeable percentage of the student numbers, and many also undertook this journey with me. Within this perspective, it was important for me to ask black students who were unknown to me (from first year up to alumni) what *they* thought it meant to be a student – in other words, what their personal experiences had been in regard to the most important requirements that they needed to fulfil to be successful higher education undergraduate students. Although I am aware of circumstances influencing them being a student, the *essence* of being a student has nothing to do with any external influences such as the socio-economic level of the student. In fact, the *5th Annual Student Village Student Spend Report*, 'Student Spend Report 2017: A Brand Me Generation, Buying Experiences' (Student Village, 2017) – research conducted among different cultures of students above the age of 17 – showed that students spend more than the average South African, and irrespective of the student's financial circumstances, they mainly invest their money in 'looking good and making memories'.

An African alumna Chemistry student (Student 2) who was identified by the *Mail & Guardian* as one of the Top 200 Young South Africans in 2014 with respect to her work in Science Education, and who was invited by the Embassy of the United States to participate in the 2016 Mandela Washington Fellowship for Young African Leaders, reported the following during a face-to-face, audio-recorded interview regarding her experience of being a student:

> *Okay, well usually what would happen [in the classroom] is … I would come into class, there would be PowerPoint slides and I would listen to the lecturer teaching and teaching and thinking – I mean it is still very clear in my mind my Chemistry lectures and my Physics – come in, they have the slides, you listen, you take down notes and then you get referred to the prescribed textbook, sections of it that you need to go and do.*

> *Then you would go and do that in preparation for the test and, in addition to that, we had support in the form of tutorial sessions where you would come in and then maybe postgrad students are there to help you; I remember with Genetics as well we used to have tutorial sessions. In addition to the tutorial sessions, we had practical work where you come into a lab and you do an experiment. The labs for me, I mean especially at first-year level, you would come in, they give you detailed instructions on what to do, you just follow the instructions, you write down the observations, you submit at the end of the day; these used to be so long I mean we would knock off sometimes at 5.00 p.m., finish at the lab at that time.*

I also asked several other current black students if they agreed with my description of the general university setup and to detail the message that the university sends to the student. The following quote from a face-to-face, audio-recorded interview is representative of their views.

> *You just literally in that [picture] described the first-year class for Chemistry. About 300 students … It's just … parrot-fashion learning in the class … I think the message is … 'Okay, go to class, cram. After you cram, regurgitate. Vomit everything you've learned and then forget about it.'* (Student 9)

From the interviews, it can be deduced that the answers are in accordance with my description of the general university setup. According to the students, the conveyed message is a 'copy-answers' and 'paste-answers' message. It was also important to find out if the students think there is an overall difference between being a white student and being a black student. Although I thought they might say 'yes' because they possibly consider themselves to be from disadvantaged backgrounds, it can be seen from their reactions that they are clear-headed thinkers with qualities that enable them to detach themselves from political affairs. The following quote best represents their views.

As a black student, it means you have to learn in English, which is not your home language … For white students it is quite hard to change between textbooks that are in English and translate the concepts into Afrikaans … [R]egardless of whether you are a white or African student, we [both] still struggle with transition from school level to university life. (Student 7)

Returning to my experience of being a student, upon studying my full academic record, I feel indifferent and detached. All of my final examinations were theoretical examinations, mainly testing my memory. Most of my marks did not bring me joy since they were average. I gaze in disbelief at this academic record and think: *Is this really supposed to portray me as an undergraduate student? A paper with some marks on it?* Upon contemplating the following photograph (Figure 8) that I took on my visit, the classroom in which I wrote my last examination, I realise that by the time I was almost done with my undergraduate degree, it felt as if I were undergoing a normal examination period. In fact, that was exactly what it was. One November afternoon, I was writing a three-hour theoretical Zoology and Entomology paper. This was my final undergraduate paper, ever, and it was supposed to display one of the most significant times in the life of a student. My seat was right at the back, next to the window of the classroom and is indicated by the red arrow in Figure 8 below. I remember the sunbeams streaming in on my desk that late afternoon as I sat next to the window. It was such an anti-climax because I sat there and it was a three-hour paper – Was this *it* for a four-year degree …? This felt too 'small' for a four-year degree. What I ultimately achieved with a four-year degree was sitting there, writing a theoretical examination in Zoology and Entomology.
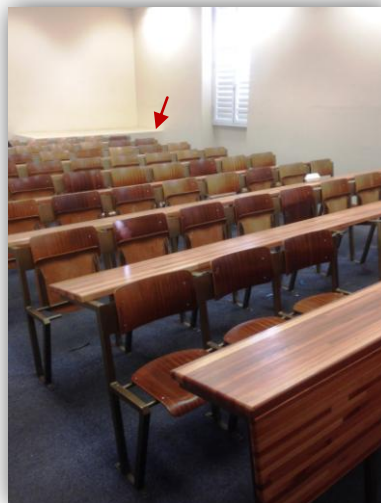
Figure 8: The classroom where I wrote my last undergraduate examination
Source: Own photograph

Although I look back now at the four years of being an undergraduate student and think that I passed most modules by memorising them, it was still a milestone receiving my BSc degree on 23 April 2005. When I look at my first degree certificate, I think of my proud parents and my grandma (Figure 9) who were with me at my graduation. What a special moment to have them with me on that special day! That moment made the four years of work worthwhile. What an incredible inspiration my grandma was to me. Until being able to engage in self-study, I did not realise the educational influence that my grandma had on me! With this, I am reminded of Whitehead's (2008:7) suggestion as I once again realise the value of what autoethnography can offer:

> Educational research is distinguished as the creation and legitimating of valid forms of educational theory and knowledge that can explain the educational influences of individuals in their own learning, in the learning of others and in the learning of the social formations in which we live and work.

Figure 9: My grandma and me at my graduation
Source: Professional photographer

By using this photograph of my grandma as a visual artefact, I became conscious that it has "become more valuable to me and now held a new meaning for me" (Makhanya, 2016:87). I do not look at this photograph with merely a special feeling anymore, I investigate the deeper meaning and value of what it portrays to me with regard to where I find myself today. My grandma taught me to work very hard, not only in an academic way through myself, but also to work hard on myself in order to improve myself. I agree with Makhanya (2016:89) when she maintains that "[t]he role the photograph plays in my cultural understanding is that mentoring is important for parents to transfer the values they have to their children." This is very true and in my case, I can definitely include my grandma into the quote.

In general, I enjoyed attending university. The whole experience was new to me after being confined to one neighbourhood for 18 years with friends in only that specific neighbourhood. Thus, meeting new people in a totally new environment was pleasant. Making friends from different cultures, all of us struggling through the same problems relating to being a student, made me realise that being a student is the same for *everyone*. The interviews with the black students confirmed this realisation. However, I went to university with the aim of *learning* something. There were many times that I did not know why I needed to enrol for a specific subject to get the degree. In some cases, even with a relevant subject for the degree such as Zoology and Entomology or Plant Science, I could not secure an overall view how the module content fitted in. In addition, the workload was in many cases immense, and this compelled the lecturer to dash through it, giving the impression that the lecturer was hasty. As a result, most of the time, not much made sense. This reminds me of Kiyosaki (2013:45) regarding his degree:

> While I have a Bachelor of Science degree from a great school, I do not remember much
> of what I learned during those four years. For example, I remember taking three years of
> calculus, but I could not solve a math problem using calculus today.

But, I still wanted to do my best, and so I worked hard, a value instilled by my grandma. Thus, although a great deal did not make sense during those four years, I still had the will to learn and an intrinsic motivation to work hard. Upon contemplation, I understand that I could manage myself because I was in control of myself and willing to do the best I could under the given circumstances. But it was not only *what* I was required to learn (the different subjects with the different modules for the degree) but also *how* I was obliged to learn that puzzles me – memorising information provided by the lecturer in the format of notes and/or a textbook and replicating it in a test or examination. *Where* I was compelled to learn, that is, the classrooms and buildings (the architecture) also played an important role. Most of these learning environments really did not allow me to make the most of my learning experience, because I was restricted by four walls. Thus, to me, quality learning entails going through the *process* of hard work, with the focus on *how* one attains the knowledge (not mere information) and skills. Learning, therefore, is *not* memorising information or following a recipe to arrive at an answer or simply testing one's IQ by providing answers to conceptual problems.

1.7 BEING A POSTGRADUATE STUDENT

After writing the last examinations for my BSc degree at the end of 2004, I sought advice in regard to pursuing an Honours degree. An acquaintance who was completing his PhD in Plant Science at the time, directed me to his supervisor because he believed that she might have a project in which I could become involved. I did not hesitate to arrange a meeting with his Ecology supervisor. After

introducing ourselves to each other, she immediately told me about a potential project in Namaqualand, a desert area situated in the Karoo, South Africa, approximately 1 200 km from Pretoria, Gauteng. Here, for more than 30 years, plant surveys had been conducted annually in a nature reserve called Goegap, which is situated almost adjacent to the town of Springbok, the main town in Namaqualand. She felt that since nobody had as yet analysed or discussed any of this data, I could continue with the field work in 2005 for an Honours project. I could then use all the data from the other years, together with the data that I had gathered. I could analyse these surveys and determine the effect of rainfall on various plant species in addition to the effect of the earlier grazing activities. I immediately accepted her offer to work on this project and thus became her Honours student.

In order to prepare for the surveys, my supervisor provided me in advance with information about the area to investigate during the period before we left for Namaqualand. During this time, I also needed to process all the data from the previous years. This was an immense job that involved working with hundreds of spreadsheets of plant species and numbers! The time spent in the city at the postgraduate study offices in the Ecology building before the field trip (February 2005 to July 2005) and after the surveys were completed (October 2005 to December 2005), represented another world. It was a world in which I spent hours in front of the computer, capturing data, analysing it and discussing the findings. I worked on a *very* old computer (even at that time) that was provided by the department. Beggars can't be choosers! It did not have a single USB port, never mind access to the internet. Consequently, I had no choice but to save my work at the end of each day on a CD. This resulted in piles and piles of CDs by the end of the year. I checked my emails *once* a day at the end of each day – never more than that. In so doing, any news that I received such as social responses or other things that did not have anything to do with my work, would not interfere with my day's tasks. The email checking was done on the 'modern communal computer' in the centre of the Ecology building, which had internet access.

Apart from my Honours project, there were also 10 other obligatory modules for which I had enrolled. These modules mainly involved writing research assignments on various Plant Science topics such as (in random order) seed ecology, plant community ecology, general ecology, field evaluation and management, plant dynamics and phenology, plant taxonomy and secondary plant metabolism. I also presented research seminars to the Plant Science Department on two occasions (apart from presenting our project results and findings at the end of the year). I asked my supervisor in a written interview to comment on what she can remember of me as her student: *"Your honours assignments were always of a high quality and stood out as among the best in the class … It was always a pleasure to have you on a field excursion."* I received the Hans Schweickerdt medal for my exceptional contribution to Plant Science at the end of my Honours year. It was an immense privilege to receive this medal. I also received Academic Honorary Colours for obtaining the degree with distinction. I definitely see my Honours year as the highlight of my student years in the Natural Sciences.

Subsequently, I had the incredible opportunity to continue working in Namaqualand. The Honours project, upon completion at the end of 2005, had the potential to result in a more in-depth MSc degree. Because I was so inspired by working in the field and in the desolate area that I loved, I naturally grabbed the opportunity with both hands. I commenced with my MSc degree at the start of 2006 and completed it in the middle of 2010. It was lovely not to have to worry about enrolling for any additional modules. For the first time in my life as a student, I had only one 'subject' to focus on: my project.

It was only at the start of my MSc degree in 2006 that I received a modern computer with USB ports and internet access from the department. I could now roam the internet freely since I had unlimited access. The downside of this was that it led to living in a technological world that was quite unlike the technological world of my cell phone, which could only SMS and make calls. It was during these years that today's most popular and largest social website, Facebook (FB), became available on the internet. I joined this network in 2007, very shortly after it opened its doors to the world. I also started using Google Chat, which allowed me to chat live to any contact on my email contact list who had a Gmail email address. With the press of a button at any given time, I could connect or disconnect with someone. Compared with my Honours year in which there was no online socialising or immediate internet access, in that sense, my MSc years brought a great deal of 'virtual reality' into my life.

The contrast between visiting Namaqualand and being in the city was huge! With Namaqualand being such an isolated area, I escaped technology. This did not bother me at all and in fact, I was more at peace with myself without it. In the city, I engaged with technology all the time, and I checked my email and FB account regularly. I realise now the importance of managing technology. Even if technology *is* there all the time, I have the choice to use it as I wish. The blame for wasting my time with, for example, online socialising, could not be placed on technology but could only be placed on myself. This other type of world that I was exposed to, the one without technology, forced me to 'slow down' and contemplate who I was and what I was busy doing. I was privileged to visit a unique and precious part of the world, and I am thankful that I made the most of that time. I worked hard, long hours into the night but still appreciated the nature around me. I learnt to respect it – to welcome the silent moments when sitting and resting for a couple of minutes or when occasionally drawing a flower. Being in the field opened my eyes to the 'real world', a world in which I was not enclosed in a classroom with desks and chairs and a projector for PowerPoint slides.

I also realise now that there were not many technological distractions in my Honours year. Having no internet access on my office and home computer played a very big role in not constantly wanting to check my emails or socialise online. My focus was on my work and that alone. In the presence of the distractions that FB and Google Chat offered, I had to exert a great deal more self-control during my MSc years.

## 1.8	MY YEAR OF TRANSITION AND TRANSFORMATION

My interest in science and in the conservation of biodiversity, encouraged me to pursue a qualification as a researcher, even though in the course of my studies, I had also thought of myself as a science teacher. I had presented my research findings on several occasions and had been involved in science communication and education at some universities and at the Sci-Enza Science Centre where I acted as a National Youth Service (NYS) intern for the National Science and Technology Forum (NSTF). Although my experience in Education did not match my experience in the Natural Sciences, I felt a deep desire to merge the two fields. My search for meaning continued…

My investigation established that the most appropriate way for me to achieve my purpose, was to enrol for a Postgraduate Certificate in Higher Education (PGCHE). The essence of this education programme at the institution where I enrolled, revolved around the design of an action research idea, which would result in the innovation and/or the improvement of my higher education practice. However, since I was not engaged in such a practice at the time, my first obligation was to find a suitable practice. Fortunately, one of the lecturers proposed that under his mentorship, I act as a part-time lecturer for his Grade 10–12 Life Sciences student teachers who were enrolled for a Postgraduate Certificate in Education (PGCE).

Everything seemed to be overwhelming, but a few key concepts could not be forgotten, such as action research, reflection, whole brain learning and learning style versatility. I decided that I wanted to use these concepts as the basis of my higher-education practice. I wanted to focus on implementing a leadership role in practice, thus improving not only the development of the PGCE Life Sciences students, but also my own professional development.

Initially, however, my mentor and I had *serious* confrontations. I was angry with him and truly upset about his interference. But for some reason, I eventually found myself doing exactly what he had suggested. Today, I am grateful for this because he facilitated learning in me in such a way, that I could start finding answers *within myself* rather than outside myself (i.e. within social media and my cell phone). For example, at times, he would tell me to switch off my cell phone and put it away. This required a great deal of self-discipline on my part, especially when I first began to detach myself from technology. It also took great courage to overcome the fear of missing out (FOMO) and to downscale my use of social media. Deep down, I knew that "[o]ne doesn't discover new lands without consenting to lose sight, for a very long time, of the shore" (Gide, 1927:353). Not only did I need to confront my history, but I was also experiencing a new education paradigm, the transcendental paradigm, and this caused confusion between what I was used to (the transmission of information) and what I was being presently exposed to (the opposite of transmission of information). I could not reconcile these two positions and consequently tried to make sense of it all. My mentor made demands on me, and this kept me accountable for my actions – specifically, the 'technological shutdown'. I came to understand

that the field of Humanities Education brought out *my humanity*. In that sense, I could control my humanity as the result of Humanities Education.

I knew a universal aim of education had to exist. My own limited investigation had revealed a wide variety of education aims, demonstrating more or less, the same essential elements. However, in my exposure to the field of education, the following aim of education attracted my attention:

> The aim of education is designing the most powerful learning environment possible (real life context in its uncompromising supercomplexity) that will evoke the learners' own empowerment (will to learn) to maximise (completely develop and fully utilise) their human potential (essential human virtues) through facilitating (demanding the highest possible quality of) lifelong, authentic learning (resolving personalised real life challenges) in order to create a safe, sustainable, and flourishing future for all. (Slabbert, 2015:132)

What intrigued me about the aim of education, was *the product*. I assumed that it would refer to knowledge and/or skills, since these are what I had been expected to acquire most of my educational life. However, instead, it was 'maximising human potential'. It was quickly pointed out that education is about learning for an unknown future (Barnett, 2004). This is profoundly significant because it requires a completely new perspective on education. Finally, this aim of education is unique in its perspective on education and the consequent innovative way in which the aim of education has to be achieved, namely 'through facilitating lifelong authentic learning'. Not knowing exactly what this entailed, the statement of my challenge was to innovate a higher-education practice that focused on facilitating lifelong authentic learning, to ensure the highest possible quality of education (learning).

Apart from the main module, several other modules highlighted the challenges that I needed to overcome to succeed in this programme. For the module Curriculum Development, my main challenge was to construct a practice theory of and for my own facilitating learning, in the format of a concept map, while adhering to very complicated requirements. This self-constructed practice theory provided the basis for my research project of the main module. This was an excruciating task to complete, because I struggled to master this new science of following specific actions and steps, in order to facilitate learning successfully. I was only a student exposed to the totally new and drastically different Science of Education, yet I needed to become a facilitator of learning at the same time. This real-life challenge presented a turning point in my life; it was an immense challenge to solve. Initially, I did not know *what* to do or *how* to do it, and after many unsuccessful and thus rejected attempts, I surrendered to 'not knowing', and this revealed the new paradigm. So, after many extremely long hours of becoming more competent in my actions, I stood back in wonder to see what I had constructed: a radically and qualitatively different paradigm from the demands of the current

education system, in teaching the theory and applying it in practice. The figures in Appendix A on the CD accompanying the thesis, represent this paradigm of facilitating lifelong authentic learning.

Through the experience of facilitating lifelong authentic learning, I learnt not to concern myself with how the current education system appeared. Instead, I needed to challenge my students to do what *should* be done: move from a passive teacher-centred approach to the active learner- and learning-centred approach in my education practice – have them learn through doing. It was during this experience that I decided to progress to a PhD after completing my PGCHE. I passed the PGCHE summa cum laude and was also awarded two prizes: one for the best Community Engagement project and one as runner up for the best Entrepreneurship project. After my application to register for PhD studies had been approved, I was asked to become involved with the PGCHE programme as a contract lecturer for the module Curriculum Development, and later as a PGCHE tutor.

Everything then began to escalate at a dizzying pace. I was still familiarising myself and gaining confidence in this new field of education, and on the proverbial 'opposite side of the fence', I was mentor, tutor, facilitator and assessor in the education of higher education lecturers on all levels. I was confused and disillusioned, not only in terms of my responsibility in my education positions, but also regarding my future studies in this unfamiliar environment. Fortunately, having to cope with the theoretical foundations of education, while needing to practise it myself in addition to assessing lecturers in their practices, inevitably ignited the power of my curiosity. My Great Hunger propelled me forwards in my new education trajectory, and I knew I belonged here:

> The Bushmen in the Kalahari Desert talk about the two 'hungers'. There is the Great Hunger and there is the Little Hunger. The Little Hunger wants food for the belly; but the Great Hunger, the greatest hunger of all, is the hunger for meaning … There is ultimately only one thing that makes human beings deeply and profoundly bitter, and that is to have thrust upon them a life without meaning. There is nothing wrong in searching for happiness. But of far more comfort to the soul is something greater than happiness or unhappiness, and that is *meaning*. Because meaning transfigures all. Once what you are doing has for you meaning, it is irrelevant whether you are happy or unhappy. You are content – you are not alone in your Spirit – you belong. (Van der Post, 1983:113-114)

"This curiosity—this asking and searching and finding out—are [sic] where [the] story takes us as we tell our future together" (Adams, Holman Jones & Ellis, 2013:670). I realised that all of us are sharing something very important. During the most critical phase of our lives when our development is at its peak, we spend the most productive part of every working day in formal education environments. This period is meant to last for at least nine years, while some choose to extend it to twelve years, sixteen years or even longer. The significance of all levels of the educational life of a student – and this life's subsequent imperatives and consequences – cannot be underestimated.

After initially haphazardly vacillating between education practice and theory and between various education theories, I finally recognised what I was searching for. This was revealed to me when I first read the work of Ron Barnett (2007:7) and for whom I subsequently developed a substantial amount of respect. His comment within the context of an education system that revolves almost entirely around knowledge and skills was completely shocking: "However, 'knowledge' and 'skills' … cannot begin to offer us a sufficient set of ideas for a higher education in the twenty-first century" (Barnett, 2007:7). Barnett (2007:3) maintains that a philosophical perspective on education "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". This quotation helped me identify the statement of purpose of my research project, as it emerged from the commencement address to the graduates of the University of Portland by the environmentalist, entrepreneur, journalist and author, Paul Hawken (2009:para. 2):

> Class of 2009: you are going to have to figure out what it means to be a human being on earth at a time when every living system is declining, and the rate of declining is accelerating. Kind of mindboggling situation … but not one peer-reviewed paper published in the last thirty years can refute this statement. Basically, civilization needs a new operating system … You are graduating to the most amazing, stupefying challenge ever bequeathed to any generation. The generations before you failed. They didn't stay up all night …

This profound statement indicates the foundation of the educational problem at hand in a general sense and at the same time, the scope and complexity thereof. It is from this statement that I could finally formulate my research challenge.

1.9   MY RESEARCH CHALLENGE

I formulated my research challenge as a primary research question.

1.9.1   My primary research question

The main research question was formulated as follows:

What does it mean to be a student in the 21st century?

To answer the primary research question, secondary or subsidiary questions needed to be addressed.

1.9.2   My secondary research questions

Although a possible multitude of secondary research questions could be formulated from my experiences as a student, I realised that they could be more appropriately categorised within the realm of the following three questions:

1. *How does current education portray what it means to be a student in the 21st century?*
2. *What are the challenges that confront education in the 21st century?*
3. *What do my life experiences as a student reveal about what it means to be a student amidst the challenging demands of the 21st century and beyond?*

Without deliberately formulating it so and only upon reflection did I realise that my research questions represented my search for meaning, which is twofold. I investigate life, albeit as a student, but I also use my life-examination to interpret the education system "to speak to larger educational purpose and meaning" (Blackmon, 2011:2). My research questions, therefore, fitted comfortably with the notion of autoethnography.

1.10   WHERE AM I GOING?

Now that you have read my narrative up to this stage and saw how I arrived at my research questions, I will provide you with an overview of the whole thesis by briefly explaining what is presented in each chapter.

This thesis is divided into 10 chapters.

Chapter 1 provides a strong foundation for the study as I immediately commence with my narrative by describing who I am with the aid of my culture-gram. The narrative continues in the format of autobiographical texts situated within my family history. This signifies the start of my autoethnography and, therefore, "finding the zero point of origin" (Denzin 2014:8) for my life story of being a student. This phase acts as a comprehensive introduction to my autoethnography, because it provides an insight into my early childhood and young adult years. I begin by explaining my home/family culture, thereby recalling my childhood and home background. I also provide you with my narrative in order to explain where I am going and how that provoked my research questions. I indicate the general direction of the research by including analyses and interviews. Similar to Benoit (2015:22)

> I look at how arts-informed inquiries into photography of schools as artifacts can act as
> place markers in order to establish my location. Arts-informed inquiry into photography
> used to extract place markers contributes to an analytic toolbox that is part of the greater

> AutoEthnographic endeavor. This data is then used along with more data from other forms of productive remembering to allow for the fusion between arts and qualitative research which lead [sic] to a better understanding of the meaning and development of the … self.

Throughout the chronological timeline (Chang, 2008:72-75), I recall experiences that influenced my life as a student (Nachmias, 1998:29). I also refer to "first educational memories" and thick experiences that I describe and examine (Renner, 2001:1).

In **Chapter 2**, I offer a brief but provoking history of education within a relevant South African, socio-historical context. I also draw attention to the current universal education system to be seen in Appendix B on the CD accompanying the thesis. I then discuss the educational framework in which my narrative is embedded. This framework, which is used throughout the study, explains "either graphically, or in narrative form, the main aspects to be studied: the key factors, concepts or variables and the presumed relationship among them" (Miles & Huberman, 1994:18). The framework includes the foremost work of Maslow, Frankl and the more contemporary work of Barnett, against which I measure my narrative as from Chapter 4.

Chapter 3 explains the research design of my study: Why do I draw on autoethnography and what does it entail? This chapter also includes my philosophical stance. This is followed by a description of the data collected, how it was collected and how it was subsequently analysed.

Chapters 4–8 form a collective whole. These chapters act as signposts for the different educational epiphanies (Denzin, 2014:12-13) that have occurred in my life to date. Each of these chapters refers to one or more significant educational experiences, ultimately representing what it means to be a student. I analysed these experiences alongside my educational framework of my narrative (Chapter 2, Section 2.3).

Chapter 4 examines my life as a school learner and refers to some of my inner values that I believe are fundamental to being a student. The chapter also provides illumination on the power-play culture in teaching and learning. Through contemplation in solitude, I recalled a very specific and significant educational experience, which I share with you in this chapter.

Chapter 5 examines my life as an undergraduate student by specifically describing two epiphanies (in the form of a dialogue and an interview), the first resulting in similar findings to those of my school experiences, regarding what it means to be a student in the 21st century. The second epiphany reveals a small window to what education can perhaps offer the 21st-century student.

Chapter 6 of my autoethnography is divided into two sections. Initially, I refer to my life as an Honours student in the Natural Sciences and then to my life as an MSc student, including the year

thereafter. The description of the high- and lowlights of these years results in profound meaning to my research questions.

In **Chapter 7**, I explain my transition, and the accompanying transformation, from my Natural Sciences background to the Human Sciences as a PGCHE student. I present this in the format of an action research project.

Chapter 8 brings me to being a PhD student, and I include a visual essay with my own art constructions to reveal what it means to me to be a student in the 21st century.

In **Chapter 9**, I seek answers through interviews with experts from various fields, as they provide insightful findings with regard to their understanding of what it means to be a student in the 21st century. I investigate the correlation between their findings and my autoethnographic experiences by attempting to answer the secondary research questions.

In the final chapter, **Chapter 10**, I discuss key elements in order to provide answers to my primary research question. I also discuss possible contributions and benefits of the study through evaluation of my autoethnography.

CHAPTER 2: MY CURIOSITY IGNITED

2.1   INTRODUCTION

I realised that I had to understand my curiosity if it were to serve me well. Curiosity is a concept that is used so freely and frequently by people on various levels and from all walks of life, that its meaning is taken for granted. In addition, an exact and 'uniform' definition of curiosity has eluded the pages of reference materials and the broader field of literature alike. What is clear, however, is that curiosity is a multi-dimensional concept with no single definition, "and it overlaps extensively with related concepts like creativity, inquisitiveness and openness to experience" (Rowson, Young, Spencer, Lindley & Gecius, 2012:3).

The nature of curiosity may be best described with three characteristics: The first characteristic is that curiosity is inherent and is best satisfied by the construction of meaning (the attainment of knowledge, not the mere acquisition thereof) (Clark, 2012). The second characteristic is of a more cognitive nature in that curiosity is evoked by an incongruity between something (e.g. an event, an object) and the individual's existing world view (Hebb, 1946; Piaget, 1952). The third characteristic also pertains to an incongruity, but is directed towards an emotional consequence, representing the perception of a gap of information in the individual's knowledge or understanding (Loewenstein, 1994).

I must agree with the statement of Arnold Edinborough (Rowson *et al*., 2012:5): "Curiosity is the very basis of education". It is arguably the most powerful force we have, because it drives human evolution (Rowson *et al.*, 2012:4). Curiosity has also been identified as a disposition and has been called the cardinal critical virtue (Hamby, 2015). My curiosity was ignited, and it inevitably propelled me into action to satisfy my proverbial Great Hunger (Van der Post, 1983:113-114).

I realised that what it means to be a student in the 21st century has to include reference to education. Although my engagement with such an endeavour should cover education in a general and in a global sense, the significance of South Africa with its rich history and its accompanying education has to be represented appropriately. This chapter therefore starts off with an exploration of South African education, followed by a research based foundation of education in general, from which the educational framework of my autoethnographical narrative were constructed.

This is my offering. Join me in my attempt at satisfying my curiosity.

2.2 THE 'WHITENESS' OF SOUTH AFRICAN EDUCATION

Education in South Africa and its culture of teaching and learning is pivotal in my autoethnographic lived experience as a student. The most recent events that had a significant impact on me from the perspective of both a student and an educator, were the violent 'Fees Must Fall' protests of 2015/2016. Through these demonstrations, primarily black university students demanded a fee-free higher education for all, with an accompanying demand for the '*de*-colonisation' of the curriculum. It is especially the level of violence that accompanied this demand that compelled me to take note.

It quickly became clear to me that this was all about 'whiteness' - about race. Within Benoit's (2015:16) acknowledgement that "the concept is difficult to articulate", this is my attempt towards a definition: it is the characteristic of the powerful 'white-skinned', privileged race occupying the land of the indigenous 'black/dark-skinned' race and by exploiting their vulnerability, forces them into submissively adopting the white 'normative' culture, thus stripping the indigenous race from their own culture. As a student, I felt compelled to engage in a brief exploration of the 'whiteness' of South African education to understand how my culture and I fitted into the events – which is inadvertently interwoven into the country's history. However, the intention of this paragraph is not to explore these events in any form of in-depth indisputable historical detail, but primarily to take you with me through my journey of identifying those highlights that were particularly relevant within this 'whiteness' context.

The origin of the earliest human beings in South Africa, the Khoi and the San, has been archaeologically determined to be approximately 70 000 years ago (Doke, 1960). Other indigenous Africans comprising five major tribes migrated to South Africa from, what is today known as Cameroon and Nigeria between 2000 BC and 500 AD (Harari, 2011:3-21). The education of these indigenous peoples in language, art, music, dance and practical skills (crafts) occurred through informal socialisation with parents and elders and more formally through cultural rituals such as initiation (Hlatshwayo, 2000).

In 1652, the Dutch, who were in possession of governmental powers, established a refreshment station and general rendezvous point for large shipping fleets that rounded the Cape. To fulfil their mission, the Dutch sought manpower in the form of local inhabitants, most of whom refused to be enslaved. Slave labour was thus obtained from India, Asia and other African countries (Booyse, Le Roux, Seroto & Wolhuter, 2011:37-52). The increase in the population of the multi-ethnic slaves and the local inhabitants, resulted in an increase in fresh produce requirements and the consequent need for farmers to extend their farming activities into the interior. This migration and the inevitable increasing interaction between the multi-ethnic population, prompted the development of a common lingua franca. Slowly but surely, a new white nation was emerging from the Dutch, today known as the Afrikaner or as the 'Boere' (farmers or Boers) – my culture.

The British occupied the Cape Colony in 1806 and launched their campaign to pursue the British Imperialist ideal of establishing a white supremacist race from the Cape to Cairo (Giliomee, 2003:264-266). Over time, the rapid increase in the black population started to cause a serious threat to the British expansion. In addition, maintaining the new, emerging, white nation as their ally, became a struggle for the British because the white farmers could not tolerate the efforts of the British to oppress and stifle their development. This new developing white nation left English domination, and approximately 20 000 Afrikaners engaged in the Great Trek to the north-east from 1836 onwards, eventually forming the two independent Boer Republics (the South African Republic – Transvaal - and the Orange Free State Republic) , still under British rule (Du Preez Van Wyk, 1947:112-147). With the discovery of gold in Transvaal in 1860 and diamonds in the Orange Free State in 1880, everything changed, especially regarding education and wealth (Giliomee, 2003:234-245). At this point in time I have lost track of exactly how many colonisations have taken place and exactly who were the colonisers and who were the colonised.

Regarding education during all of these colonisations, the initial former simple and non-segregated education system became increasingly complex and segregated. It was initially segregated according to the different ruling groups. Thereafter, it was segregated through 'racial' groupings. Generally, there were white English schools, white Afrikaans schools and missionary schools for Africans and people of colour. In each of these groupings, schools were again segregated along class lines, with the richer children receiving more and better education than the poorer students. Education was initially free and was not compulsory. However, although education eventually became compulsory for most, black students were mainly excluded from this ruling. Particularly with the establishment of the mines, education revealed patterns of social inequality corresponding to both race and class and subsequently, to gender. Notably, during this time, white individuals assumed the more complicated and responsible skilled jobs, while the members of the black population performed the low skilled or unskilled jobs – obviously with a substantial difference in income (Christie, 1991:29-48).

The South African War of 1899-1902 was the result of the attempt of the British to seize the mining wealth in the Afrikaner republics. It turned out to be one of the darkest moments in South African history up to that point in time. Not being able to conquer the Boer commandoes and refusing military defeat, the British troops engaged in destroying the Boer's farms, butchering their livestock, poisoning their wells, burning down their houses and incarcerating their women and children in more than 40 concentration camps. The appalling conditions of starvation, malnutrition, disease, exposure and other atrocities in these camps caused the death of 22 000 children and 5000 women while 5000 commando men died in battle. Evidence that some black South Africans were supporting the commandoes, caused the incarceration of many black people (men, woman and children) in more than 60 similar but separate labour camps in which 20 000 people died. Having essentially lost everything, dejected Boers eventually conceded defeat (Encyclopaedia Britannica, 2018a; McGreal, 1999;

Giliomee, 2003; Meredith, 2007; SAHO, 2017a). Although I had known some of this detail, it was when my Grandma told the stories that I realised that both the destruction by the perpetrators and the suffering of the victims remain unfathomable …. How is it possible that human beings could do this to others and how could anyone recover from such an experience?

The participation of black people in the war was such a threat to the British expansion, that they were excluded from the peace treaty negotiations after the war. The treaty also determined that any consideration of the enfranchisement of black individuals, would have to wait until self-governance has been granted to the Afrikaner republics as British colonies. This was a cunning way to hold the Afrikaner to ransom in effectively containing the expansion of black people by restricting their movements and where they could work. These restrictions were enforced through a pass system that was implemented in 1903 by the British. The system caused much conflict between the black people and the white Afrikaner population since a newly appointed Afrikaner constabulary who had to enforce the pass laws were seen to be colluding with the British in order to oppress the black people (Giliomee, 2003:264-265, 285-295; SAHO, 2017a, 2017b).

With all the wealth of the mines now under British control, the destitute and impoverished Afrikaners had to rebuild their lives from nothing. Finding that English would be the only official language in schools, despite treaty agreements, incensed the already psychologically exhausted Afrikaners who this time round, had nowhere to escape with their inherent cultural qualities to build a new nation. This eventually resulted in the emergence of a deep, unifying, Afrikaner nationalism through an organisation called the Afrikaner Brotherhood (Du Preez, 2012). The aim of this organisation was to liberate the Afrikaner once again from the shackles of British oppression and to pursue the self-determination that was promised in the country of their birth, the only country known as their home. Quality mother-tongue education, farming expertise and economic empowerment of *all* Afrikaners – especially those that were labelled the 'poor whites' were the focus. Today, Afrikaans is the third most spoken language in South Africa, it became a technical, commercial and academic language in record time, our farming expertise is in demand in many countries especially in Africa (Pearce, 2011; Traydon, 2018) and about 30% of the South African business world is still Afrikaans (Batt, 2016).

My pride of being part of an Afrikaner culture that was able to rebuild itself into something significant is substantiated by an excerpt of a Tweet from our internationally highly respected former Public Protector, Dr Thuli Madonsela, and her friend, Pastor William Mametsa, which was posted on their Facebook Page on 23 January 2018:

> I think the reason the Afrikaaner [sic] nation was able to build themselves into a
> formidable nation was to forget the past and found ways to empower themselves. The
> Afrikaaner [sic] was oppressed, confined to concentration camps by the English yet he
> rose and sent his kids to school. They were murdered in thousands, their women were

raped and their babies starved to death in camps but they rose because they moved beyond the hatred of their enemies. Instead of them toyi toying, they built their own schools, taught and trained their kids to work hard and farm the land. They taught their kids real values of respect (ubuntu) …The problem with us is that we see ourselves as victims. We feel sorry for ourselves and therefore deserve free things. Free houses, free money. We don't teach our kids the value of hard work … Our greatest enemy as a black nation today is blaming everybody and hating ourselves. We hate ourselves so much that we destroy the things that belonged to us. We destroy our schools, libraries and hospitals … This is self-hate, and it's destroying the black man. Let's face our real demons as a black nation and rise to the occasion. We have destroyed the culture of learning in our communities and replaced it with entertainment. (Madonsela, 2018)

It seems as though, over time, my Afrikaner nation became increasingly complacent with the disenfranchisement of the black population by the British, so much so, that when they effectively came into power in 1948, the perpetuation of the existing black disenfranchisement became a convenience to suppress the threat of the overwhelming black majority to the surge of Afrikaner nationalism. But what is most shocking, irrespective of proposed threats to the Afrikaner, the same Afrikaner that was appraised for its character of Christian values, principals and ingenuity, could succumb to creating what eventually became the monster of apartheid.

During the 1950s and 1960s, the population of South Africa was divided into the racial groups: White, Coloured, Indian and Black, with the latter further divided into eight ethnic groups. Each of these ethnic groups was allocated a piece of land called a homeland or Bantustan (Figure 10), which was proposed to be their land of origin and to which they were required to 'return'. But these lands were primarily situated in rural areas far away from large cities or towns, which made their viability as economically self-sufficient units effectively impossible (Giliomee, 2003:514-563).

The coloured, Indian and black labourers in urban areas were restricted to residing in particular locations outside the cities and towns depending on their group, and their movements were restricted by pass laws. They were also excluded from using public amenities and facilities or were provided with separate systems that were of a much lower standard (Giliomee, 2003:317-319; Booyse *et al*., 2011:246; SAHO, 2015).

The segregation in itself was demeaning but the way in which it was done by indiscriminately separating parents and children and members of larger families and communities of many different ethnic groups living peacefully together, was destructive at the very least. The banal indicators for separating groups were utterly humiliating. The forceful removal of people from their places of residence, the birthplace for many, to unfamiliar places that were often far removed from where they congregated, was dehumanising.
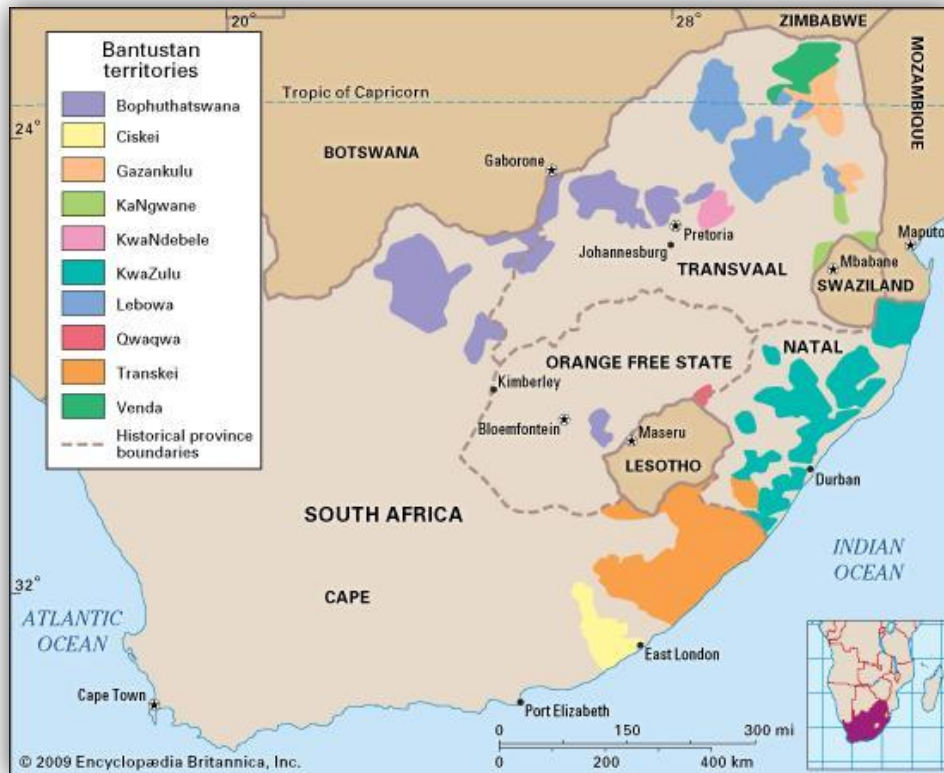
Figure 10: Bantustan: Historical territory, South Africa
Source: Encyclopaedia Britannica, 2018b

The Bantu/Black Education Act of 1953 determined that education would be controlled by the state, and it was to have a Christian and broadly national character (what an irony when non-whites were excluded from that nationalism). The mother tongue was assumed to be English or Afrikaans and denoted as the medium of instruction (another ridiculous anomaly). Provision was made for black education with facilities and financial support on a level incomparable with that of white education. The dissatisfaction with this state of affairs among the black communities flared up in several ways from time to time. Eventually, black schools were transformed into ideological battlegrounds and in 1976, violent student protesters in black schools insisted that Afrikaans as the medium of instruction should be scrapped. These protests were resisted with excessive force from police, sometimes with live ammunition. Although the protesters' insistence was granted, it took the government eight months to restore a functional degree of calm to the country, during which 575 people died, 4 000 were injured and inestimable damage to government and private property occurred (Christie, 1991; Booyse *et al.*, 2011:239-245).

Similar violent protests against the implemented Act repeatedly flared up, and exploited by political activists, the unrest escalated to the extent that a seven-month partial state of emergency in the

country was declared in 1985. There was some reduction in activities, but the disruption of education continued and gave rise to the slogan, 'Liberation first, education later', which resulted in the almost complete collapse of the black school system within four months. Subversive turmoil continued with a demand for 'People's education' (an education that would benefit black people) until the beginning of 1990 (Booyse *et al.*, 2011:247-267).

By the time I enrolled in Grade 1, all remaining restrictions from the partial state of emergency were lifted in order for all stakeholders to engage in negotiation towards a non-racial, free and fairly elected democratic government.

I assume that the geographical separation where all these consequences of apartheid was playing itself out in the black townships, had an overall 'out of sight, out of mind' result on us as school children where all my attention was focused on my school work and doing well – of course, with the aid of my Afrikaner privileged condition of an uninterrupted quality education. This continued even when black students joined my school. But, like Afrikaner students in general then, as a more comprehensive social consciousness developed when I entered university, my unconscious bias (Sternberg, 2016; Phelps & Claybrooke, 2017) still 'prevented' me from probing access to the full impact of the devastating apartheid consequences and the extent of the atrocities that accompanied them. It is with perdition that I have to confess that I have to repeat the exact expression I made earlier – only now the roles of perpetrator and victim are switched.

Even though this is the case, reflecting on the abuse of school to achieve the ideological ideal to destroy apartheid, is primarily unethical and all the more so if damage and even deaths are possibilities. In addition, severity of the disruption of black education for such an extended period of time, resulted in the children becoming known as the lost generation, effectively being deprived of education for 14 years. More devastating though is what the children inadvertently learnt about education during that time: the way in which one gets what one wants is through one-sided, destructive, violent protests and not through mutually constructive and educated quality intellectual engagement.

After much effort from all stakeholders, including a 'repenting' Afrikaner Brotherhood now known as the Afrikaner League, a democratic political dispensation for all people was proclaimed in South Africa in 1994. The thrust towards a new People's education commenced in which the Constitution of South Africa with its Bill of Human Rights – still acknowledged to be one of the best in the world – is the foundation (Booyse *et al.*, 2011:187-265; SAHO,2011). This People's education secures basic and equal education for all, with the choice of one of the 11 official languages and with no discrimination on the grounds of race.

By 1997, the time I was in Grade 9, the education landscape had changed dramatically in terms of Acts and policies. The focus of this change was the inception of Curriculum 2005 (C2005), an Outcomes-Based Education (OBE) curriculum. Although I never encountered OBE, I learnt that the development of the new curriculum firstly involved the cleansing of the apartheid curriculum from its 'whiteness' in the immediate aftermath of our first democratic election in 1994. In this way, C2005 was created (Chisholm, 2003a, 2003b). It was an Australian curriculum derived from mixed origins and was very complex (Killen, 1999). It was hastily implemented through short in-service courses and was met with severe criticism, denouncing it as bound to fail (Soudien, 1997; Soudien & Baxen, 1997; Christie, 1998; Jansen, 1998; Naidoo, 2011). A new design was brought forth through consultation with Spady (1994) whose concept of OBE was much simpler. However, the eventual curriculum documents did not specify any content or pedagogy and contained a complex framework with difficult terminology. It was acknowledged that implementation of an OBE would require a paradigm shift; however, C2005 was implemented by facilitators who were equally uncertain in conducting the short in-service courses for a completely different classroom practice (Jansen & Christie, 1999). Curriculum 2005 was eventually reviewed and revised (Chisholm, 2003a, 2003b, 2004; Chisholm, Motala & Vallay, 2003), with major recommendations made by a ministerial committee, and the new Revised National Curriculum Statement (RNCS) came into being (Chisholm, 2003a, 2005a, 2005b).

The major challenge in designing a 'whiteless' curriculum was the consideration of the entire spectrum of the racially and socially based inequalities that determine the context of education. A major consideration is that the codes of powerful content knowledge should be taught to everyone (Christie, 2008; Allias, 2014). Finally, the RNCS (Curriculum and Policy Statement – CAPS) was implemented in 2011. The eventual result is that a content-based curriculum with exceptional detailed content knowledge together with examples, the pedagogy to use, complete lesson plans, worksheets with answers and in some cases, videos with more examples are provided for teachers. However, it is a curriculum in which the teacher is a technician for compliance, and my limited experience is that this may not restore the culture of teaching and learning to produce quality students in schools (Christie, 1998; Christie, Butler & Potterton, 2007; Soudien, 2007). Morrow (2007) warned against a complete collapse of many of our schools and universities, and Bloch (2009) heeded that we cannot afford the same slow educational change as occurred previously, and if a recent study about the readiness of our school students indicates that they are not adequately equipped to handle higher education (Govender, 2017), we have reason to be seriously concerned.

After more than 20 years of democracy, there seems to be little evidence of substantial improvement in the quality of our education system except for an increase in access (Van der Walt, Potgieter & Wolhuter, 2014). This is devastating, especially considering that South Africa spends approximately 15% of its total budget on basic education (Mbiza, 2018). Despite similar rigorous economic and

policy attempts towards the transformation of higher education (Soudien, 2010), the poor quality of South African schooling and higher education is represented by the consistently poor results over a period of at least ten years of the Progress in International Reading Literacy Study (PIRLS). In 2016 it was indicated that nearly 80% of our Grade 4 students still cannot read – the corresponding adverse effect it has on the quality of the consecutive levels of education is inevitable.

I now return to the proportionately small number of predominantly black students who were protesting for fee-free higher education and the decolonisation of the curriculum in 2015/2016. In 1916, our first and exclusively black university, the Lovedale Missionary Institute near Fort Hare was established (Maaba, 2001:419). It offered a 'whiteness' Western academic education through white European lecturers of international standard that quickly made it the key higher education institution in Sub-Saharan Africa. It produced a black African intellectual elite. Nelson Mandela (1994b:41) who was a student there, wrote the following accolade in his autobiography: "For young black South Africans like myself, it was Oxford and Cambridge, Harvard and Yale, all rolled into one". This must be undoubtedly one of his experiences that had Mandela said: "Education is the most powerful weapon which you can use to change the world". Like Mandela, many others who fought for the destruction of apartheid, also had the opportunity to study with bursaries in the United Kingdom (Israel, 1999) likewise in other European, American and African universities during the time of the struggle – I would assume for what should happen after achieving the1994 aim. I found it difficult to identify the corresponding unrelenting rigour, vigour, commitment and dedication to destroy apartheid, now being employed to build a formidable new nation. After more than twenty years of higher education under a new dispensation during the 2015/2016 student protests, Jonathan Jansen, the former black Vice Chancellor of the University of the Orange Free State, stated that the fundamental problem of the recent upsurge in the call for decolonisation of the curriculum is its "rhetorical and dishonest appeal among protesters to 'catastrophise' (grossly exaggerate events or possibilities as unbearable 'realities') … which is far removed from a sincere desire or commitment to change the curriculum in places of learning" (Jansen 2017:163). The fundamental curriculum theory question is: Which knowledge is most worthy? The students, however, aimed to highlight the need for systemic solutions to the problems of hunger, poverty and equality due to the 'whiteness' of the education system but are ignorant about the limits of altruism:

> The protestors know that the university cannot single-handedly solve these problems in an instant. What universities can do is prepare highly skilled graduates who can alter domestic economies and lead social change. But that solution is too far off in the future. The students want change *now*, and to make their case they targeted the most vulnerable of institutions in the social welfare chain: the public university. The tragedy is that irrevocable damage was being unleashed on fragile and immensely valuable national assets. (Jansen, 2017:193)

A school or university teacher has the following task:

> … making the curriculum intelligible to students. The curriculum is dead until it comes alive in the teaching and learning process … Moreover, invoking the language of decolonisation is at best a distractor from the challenges of producing, acquiring, and using knowledge to advance our understanding of a complex world. (Jansen, 2017:169)

It requires a simple accounting operation to determine the cost of fee-free higher education per student and what may be made available from an already excessive higher education budget in government coffers, in order to come to the already known conclusion from statistics and studies in other countries, that fee-free higher education eventually becomes unsustainable (Bozzoli, 2018).

The student protest leaders were all postgraduate students. In view of the preceding paragraphs, if this is the type of student that our higher education is producing after 20 years, no wonder our higher education quality is ranked as low as it does. It is beyond my comprehension that the protests were not seized by the higher-education vice chancellors as an ideal educational opportunity to demand academic accountability, social responsibility and ethical morality from the students in relation to their intended and/or on-going actions. After all, this is ultimately the function of a higher education institution. It is deeply concerning what students are learning under these conditions where they were never held accountable for their actions:

> They have learnt that, more often than not, there is a causal connection between levels of disruptive violence and the chances of getting what they want. And when they cannot get what they want, the protests escalate quickly into destructive and dangerous cycles of violence that have laid low even the top universities in the country. (Jansen, 2017:241)

The student protests appear to be no different from the labour, service delivery, governance and other protests in South Africa. I cannot help but relate this to the 'Liberation before education' slogan during the school protests in 1975 and ask myself: What is the eventual consequence of "South Africa's scary new culture of reckless disrespect"? (Jansen, 2016). Could it be that it is so easy for people to get what they want through the violent destruction of what exists, that the capacity to engage in the effortful and fulfilling labour of creatively constructing what *could be*, is being lost? Is this ultimately what it means to be a student in the 21st century – in South Africa?

And like Thuli Madonsela tweeted, these conditions are still blamed on 'whiteness' – on race. However, if we consider the perpetrators of the greater and the smaller wars, the holocausts, the genocides, the ethnic cleansings and the many other atrocities, irrespective of magnitude or intensity, no race is excluded – *and no justification will suffice for the perpetrations*. As human beings, we share an evolutionary killer-carnivore heritage (Ardrey, 1961; Harari, 2011; Davis 2016).

Freedom – Our Responsibility. This was the title of an international conference held with the aim of building a culture of reconciliation, sustainability and empowerment in South Africa (Smith, 2014). There is no doubt that the preceding paragraphs call for reconciliation. In fact, there can be little doubt that reconciliation is one of the most significant contemporary challenges in the world today (Alhuwalhia, Atkinson, Bishop, Christie, Hattam & Matthews, 2012). However, with regard to the South African student protests, it is the prominence of 'freedom' that struck me. I asked myself: Freedom from what? The preceding paragraphs indicate that it is most likely freedom from 'whiteness'. Our reconciliation, therefore, is *not* about race, but it is about humanity. We, therefore, have the responsibility to liberate ourselves from the divisions of race and all other divisive constructions through the process of reconciliation in the commonality of our humanity.

However, the key question is: How is reconciliation attained? Jansen (2009:269) describes brokenness as follows:

> The origin of brokenness comes from the spiritual world of evangelical faith. It is the construct of brokenness, the idea that in our human state we are prone to failure and incompletion, and that as imperfect humans we constantly seek a higher order of living. Brokenness is the realization of imperfection, the spiritual state of recognizing one's humanness before the forgiving and loving power of God. But brokenness is more; it is the profound outward acknowledgement of inward struggle done in such a way as to invite communication with other people and with the divine.

Continuing in this regard, Casey (2016:92) adds another critical element of brokenness, the recognition of a moment of vulnerability, a moment of brokenness that is shared by all involved: "[S]uch moments reveal our true humanity because they bring us closer to one another through the shared experience of brokenness".

Despite our inherent violent (killer) human nature, it is the fact that we are fundamentally moral human beings (Peterson, 2018) who are ontologically endowed with exceptional human dispositions, qualities and virtues (Barnett, 2007:101-112) that eliminates violence as an option. The ethics of our humanity in this regard is "an on-going *practice*, rather than a set of ideal *principles*. It involves continuously being open to others and being prepared to think about how we should live together in the world" (Christie, 2008:9).

Such a living together, though, also elevates responsibility as the ethical imperative to achieve freedom. And this responsibility is always and fundamentally an individual and personal one. As Peterson (2018:31-66) points out: As an individual human being I have to take ownership of the life I am living and, even if the circumstances are not of my own doing, I have to take responsibility for the life I am creating – because I have the freedom and power of choice – not necessarily to change my

circumstances, but always how I respond to it. And if my response is an *action* of my own life enhancement, however minute it may seem, it flows together with the life enhancement energies of everything into what Wheatley (2006) calls a participating universe.

To start out with healing our nation, it might be important to engage in smaller and larger projects of the kind that psychosocially exposes our vulnerability and releases our shared and reciprocal brokenness as has been done in many ways all over the world. However important such projects might be, they could and should only be temporary, because it is continually pursuing the authentic human nature of every student to become fully human that constitutes the sustainability of a flourishing humanity - this is the ethical imperative of the education project. It is the foundation and the construction of the framework of this kind of education that is the object of the next section.

2.3   THE 'HUMANNESS' OF AUTHENTIC EDUCATION

I have subsequently conducted a literature research in order to explore the 'humanness' of authentic education (Jansen, 2009:269), that appears in Appendix B on the CD. It is from that exploration that I constructed the educational framework of my autoethnographic narrative which follows in this paragraph. Since this framework is a result of my construction of knowledge statements, it is important that I provide an appropriate context as a prelude for this academic endeavour.

First of all, I want to state that these knowledge statements have been inter-subjectively validated. In this regard, Polkinghorne (1983:241-251) provides a valuable indication of how such validation may be executed through three overlapping measures, namely innate reasonableness, calculated trial-and-error construction and adoption of appropriate pluralistic epistemologies. These, together with appropriate triangulation and crystallisation operations were implemented to enhance the trustworthiness of the knowledge claims I have made. Although this is the case, this research, similar to any other, cannot and does not claim exhaustiveness or absolute certainty because of the abundant accessible data, information, knowledge and experiences that were consciously and unconsciously filtered forward (Weinberger, 2012:11). Within this context, my research project inadvertently cuts across several fields in education, and it may contain concepts that are contentious even within the same field. In fact, Weinberger (2012:40) states that "[w]e are witnessing a version of Newton's Second Law: On the Net, every fact has an equal and opposite reaction." Although this disconcerting discovery became real to me, through necessity, I had to construct my knowledge statements to be appropriate within the ambit and confines of this research project and provide valid and trustworthy interpretations and explanations upon which I could base my actions in an attempt to resolve the research challenge with which I was confronted (Polkinghorne, 1983:242). Therefore, I deliberately but inevitably made a selection, although I acknowledge that my interpretation is but one of many. In

the paragraphs that follow, I voice my coherent line of argument, that as far as possible, is supported and validated by appropriate and trustworthy existing research, reported by recognised and reputable authors. At the same time, I have resourced other educationists and researchers whose names might not be found among the mainline research fraternity. I did this because their contributions affirmed at least the internal validity of my logical line of argument and sought justification since the supercomplexity of the world in which we are living is characterised by a "multiplicity of incompatible interpretations" (Barnett, 2004:249) – and mine is one of them. In view of this, I would like to extend an invitation to you, the reader, through the following words of Popper (1963:35):

> So my answer to the questions 'How do you know? What is the source or basis of your assertion? What observations have led you to it?' would be: 'I do *not* know: my assertion was merely a guess. Never mind the source, or the sources, from which it may spring – there are many possible sources, and I may not be aware of half of them; and origins and pedigrees have, in any case, little bearing upon truth. But if you are interested in the problem I tried to solve by my tentative assertion, you may criticize me as severely as you can. And if you can design some experimental test which you might think might refute my assertion, I shall gladly and to the best of my powers help you to refute it.'

But until you have constructed such experimental tests and produced a similarly substantiated set of alternative knowledge claims, I would like to invite you to join me in my attempt to resolve the challenge at hand on the basis of the knowledge claims constructed in this paragraph. But for both of us to benefit from the experience that this project aims to achieve, I ask you to abandon your prejudices, to set aside your assumptions and to suspend your certainties – at least for a while – and join me on this explorative journey because I suspect that we may be afforded a delightful relationship in which we allow ourselves to change our minds to some extent and experience the gratifying outcome of departing as wiser beings.

2.3.1   The educational framework of my autoethnographic narrative

This research is an exploration of my student life, and central to being a student is learning. However, although my life as a student has been occupied by many different types and levels of learning, the learning that is pivotal to this research is *authentic learning*, the type of learning I encountered for the first time during my PGCHE year, with *authenticity* and *facilitating authentic learning* vitally related to authentic learning. Authenticity, authentic learning and facilitating authentic learning will therefore be discussed next.

2.3.1.1 Authenticity

Authentic education uses the philosophy of Martin Heidegger (1962) as the phenomenological ontology of *Dasein* ('being there') and *Being* (as the inseparability of the human being and its *experience* of being there or present) as its foundation. Escudero (2014:6) links this with autoethnography extremely well when he maintains that Heidegger's (1927) magnum opus, *Being and Time*, "demands that the reader undergo for him- or herself his or her own journey of self-discovery. It outlines a path of self-discovery and self-analysis". Barnett (2007:167) warns us very seriously that this very "[b]eing is now called forward unremittingly, day in and day out" and refers to it as "being-for-complexity" (Barnett, 2007:167) since we are living today in a world of increased complexity. In effect, the seriousness of autoethnography is emphasised.

As human beings, we come into this world as potential and therefore have a purpose, which is encapsulated in the uniqueness of our individual *authenticity*. Being – that which everyone experiences – is always in a relationship with something. We are primarily in a relationship with ourselves (individually), our internal environment, but we are also jointly, with others, in a relationship with our external environment (human and non-human), with the latter being natural or manmade. These relationships inadvertently influence us, and we influence them. For this reason, we have a responsibility to care for everything and everyone with whom we have a relationship. Frankl (2011:32) states that "being human is being responsible – existentially responsible, responsible for one's own existence". Frankl (2011) further explains that humans can only exist authentically when they are responsible. Buscaglia (1986) reveals the ethical principles that guided humanity throughout history. He says that everyone of us, through our own individual uniqueness, is responsible to complete a portion of the vast universal canvas. The full actualisation of the world, therefore, depends on the self-actualisation of each one of us. Consequently, the greatest challenge to each and every single human being is to work diligently at being fully human - it is an ethical imperative . There is thus also a strong link between being responsible and having integrity. According to Fishman (2014:26) from the *International Centre for Academic Integrity*, integrity lays the foundation for responsibility. Integrity can be seen as the virtue of one's own convictions and deepest values (Rand, 1964:46).

Unfortunately, we are born into a world of compliance and conformity, a world in which society manages us to the extent that we are living inauthentic lives, resulting in the making of choices based on outside influences (Heidegger, 1962:428; Peck, 1978:42). My quest and your quest in life is, therefore, to pursue the truth (the word 'truth' translated into Greek is *aletheia* that means continuous revealing or disclosure) in all these relationships because we need to care for them appropriately. But we can only care appropriately when we pursue the truth about our own authenticity, who we really are, what we are capable of and our ultimate purpose.

The importance of authenticity in education cannot be underestimated. Although Barnett (2007:40) specifies higher education in his statement, what he says is equally valid for all levels of education: "'Authenticity' is perhaps the key concept within the deep structure of the idea of higher education" and "A higher education that does not call, does not insist, on authenticity in the student is no higher education". However, authenticity is not simply there for the taking, "it has to be fought for, won and sustained" (Barnett, 2007:40).

Becoming authentic, demands effortful, committed work that requires courage, honesty, integrity and determination. First, we must excavate and destroy the deficient and paralysing inauthentic core beliefs that we have adopted and allowed to obscure our authenticity in order to liberate ourselves from their devastating power. Only when this is accomplished, are we ready to move deeper:

> At this deeper level, our living organism is a system tingling with purpose … the deep organic programming that underlies our sense of what is 'right'. And just as each of us is a unique expression of our genetic code … we are each, similarly, a unique expression of our cellular commitments … These cellular commitments are the burning fuse of purpose that snakes through our lives, always focused on the explosive realization of our full human potential and eventual self-transcendence. (De Quincey, 2005:57-58)

This essential work consists of a process that requires authenticity, purpose and self-transcendence. These guidelines should enable people to undertake rigorous and appropriate self-management. Socrates revealed a fundamental existential truth when he declared: "An unexamined life is not worth living". This examination of one's life must be very specific because it has to promote self-transcendence for the purpose of becoming authentic. It represents the process of learning but is fundamentally concerned with learning more about the quality of our lives. Smilkstein (2011) states that we are born to learn, and Leonard and Murphy (1995:xv) expand on this as follows: "Our destiny is to learn and keep on learning for as long as we live".

Our authenticity is the source of our full human potential. It is inherent because of our ultimate purpose to serve humanity for the common good. But it comes to fruition only when we commit to the call of resolving the unprecedented challenges of real-life in its dynamic supercomplexity. Only then can real-life reveal its deepest secrets to the diligent seeker – that transcends its reduction to existing texts or theories or disciplines or subjects – to a higher order of being human. However, since realising unique personal potential (talent) may be abused to the detriment of the common good, we are endowed with a generic ethical potential (virtues, i.e. ethical competencies of moral excellence). Only if these two potentialities operate in harmony is it rewarded with *flow* – an optimal experience of exhilaration, accomplishment and joy at one's contribution to humanity and one's own personal transformation, of an intensity that nothing else seems to matter (Csikszentmihalyi, 1996, 2009).

The consequence of failing to satisfy the ontological quest for accessing the treasure of extraordinary potential and utilising it in fulfilling our unending quest of becoming authentic, is incomprehensible, as the preceding paragraphs have indicated. However, we are also witnessing the alternative as an increasing devastation in all domains and at all levels.

> According to some of the most distinguished and thoughtful students of the mind, one of the most devastating things that can happen to anyone is to fail to fulfil his potential. A kind of gnawing emptiness, longing, frustration and displaced anger takes over. When this occurs, whether the anger is turned inward on the self or outward towards others, dreadful destruction results. (Hall, 1976:4)

Since we will spend a lifetime pursuing authenticity, it should be no surprise that we are specially created for this purposeful learning. Victor Frankl, a prisoner in Auschwitz and Dachau whose family perished in the gas chambers, might be thought of as someone who had nothing to live for. On his release, Frankl (2008:105) wrote one of the most powerful and enduring works of the 20th century that was based on the notes in which he had secretly managed to record his experiences:

> Man's search for meaning is the primary motivation in his life and not a 'secondary rationalization' of instinctual drives. This meaning is unique and specific in that it must and can be fulfilled by him alone; only then does it achieve a significance which will satisfy his own *will* to meaning.

Please note that it is the *search* for meaning that is the primary motivation in man's life, not the finding of it. This does not mean that finding meaning is excluded in this learning process, but rather indicates the perpetual innate will to *improve the quality of meaning* and, therefore, of life. Another vital remark is that the search for meaning must be conducted *by the individual human being alone*, in order for one to benefit from the continuing generated will to search for new, improved meaning for which the only purpose is improvement of the quality of life. This does not suggest that meaning cannot be constructed in conjunction with other human beings but that the individual human being must engage in the journey inwards, the 'lonely' journey to explore the potential that is already in existence there, to find what is latent and not yet revealed and to take ownership of the meaning that has been constructed before it is exposed for examination by others. Esping (2010:204) confirms that Frankl's (1946) book, *Man's Search for Meaning*, meets numerous autoethnographic functional and structural characteristics as described throughout Ellis' (2004) book *The ethnographic I: A methodological novel about autoethnography.*

The *will* to meaning or the search for meaning or the construction of meaning incorporates the will to learn, which is the foundational, ontological human disposition. "Will is the state of the person's being. It provides internal energy; spirit even" (Barnett, 2007:18). All other dispositions (such as the

will to engage, the will to explore, the will to experience, the determination to go forward), are built on the will to learn (Barnett 2007:101). However, all dispositions are also foundational when compared with human qualities. Human qualities (e.g. integrity, courage, responsibility, resilience, self-discipline and respect) "supply the character of the person that is already energized through the dispositions" (Barnett, 2007:101). Within this context, the will to find meaning is fundamentally a quest to find out who we really are, what we are capable of and what our ultimate purpose is. The will to learn is, therefore, also the will to self-transcend into a flourishing, life-enhancing authenticity.

> Will, we must say and not shirk from saying it, is ontological through and through. Without will, the idea for person cannot get off the ground. Without will, too, the idea of a student cannot seriously have meaning … It indicates that a student is committed, is energized, is giving of herself in a firsthand way. It indicates much more too; for example as to matters of responsibility and other virtues that we must come onto. Where the will is present, everything is present, everything is possible. Where it is absent, nothing, educationally speaking, is possible. (Barnett, 2007:18-19)

Unfortunately, our current partial, insufficient and therefore, deficient mind-body education is dismally failing in its ontological challenge.

> Due to the depersonalization and alienation occurring in contemporary education … education has lost sight of and is moving further away from what it means to be truly human. That is, both students and educators are estranged from their authentic phenomenological sense of self-hood … For the sake of education's potential reform, once made philosophically aware of this condition, educators should seek a return for appropriation to this forgotten understanding of what it means to be human and which is, in the first instance, always and already a primordial way of Being-in-the-world in which life unfolds as an original 'educative' process. (Magrini, 2011:1)

2.3.1.2   Authentic learning

Authentic learning, however, accomplishes the ontological challenge of 21st-century education within a supercomplex world with an unknown future (Newman, Marks & Gamoran, 1995; Van Merriënboer & Paas, 2003; Barnett, 2007; Thomas, 2012), because of its potential in the transformation of the human being as an educational purpose (Barnett, 2007:101-103). Pursuing one's authenticity is the product of authentic learning, the type of learning that educates us on how to live life in its inequality, diversity and uncompromising supercomplexity. Authentic learning allows one to take responsibility

for one's own actions, to become *fully human* (*not* becoming black/white)*,* due to the attainment of the fundamental human virtues. This is exactly what the message of Madonsela (2018) urges us to do.

Authenticity is an essential requirement in learning tasks because "whole learning tasks are considered the driving force for learning in powerful learning environments" (Van Merriënboer & Paas, 2003:14). This means that students should become 'active learners', capable of solving complex problems and constructing meaning that is grounded in *real-world experience*. Dispositions and qualities in the form of essential human virtues (intra- and interpersonal human virtues) are acquired through this pedagogy as personal development of the highest order (Alexander & Potter, 2005:108) and the ultimate transformation of the human being as the educational purpose, nothing less (Barnett, 2007:101-103).

Although there are many virtues, the main ones, as Slabbert, De Kock and Hattingh (2009:CD-ROM) identified them from the work of Aristotle, can be stipulated in the following sequence of attainment:

a) Intrapersonal human virtues:

Self-confidence (feeling capable); motivation (the will to do it); initiative (taking action); effort (working hard); perseverance (finishing your action); common sense (making the right decision); responsibility (doing the right thing, i.e. having integrity, and accepting the consequences); independence (self-sufficiency); joy (being joyful); love (caring for myself and everything I stand in relationship to; thus having empathy).

b) Interpersonal human virtues:

Humanism (how do I see you? – this refers to 'brokenness' as explained by Jansen [2009:269] and Casey [2016:92] in Section 2.2); communication, divided into four levels: acquaintance, sharing information, personal interest and sharing feelings (maximising potential can only happen when feelings are understood); dealing with feelings (how do I respond to you?); justice and forgiveness (how do I want you to respond to me?); love (how do I ultimately care for you?); leadership (how effectively can I 'lead' you to maximise and fully utilise your potential?)

Additionally, authentic learning epitomises holistic learning or holism. Holism is not about putting things together – such a perception can never constitute holism. Holism in education recognises the inseparable wholeness and interconnectedness of the world. The purpose of education is to empower learners to explore reality as an inseparable whole, and through critical analysis, to find its constituents and to identify the nature and structure of the relationships between them. This constitutes its power and quality or lack thereof, making it possible to improve its quality effectively within the supercomplexity that makes it deficient, thus manifesting the real-life challenge. It is, in effect, the restoration or increase or induction of new relationships that restores the power and quality

of reality and makes the whole more than the sum of the parts and hence, resolves the real-life challenge.

The learning that pursues authenticity can only be holistic if the integrity of all four of the inseparable essential components of human individuality, namely body, mind, soul and spirit, is simultaneously activated. Although I am incredibly appreciative of all the things that I have learnt, my search for meaning has not been satisfied by finding things. This has been happening as far back as I can remember, even as a small child, and in this, I found myself a little different from my classmates. I now realise that throughout my entire student life – although perhaps not always consciously – I was in a continuous pursuit of finding myself through the teleological questions (Dimitrov, 2003:500): What is the purpose of this? Is this all there is? Who am I? What am I capable of? What am I here for? Why am I doing this? In view of pursuing answers to these questions, I agree with Niño (2002:45) that I was then, and still am, on a "spiritual quest".

If the aim of education is to facilitate lifelong authentic learning, then learning as the focus of education must be defined. I can recognise that I am on a spiritual quest with my body, mind, soul and spirit being simultaneously activated when I am experiencing it in the way in which I am learning. In this sense, the learning framework for this research is in its simplest form – according to Claxton (1999:11), "what you do when you don't know what to do" and according to Slabbert, De Kock and Hattingh, (2009:CD-ROM), the construction of meaning by the learner him- or herself who is then able to use it to do something creatively new. According to the constructivist epistemology, "knowledge is not passively received either through the senses or by way of communication" (Von Glasersfeld, 1988:83), 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 (Heylighen, 1997, Von Glasersfeld, 2005:11). This is authentic learning with the following characteristics (Lombardi, 2007:5-6):

- It takes place while immersed in a real-world experience with its uncompromising complexity.
- It is a confrontation with a demanding, ill-structured challenge and reflects "our physical [PQ], mental [IQ], emotional [EQ], and spiritual [SQ] experience … when the factors responsible for the integrity of all inseparable constituents of human individuality, i.e. body, mind, soul and spirit, are simultaneously activated" (Dimitrov & Wilson, 2002:46, 48).
- It requires sustained investigation.
- It considers multiple dimensions and perspectives.
- It is sustained through continuous critical reflection.
- It challenges the attainment and flourishing of cognitive (academic) and non-cognitive (personal) potential.

- The final product is real but has multiple possible outcomes.

The constructivist character of authentic learning has been firstly criticised as too time-consuming when used in education to the detriment of the disadvantaged living in impoverished learning environments and secondly, as an apparent denial that knowledge is socially constructed. The counter-argument to these criticisms is that learning inevitably takes time, and quality learning takes even more time. Besides, the (cognitive) construction of meaning (knowledge and skills) is inherently and ultimately individualistic even though it may be constructed in a social environment, and so is the attainment of the (non-cognitive) personal qualities of human potential (Mohrhoff, 2008:18). In fact, the support of research in many dimensions, especially that of neuroscience, has elevated constructivism to a physical reality (Smilkstein, 2011; Zull, 2011).

a)   *The authenticity of experiential learning*

According to Fry, Ketteridge and Marshall (2009:15), experience on all levels of life is fundamental in learning and is referred to as 'experiential learning'. Kolb's (1994) Experiential Learning Theory is significant in that it originates from his research on how human beings naturally – authentically – learn (Kolb, 1984:21; Ellis, Kiesinger & Tillmann-Healy, 1997:26). Slabbert, De Kock and Hattingh (2009:68-76) utilised Kolb's experiential learning cycle to identify the characteristics of authentic learning (Figure 11).

Life calls (invites the learner) to explore its deepest secrets and man's primary motivation in his life, the search for meaning (curiosity). This evokes an intentionality to attend to and engage in a relationship with life, perceiving, feeling (bodily-kinaesthetically and emotionally) and thus **immersing in** a challenging real-life experience (in which the real-life experience and its outcome are unknown) as the first step in authentic learning (explorative consciousness). As one experiences chaos and complexity, the quality of reflexivity is evoked when an intentional **reflection on** the challenging real-life experience is lodged during which the challenging real-life experience is translated into useful dynamic information (reflexive consciousness) (Korthagen, Kessels, Koster, Lagerwerf & Wubbels, 2001:43). The reflection allows for a **construction of** that challenging real-life experience in the form of cognitive schemata and mental models that transcend the direct experience (its knowledge and skills) (Van Merriënboer & Paas, 2003:5). This results in a new order of consciousness in the form of dispositions and qualities as personal development of the highest order (Alexander & Potter, 2005:108) and the ultimate transformation of the human being as the educational purpose (dispositional consciousness), nothing less (Barnett, 2007:101-103). This energises and enhances the foundational disposition of the will to learn (Barnett, 2007:101; Frankl, 2008:105) into

creating a higher quality of life and a readiness to **explore a new and challenging** real-life experience through which enhancement of the quality of life *for all* will ensue (an ethical consciousness, also known as a new order of self-transcendence) (Csikszentmihalyi, 1996).
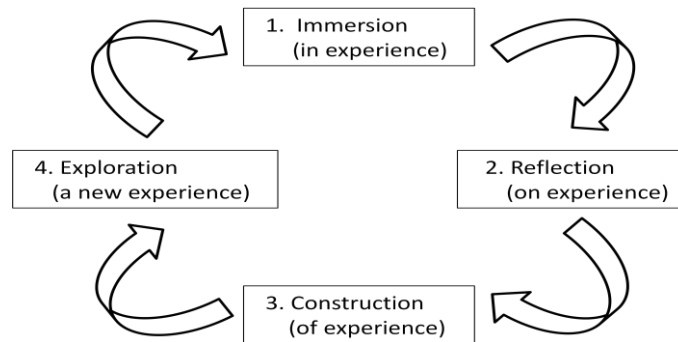
Figure 11: The cycle of authentic learning
Source: Slabbert, De Kock & Hattingh, 2009:73

b)   *The quality of learning style versatility*

The theory of learning style versatility (Du Toit & Petegem, 2006:1665-1687) can be explained through the Herrmann Whole Brain® Thinking Model that indicates our thinking preferences in four different quadrants of the brain as depicted in Figure 12 and ultimately summarises one's maximum potential.

Any of the four brain quadrants, A, B, C or D, may be an individual's preferred learning style. However, scrutinising the learning modes available in the other quadrants makes it clear that the ability to function well in *all* quadrants will radically improve the quality of learning. The quality of learning in turn, will assist in resolving the challenges of real-life in a holistic, integrated way, and this will characterise someone who is operating to a fully maximised human potential in this regard. It should be obvious that authentic learning does not only demand learning style versatility, but is also, in fact, impossible without learning style versatility.

Dewey (1897:78) explains the relationship between education and living, or lived experience, as follows:

> I believe that education, therefore, is a process of living and not a preparation for future living. I believe that school must represent life – life as real and vital to the child as that which he carries on in the home, in the neighbourhood or on the play-ground.
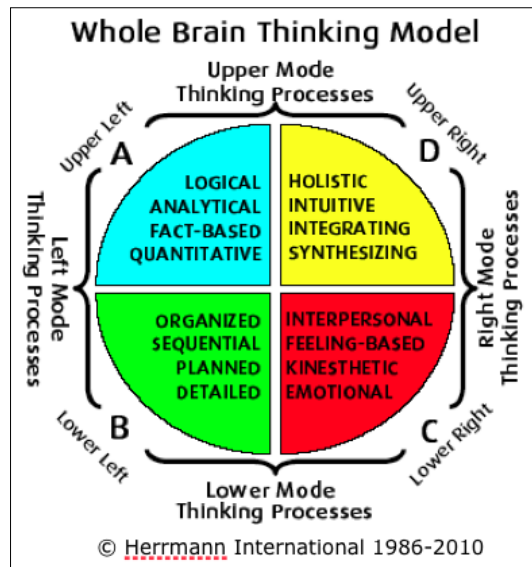
Figure 12: The Herrmann Whole Brain® Thinking Model
Source: Herrmann, 1995

The actual learning processes required to resolve the challenge, will therefore "be both high-risk and transformatory in character" (Barnett, 2004:257). This learning process therefore results in 'brokenness' (Jansen, 2009:269; Casey, 2016:92).

Turak (2014) reminds us that such an achievement of transformation, not only in learning theory, but also in all dimensions and on all levels of life, is not an option, but an ethical imperative.

> Whether you call it personal development, personal growth, self-actualization, self-transcendence, or spirituality does not matter. What matters is realizing that the reason you were born is to become the best human being you can possibly be. Personal development is not a tool for reaching a bigger goal. Becoming a complete human being is already the biggest and most noble goal you can aspire to. (Turak, 2014:para. 4)

For this to be possible, however, the professional practice of facilitating lifelong authentic learning must be employed in education.

2.3.1.3 *The professional practice of facilitating lifelong authentic learning*

The concept of learning in all its variants (e.g. lifelong learning, experiential learning and authentic learning), its facilitation in education and its associated concepts have been the focal points of research for many authors. Only a few authors have been selected and referenced in this study. I found the work of Slabbert, De Kock and Hattingh (2009) a valuable resource for its holistic integration of

all these concepts into the field of education. The concept of learning is so often fragmented into isolated theories, methods and techniques used eclectically in a technicist fashion, stripping it from its holistic purpose.

It was my search for a substantial, universal aim of education that initially attracted me, my reward of my search being the aim as defined in Chapter 1, Section 1.8. From all the preceding paragraphs, it can be deduced that facilitating learning requires the deliberate and purposeful intervention of a facilitator of learning who confronts learners with *authentic real-life challenges*. The learners must resolve these challenges themselves in order to achieve personal development of the highest order (the highest quality of Being), while producing the highest possible level of learning quality. This is the focal point of facilitating authentic learning.

Although facilitating learning is described as a linear process, in practice, it is a complex process determined primarily by the learners' responses to the real-life challenges that they are initially confronted with and their continuous progression towards the improvement of the quality of their learning. Facilitating learning consists of three purposes, each with one or more facilitating learning functions to achieve this purpose. I have summarised the process as indicated in Table 1.

Table 1: The professional practice of facilitating lifelong authentic learning

WHAT IS THE FACILITATING LEARNING PURPOSE?	WHAT IS THE FACILITATING LEARNING FUNCTION?	DESCRIPTION
INITIATING LEARNING	**Learning Task Design (LTD)**	Everything in facilitating learning revolves around a learning task that has to be designed. A learning task is a demanding real-life challenge within the curriculum context. The learners must experience this in person as a serious desire to improve the quality of life or in the form of an existing real-life problem that at the time has no known resolution and must be solved by the learners themselves. As a powerful learning environment, the learning task has to aim at the development of complex and higher-order knowledge and skills, deep conceptual understanding and metacognitive competences that enable learners to be in control of their learning and personal development. Such outcomes are the most appropriate for the transfer of learning (Van Merriënboer & Paas, 2003:3). The challenge has to demand immediate resolution by the learners themselves, even if it is a currently required proactive action to prevent disaster later. Finding the resolution to the challenge should be possible only through the learners' acquisition of the knowledge, skills and values indicated in the curriculum. Resolving the challenge must be an actual experience of personal development by the learners and the subsequent improvement of the quality of their lives.
	Learning Task Presentation (LTP)	This involves presenting the learning task orally in the form of a monologue and providing the accompanying support in the shortest possible time to indicate clearly what the real-life challenge is, to demonstrate the importance and urgency of resolving it within implicated parameters and to stress that action is required immediately. Its purpose is to immerse the learners in experiencing the real-life challenge in its holistic uncompromising complexity but without allowing any interaction from their side at this stage. Only the essence of the oral presentation should be provided to the learners in written form for reference purposes.
LEARNING	**Authentic Learning (AL)**	After the presentation of the learning task, authentic learning will commence and continue throughout the entire learning task execution phase as the foundation for all learning actions in the authentic learning cycle, which comprises: (a) immersing of learners in the challenging real-life experience; (b) demanding their reflection on the real-life experience to establish what the actual real-life challenge is and what is necessary to resolve it; (c) ensuring that learners purposefully probe all appropriate existing curricular avenues that may contribute to the resolution of the real-life experience; (d) constructing the best possible quality real-life experience resolution; and (e) eliciting the exploration of executing the proposed resolution to the challenging real-life experience.
MAINTAINING LEARNING	**Learning Task Execution (LTE):**	This commences immediately after the learning task presentation and simultaneously with authentic learning. This ensures that the learners execute the learning task themselves by resolving the demanding real-life challenge upon an authentic learning foundation through metalearning and cooperative learning.
	(a) Metalearning (ML)	This ensures that learners resolve the real-life challenge – personally and individually – by taking full control and full responsibility for their own learning through planning, executing, monitoring and assessing their learning to submit the following highest possible quality end products: (a) the resolved challenge (Why: values) (b) how it was resolved (How: skills)

WHAT IS THE FACILITATING LEARNING PURPOSE?	WHAT IS THE FACILITATING LEARNING FUNCTION?	DESCRIPTION
		(c) the content learnt (What: knowledge) Subsequently, the learners become active, effective, independent, lifelong learners who continually increase the quality of their own learning, maximising their potential and personal development through attaining fundamental (essential) intrapersonal human virtues (qualities).
	(b) Cooperative Learning (CL)	Ensuring that the learners help one another to learn in small groups with the sole purpose of enhancing the quality of their learning and that of others through the following demanding requirements: (a) base groups of four learners; heterogeneous groups – academically and socially (b) positive interdependence; individual accountability (c) promotive interaction (d) assessment of cooperation Besides the achievements of the individual learner during metalearning, learners also become interdependent through attaining fundamental (essential) interpersonal human virtues (qualities).

	Learning Task Feedback (LTF)	This is the epitome of facilitating learning through the intervention of the facilitator of learning during AL, ML and CL. The sole purpose of LTF is to improve the quality of the learners' learning through the appropriate execution of a hierarchical order of actions, executing the next action only if and when the current action does not result in
		 (a) the learner's (re)engagement with LTE
		 (b) the learner's emotional encouragement and support (non-verbal, then verbal)
		 (c) asking for clarification from learners (What are you doing? Why are you doing it?) to elicit metalearning from them through:
		    • requesting them to answer their own questions;
		    • demanding reflection by asking content-void but quality-enhancing questions (e.g. Where/how could you find what you need? How would you convince me that what you are doing is the best? What else is possible? How would you ensure that you have explored all avenues/resources/possibilities?); and
		    • requiring resourcefulness; demanding resilience; advising auto-education; providing edutainment.

	Learning Task Consolidation (LTC)	Ensuring that learners ascertain the rate of their learning progress, assess the quality of their learning and determine what exactly is to be done to sustain the focus on resolving the real-life challenge in the next learning period, thus significantly bridge the time gap between this learning period and the next.

Source: Adapted from Slabbert, De Kock & Hattingh, 2009:102-119, CD-ROM

The foundation of this educational framework of my autoethnographic narrative can therefore be identified as authenticity, consisting of two mutually supporting pillars: authentic learning and facilitating authentic learning. At the heart hereof lies the authentic 'I', the self with purpose and virtue. This description is provided graphically in Figure 13 below:
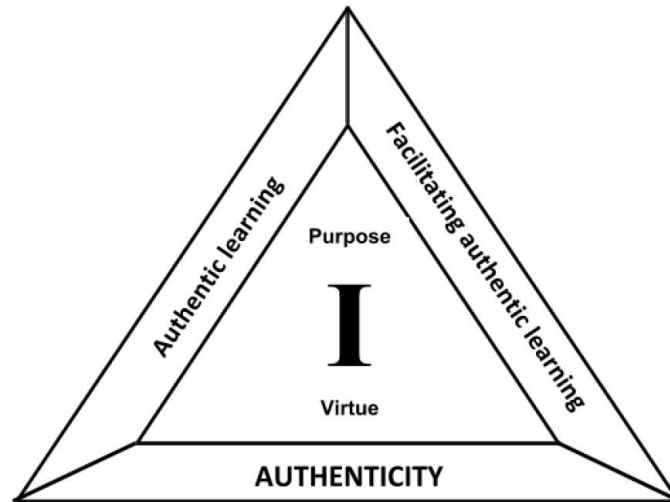
Figure 13: A practical philosophy framework for education
Source: Slabbert, 2015:9

2.3.1.4 *Becoming fully human: An existential call*

Whether we want to become good parents, teachers, artists, firefighters or just decent people, life can have meaning if we strive to be who we want to be by doing what is necessary to become that person.

(Baggini, 2005:116)

The above quote of existentialism represents becoming fully human. I completely support MacMillan (2017:58) in his statement that "[u]ltimately higher education should be a place and time for students to ponder the big existential questions of life - Who am I? What do I want? How should I live?" because "[e]xistentialism provides key insights to help us focus on the individual and the challenges he/she faces in making sense of the higher education experience" MacMillan (2017:58). After all, life questions are exactly the questions that all students ask themselves, and purpose is what they seek, because they need to make important decisions, decisions that will influence the rest of their lives. I trust that you observed that I asked exactly these questions throughout my narrative. "Education that helps teachers and students further their life-narratives is education for meaning, and it is the only form of education that is existentially vital and valid" (Mayes, 2010:29). Autoethnography hence calls

for existentialism (Bochner, 2013:50). For me, the central idea of existentialism is offered best by Reker and Chamberlain (2000). The authors state that existentialism

> [A]ttempts to understand how events in life fit into a larger context … involves the process of creating and discovering meaning, which is facilitated by a sense of coherence (order, reason for existence) and a sense of purpose (mission in life, direction). (Reker & Chamberlain, 2000:15)

Mayes (2010:29) refers to this as

> [T]he most important thing that a person can do in life is to discover what is most important to him at the deepest level — and then to honor, explore, and extend that commitment or set of commitments as [sic] best he can in his unique lifeworld.

In addition, Mayes (2010:28) attests that "[e]ducation is existentially valid only when it helps an individual live *authentically* in the light of his own self-discovered, self-defined, and deepest meanings" [own emphasis]. To reach their deepest levels, individuals must become authentic. "A person is authentic in that degree to which his being in the world is unqualifiedly in accord with the givenness of his own nature and of the world … authenticity is the primary good or value of the existential viewpoint" (Bugental, 1965:31). Authentic learning – the type of learning that really matters in attaining virtues is

> [H]ard and protracted, confusing and frustrating … It involves exhilarating spurts, frustrating plateaus and upsetting regressions … Even if learning is going smoothly, there is always a possibility of surprise, confusion, frustration, disappointment or apprehension but such effortful learning is always rewarded by fascination, absorption, exhilaration, awe and relief. (Claxton, 1999:16)

Zull (2011:76) refers to the reward as "the deepest joy".

Authentic, holistic, constructivist learning in an experiential learning cycle is missing one crucial third dimension, that is, the dimension of learning towards increasing quality. For this purpose and because Kolb's Experiential Learning Theory does not include *quality* (i.e. the continual pursual of the highest possible quality of Being in all domains and levels), I was drawn to Maslow's (1943) theory of human motivation. This theory demonstrates a significant association with Frankl's (2008:105) primary motivation in a human being's life, which is the *search for meaning* (our existence is about becoming fully human) – and the *will* to learn with particular reference to a student – which besides constituting motivation as such, constitutes *the fundamental human disposition* (Barnett, 2007:101-112).

I referred earlier in this section to Frankl's search for meaning, and now I wish to elaborate on Maslow's role (in connection with Frankl) in my autoethnography, as to emphasise the role of "subjectivity, feeling, empathy, authenticity, intimacy, death and dying, and everything involved with finding meaning in life" (Bochner, 2013:51).

I am not blind to the criticism against Maslow (and for that matter, existentialists such as Frankl) of demoting culture (Trigg, 2004:393). Allender (2004:484), however, argues that the heart of self-study (self-reflexivity) lies in the theories of this humanist psychologist. This suits my autoethnographic approach very well. Therefore, as the core of my autoethnography, I focus on my personal experiences in the hope that someone *may also develop from them*. This is another argument against the criticism against self-directedness of Maslow's theory. This argument includes "bring[ing] to light the importance of how humans interact with others and deal with social relationships" (Bochner, 2013:50-51).

Therefore, Maslow's hierarchy of motivation (1943, 1954) is a means to reach self-actualisation and what Barnett (2004) and Slabbert, De Kock and Hattingh (2009) refer to as 'authenticity' and becoming aware of your potential as one attains the fundamental human virtues. My search for meaning (Frankl, 2008) forms the basis and represents the levels of Maslow's hierarchy.

Maslow (1943, 1954) explains that certain human needs motivate human behaviour to satisfy them, which subsequently provides meaning to life. I concur with Mayes (2010:31) when he states that "Maslow's ideas are central in defining education for existential authenticity", which comes to the fore within this quote:

> [W]hat we must do is to accept the person and help him learn what kind of person he is already. What is his style, what are his aptitudes, what is the person good for, not good for, what can we build upon, what are his good raw materials, his potentialities? … Above all, we [must] care for the child, that is, enjoy him and his growth and his self-actualization. (Maslow, 1968:vi)

Maslow (1954) proposed a hierarchy of such needs in a pyramid with the supposition that a lower primary need needs to be satisfied before a subsequent higher need is pursued. The original hierarchy was based on four deficiency needs (physiological, safety/security, belongingness and love, and esteem) together with one growth need, namely self-actualisation (Maslow, 1954; Frey, 2007). It was only later that two lower needs (cognitive and aesthetic) (Maslow, 1954) and one higher growth need (self-transcendence) were added to his hierarchy (Figure 14) (Maslow, 1964; Frey, 2007). Maslow (1987:68) did, however, acknowledge that the order in the hierarchy "is not nearly as rigid" as he initially proposed.

Regarding learning, Frey (2007:7) confirms that "[t]he problem sets around us, and our ability to solve those problems, are a constantly refocusing lens into our learning motivators". Frey (2007:7) continues by saying that Maslow's (1954) viewpoint is that the more one grows in self-actualisation and self-transcendence, the more wisdom will be developed to react appropriately to any circumstance.

My aim with this autoethnography is, therefore, not only to demonstrate my personal development throughout my life, but also to develop myself, through autoethnography, by engaging in self-reflective practices to grow in self-actualisation and eventual self-transcendence. I outline my progress relating to this from Chapter 4 onwards. Indeed, my main reason for autoethnography is that it "provides an avenue for doing something meaningful for yourself and the world" (Ellis, 2004:xviii). This reflects the therapeutic impact of autoethnography as "self-administered logotherapy" (Esping, 2011:65).
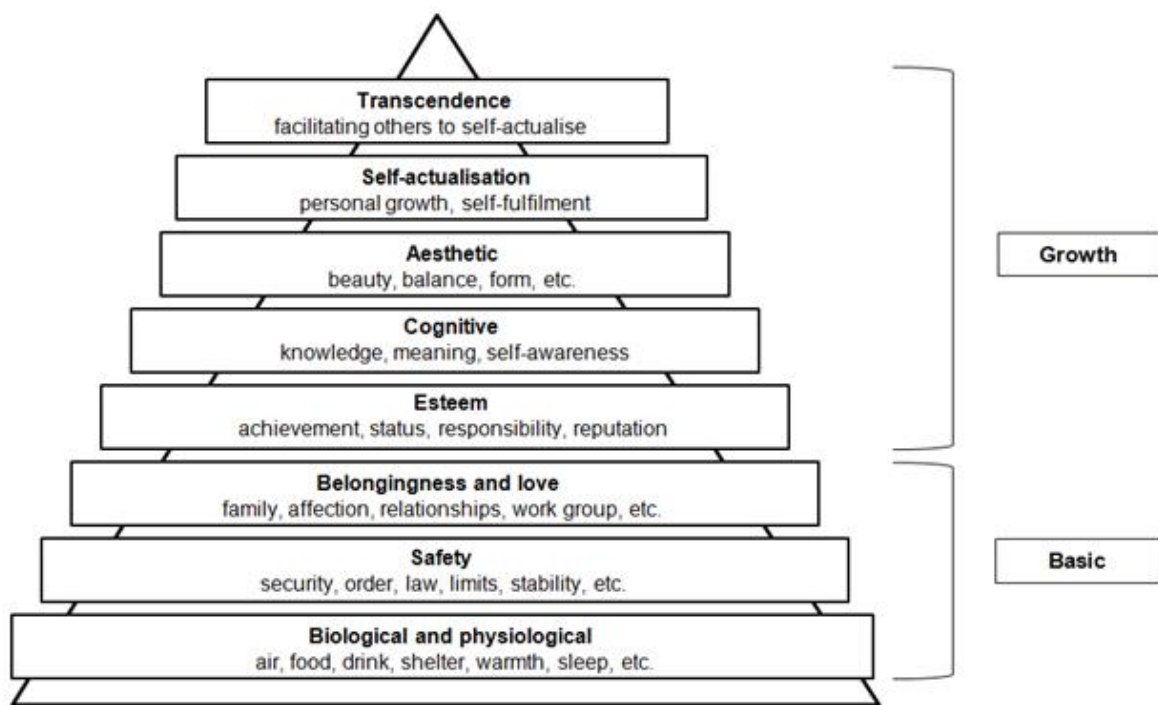
Figure 14: Maslow's hierarchy of motivation

Source: Modified from Anderson, 2007; Freeslow, 2009

Self-actualisation as the level beneath self-transcendence is, in fact, a continuous process of transcending – going beyond – my own individual state of being to a higher level of consciousness and being than I was. "Maslow says there are two processes necessary for self-actualisation: self-exploration and action. The deeper the self-exploration, the closer one comes to self-actualisation"

(Maria, 2011:4). Self-transcendence at the top of the pyramid is not only transcending myself but going *beyond* transcending myself and extending myself to ensure the self-actualisation of other humans as individuals and as communities. This is referred to by Slabbert, De Kock and Hattingh (2009:CD-ROM) as the highest interpersonal virtue named 'leadership'. Frankl (2008:115) explicates the relationship between self-actualisation and self-transcendence within another context:

> [T]he true meaning of life is to be discovered in the world rather than within man or his own psyche, as though it were a closed system. I have termed this constitutive characteristic 'the self-transcendence of human existence'. … [S]elf-actualization is not an attainable aim at all, for the simple reason that the more one would strive for it, the more he would miss it. In other words, self-actualization is possible only as a side effect of self-transcendence.

Transcendence (peak experiences in a new order/higher level of consciousness of the self) means becoming not only aware of one's maximal potential but also the potential of all human beings as a whole and, therefore, "the essential quality of human existence renders man a being reaching out beyond himself" (Frankl, 2014:xvii). Maslow (1968:88) proposed seeking peak experiences where "the whole of the world is seen as a unity" are felt and escorted by a heightened sense of awareness. He believed that one should develop these experiences filled with creative energy that brings value to life. Wilber (2000:15) agrees with Maslow by saying "[b]ut all of those peak experiences, no matter how profound, are merely temporary, passing, transient states. In order for higher development to occur, those *temporary states must become more permanent traits*". The challenge of the education system is therefore to become a *life style* of facilitating authentic learning, so that students can become fully human.

2.4   CONCLUSION

In this chapter, I briefly outlined the teaching and learning culture in South Africa and posed the questions: Could the reason be that it is so easy for people to get what they want through violent destruction of what exists, that the capacity to engage in the effortful fulfilling labour of creatively constructing what could be imagined, is being lost? Is this what it means to be a student in the 21st century?

I continued the chapter with a holistic approach on universal education as appearing in Appendix B on the CD, which allowed me to construct my autoethnographic framework of my narrative by researching scholars in the field, together with my hands-on experience with authentic learning. I

explained how Barnett, Frankl and Maslow played a vital role in my research. I also attempted to explain the relationship between existentialism, authentic learning and autoethnography.

In the following chapter, I describe the research design – a design to satisfy my curiosity.

CHAPTER 3: A DESIGN TO SATISFY MY CURIOSITY

3.1   INTRODUCTION

This brings me to the thesis' purpose: I explore what it means to be *a student*. I therefore examine the *student* (academic) culture and not my whiteness or an ethnical culture(s). "This is a story of understanding autoethnography as the enactment of narrative inquiry, learning and pedagogy" (Hayler, 2017:208) through personal experience (Adams, Holman Jones & Ellis, 2015:27) and "studying inwards" (Reinikainen & Zetterström Dahlqvist, 2016:70), from my perspective in the position of being a life-long student.

Writing this autoethnography allows for re-experiencing my life and contemplating memories to reach the result of "... looking at what is going on between self and practice" (Bullough & Pinnegar, 2001:15). I attempt doing this by utilising "eclectic bricoleurs" in my methodology "drawing upon a range of materials, from 'impressionistic' personal memories and musings to more traditionally 'objective' data like fieldnotes and informant interviews" (Anderson & Glass-Coffin , 2013:64). The interviews are conducted more as a conversation between two equals, than as a distinctly hierarchical, question-and-answer exchange (Ellis & Berger, 2002:845). I have also used my past life experiences as a student in order to engage with "future oriented remembering" (Mitchell, 2004:46) to see how "my own experience might have implications for educational practice" (Jarvis, 2014:5). This might lead to reimagining education. Lyons and LaBoskey (2002:21) confirm this as "interrogating aspects of teaching and learning by storying experiences".

As I travel a parallel, albeit intertwined road, that of self- examination through deep self-reflexivity and at the same time investigating what it means to be student in the learning and teaching culture, my wish is that you, whoever you might be and wherever you are, might find some meaning from what you will experience in this study, even if you are not a student in the formal sense of the word. Because, in fact, we might have much more in common than you or I know. Take that very first sonar photograph of me as an example (Figure 2). Don't you agree that we all looked like this once…? No matter who you are or where you come from...? This autoethnography is two-fold in sense-making, because not only am I making sense of my narrative by contemplating why specific educational experiences are challenging or transformative, but I also strive to provide a universal framework to others with similar experiences (Chang, 2013:116; Adams, Holman Jones & Ellis, 2015:30). In this chapter, I elaborate on what autoethnography entails and why I engaged with narrative inquiry.

3.2   BECOMING INTERESTED IN AUTOETHNOGRAPHY

The name *Homo narrans* was invented to emphasise man's natural tendency towards telling narratives (Fisher, 1987:63). Humans born into a narrative world tend to make sense through narratives – their own as well as others. This undertaking provides the foundation of my study.

Although I liked to keep a fairly simple diary in my childhood years that consisted of the usual daily or weekly itineraries accompanied by frequent inspirational thoughts scribbled down on the pages, I never envisaged that many years later, I would engage in my very own academic narrative inquiry. Believe me when I tell you, I did not choose autoethnography; this unconventional research method chose me! (Ellis, 2004:26). From the onset of investigating this "method and text" (Hayano, 1979:99; Reed-Danahay, 1997:9), this "process and product" (Ellis, Adams & Bochner, 2011:1), I realised the potential transformative and therapeutic impact it offers, not only for myself but also for my readers. Furthermore, I soon came to realise that autoethnography is more than merely a method, it is the way of life (Adams, Holman Jones & Ellis, 2013:669; Toyosaki & Pensoneau-Conway, 2013:559; Adams, Holman Jones & Ellis, 2015:22, 24).

I believe this strengthened my existentialistic point of life-view; autoethnography characterises existentialism. I am a lifelong student, and autoethnography provides me and my readers with transformation and therapy in a personal and academic dimension (Willis, 2004:323; Starr, 2010:2). It is the instrument in my search for meaning (Frankl, 2008:105) and the process to develop my potential (Maslow, 1943, 1954; Frankl, 2014:xvii). This study is consequently interactive, idiographic and existential-phenomenological in nature, a qualitative autoethnographic study of what it means to be a student in the 21st century. To give meaning to the word 'student' and to provide an anchor for the question – What does it mean to be a student in the 21st century? – the question must be stripped of all paraphernalia such as economic, political, financial, socio-cultural, environmental and other external influences, since these do not determine the *authenticity* of being a student. Thus, throughout the study, the word 'student' will imply 'authentic student'.

As the primary participant in this research, my own life experiences as a student in the 21st century together with other students and persons who influenced or contributed to my being a student, provide the baseline data for the project. Thus, the research design is an autoethnographical interpretive construction of my living theory of being a student, that is, iterative in terms of my life history and my pursuance of a safe, sustainable and flourishing future for all, in which the past and future will ensue in the moving present of my research endeavour. Sartre (1981:ix) refers to this as "each person is a universal singular". I need to examine my life from different positions concurrently. Although this "personal sense-making quest" (Smith, 2006:472) may result in understanding what is currently required from a student, the valuable contribution of this research project is situated in the inevitable confrontation with an increasingly unknowable, supercomplex future and its subsequent radically

different and qualitatively elevated challenging demands of being a student in the 21st century. For this reason, my research participants include prominent international educationists, philosophers, futurists, psychologists and neurologists.

3.3   WHAT IS AUTOETHNOGRAPHY?

The beginning of autoethnography lies within the research of anthropologists in the 1970s (Ellis, 2004; Muncey, 2010:63; Gannon, 2017:2) who exploited ethnography as methodology. The term ethnography originates from the Greek words *graphein*, the verb for 'to write,' and *ethnoi*, a plural noun for 'the nations—the others' (Erickson, 2011:43). According to Bernstein (2016:para. 2), this methodology "involves working within a community, learning their culture, and letting the subjects of your research, called informants in anthropology … present their own point of view in their own words". Therefore, ethnography focuses on participant observation.

Autoethnography originated from the need of the above type of researchers "to heal the split between the public and private realms by connecting the autobiographical impulse (the gaze inward) with the ethnographic impulse (the gaze outward)" through "reflect[ing] on and engag[ing] with their own participation within an ethnographic frame" (Tedlock, 2005:467).

I am indebted to acknowledge that I am referred to as the minority white, empowered and privilege Afrikaner, growing up in a white conservative middle-class environment, opposed to the underprivileged African culture whose inhabitants grow up in the poor, rural environments. Steyn (2005:170) so aptly phrases that "[t]he intimate role that the denigration of Africa has played in the identity construction of whiteness on this continent cannot be evaded. This lies at the deepest heart of all whiteness ...". I stand out like a sore eye within my country: an Afrikaans, white female with a background of imperialism and being economically privileged. I do not want to "… ignore the manner in which the notion of race [culture] has structured people's life opportunities in society as a whole" (Frankenberg, 1993:1). From this observation, the best researcher position I can acquire is an insider/outsider role to be defined as "the culturally marginal person; these are people who have had important socializing experiences in more than one culture" (Greenfield, 2000:233). Indeed, my classes in high school and university comprised Afrikaans and English lectures with students from different cultures joining me. I believe this insider/outsider position, by interviewing other students, colleagues as well as international experts in various fields and naturally from other cultures opposed to my own, complied with the "necessitated deeper engagement with the autoethnographic paradigm" (Maydell, 2010:3): I recognise that it is unethical to deny other cultures membership. "The insider status … has to be granted by the community" (Colic-Peisker, 2004:86).

Therefore I realised that, apart from the many interviews I conducted lending credibility to my narrative, it should definitely be read by a previously disadvantaged African person – a person from a radically different culture as from mine. In doing so, she could raise her voice about my narrative on how I remember university. Jarvis (2014:138) concurs with this action. I subsequently asked an African colleague and student peer to read my narrative. Extracts from her letter of verisimilitude with valuable comments can be found in the last chapter of the thesis.

Ellis (2004) confirms Tedlock's (2005:467) view on reflection in her book, *The Ethnographic I: A Methodological Novel about Autoethnography* (an academic novel devoted solely to autoethnography and one of the most all-inclusive books in this genre) by agreeing to the research-shift from "participant observation to the observation of the participant" (Ellis, 2004:50).

Although he was an outsider regarding his research, anthropologist Karl Heider (1975) was the first to introduce the term "auto-ethnography" in his publication on the Dani people, titled, 'What do people do? Dani Auto-Ethnography', with the "auto" referring to "informants" and not the ethnographer (Chang, 2008:44). Two years later, Goldschmidt (1977:302) embraced autoethnography from a reflexive standpoint: "[T]o see respondents as people, to see behaviour in context, to see meaning and purpose in the everyday event" while still being aware of the universality it must bear. In 1979, David Hayano used this term to conduct research on a group as an insider referred to as a "native" (Hayano, 1979:100). From there on, it took approximately two decades for the term autoethnography to become established. Smith-Sullivan (2008:5) constructed a "visual tracking guide" as the pathway demonstrating when the term autoethnography became historically evident: "Dani **Auto-ethnography** (Heider, 1975); **autoethnography** (Hayano, 1979); socioautobiography (Zola, 1982); ethnographic autobiography (Brandes, 1982); auto-anthropology (Strathern, 1987); autoethnology (Lejeune, 1989); interpretive biography (Denzin, 1989); **autoethnography** (Lionnet, 1989); **autoethnography** (Deck, 1990); ethnographic memoir (Tedlock, 1991); autoethnography (Pratt, 1992); narrative ethnography (Abu-Lughod, 1993); auto-observation (Adler & Adler, 1994); ethnographic short stories (Ellis, 1995a); critical autobiography (Church, 1995); self-ethnography (Van Maanen, 1995); **autoethnography** (Ellis, 1995b); reflexive ethnography (Ellis & Bochner, 1996); new/experimental ethnography (Ellis & Bochner, 1996); personal ethnography (Crawford, 1996); and autobiographical ethnography (Reed-Danahay, 1997)."

The term autoethnography became reputable during the late 1990s, especially due to the autoethnographical front-runners, Carolyn Ellis together with Art Bochner and Deborah Reed-Danahay and their collections, *Composing Ethnography: Alternative Forms of Qualitative Writing* (1996) and *Auto/Ethnography* (1997) respectively. Although autoethnography has been criticised to some extent in certain realms (Muncey, 2010:56; Gannon, 2017:5), it can be seen as a new genre of research conduction. "The postmodern era made it possible for critical theories to

emerge and take hold in academic inquiry and to open up the possible range of research strategies" (Wall, 2006:2). Researchers started to see the new possibilities. In fact, Duncan (2004:3) attests that

> In the 21st century, ethnographic approaches are being acculturated into a postmodern academic world. The desire to discover and make room for the worldview of others suits a postmodern sensitivity, in which no one right form of knowledge exists and multiple viewpoints are acknowledged and valued.

Ellis, Adams and Bochner (2011: "1. History of Autoethography") argue that due to the "crisis of confidence" as a consequence of postmodernism towards the 1980s, new ways of "social science inquiry" resulted. Researchers grasped the significance that stories could bring in this age of uncertainty – a means to understand the self. Ruth Behar (1996:26) is an excellent example regarding the referred new research possibilities with her query on her position as an anthropologist:

> In anthropology, which historically exists to 'give voice' to others, there is no greater taboo than self-revelation. The impetus of our discipline, with its roots in Western fantasies about barbaric others, has been to focus primarily on 'cultural' rather than 'individual' realities. The irony is that anthropology has always been rooted in an 'I' - understood as having a complex psychology and history-observing a 'we' that, until recently, was viewed as plural, ahistorical, and nonindividuated.

In the same sense, Gannon (2017:2) highlights the importance of centring "self-identification and insider status" in autoethnography, ultimately emphasising the importance of self-reflexivity by the approach of "studying inwards" (Reinikainen & Zetterström Dahlqvist, 2016:70).

3.4   AUTOBIOGRAPHY AND AUTOETHNOGRAPHY – RELATIONSHIP?

Having investigated the relationship between *ethnography* and autoethnography, I now wish to draw attention to the relationship between *autobiographical* and autoethnographical research. The word 'autobiography' was invented in 1797 as a holistic term for authors referring to their own experiences (Berryman, 1999:72). Dilthey (1927:191) described autobiography almost a century ago as "the highest and most instructive form in which the understanding of life presents itself to us", and Hornung (1989:91) argues that it is the "possible artistic solution to the fragmentary nature of human experience". Because I investigated my life, albeit as a student, I needed to understand *life* itself. This had a significant influence on my choice of the action of autobiography, namely autoethnography, as the research method; I believed no other method could offer me a better way to investigate life.

According to Barbour (2004:7) "autobiography can be a powerful way of exploring solitude" and is usually understood "as the practice of spiritual disciplines ... meditative awareness, and the cultivation of particular forms of virtue" (Barbour, 2004:8). It "is not simply analysis of text or discourse but an assessment of how people articulate their values and their wisdom about life" (Barbour, 2004:9). Solitude is, therefore, linked to ethics and spirituality (Barbour, 2004:129). Throughout my life, I came to realise that even though I am well-adjusted in society, I gain my energy by being in solitude. I specifically realised this during the years I spent as a Natural Scientist in the isolated desert of Namaqualand, South Africa. Later in my authoethnographic narrative, you will see the significance that solitude played in my life.

Autobiographical research entails the researcher viewing himself, and thereby documenting his own life, as both the subject and the researcher (Tenni, Smyth & Boucher, 2003:1). Thus, it is research focusing on "subjective perceptions and experiences of individual people" (Sikes, Troyna, & Goodson, 1996:37). Smith (1994:288) discusses why autobiographical research is so important:

> Autobiography is a special case of life writing …. Autobiography suggests the power of agency in social and literary affairs. It gives voice to people long denied access. By example, it usually, but not always, eulogizes the subjective, the 'important part of human existence' over the objective, 'less significant parts of life'. It blurs the borders of fiction and non-fiction. And, by example, it is a sharp critique of positivist social science. In short, from my perspective, autobiography in its changing forms is at the core of late twentieth century paradigmatic shifts in the structures of thought.

Denzin (1989:27) explains that autobiographical research consists of the following main actions: "life, self, experience, epiphany, case, autobiography, ethnography, **auto-ethnography** [own emphasis], biography, ethnography story, discourse, narrative, narrator, fiction, history, personal history, oral history, case history, case study, writing presence, difference, life history, life story, and personal experience story". Stone (1981:80) also portrays autobiography as being "… simultaneously historical record and literary artefact, psychological case history and spiritual confession, didactic essay and ideological testament". It signifies "... a trend away from modernism and its assumptions about legitimate knowledge and knowledge production toward broadening of what counts as research" (Bullough & Pinnegar, 2001:13). Autobiographical research, therefore, refers to documenting one's own life while merging the author's experience with scholarly research. Therefore, autoethnography forms part of autobiographical research. Reed-Danahay (1997:9) defines autoethnography "as a form of self-narrative that places the self within a social context." Within my study, the research happens within and in relation to the educational environment (the ethnographical culture). Thus, I present myself in the educational environment (my practice of being a student) by undertaking autoethnographical research (Grbich, 2013:120).

3.5   MY EMERGING SELF: MEMORIES OF A STUDENT

For someone with more than a decade of experience in the Natural and Physical Sciences, writing an autoethnography can be very daunting. For someone being introduced to Humanities Education after having developed a mind for the hard sciences, writing an autoethnography seemed almost impossible. Initially, I panicked, thinking: *I do not have enough data ... I have never been a true writer, rather a scientific researcher who writes up facts. Until recently, there was only an objective right or wrong, a solid black or white. Now, suddenly, after more than a decade of writing with the mind, I needed to write with my heart ... a much bigger challenge than ever foreseen!* While writing this I recalled the words of Pathak's (2013:596) as they related to the above:

> Despite the pressing mandate of scientific imperialism to be objective, distant, and squarely in the middle of the statistical norm, I find myself drawn relentlessly to the margins, singing a harmony that is off from the rest of the voices around me about the unique ways my experiences reveal and reflect a larger world.

The researcher must become the research. So, I made the effort and started to collect my autoethnographical data. I began with what Jarvis (2014:140) refers to as "memory sharing conversations". I reached out to my mom to help look for lost school books and/or photo albums, whatever we could find. During our occasional morning walks, I sometimes asked my mom to refresh my memory on some aspect of my childhood, schooling and young adult years. It was a privilege to have her by my side on a daily basis. Due to circumstances, I moved back to my mom's house more or less halfway through my PhD, and this unplanned move presented the wonderful opportunity of providing a window into my childhood life. I asked her questions mostly in an informal way through ad hoc discussions and sometimes in a more formal way, being more specific about certain times in my life. The other person who walked an intimate path down memory lane with me was a close friend from university who quickly became my critical friend in my autoethnographical journey. As I shared my stance on this journey on a regular basis with him, he provided me with constructive feedback. I agree with Rosenberg (2016:37) that journeying down memory lane is a *very* emotional business. Even though I felt emotionally drained many times throughout this journey, Pithouse-Morgan, Mitchell and Pillay (2012:1-2) and Allnutt (2013:156) explain that one's memory can be used to understand the present and future. This motivated me to push through with memory searches regarding my life as a child and young adult in order to find answers to my research questions.

At the start of entering this new world of being an autoethnographer and after studying one of the first autoethnographies that I had laid my eyes on (a *very* weighty one), I told a professor one afternoon at university that I do not have much information and evidence about myself! His immediate reply was: "Oh yes, you do! Delve into your past and see the photos and other documents you'll find". And, he was right. I had no less than the man who wrote the autoethnography that I had frantically studied.

Ironically, the art now became what to select for the autoethnography so that it would not become a mere autobiography. In a way, by deliberately choosing the data, I also started with the analysis. I saw it as a sort of coding that took place in my mind *as well as* in my heart (Bochner, 2000:271; Ellis, 2000:273) where the themes that emerged from the selection possibly represented answers to my research questions. While browsing through all the photo albums and stumbling upon my certificates, records, diaries, notes and old letters from family and friends, a mixture of feelings reluctantly emerged. I told my mom that I had forgotten who I was ... With this past being revealed to me, I could not imagine that I was the person once in the photographs and on those papers. Indeed, "[p]hotographs are never merely visual but in fact conjure up synaesthetic and kinaesthetic effects, for the visual provokes other sensory responses" (Edensor, 2005:16). At some point, I had lost confidence in my actions. Somehow, feelings of guilt crept in when I performed better in an activity or situation than my peers. It was as if I did not have the right to achieve more than they did. Things that were forgotten began to emerge again, the most important of which was the reconstruction of the lost self. In this sense, I can refer to the logotherapy of Viktor Frankl (2014:xviii). Being therapeutic, this autoethnography would allow me to heal through meaning (Fabry, 1968) since it would lead to 'self-understanding' (Frankl, 2014:xix) in my search for meaning (Frankl, 2008:105). Damasio (1999:173) describes this as the autobiographical self:

> [I]n the fleeting moments of knowledge in which we discover our existence are facts that can be committed to memory, be properly categorized, and be related to other memories that pertain both to the past and to the anticipated future. The consequence of that complex learning operation is the development of autobiographical memory, aggregate of dispositional records of who we have been physically and of who we have usually been behaviorally, along with records of who we plan to be in the future … When certain personal records are made explicit in reconstructed images, as needed, in smaller or greater quantities, they become the autobiographical self.

Damasio (1999:173) explains that this self is dependent on "autobiographical memory" and "core consciousness" (Damasio, 1999:199) – in my case "as a form of narrative construction" (Hayler, 2017:208). Damasio (1999:16) defines this as the here and now – a sense of self and illustrates it as shown in Figure 15.

AUTOBIOGRAPHICAL SELF

AUTOBIOGRAPHICAL MEMORY
[an organised record of past experiences of an
individual organism]

[dual dependency on both continuous pulses of core
consciousness and continuous reactivations of
autobiographical memories]

CORE SELF

[memorisation of repeated instances of
core-self experiences]

[a transformation occurs]

[a transient but conscious reference to the individual
organism in which events are happening]

core consciousness

PROTO-SELF

[a transient but conscious reference to the individual
organism in which events are happening]

Figure 15: Types of self

Source: Adapted from Damasio, 1999:199 (Blue text inserted)

3.6 AUTOETHNOGRAPHY AND THE MULTIFACETED STUDENT

This section elaborates on autoethnography by describing the typologies and forms of autoethnographic writing I chose and the reasons why. Throughout the years of being engaged with autoethnography, I studied many papers, theses, collections and books of many practitioners claiming to be autoethnographers. Chang's (2008) book *Autoethnography: A Method*, confirms the many different stances from which practitioners define and describe autoethnography, but there are several significant authors that were prominent in providing influential text for me to form the underpinning of autoethnography. They include in random order: Carolyn Ellis, Art P. Bochner, Denzin K. Norman, Yvonna S. Lincoln, Tony E. Adams, Heewon Chang, Stacy Holman Jones and Leon Anderson. My belief in what autoethnography entails is built upon their work. I came upon many definitions for the term autoethnography, and it is elementary that the most appealing to me is from the foremost autoethnographer, Carolyn Ellis:

As an autoethnographer, I am both the author and focus of the story, the one who tells and the one who experiences, the observer and the observed ... I am the person at the

intersection of the personal and the cultural, thinking and observing as an ethnographer
and writing and describing as a storyteller. (Ellis, 2009:13)

3.6.1 Multifaceted writings: Typologies and forms

Some researchers such as Ellis and Bochner (2006) and Denzin (2006) support the evocative writing
typology as described in the quotation of Ellis (2009) above, which can include what Chang
(2008:145) refers to as "confessional-emotive" and "imaginative-creative" writing Chang (2008:148),
"the boldest departure from traditional academic writing" resulting in "performative storytelling"
(Harrison, 2016:21). Finding myself moving deeper into the Human Sciences every step of this
explorative study, I simultaneously drifted away from the Natural Sciences: The evocative nature of
my narrative propelled me into describing my feelings. So different from the Natural Sciences!
Reinikainen and Zetterström Dahlqvist (2016:71) describe this as focusing on "own experiences on an
individual level". I agree with Humphreys (2005:853) in the sense that "I have acknowledged that
there are dangers arising from the charge of self-indulgence and narcissism but would argue strongly
that this risk is outweighed by the potential in autoethnography" because autoethnography can result
in "acts of witnessing, empathy and connection that extend beyond the self of the author" (Sparkes,
2002:38). This writing typology, far removed from my experiences in the Natural Sciences,
challenged me to get to know a side of myself that I now realise was suppressed for most of my life –
being an artist. You will understand what I mean by this when you reach Chapter 8 of my narrative.
Pillay, Naicker and Pithouse-Morgan (2016:5-6), editors of the book *Academic Autoethnographies:
Inside Teaching in Higher Education*, describe the process beautifully as being related to education
(and for me, related to being a student):

> Embracing the multifacetedness of the academic self becomes an aesthetic experience—a
> work of art, creating versions of self through writing, photographs, cellphilms, and
> drawings. Each author composes 'a life'—ambiguously moving in and out of self,
> blurring personal–social boundaries, blurring personal–cultural selves while navigating
> various academic positions at any one time, inside–outside of university settings.

Another profound reason for finding myself drawn to the evocative nature of autoethnography is
explained perfectly by Adams, Holman Jones and Ellis (2015). I can closely relate to this because of
my strong 'hard sciences' background:

> Further, the idea(l)s of prediction and control in the hard sciences (e.g., chemistry,
> physics, and biology) do not translate to the movements and meanings of humans in
> social interaction or speak to the significance of human thought and action. Although we

may be able to make educated guesses about cultural patterns and practices, we can never predict what other people might think, say, or do. Nor can we establish singular, stable, or certain "truth" claims about human relationships. Social life is messy, uncertain, and emotional. If our desire is to research social life, then we must embrace a research method that, to the best of its/our ability, acknowledges and accommodates mess and chaos, uncertainty and emotion. (Adams, Holman Jones & Ellis, 2015:14-15)

Gannon (2017:1) describes autoethnography as "an increasingly popular form of postpositivist narrative inquiry that has recently begun to appear in educational contexts" and that "[a]dvocates claim that autoethnography enables us to live more reflective, more meaningful, and more just lives." In fact, Bruner (1996:149) also argues that regarding its role in education

> We devote an enormous amount of pedagogical effort to teaching the methods of science and rational thought: what is involved in verification, what constitutes contradiction, how to convert mere utterances into testable propositions, and on down the list. For these are the 'methods' for creating a 'reality according to science'. Yet we live most of our lives in a world constructed according to the rules and devices of narrative. Surely education could provide richer opportunities than it does for creating the metacognitive sensitivity needed for coping with the world of narrative reality and its competing claims.

However, I cannot escape my history, and I still acknowledge that I come from a strong Natural Sciences background. I find the idea of an "analytical-interpretive" writing typology (Chang, 2008:146) not only alluring but perhaps also necessary. I can understand and thus also support Anderson's (2006:379) clarification of why autoethnography must not fall into a pit of biased subjectivism but must at least retain objectivism to a certain extent. I believe I adhered to what the analytical autoethnographer must be/do, as explained in Anderson's popular article 'Analytic Autoethnography' (Anderson, 2006:378-388). One must be wholly part of the environment being studied, reflect on the data (the self) to be analysed (I refer here to 'contemplate', a concept I explain in the data analysis section), be continuously present and holistically active in the transcript, incorporate others in similar circumstances as participants, and perform analysis of theory.

Even though the conflict between subjectivism (evocative autoethnography) and objectivism (analytical autoethnograhy) continues (Pace, 2012:2-3) and being the multifaceted being that I am, I attempted to combine subjectivism and objectivism into my narrative to gain the most from my narrative inquiry. The reason why I chose these specific writing typologies was to fulfil the purpose of writing my autoethnography (Chang, 2008:149); I need my readers to *feel* my narrative and relate to it, but at the same time, I need some objectivism in order for my readers to consider it as a professional academic piece of work. I believe this approach satisfies my belief that we are all multifaceted human beings. The objectivism relates more to our rational minds and the subjectivism

relates more to our spiritual side, making the experience both "scientific and spiritual" (Anderson & Glass-Coffin, 2013:58). Tedlock (2013:359) describes my related actions accurately:

> One by one she considers expressive, transactional, and poetic modes of writing: expressive writing foregrounds energy and emotion; transactional writing emphasizes analysis and theorizing; while poetic writing creates literary texts. Twisting these strands together, she produces an evocative analytic text.

Ellis, Adams and Bochner (2011: "4.1 Forms of and approaches to autoethnography"), supported by others, describe the main forms of autoethnography as:

- indigenous/native ethnographies that refer to "ethnographies conducted by ethnographers about their own people" (Chang, 2008:44);
- narrative ethnographies being stories of the ethnographer incorporated into the other's stories;
- reflexive, dyadic interviews focusing on the interviewee, although the reflection of the ethnographer is added to the context;
- reflexive ethnographies with the focus on the progress of the ethnographer through "confessional" writing (Van Maanen, 1988:78), exposing "their ethnographic process, their personal experiences, or feelings from the field" (Chang, 2008:44);
- layered accounts "often focus on the author's experience alongside data, abstract analysis, and relevant literature" (Ellis, Adams & Bochner, 2011: "4.1 Forms of and approaches to autoethnography");
- interactive interviews that lead to "in-depth and intimate understanding of people's experiences with emotionally charged and sensitive topics" (Ellis, Kiesinger & Tillmann-Healy, 1997:21) and is collaborative in nature;
- community autoethnographies that are similar to interactive interviews but with the focus on how the community handles specific cultural issues;
- co-constructed narratives where participants write their own stories simultaneously and thereafter, seek meaningful relational experiences and
- personal narratives for allowing the phenomenon to speak – the researcher self – producing rich personal and professional data.

These forms differ from each other regarding the focus placed on the object being studied. The researcher's self, the study of others, and the interaction "as autoethnography is both self-focused and other-focused" (Hernandez & Ngunjiri, 2013:278). My study focuses on a *personal narrative*, a more contemporary type of autoethnography that is accompanied by layered accounts and reflexive ethnographies and interviews. Ellis, Adams and Bochner (2011: "4.1 Forms of and approaches to autoethnography") maintain that "layered accounts use vignettes, reflexivity, multiple voices, and introspection". This agrees with the notion of my search for meaning (Frankl, 2008:105) and evaluating where I am in Maslow's hierarchy of motivation (1943), as presented in chapters 4–8. Therefore, I am studying myself through narrative inquiry. These "[s]elf-reflective data result from introspection, self-analysis, and self-evaluation of who you are and what you are" (Chang, 2008:95)

while "self-critical exploration", in turn, results in transformation (Qutoshi, 2016:68). Chang (2008:48-49) continues that at the end of a thorough self-examination, "autoethnography is not about focusing on self alone but about searching for understanding of others (culture/society) through self". My hope is, therefore, to understand the teaching and learning culture through scrutinising myself. Indeed, I could not agree more with "Socrates's idea that the unexamined life is not worth living, [and that it] holds particular meaning when choosing the lens of autoethnographic research" (De Beer, 2016:48). The importance of Socrates's philosophy is especially revealed in the final chapter of my thesis, Chapter 10.

3.6.2   The dimensions of autoethnography

This autoethnographical exploration includes an autoethnography consisting of three dimensions occurring in various intensities along a continuum throughout the study. Harrison's (2016:21) narrative about "identity construction and finding a sense of purpose in South African higher education" in which she asks what it means to be "academic", agreed with Chang's (2008:48) explanation that autoethnography must be "ethnographic in its methodological orientation, cultural in its interpretive orientation, and autobiographical in its content orientation". The relevance to my study of the dimensions can be understood as follows: *I* ('auto' representing the self) am living as a student in an *academic environment* ('ethno' representing the culture) and I put in writing the research process ('graphy').

The prominence on these three dimensions are varied so that "different exemplars of autoethnography fall at different places along the continuum of each of these three axes" (Ellis & Bochner, 2000:740). My exploration varies between my relationships (with myself and the academic community), continuity (past, present, future) and place (Clandinin & Connelly, 2000:50) in my experience of being a student.

3.6.3   Possible pitfalls of autoethnography

My authoethnography is characterised by my lived experience in the form of a self-narrative, which also inevitably includes the recording of my life history (Chang, 2008:44). The techniques of Goodson and Sikes (2017:150-184) for recording life history, guided me. Samuel (2009:3) explains that with the recording of life history, the researcher "attempts to structure the process of telling stories to yield rich, in-depth details about the specific life experiences, memories and interpretations that the individual produces". Hodder (2003:156) confirms this by saying "there is no 'original' or 'true' meaning of a text outside specific historical context". Furthermore, I heeded the statement of

Lamott (1995:114) about writing, which I believe is even more relevant to autoethnographic writing: "Writing is about hypnotizing yourself into believing in yourself, getting some work done, then unhypnotizing yourself and going over the material coldly [objectively]." Regarding the process of writing my authoethnography, I needed to be aware of the following while conducting the autobiographical exploration: living in total isolation; a diminution of data analysis where the focus lies mainly in the narrative; self-indulgence; depending solely on memory as the data source (memory can be unreliable); overlooking ethical standards; defining autoethnography inappropriately and using it incorrectly (inter-textuality should be acknowledged); and being atypical (Coffey, 2004; Chang, 2008:54-57). Therefore, throughout the study, I practised being continuously mindful of the above challenges. I believe my rich data sources also helped to deal with the above challenges.

Regarding the research scope, the nature of the research proved to be without restrictions. An enormous challenge was to keep the focus on my research questions despite many connections to other aspects of the research.

3.6.4   The power of autoethnography: A call for education

Despite possible pitfalls, Chang (2008:51-52) lists the benefits of autoethnography to educators as follows: It is a "researcher- and reader-friendly" method – it allows researchers easy access to the primary data source from the beginning because the source is the researchers themselves", it reveals how the self and others within the specific environment can be understood, and it can lead to transformation of self and others. Gergen and Gergen (2002:14) corroborate this: "In using oneself as an ethnographic exemplar, the researcher is freed from the traditional conventions of writing. One's unique voicing – complete with colloquialisms, reverberations from multiple relationships, and emotional expressiveness – is honored."

In this supercomplex world in which we are living, educators must "clearly recognise the importance of personal narrative, the power of stories, and the significance of whose perspective is being expressed and whose is being heard" (Kridel, 1998:10). This supercomplex world brings more and more uncertainty with "messy ... multi-voiced text" but "as education further explores forms of qualitative research" such as autoethnographies and life histories, these have "so much to offer as researchers feel their way along and seek to shed light on this complex phenomenon we call education" (Denzin & Lincoln, 1994:10-11). As Hunt (2014:6) maintains, autoethnography "is a useful approach to professional education and lifelong learning."

Kennet (1999:231) continues the argument by saying that it "allows students to reflect on the forces that have shaped their character and informed their sense of self". Autoethnography is not merely an

academic telling but rather an academic learning that offers "deeper changes in the inner self … It is to a greater or lesser extent, a road of transformation" (Willis, 2004:323). In this regard, Schubert (1986:33) believes that critical self-exploration as part of autoethnography is vital in the educational environment:

> The individual seeks meaning amid the swirl of present events, moves historically into his or her own past to recover and reconstitute origins, and imagines and creates possible directions of his or her own future. Based on the sharing of autobiographical accounts with others who strive for similar understanding, the curriculum becomes a reconceiving of one's own perceptive on life. It also becomes a social process where individuals come to greater understanding of themselves, others and the world through mutual reconceptualization.

3.7   CONSTRUCTING MY METHODOLOGY

Chang (2008:46) explains autoethnography as follows: "I expect the stories of autoethnographers to be reflected upon, analysed, and interpreted within their broader sociocultural context". The autoethnographical narrative throughout this study is based on my experience of education throughout my life, with the inevitable focus on the following events that are contemplated: teaching and learning; key life-educational moments; society and culture (ethnography); and ideological and philosophical constructs within the autoethnographical framework of my narrative. My autobiographical exploration is embedded in the living theory projected by Whitehead and McNiff (2006:32). Thus, this study constructs my living theory of exploring what it means to be a student in the 21st century. Whitehead and McNiff (2006:34) developed the living theory to explain educational power on an individual's learning. The use of this method in my practice as a higher education student is ideal. I have a rich lived experience and, therefore, a great deal of data is available, in a way that using any other method would not give me the optimal access to the data that I need to answer my research questions.

3.7.1   Philosophical view

This section elaborates on my 'personal philosophy' since how I interpreted my data depended on my values (my intra- and interpersonal fundamental human virtues) (Pitard, 2017:2). Wall (2006:10) maintains that "[m]ethodology arises out of philosophy".

My ontological assumptions (what is reality?) are a nominalist (subjectivist) view. In the final analysis, knowledge is fundamentally the authentic construction of meaning by the individual learner (Maree & Van der Westhuizen, 2009:19). "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), while the relationships with the self is the nodal point of all relationships. This means that if the relationship with the self (internal) is not whole, all other relationships with the external (including society) will fail. My ontological assumption aligns well with autoethnography's self-reflexivity.

My epistemological assumption (how can we know?) is interpretative (anti-positivist) with a constructivist point of departure and perspective, thus moving away from a positivist ontological and epistemological perspective since it recognises the necessary interaction between consciousness (of the self) and the cosmos. Multiple realities exist in a phenomenological existential context; the researcher and what is researched are inseparable (Sikes & Goodson, 2017:127-129). "Consciousness and world are not separate entities but a holistic construction of lived experience" (Howell, 2013:xx). Thus, the knowledge construction is a result of my own subjective experience of being a student in the 21st century. My epistemological assumption agrees with autoethnography as researchers research themselves as the main sample.

My assumption about human nature is at a point between determinism and voluntarism, because not only am I the subject of my research but also, I do not live my experience alone and in isolation. I connect with society and society connects with me and, therefore, I influence society and society influences me. I carried out my research between these two opposites and thereby included myself and the environmental influences. This gave assurance that my assumptions about human nature were as accurate as possible, which suits the cultural dimension of autoethnography.

3.7.2 Sampling

I was the main sample but because the research involved my lived experience and I form part of society, the sampling included various different sampling types. As I carried out my research, I encountered other samples relative to all other sampling. Denzin (2014:6) asserts "[w]e must learn how to connect (auto)biographies and lived experiences, the epiphanies 'significant events' of lives, to groups and social relationships that surround and shape persons. As we write about lives, we bring the world of others into our texts". These other voices complement my autoethnography in such a way, that they bring validation to something otherwise seen only as perhaps a 'tall story' that loses track of the focus of the study.

According to Creswell (2011:165), sampling is related to the research question with consequent sub-questions keeping the methodology in mind. However, intentional sampling and purposive sampling (Goodson & Sikes, 2017:159) are most commonly used in qualitative research methods. The size of the sampling depends on various significant factors such as the questions for the interviews, the data collected, the up-to-date analysis and the supportive resources (Merriam, 2009:80). I therefore undertook sampling for interview conduction in relation to my research questions and methodology. This took place with a wide collection of divergent individuals that I divided into two batches:

1. The autoethnographic sampling: I selected several prominent people with whom to conduct semi-structured interviews (a family member, teachers, lecturers, supervisors). Most of these people featured in my educational experiences throughout the various phases of my life and made a significant impact on my life as a student. I conducted semi-structured interviews with 21st-century students who demonstrated a wide spectrum of attributes and had one discussion with no specific schedule, with a close friend as he accompanied me on an 'autoethnographical tour'. I also obtained six letters of verisimilitude. (See the complete [unedited] letters in Appendix G on the CD accompanying my thesis.) "[V]erisimilitude refers to the appearance of truth and reality, in the sense that events and experiences which are described by a storyteller should be felt by readers to be authentic, life-like, believable and possible" (Jarvis, 2014:134). Hence, I asked several people whom I knew, to read my narrative and to react to it in a written manner. I requested their reaction to include a confirmation of the accuracy of my narrative to determine whether our memories of my experiences were the same or not. Their responses and my contemplations thereof appear in the last chapter of my thesis (Chapter 10). These letters were written by the following persons: Mr Conrad Geldenhuys, a former postgraduate co-student (Plant Science); Dr. Kgadi Mathabathe, lecturer and former colleague (Education Faculty); Prof Carin Maree, senior lecturer and former co-student of the PGCHE; Ms Tracy Shaw, personal friend for the past 18 years and former undergraduate and postgraduate co-student (Zoology); Mr. Niel Malan, personal friend for the past ten years and postgraduate co-student (Chemistry); and Mrs Annatjie de Jonge, school teacher and personal friend for the past five years.

2. The expert semi-structured interviews: These were conducted with contemporary and traditional leading professionals in education and contemporary philosophers, futurists, psychologists and neuroscientists. They included successful entrepreneurs with and without formal qualifications. The sampling for these participants was purposive. I utilised the internet search engine, Google, to locate the most prominent, authoritative, highly qualified, independent individuals for each of the particular categories. Some participants referred me to others, and my supervisor also recommended a few potential participants.

The sample was divided into two sets: i) the local participants supporting my autoethnography (a family member, a friend/colleague, teachers, lecturers, supervisors and students); and ii) the

international participants (experts specialising in various fields) who supported my autoethnography and more importantly, provided expertise relating to the supercomplex future. As I neared the end of the expert interviews, I discovered another participant that I deemed crucial, the transcriber of the expert interviews. The explanation of her participation could be justified by her contribution as a 'coincidental participant', which acted as crystallisation/triangulation of my autoethnography and verified the interviews of the expert participants. (For her complete written interview, see Appendix F on the CD accompanying the thesis.)

In total, I conducted 53 interviews: 24 autoethnographic interviews (including the discussion with a critical friend and the transcriber's interview) and 29 interviews with specialists from various fields. The interviews lasted between 30 minutes and 1 hour 30 minutes.

3.7.3   Data collection

The thesis that I submitted originally needed to be reduced significantly, with the implication that the data (including the interviews) I initially collected and analysed, needed to be condensed considerably. Consequently, this final thesis comprises only the highlights of my data, which represents my life as a student and which I view as a meta-analysis of the first submission.

3.7.3.1 Methods, instruments and techniques

The autoethnography consists of "social facts" such as information referring to dates, for example, birth and graduation dates, as well as reference "to a feeling that issues from experience" (Sartre, 1981:ix). Therefore, the autoethnography is a non-fictional account of my life experiences. Sartre (1981:ix) continues "that each piece of data set in its place becomes a portion of the whole, which is constantly being created, and by the same token reveals its profound homogeneity with all the other parts that make up the whole". For the writing of my narrative, I roughly followed Mezirow's transformation as a critical reflection on experience and an invaluable step in transformative learning (Mezirow, 1978, 1990, 1991, 1998, 2000, 2012). This was in association with Moustakas' (1990) phases of heuristic inquiry as I searched for meaning in my experiences (Frankl, 2008:105). Mezirow's (2000:259) phases of transformative learning are as follows:

1. Experiencing a disorienting dilemma.
2. Undergo self-examination.
3. Conduct a deep assessment of personal assumptions and alienation created by new roles.
4. Share and analyse personal discontent and similar experiences with others.
5. Explore options for new ways of acting.

6. Build competence and self-confidence in new roles.
7. Plan a course of action.
8. Acquire knowledge and skills for action.
9. Try new roles and assess feedback.
10. Reintegrate into society with a new perspective.

Hiles (2001) summarises the phases of heuristic inquiry as presented in Table 2.

Table 2: Summary of Moustakas' (1990:27-37) phases of heuristic inquiry

Initial engagement The task of the first phase is to discover an intense interest, a passionate concern that calls out to the researcher, one that holds important social meanings and personal, compelling implications. The research question that emerges lingers with the researcher, awaiting the disciplined commitment that will reveal its underlying meanings.
Immersion The research question is lived in waking, sleeping and even dream states. This requires alertness, concentration and self-searching. Virtually anything connected with the question becomes raw material for immersion.
Incubation This involves a retreat from the intense, concentrated focus, allowing the expansion of knowledge to take place at a more subtle level, enabling the inner tacit dimension and intuition to clarify and extend understanding.
Illumination This involves a breakthrough, a process of awakening that occurs naturally when the researcher is open and receptive to tacit knowledge and intuition. It involves opening a door to new awareness, a modification of an old understanding, a synthesis of fragmented knowledge, or new discovery.
Explication This involves a full examination of what has been awakened in consciousness. What is required is organization and a comprehensive depiction of the core themes.
Creative synthesis Thoroughly familiar with the data and following a preparatory phase of solitude and meditation, the researcher puts the components and core themes usually into the form of creative synthesis expressed as a narrative account, a report, a thesis, a poem, story, drawing, painting, etc.
Validation of the heuristic inquiry The question of validity is one of meaning. Does the synthesis present comprehensively, vividly, and accurately the meanings and essences of the experience? Returning again and again to the data to check whether they embrace the necessary and sufficient meanings. Finally, feedback is obtained through participant validation, and receiving responses from others.

Source: Moustakas, 1990:27-37 in Hiles 2001, "2.Heuristic inquiry, Table 2"

3.7.3.2 Past research: The autoethnographic framework of my narrative

I made use of past research that included the latest scholarly books, academic journals, articles in periodicals and conference proceedings. Existing research indicating the challenging demands for education with an unknown future, educational discourse on the news and news websites, together with other programmes and documents on the World Wide Web, were also studied thoroughly. This past research was used to determine ground concepts, to research what happens in practice, to determine the origin of the ground concepts and ultimately, to construct a model of the concepts that

finally provided the framework for my autoethnographic narrative (Garbers, 1996:278) as discussed in Chapter 2 (My Curiosity Ignited).

3.7.3.3 Observation

As a result of the iterative research process, observations differed among the complete observer, the observer as a participant, the participant as the observer and the complete participant.

a) Practice research (current research)

This research acts as a resource of external observation and self-observation. It also verifies a theory of the ground concepts and refines and elaborates on it.

i) Personal data collection (internal data collection and observation)

This comprises research from the past and the present and is my primary source of information (Chang, 2008:71, 89), which "taps into the wealth of information on self" and "can be written down as textual data" (Chang, 2008:72). For data collection from the past, my autobiographical chronology as proposed by Chang (2008:73) was my guideline in highlighting my educational life experiences such as my "school experiences, educational accomplishments, and educational encounters" in chronological order (Chang, 2008:73) as "[a] historical truthful statement … that accords with existing empirical data on an event or experience" (Denzin, 2014:13). I carried a field journal/recorder with me at all times in which I continually made relevant (and even what might have seemed irrelevant) notes/recordings. I agree in this regard with Lamott (1995:133) who believes in having "index cards and pens all over the house – by the bed, in the bathroom, in the kitchen …" as well as everywhere you go.

For an improved understanding of what it means to be a student in the 21st century, I first needed to examine where I came from – specifically as a child situated within an educational environment – to see how and why I eventually became a student in the 21st century. The reason for this is that I needed to take into account all the years prior to my living in the 21st century as a student, because these years of my life shaped me into the human being who entered university for the first time. I provide my narrative of being a student in chronological order in Chapter 1 and in other chapters, I provide several epiphanies that act as signposts in my life as a student from my school years through to being a PhD student. The data I collected to construct these chapters came from the following

varied sources, prompted by Giorgio's (2013:409) memory-data list: voice memo transcriptions from my hand recorder; electronic journal writings; text memos on my cell phone; field notes kept in a notebook; photographs from visits to different educational sites; various artefacts collected throughout the years of my life, such as photographs from family albums (all photographs used are given the necessary credit), academic results and school record cards, certificates for achievement, etc.; my Morning Pages (three A4 pages of writing about anything that flowed from my thoughts at the start of the day, as instructed by Cameron [1995:9-18]); and my art constructions. For the sake of authenticity, I did not correct possible mistakes in the grammar, the spelling, or the style of my writings and voice and text memos, because I was in effect, writing/speaking in a stream of consciousness that constituted evidence of my journey. The combination of personal and academic data provided "a more expansive autoethnographic record" (Anderson & Glass-Coffin, 2013:72). To stay true to my narrative, most of the photographs included in the thesis were not edited at all or were only edited slightly to improve the lighting exposure for the purpose of clarity. Some photographs were edited to remove the identity of a person or place. McIlveen (2008:14) argues that autoethnography as a method, lends plasticity to data collection and supplies opportunities for the writer to exploit data such as journals/diaries, photographs, letters and other useful records to ensure trustworthiness. These different data sources helped me recollect my thoughts and feelings of a time that initially was long forgotten.

Apart from the above data, I was urged by a colleague to visit past educational places to evoke memories. For this reason, I visited my primary and high school grounds and classes and my university campuses and classes where I was an undergraduate and a postgraduate student. My colleague warned me, however, against the pitfall of nostalgia: "How we remember is as important as what we remember" (Mitchell & Weber, 1999:220). I was advised to focus on the knowledge construction that these visits offered and not to be led astray by feelings. It was very important while presenting my story through my eyes, not to become swept away by nostalgia and not to become indifferent. In a self-study, Kraft (2016: ''Representations and Retrieval Pathways'') confirms the following regarding memories:

> Revisiting the places of our past shows that retrieving a long-term memory involves two factors: 1) the memory representation itself and 2) the retrieval pathway to that memory. Memory representations of personal events can remain vivid and detailed over many years, even while retrieval pathways may become overgrown and inaccessible with disuse. Pathways to a memory can then be reactivated by the retrieval cues at the actual sites of the events. That is how a memory we haven't thought of for years can return with surprising clarity and detail. When these older memory representations are retrieved, the information is undiminished.

This prompted me to revisit the places where the events took place, instead of simply trying to bring these places to mind. Kraft (2016: "1. Recovering Memories") also states that "recovered memory … refers simply to a memory of a past event that has not been recalled for a considerable period of time." Being physically back at a place where I spent most of my time as a scholar and a student, had a profound effect on supporting memory gain. With my senses awakened (O'Reilly-Scanlon, 2000:92), I could see, smell, touch and hear the places where I spent most of my life. Kraft (2016: "Representations and Retrieval Pathways") supports my experiences: "Revisiting the places of old memories suggests a vast collection of un-remembered events represented in considerable detail." The following questions were specifically asked upon the visits to my schools and the visits to the university from which I obtained my undergraduate degree: On a general school/university day, how late did I get out of bed and start preparing for school? Who woke me up and how? How did I feel? How did I get to school? How did I feel when I entered the school gate? What did I do during break times? Did I like my teachers or not?

Being back at the home where I grew up, evidently helped me to regain the memories of being a child and a young adult growing up here at a time that I needed them the most – while constructing my autoethnography. As much as I wanted to put *everything* I had in my possession into this study (my photographs, cards, letters, academic records, certificates, assignments, tests, examinations, transcripts from my verbal journal [upon the educational institute visits], other notes, my art) to act as support to confirm the veracity or in some cases, to provide data, it would not have been feasible. The thesis would be too long, and it would be difficult to keep the reader's attention because of interference, with the result that it would defeat the purpose of using it all in the first place. For the same reason, I could not refer to every small detail that influenced and shaped me as a student. The thesis indeed covers a lifetime, but I reminded myself constantly throughout the writing of the thesis that this is an autoethnography and *not* an autobiography. In the same sense, Denzin (2013:129) claims that not all of a person's self-stories and life history can be included. Consequently, I have made painstaking selections that best represent each particular autoethnographical phase, or more specifically, each educational experience.

While studying parameters such as (a) approximate number of pages, (b) page size, (c) font type, (d) font size, and (e) line spacing widely found in autoethnographical writings, I realised that I would like my text alignment to be left aligned rather than justified. While this did not previously make sense to me – all my texts were justified – it felt correct to left align the text of this autoethnography. I can intuitively feel the flow that this alignment promotes.

ii) External data collection (international experts)

I sought out expert voices in my search for what it means to be a student by conducting interviews with international experts from relevant but diverse fields (Chapter 9). I elaborate on this process in the data analysis description that follows later in the chapter.

b) *Future research (anticipatory research)*

This research lays the foundation for future research, makes suggestions and sets appropriate models in place. This is elaborated on at the end of the study and includes sections on data verification and possible autoethnographic contributions and benefits of the study.

3.7.3.4 Interviews

As already pointed out in Section 3.7.2, I did not live my experiences alone and, therefore, I not only made use of the above 'practice research' but also prepared and conducted semi-structured interviews that allowed for open-ended answers. Futurists, prominent career professionals, successful non-academic entrepreneurs and independent academics (referred to as 'experts') were interviewed in the field of traditional and futuristic education. Several people that had a significant impact on my life as a student were also interviewed; these interviews functioned as support for my autoethnography. Figure 16 explains the invitation procedure for both the autoethnographic interviews and the interviews with experts. The interview process is depicted in Figure 17.

A few notable points regarding other logistics related to the interviews follows: To ensure complete capturing of the interviews, I made use of audio recordings, field notes and a reflective journal. I always had two voice recorders available: my hand recorder and my phone's recorder. In addition, with Skype calls, the Skype call MP3 recorder launched itself automatically. Most interviews were international audiovisual interviews conducted via Skype and Google Hangout. Some were national and face-to-face interviews. I realised what a laborious task transcription was, and the time required would prevent me transcribing the interviews, so I appointed a professional transcriber for this purpose.

Although I asked all my participants the same set of questions during the semi-structured interviews, the questions asked were sometimes followed by probing questions, as my research participants came from various fields and I wanted to exploit each one's expertise. I also asked probing questions in order to maintain focus and clarity (Leedy & Ormrod, 2001:196). I sometimes asked the participant to confirm a statement to ensure that I had understood correctly. It did happen that some participants

referred me to other possible participants, who also gave me interviews. The research participants were unknown to me and I was unknown to them. An interview was conducted with only one participant per interview. I had the participants sign a consent letter prior to the interview to ensure that they gave me their full consent to participate in the study, as well as to assure them that their identities would be kept confidential.

Most of the participants did not ask any questions in advance about my research, although, to put them at ease, I gave them the chance to ask me questions before we began the interview. Therefore, most participants were, in that way, totally 'unprepared' and spoke from the heart.

STEP ONE
Sending invitations: Inviting possible participants by sending them an email and asking them to participate in my study, stating that I would value their contribution highly.

STEP TWO
Waiting for their responses: If I did not receive an answer within five days, I re-sent the email (This was repeated a maximum of three times).

STEP THREE
Response received: The answer was either "yes" or "no".

YES	NO
If the person agreed to participate, the date, time and means of communication were confirmed. A consent letter was also sent for the participant to sign. Face-to-face meetings were preferred at a place comfortable for the participant, however, for sound quality purposes I asked, if feasible for the participant, for a venue as quiet as possible.	If persons refused to participate, I asked if it were possible for them to send me interview answers electronically. (A few participants agreed to this.)

STEP FOUR
Attending the interview: The interview was conducted on the day and time agreed upon. (Owing to the geographical constraints for the expert interviews, an audio-visual Skype call was used to communicate in most cases.)

Figure 16: The invitation process

PHASE ONE
Ensuring punctuality: About 20 minutes before the interview commenced, I set up the recorder (and backup recorder on my cell phone) and made myself comfortable.
PHASE TWO
Participant arrival / Skype-calling participants: We greeted each other, and I thanked them for their interest, after which I inquired if they wanted to ask me anything specific before we commenced the interview.
PHASE THREE
The interviews: The questions were asked (including probing questions) and answers were received. Member check: I sometimes asked participants to confirm something to make sure I had understood them correctly.
PHASE FOUR
Ending off the interviews: I asked the participants if they would like to add something in conclusion and thereafter thanked them for their invaluable contributions.
PHASE FIVE
Emailing a letter of thanks to each participant, transcribing the interview and subsequently making it available to the participant to review. I was pleasantly surprised to find that most of the participants wanted to see the transcripts, confirming their interest in the study.

Figure 17: The interview process

3.7.4 Data analysis

The data analyses are twofold, taking both my autoethnography and the expert interviews into account. Ultimately, all analyses act in the service of self-reflexivity as related to not only my own transformation but also that of the teaching and learning culture. "Thus, reflexivity entails taking seriously the self's location(s) in culture and scholarship, circumspectly exploring our relationship to/in autoethnography, to make research and cultural life *better* and *more meaningful*" (Berry, 2013:212). The analysis of my autoethnography in its holistic view is guided by Polkinghorne's (1995) narrative analysis, described in his article 'Narrative configuration in qualitative analysis' as "the configuration of the data into a coherent whole" (Polkinghorne, 1995:15).

3.7.4.1 Autoethnographic data analysis

I will first discuss how I analysed the autoethnographical data, both the internal data (of myself) and the external data (the autoethnographic interviews). I support the strategy of Grossi (2006:21) to identify vital times in one's life that are related to the focus of the study. Thus, my analysis strategy was to decide on significant moments in my life as a student, examine and classify them chronologically and ultimately present them as structured, educational experiences also referred to as epiphanies. The presentation was preceded by an introduction and ended with a conclusion of the

respective autoethnographical chapter (Humphreys, 2005; Jensen, 2013; Pitard, 2016). The significant phases were both pleasant and unpleasant times that I was able to recall that made an impact on me as a student.

People analyse as they write, because they deliberately select what they want to put to paper. However, Anderson (2006:387) clearly warns that "not all [auto]ethnographic writing is explicitly or self-consciously analytic or committed to addressing general theoretical issues." I agree with his use of "the term *analytic* to point to a broad set of data-transcending practices that are directed toward theoretical development, refinement, and extension" (Anderson, 2006:387) in order to improve the autoethnographic experience. In addition, Méndez (2013:281) discusses the writing style, stating that the emphasis is on the *meaning* and "not the production of a highly academic text", although it is still an *academic* narrative. Holman Jones, Adams and Ellis (2013:37) are in agreement with this and state that the narrative should appeal not only to academics but also to a more extensive audience. In addition:

> These narratives are not so much academic as they are existential, reflecting a desire to grasp or seize the possibilities of meaning, which is what gives life its imaginative and poetic qualities. The call of narrative is the inspiration to find language that is adequate to the obscurity and darkness of experience. We narrate to make sense of experience over the course of time. (Bochner, 2000:270)

I also found that I moved forwards and backwards between the autoethnographical chapters as I wrote, implying that it is definitely not a linear process. It is a complicated process of continuous reconstruction.

Concerning the interviews, I used either the autoethnography interview answers as support for my narrative by studying the interviews and carefully selecting relevant text from the interviews, or I used the interviews/parts of the interviews to act as data for a significant educational event. I sometimes made use of unusual and extended quotations. To support the essence of the participant's view, I felt compelled to maintain the context within which the essence of the participant's view came to the fore. It is, indeed, their narrative as well. Moreover, in his book, *Oneself as Another*, Ricoeur (1992) argues that the individual is also embodied in the other and that mutual feelings may occur between the individual and the other. This may only emerge in their extended narratives.

I made use of verbatim quotations: the exact words and order of the participant's speech, to add to the trustworthiness of what the person said. However, I did some slight "tidying up" of the texts. Corden and Sainsbury (2006:18) found "[t]o enhance readability, some researchers … do some re-punctuation. It [is] also common practice to take out the 'ums' and 'ers', phrases such as 'I mean' and 'you know', and the word repetitions which pepper most people's speech." The omission of these

types of speech and "repetitions" influences the data analysis and interrupts the flow of the argument, as they do not contribute to it and are appropriately replaced by an ellipsis ("…"). This means that a word/words/passages have been left out for analytical or even ethical reasons. These words may have no influence on the focus of the study or may need to be excluded to protect the participant's identity. An ellipsis is also used if the participant's sentence was not finished or it 'hovered' in the air. The same applies to the *expert interviews*.

Due to the nature of the data, the way I collected it, differed, which resulted in implications on how I presented it. In addition, I analysed the autoethnographical chapters (Chapter 1 and chapters 4–8) in different ways in order to accompany the specific writing typology. All these chapters represent the "epiphanies of a life", the "[e]ffects at the deep level cut to the inner core of the person's life and [that] leave indelible marks on him or her" (Denzin, 2013:130). Chapters 2, 3, 9 and 10 are also created differently compared with Chapter 1 and chapters 4−8. Chapter 2 comprises a literature study covering both the South African educational context and the universal education context (Appendix B on the CD), which resulted in the educational framework of my narrative. Chapter 3 explains my research design. Chapter 9 covers the expert interviews I conducted, in conjunction with answering my secondary research questions. Chapter 10 consists of my autoethnographical contributions and the addressing of my primary research question. I explain the different analyses methodologies used in Chapter 1 and chapters 4–9 throughout the following pages.

a)   *Memory work and arts-informed inquiry*

Chapter 1 presents a coherent chronological narrative up to the stage where I developed my research questions. This chapter took into account a rich part of my life because it demonstrates a path of almost 31 years. I used memory work together with photographs to write and analyse this chapter. I refer to memory work in Chapter 1 and Chapter 3.

b)   *Constructed vignette analysis model*

For chapters 4 and 6, I constructed an analysis model adapted from Pitard (2016) as the methodology to analyse my autoethnographical experiences. Because of this novel construction, I feel it is necessary to provide an in-depth explanation on how I reached the analyses of these chapters. Pitard (2016:1) suggested analysing her autoethnography by constructing a "structured vignette analysis". I determined that I would be able to modify this analysis to suit my own research needs. Pitard (2016:1) explains why she developed this analysis method: "To assist my analysis I developed a structured method for analysing each vignette to reveal layers of awareness that might otherwise remain

experienced but concealed." Unfortunately, most autoethnographies that I studied remain hidden as mere experiences. To access meaning in my autoethnography, I realised that a deeper level of awareness must be reached within the existential moments I write about. Pitard (2016) carried out deliberate control by conducting in effect, action research. She strived to improve her teaching practice deliberately. Without knowing that I consciously performed certain actions that I will refer to as 'x, y and z', I improved my being, with 'x, y and z' influencing my life. These actions, therefore, contributed to my development.

The structured data analysis methodology that I constructed consists of several steps in chronological order:

1. **Introduction**: A broad overview of the specific autoethnographical phase under investigation is provided. Sometimes contemplation may emerge.
2. **Educational experience:** A depiction in the format of a vignette. Following the experience are two exceptionally important steps:
   a) The <u>emotional response</u> to the depiction (my feelings): Explaining the emotions connected to the experience. This is feelings from the past (i.e. how I felt during the experience).
   b) The <u>contemplation</u>: The rationale to the emotional response. What did I learn from the experience in the sense of *what it means to be a student*? Meaning can be found in contemplating the emotional response (Why did I feel that way?). This happens in the present moment.
3. **Conclusion:** Contemplating the whole phase to reach a result on the specific autoethnographical phase.

A graphical representation of this model can be seen at the end of this section as Figure 18.

The aim of the **introduction** is to provide a description of the totality of the autoethnographical phase, and this is done in such a way as to contextualise the educational experience. In this regard, the focus of the research lies predominantly in the **educational experience** that operates as a unit of reference. A reference unit needs to be identified since one cannot use the whole story, and everything is not equally important (Anderson, 2006:387).

The educational experience emphasises educational highlights, ultimately contributing significantly in a *universal* manner to the understanding of what it means to be a student (Denzin 2014:7). Anderson and Glass-Coffin (2013:66) explain vignettes as "revisiting and retelling specific emotionally memorable events" by making use of "an example or small illustrative story" (Grbich 2013:312). Thus, it can be seen as simple, minimal language usage that creates an atmosphere. I realised that the

vignette could be accessed only when the **emotional response** was identified and consequently, I could contemplate the educational experience.

Early in the analysis process of describing the emotional response of the specific educational experience, I struggled with the idea of documenting the emotions that I had felt during the educational experience. To report my emotional state for the specific experience, I turned to the classification system of emotions of Plutchik (2001) to help identify the emotion that occurred within me with each respective educational experience. I mainly referred to English "emotion words" since there are hundreds of them (Plutchik, 2001:349). I may not have mentioned a primary (or mixed) emotion in an emotional response step; still, the emotions I mentioned could be similar or could fall under a primary emotion.

It took me some time to find a good definition for **contemplation**. Most dictionaries and literature are confusing in regard to a definition for contemplation, so I am delighted to present a definition that I believe in. In the book, *The Mind's Own Physician* (Kabat-Zinn, Davidson & Houshmand, 2011), a number of experts on meditation and on neuroscience are in dialogue. Here, Thomas Keating, one of the experts, gives an exact definition of contemplation that I support:

> From the perspective of … contemplation … we emphasise the intentionality of silence. That is to say, silence as an intention has a significant effect on the process of [contemplation], whether you are experiencing thoughts, feelings, external sounds, or whatever. Getting used to disregarding the flow of thoughts leads into deeper levels of interior silence and peace. At that level we seem to be touching or experiencing a deeper aspect of human nature than ordinary psychological awareness. This is usually known as the spiritual level of our being or, in terms of perennial philosophy, the intuitive level of consciousness and beyond. (Kabat-Zinn, Davidson & Houshmand, 2011:61)

Contemplation, therefore, adds the dimension of quality through spirituality, which involves awareness. I see this not only as awareness but also *self*-awareness: to be deeply aware (conscious) of who I really am. This is why I much rather refer to contemplation than to reflection, which lacks this significant dimension. I must confess that I did not reach this level of contemplation each and every time. However, as I progressed through the different autoethnographic phases, I did undergo spiritual growth. This was because not only did I practise contemplation more often, but also because there was an increase in spiritual levels as I passed from one autoethnographic phase to the next. Within this crucial step of the model, I asked, "What does *this* (the particular educational experience) mean to be a student?" The *analysis of the text,* therefore, took place, roughly following Mayring's (2014) qualitative content analysis. Here, the concepts from the autoethnographical narrative framework guided and influenced me unconsciously.

In addition, after writing numerous drafts of the autoethnographic vignettes, I left them to 'incubate' for some time while I was busy revising the first 'chapters' of this study. This incubation period also resulted in spiritual growth so that when I reviewed my autoethnography phases, I found that my contemplation quality was higher.
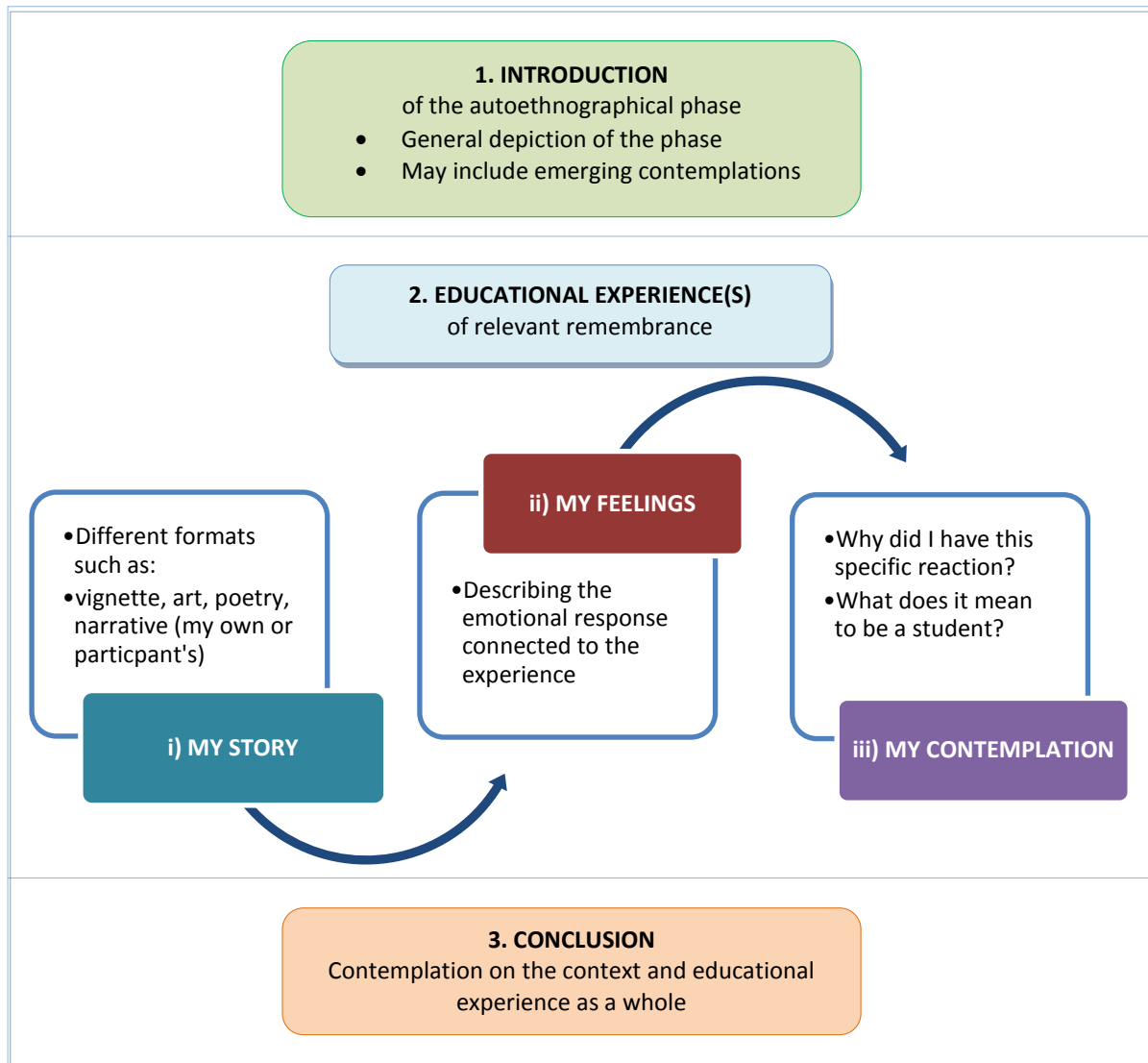
Figure 18: My structured autoethnographical data analysis methodology
Source: Pitard, 2016

c)   *Dialogue and interview*

Similar to the text-analysis method used for the vignettes, I roughly followed Mayring's (2014) qualitative content analysis to analyse the content of Chapter 5, which consisted of a dialogue and an interview. The concepts from the autoethnographical narrative framework guided me and influenced

me unconsciously. I conducted the same analysis for the part of Chapter 6 where my MSc-supervisor shared her narrative.

d) *Visual essays*

For chapters 6 and 8, I made use of expressive visual research by constructing visual essays, a result of incorporating my "scientific and visual abilities" (Pauwels, 2012:257). I find that this method fitted well with my scientific background in Natural Sciences combined with my current experiences in the Humanity Sciences. I therefore created my own 'artistic piece' embedded in a "metaphor drawing" (Makhanya, 2016:87) about my 'practice' of being a student in the 21st century (Mitchell, 2015:8). Autoethnographic writing can, therefore, have an evocative and analytical effect (Rose, 2016:436-440). This also naturally suits the autoethnographic writing typologies that I selected.

During the past few decades, visual methodologies have been considered to investigate "the human condition" (Mitchell, 2008:375), and "can be deeply revealing, giving immediate access to areas of inner conflict and ambivalence" (Hogan & Pink, 2012:231). This type of analysis complements my existentialistic auotoethnographic approach.

The basis of my "artistic text" analysis (Mitchell, 2008:375) of my "artful autoethnography" (Ellis, 2004:184) is provided by the work of Sarah Pink, Marcus Banks, David Zeitlyn, Claudia Mitchell and Gillian Rose. In chapters 6 and 8, I made use of art and images as visual evidence (Mitchell, 2011:100) with constructions of understanding as they reflected my journey of transformation (Mitchell, 2008:367). Banks and Zeitlyn (2015:194) refer to this as

> [T]he photographic [visual] essay [that] is normally driven by a strong narrative which links one image [photos/art/poetry] to the next in sequence, either in a more or less strict chronological fashion or through a more abstract association of ideas. The narrative … transcends the internal narrative of the individual images.

In the same sense, Mitchell (2011:193) warns: "What is critical is an aesthetic for reading these images as a photo essay or photo documentary rather than as individual photos." Suominen (2003:50) describes this "critical essay writing as a method [that] intertwines visuals, creative and theoretical /academic essay writing. Through critical essay writing I analyze my visuality and photowriting in the light of relevant theories and in the disciplinary context." This method is influenced by Rollwagen's (1988) ground research on anthropological film.

I found this analysis appropriately embedded in my autoethnography as I again realised the value of the saying 'a picture is worth a thousand words' and as a multifaceted being, "the possibility of

multiple ways of knowing and communicating needs to be further investigated" (Suominen, 2003:20). Due to the evocative nature of my autoethnography I found that powerful feelings were best described by means of visual aids, undeniably revealing the "the mind's inner imagery" (Edgar, 2004:95). I further agree with Suominen (2003:49) that "finding and modifying methods for my research forms the heart of my epistemological narrative and is tightly linked to the more personal narrative told and evolving simultaneously." Rose (2016:480-483) formulated an in-depth set of questions for reaching meaning in images, and these guided me in my analysis thereof.

Questions regarding the production of an image:

> When, where and why was it made? Who made it? Was it made for someone else? What technologies does its production depend on? What technologies does its transmission depend on? What were the social identities of the maker, the owner and the subject of the image? What were the relations between the maker, the owner and the subject? Does the genre of the image address these identities and relations of its production? Does the form of the image reconstitute those identities and relations? (Rose, 2016:480-481)

Questions regarding the image:

> What is being shown? What are the components of the image? How are they arranged? What is its material form? Is it one of a series? Where is the viewer's eye drawn to in the image, and why? What is the vantage point of the image? What relationships are established between the components of the image visually? What use is made of colour? How has its technology affected the text? What is, or are, the genre(s) of the image? Is it documentary, soap opera, or melodrama, for example? To what extent does this image draw on the characteristics of its genre? Does this image comment critically on the characteristics of its genre? What do the different components of the image signify? What knowledges are being deployed? Whose knowledges are excluded from this representation? Does this image's particular look at its subject disempower its subject? Are the relations between the components of this image unstable? Is this a contradictory image? (Rose, 2016:481)

Questions regarding circulation of the image:

> What transports this image? In what form(s) does this image circulate? Must it change form in order to circulate? In what forms is it materialised in different places? Is its circulation organised in any way, and if so, how? How is its circulation organised and controlled? Who controls its circulation? (Rose, 2016:481)

Questions regarding audiencing:

> Who were the original audience(s) for this image? Where and how would the image have been displayed originally? How is it stored? How is it re-displayed? Who are the more recent audiences for this text? Where is the spectator positioned in relation to the components of the image? What relation does this produce between the image and its viewers? Is the image one of a series, and how do the preceding and subsequent images affect its meanings? Would the image have had a written text to guide its interpretation in its initial moment of display, for example a caption or a catalogue entry? Is the image represented elsewhere in a way that invites a particular relation to it, in publicity materials for example, or in reviews? Have the technologies used to display it affected the audiences' interpretations of this image? What are the conventions for viewing this technology? Is more than one interpretation of the image possible? How actively does a particular audience engage with the image? Is there any evidence that a particular audience produced a meaning for an image that differed from the meanings made at the site of its production or by the image itself? How do different audiences interpret this image? How are these audiences different from each other, in terms of class, gender, 'race', sexuality and so on? How do these axes of social identity structure different interpretations? (Rose, 2016:481-483)

Addressing the above questions is referred to by Banks and Zeitlyn (2015:17) as "reading pictures". Not only do the above questions help in understanding the image, but they also demonstrate *why* the image exists (Banks & Zeitlyn, 2015:19), that is, they analyse the image as an object, a more "formal reading" that is also known as content analysis (Banks & Zeitlyn, 2015:31; Rose, 2016:131-155).

e)   *Action research*

For Chapter 7, I employed the six steps of action research (identity, plan, act, observe, reflect and review), with the emphasis on reflection as the analysis procedure. I followed the popular work of McNiff and Whitehead (2011) in this field as a guideline. Regarding my autoethnographic approach, Whitehead (2016:139) wrote a review of the book, *Academic Autoethnography: Inside Teaching in Higher Education* by Pillay, Naicker and Pithouse-Morgan (2016), praising the "use-value" of autoethnography "in the creation of living-educational-theories" such as "explanations of an individual's educational influence in their own learning as they deepen and extend their understanding of cultural influences in their learning." Since I am both practitioner and researcher, taking an active part in the research while innovating my education practice, my research follows a participatory action research approach that consists of a number of action spirals containing action research cycles.

Each cycle pursues an essential aspect of the proposed innovation of my education practice in a continual progression towards its achievement.

3.7.4.2 Coding: Expert interview analysis

In this section, the analysis in Chapter 9 is explained. I investigated the coding manual of Saldaña (2016) in order to reveal the various significant categories that emerged from the expert interviews. Many other sources that I encountered while conducting this research, also referred to this book as invaluable when coding interview data. Since data saturation appeared as from the 15th interview, most quotes were selected as representative quotes from interview numbers 1 to 15. I did, however, insert some quotes selected from some other interviews, in cases where I felt quotes from these interviews were more representative of an answer, or even in some instances where a new category, subcategory or sub-subcategory might have come into view (with their respective codes and/or subcodes). I made use of exclusively extended quotations from the interviews. The reasons for this are as follows:

- These were the views of *experts*, compelling me to share their narratives as a whole, as far as possible.
- The data was very *rich* and revealed the complexity and the richness of the study itself.
- To support the essence of the participant's view, I felt compelled to maintain the *context* within which the essence of the participant's view came to the fore.
- Because this study is an autoethnography, the method, which is in effect my narrative, not only allows the use of other narratives but also suggests it.

Thus, each interview I conducted could be seen as a narrative. After the interviews, they were transcribed, and the analysis process was initiated. Now I could explore the analysis process to construct my living theory of being a student with the expert's view included. However, I heeded the warning of Saldaña (2016:14), "Keep in mind that the actual act of reaching theory is much more complex and messy than illustrated". The model of Saldaña (2016:14) is presented in the Appendix C on the CD accompanying the thesis.

Initially, I did not entirely understand the statement of Saldaña (2016:14) mentioned above because I did not have experience in analysing interview transcripts. However, I soon began to comprehend the meaning clearly as I progressed with the analysis process. It became evident that the 'codes-to-theory' model is definitely not a linear process of following a specific method and arriving at one specific answer through applying the method alone. It is rather a to-and-fro process of handling the data and engaging with it in such a way that one becomes immersed in the data and finds new developments as the analysis progresses. This implies that a person may need to 'overwrite' or develop additional steps

to arrive at the best answer. The researcher definitely needs to review the data more than once. It is from within this process that one starts to engage with the interpretation of the data. The data analysed is, therefore, not left fragmented but results rather in the construction of a holistic picture of understanding.

Even though the above is true and valid, I still needed to study the science behind analysing qualitative data in order to make sense of my transcripts. Before I commenced with the analysis process, I identified the steps needed to analyse and eventually interpret the data. This journey entailed studying Saldaña's (2016) coding manual and consulting various other sources in the literature. In addition, it involved ad hoc discussions facilitated by my supervisor with other students about analysing qualitative data. As a result, it became evident that I needed to be able to explain the process I undertook to analyse the data. Because this process is not linear and 'clean', I developed an analysis process that best suited my novel research needs.

I acknowledge the fact that the typical qualitative data analysis description and thus, the language of coding according to Saldaña (2016), fits uncomfortably in the storied narrative approach for working with autoethnographic data. Accordingly, I placed the analysis procedure in Appendix C and D where you can follow step by step how I analysed the expert interviews.

To reach clarity as far as possible in the analysis, it became evident that the analysis process would result in a self-constructed model. Thus, all the steps as explained in Appendix C, as well as the constructed table consisting of the different categories in Appendix D, contributed to the development of the model. As the end-product of the analysis of the interviews with the experts, a model was constructed during the entire analysis process to represent ultimately what it means to be a student. You can find this model in Chapter 9.

Although most of the data strongly revealed what the current education system looks like and to an extent, what it *should* look like regarding lectures, lecturers and physical structure, the *significance of this study lies within what the 21st-century student should look like*. By looking at what learning means in reality and the qualities attained from learning in the 21st century and beyond, the model finally developed into *this* core category (Phase two, step 3 as presented in Appendix C) that represents my living theory of being a student.

Apart from the coding resulting in categories and ultimately the core category, a meta-analysis was conducted to investigate the initial analysis on a different level of meaning: What does this analysis mean in relation to my transformation as a human as well as the transformation of the teaching and learning environment? By investigating this question, I ultimately attempted to answer my secondary research questions.

3.8   BEING ETHICAL

'Autoethnography and the Ethics of Writing about the Embodied Self' by Richards (2016) summarises the ethics within autoethnography thoroughly:

> Good autoethnography is scholarly. It is well theorised and well contextualised. It is analytical. Its academic goals are clearly defined. It is useful to others (both academic and nonacademic). In these ways it is like any other type of research. But, unlike some research, it has an external ethical dimension and an internal one. There are safeguards you can use to make your work ethical in the public domain, but you have to make ethical choices yourself, about how you include information, and what you allow it to do to you in the private domain. My extremism again—I don't think you can really practise ethical research unless you are an ethical person. The public and the private are always connected. (Richards, 2016:172)

Even though I am the main subject of my research, I do not live in isolation. There will always be other people involved within and outside my story. In conducting interviews with 53 people, I followed the code of confidentiality at all times. Obtaining ethical clearance from the university in order to be able to conduct the research with the participants, involved a six-month process (see Page iii for ethical clearance certificate). The ethical considerations, as contained in all of the official documentation and application forms of the Ethics Committee of the Faculty of Education at the University of Pretoria, were taken into account. Emphasis was placed on the following aspects:

- All participation in the research is voluntary, implying that the participants can withdraw from the research at any time without consequence.
- There must be informed consent. This means that research participants must give their consent to participate in the research and at all times, must be fully informed about the research process and purposes.
- Safety in participation must be guaranteed. This implies that the human participants should not be placed at risk of any type of harm.
- Privacy must be maintained. This means that the *confidentiality* and *anonymity* of the participants must be protected at all times.
- Trust is essential. This implies that the participants will not encounter any acts of deception or betrayal in the research process or its published outcomes.

All the participants were given a consent letter that had been approved by the Ethics Committee of the Faculty of Education at the University of Pretoria to study and sign, thereby giving their full consent to participate in the study. "The goal of securing informed consent is to ensure that participants are making an informed, voluntary, and autonomous decision to participate or appear in a text or performance" (Tullis, 2013:248). These signed letters are strictly confidential and are stored in a safe at the Faculty of Education at the University of Pretoria.

Referential adequacy refers to the documents kept on a USB device. These include the transcripts of all the interviews (all participants were kept anonymous), the analysis of the expert participant interviews, the ethical consent letter (as it was sent out or given to the participants), and all the interview schedules. The audio files of the interviews as well as the signed consent letters cannot be made available to anyone because the participants' privacy will be at stake. The University of Pretoria stores these files and letters in a safe.

This section concludes with a quote from Noddings (1984:49) that summarises relational ethics, "the heart of narrative inquiry" (Clandinin, Caine & Huber, 2017:782) so well:

> [I]n genuine caring relationships and caring situations – the natural quality of my engrossment, the shift of my energies toward the other and his projects – I form a picture of myself … But as I reflect also on the way I am as cared-for, I see clearly my own longing to be received, understood and accepted.

3.9 CONCLUSION

This chapter provided a review of the development of the autoethnographic research and how autoethnography can be closely linked to teaching and learning, with the emphasis on "studying inwards" (Reinikainen & Zetterström Dahlqvist, 2016:70). I elaborated on the research design of the thesis, including the ethical considerations. I also attempted to highlight the role of existentialism in relation to my search for meaning (Frankl, 2008:105) and how autoethnography is *the* method to serve as a vehicle to reach the answer to my research questions. "Autoethnography can be viewed as a method of introspection in order to investigate everyday life and by doing so, connecting culture and the individual" (Reinikainen & Zetterström Dahlqvist, 2016:71).

Ultimately, this chapter reflects the nature of the study: a scientific study where students (myself being the focal specimen) and various professionals in fields of specialisation (philosophy, futurology, education, neurology and psychology) participated and where various document analyses were conducted to ensure scientifically founded and grounded evidence of what it means to be a student in the 21st century.

This study may, therefore, contribute to the existing body of knowledge on what it means to be a student in the 21st century, because it reveals the current state of education and subsequently suggests how education needs to be transformed, in order to resolve the challenges that the 21st century poses to education. Holman Jones, Adams and Ellis (2016:30) remind us of the characteristics of an autoethnography: "(1) purposefully commenting on/critiquing of culture and cultural practices, (2) making contributions to existing research, (3) embracing vulnerability with purpose, and (4) creating a

reciprocal relationship with audiences in order to compel a response." Thus, I hope this study as a practical consideration for the use of autoethnography will influence people to *move to action*, ultimately benefitting society (Denzin, 2014:20).

In the following chapter, I return to my narrative as it takes the shape of a vignette to represent an epiphany representing my school years. I concur with Richards (2016:169): "I wanted to retain that child's voice as much as I could to be accurate, while balancing it with adult insights". This will give me an understanding of not only myself (albeit as a child) but also an insight into the teaching and learning culture because "ultimately the truth of the story lies not in its accuracy but its meaning" (Gabriel, 1998:136).

CHAPTER 4: THE CONSEQUENCE OF POWERPLAY

4.1   INTRODUCTION

To me, this chapter symbolises primary and secondary school. Chapter 4 also represents a significant phase in my academic life, because this was the first time that I was registered at an official educational institution.

I was the perfect example of a student who did academically well and who obeyed her teachers. I had integrity and had gained other qualities at a very early age to the extreme of cutting my own hair in Grade 1 because I believed it touched the collar of my school shirt. Although my mom said this was not the case, the teacher had made it clear that part of the school rules was that our hair may not touch our collars! I believed in doing the right thing even if it meant going above my mom's authority. I knew I had the responsibility of obeying the teacher and the school rules.

This chapter consists of a vignette (that follows on the next page) taking place in my Grade 2 classroom. I took this photograph (Figure 19) during my school visit, while sitting in my Grade 2 classroom, reflecting on my primary school experiences. The photograph prompted the memory encapsulated in the vignette and helped to "spirit the past into the present" (Kelly, 2011:54).

Figure 19: My Grade 2 classroom

(I used to sit somewhere in the middle)

Source: Own photograph

4.2   MY VIGNETTE

I am sitting in my Grade 2 classroom. All's quiet. We wait in anticipation for the teacher to hand us our assignment for today's class.

"Today, you are going to learn more about kitchen appliances."

She hands us our worksheets and says we are also going to do colouring.

Yes! One of my favourite activities!

I receive the outline of a fridge on a piece of white paper. To me, the fridge represents cold, and I associate cold with the colour blue – the blue of water in our swimming pool and in dams and lakes and the sea and the bright blue sky of our winter days, with not one cloud in sight. It is the most natural thing for me to colour the image blue. I do not hesitate and start with the colouring process. What fun!

All of a sudden, the teacher starts talking again. "Now, before we commence with the activity, I will tell you what the colour of the fridge is. The fridge is white and, therefore, you need to colour it in with yellow. Yellow represents white."

I freeze for a second.

I start to panic.

Uh-oh!!!

I immediately grab hold of my yellow crayon and frantically start colouring over the half-way-already-blue fridge.

I clasp the table. I cannot believe my eyes.

The fridge is now… green!?!

Suddenly, my teacher is next to me, giving me a clean worksheet …

4.3   MY FEELINGS

I panicked because I had coloured my fridge blue, and it needed to be yellow according to the teacher. My natural response was to grab the yellow crayon and try to correct the blue fridge by colouring over the blue with yellow. Despite the fact that I felt as if I had disobeyed the teacher by not waiting for her

instructions, I was quite amazed to see that mixing blue and yellow produced the colour green. In reliving this event, I realise what I had really gone through.

As I mentioned, colouring was one of my favourite pastimes, and I was obviously excited and happy to engage in this activity. That is why I so spontaneously and intuitively picked up my blue crayon and happily started enjoying the colouring activity without waiting for the instruction to do so.

Having already started, I was interrupted by the announcement from the teacher: *"Now before we commence with the activity …"* This surprised me. Since colouring came so naturally to me, why did I need to wait to enjoy what I so dearly loved? Her next announcement confused me: "*I will tell you the colour of the fridge"*. Why would I need to wait for her to tell me the colour of the fridge? Although the actual colour might be white, my experience and expression of it being a cold fridge meant that I should colour it blue. But what she said next totally confounded me: *"The fridge is white"*. I could relate to that – but her next announcement, *"and therefore you need to colour it in with yellow"* filled me with apprehension. And then she said, "*Yellow represents white."* Initially, I was annoyed at this, because to me, this was an obvious mistake. I felt some anger developing mixed with fear, which made me panic because the whole situation had become so uncertain. In my anxiety to correct what I had done wrong, that is, grabbing the yellow crayon to cover my mistake, I ended up exacerbating the problem, which made me feel what I now know to be terror. Irrespective of what happened after that, an activity that had started out with joy and excitement ended in terror. This must have had a significant impact on my life as a student.

4.4   MY CONTEMPLATION

I followed my heart at the start of the assignment. I did not hesitate to start colouring the fridge. Being the intuitor that I am, I followed my intuition. It felt right. I was confident in my action. My meaning in regard to the colour of the fridge was that it was blue because blue represented cold. And that is what a fridge is; it keeps food and drinks cold. Should I have waited for the teacher to explain to me what to do? Do I need to obey her unconditionally? What was I supposed to do in such an utterly confusing and terrifying situation? This frightening experience reminded me of Helen Buckley's story (n.d.) about the red flower.

The parable of the red flower with the green stem

Once upon a time, there was a little boy who attended a big school.

One morning, the teacher said, "Today, we're going to draw."

"Good," thought the little boy. He liked to draw lions, tigers, chickens, trains and boats. He gathered his colour pencils and started drawing.

"Wait!! Don't start yet," said the teacher. She waited until all the students were ready and said— "We're going to draw flowers."

The little boy started drawing beautiful flowers with his pink, orange and blue pencils.

"Wait!" said the teacher. "I'll show you how to do it." And the flower she drew was red with a green stem. "Okay," said the teacher. "Now you can do it."

The little boy looked at the flower that the teacher had drawn, then looked at his own flowers and liked his the best. But he couldn't say that, so he turned the sheet of paper over and drew a flower just like the one the teacher had drawn – red with a green stem.

On another day, the students were having class outside, and the teacher said, "Today, we are going to play with clay."

"Great!" the boy thought. He liked to play with clay. He could make things such as elephants, mice, cars and trucks. He started to take some clay in his hands and make a big ball.

Then the teacher said— "Wait! Don't start yet." She waited until all the students were ready. "Now," she said. "We're going to make a plate."

"Good," thought the little boy. He liked to make plates of different sizes and shapes.

And then the teacher said— "Wait!! I'll show you how to do it." It was a soup plate. "Okay," she said. "Now you can start."

The little boy looked at the plate that the teacher had made, then looked at his own plate and liked his the best. But he couldn't say that, so he got his plate, made it into a big ball and started again. He made a soup plate just like the one the teacher had made.

And so, from early in life, he learnt not to do things by himself but to wait for a model.

And then, the little boy went to another school that was even bigger.

One day, the new teacher said, "Today, we're going to draw."

"Good!" thought the little boy. He waited to see what the teacher would draw.

The teacher didn't draw anything. She only walked around the room.

Then the teacher approached the little boy and asked, "Don't you like to draw?"

"Yes," he said. "But what are we going to draw?"

"I don't know," said the teacher. "Draw whatever you want."

"How can I do that?" he asked.

"Any way you want," said the teacher.

"But what colours should I use?" asked the little boy.

"You choose. If everybody makes the same drawing with the same colours, how can I know which drawing is yours?" she said.

"I don't know," answered the boy.

The boy picked up his crayons and started to draw …

A red flower with a green stem.

I am both sad and angered by the effect that the 'fridge' event must have had on my very young student life and the consequences thereof in my later life. Perhaps insecurity and the loss of self-confidence in my actions? Perhaps inhibition of my development and growth along Maslow's Hierarchy of Needs?

But it was not all bad because I also discovered something interesting, namely that mixing blue and yellow produces green – what a paradox that proved fortunate, since I paid it forward later in my student life … You will see in Chapter 8.

It also became evident that the focus emerging from this autoethnographical phase was primarily on my early primary school years (the foundation phase). Upon contemplating this, I realised that these were the years that my grandma was working at the school. I was in Standard 2 (Grade 4) when she retired. Although she never mixed work (being a school secretary) with her private life (in this case, the life of a granny), just *knowing* she was physically there with me on the school grounds contributed a great deal towards making me feel safe and happy.

In this regard, I agree with Grossi (2006:35) when she said, "[t]hus my childhood physiological [and safety] needs, as described by Maslow, were more than adequately taken care of". You can deduce that the same applies to me. By taking into account the stability that was provided in the way I grew up in a safe house and a safe school, I am of the opinion that the first two basic needs were fulfilled. The third step of Maslow's theory is social needs – that of belongingness and love. During school, I belonged to my grade group consisting of mostly girlfriends (I believe it is natural to have more

friends of the same gender at a young age, especially in primary school). From an early age and throughout my school career, I was selected intermittently as class leader, even winning the award for best class leader at times and thus demonstrating what I understand today to be leadership qualities. Having this status, provided me with responsibility, the first growth level of Maslow's hierarchy, and I took this responsibility as seriously as my school work (together with obeying the school rules and the teacher!). I was always one of the first to arrive at school to be on duty, implying that I had a 'moral obligation' (Coulson, 1969:168). I trust that this contributed to me reaching the second growth level of Maslow's hierarchy, ultimately contributing to my identity construction.

4.5   CONCLUSION

The postmodern/postcolonial conception of the self and society is one of
multiplicity of identities, of cultural displacements, and of shifting axes of power.
(Reed-Danahay, 1997:2)

I conclude this vignette with my belief that the teaching and learning culture, in general, denied me the experience of reaching my own understanding (Barnett, 2007:164). In terms of authentic learning (Slabbert, De Kock & Hattingh, 2009:68-73) and based on Kolb's experiential learning cycle (Kolb, 1994), attaining understanding refers already to the first step of the cycles, which is concrete experience.

The 'fridge' exercise made me realise that a student is deprived of learning when the teacher tells the student exactly what to do. Simply sitting, waiting and watching what the teachers do and how they do it, deprives students of the chance to discover things on their own (i.e. to arrive at the answer on their own). The student simply replicates what the teacher does. Palmer's (1994) book *To Know As We Are Known: Education as a Spiritual Journey* supports my belief around what the student is obligated to do when confronted with the teacher. The teacher feels safe in a power position:

> With power comes security: the security of controlling the classroom agenda, of avoiding serious challenges to one's authority, of evading the embarrassment of getting lost in territory where one does not know the way home. Teachers are unlikely to relinquish such power even in the face of students who hunger for another way to learn. (Palmer, 1994:67)

This is so much in contrast to what Barnett (2007:40) argues education should insist on: authenticity. Knowledge must be *personally* constructed to acquire qualities of "personal insight and understanding" (Barnett, 2007:164).

My concluding remark is that through contemplating my school years and specifically this epiphany, I revealed a layer of consciousness (Pitard, 2016) that has contributed to my improvement of a 'student gaze' (adapted from the term of Mitchell and Weber [1999:7], "teacher gaze").

The following chapter reveals my university undergraduate experiences in terms of what the teaching and learning culture offers the student. These experiences are examined through a dialogue between a friend and I in addition to an interview that I conducted with one of my previous Plant Science lecturers.

CHAPTER 5: A RESULTS-DRIVEN EDUCATION

5.1 INTRODUCTION

[H]ow can any human being help but be insulted by being treated as an interchangeable
part, as simply a cog in the machine, as no more than appurtenance to an assembly line
(an appurtenance less good than a good machine)? There is no other human, reasonable,
intelligible way to respond to this kind of profound cutting off of half of one's growth
possibilities than by getting angry or resentful or struggling to get out of the situation.

(Maslow, 1998:62)

My first steps alone as a registered student on campus attending classes for the first time were awfully daunting. I remember at one stage standing all alone in the middle of campus, uncertain of where to go to next and feeling lost even though I was among hundreds of other students hurrying along. As I looked around me, it was quite a dizzying effect. Then I remembered the campus map that I had received previously during orientation week. I got the map out and tried to decipher where my next class was. I felt lost in a sea of students, identified by merely a number.

When considering all the university subjects for which I was enrolled, my main memories immediately emerge from two fields: the Physical Sciences (specifically Chemistry because Chemistry is generally considered the most difficult subject) and the Natural Sciences, with Plant Science being a major subject choice. I was enrolled for various modules within Plant Science throughout my undergraduate degree. For these reasons, I refer to the above subjects when sharing my experiences.

In this chapter, I present an extract from the transcript of a voice recording of a discussion between my friend and I as he escorted me on a trip through the Chemistry building during one of my visits to campus. Bolen (2014:142) warns that ordinary events, in my case, a seemingly mundane conversation with a friend, may be "overlooked because they [seemingly] lack transformative power".

Thereafter, I share an experience from Plant Science with you in the form of a semi-structured interview. In my final year, I conducted a research project as part of a Plant Science module. Through this experience, I caught a glimpse of what education could offer me as a student.

5.2 RELIVING CHEMISTRY: A DIALOGUE

As part of my return visits to university, I asked a friend, a postgraduate student in Chemistry, to accompany me on my trip of reliving Chemistry. Below is an extract from the transcript of our discussion, representing the essence of the trip. The contemplation and analysis of the discussion follow the extract.

Friend: *[W]e are heading downstairs to the labs and taking pictures of the stairs* [Figure 20] *because the stairs are so much [a] part of the experience. Usually, great crowds of people [are] coming up and down after and before lectures.*

Me: *Yes, that is so part of the experience, the whole feeling of, you know, you rush up to the next class or you walk in a dreaded kind of way, just kind of like dragging yourself up the stairs …*
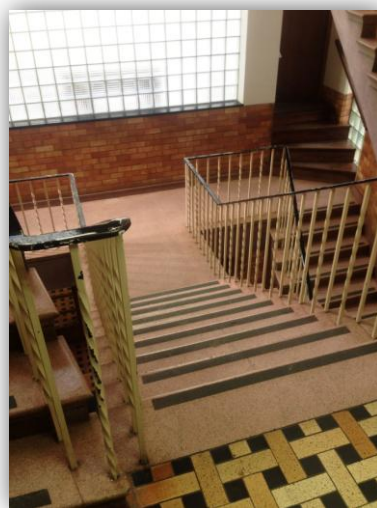
Figure 20: The Chemistry building staircase
(To me, a very familiar feature of this building)
Source: Own photograph

I remember it was within this exact lab that we needed to do the titration practical [Figure 21]. *… They tell you basically what to do, you know, step by step … Okay, but now I recall, we were standing here; we were very jittery … we tried to follow the steps, but what they told us on the paper and what we saw didn't match up. We were hasty; we were moving into the fifth hour here; I mean, we were tired and irritated. It was not only me, everybody shared everything, the answers [that is], with everybody, so it was quite a frustrating process to go through … I can't even recall the lecturer in the lab that much … I just remember the students and everybody trying to get to the answers. I mean, we were running out of time …*

Figure 21: Example of the titration apparatus used in our titration practical

Source: Own photograph

Friend: *And stuff [the experiment apparatus] is wet, and you try to keep your paper out of the wet spots, and so on.*

Me: *Yes, and [I am] trying to see … how far am I, and am I doing this correctly? But I remember … it was for this exact titration practical that in the end, you know, you just open the tap [of the apparatus] and the water just shoots out and the chemicals, and you just try to take down what you see and what is happening.*

Friend: *Okay, not a totally nice experience of a titration experiment.*

Me: *Unfortunately not! … [I]t was during the practical sessions that I really felt like, okay, now we are going to learn something because it's hands on; it is experience. But most of the time, you know, everything was already there and explained step by step, and I think that is what stressed us out as well – we needed to follow the steps and we needed to get to that result. It was already there, but now we need[ed] to get there. Do you know what I mean?*

Friend: *Ja [Yes]. So you thought you were going to do things, and you discovered you had to fill in the worksheets. Yes, here's the equipment; here's the instructions. Follow the instructions; get to the results.*

Me: *Hmm, and how do you remember it then, the same? During what year was that?*

Friend: *That was 1990.*

Me: *You see. Oh, okay, my first year was in 2001. But I remember this [as well] … lots of students, and it's busy.*

Friend: *Yes, a crowded place, busy, and tutors and lecturers trying to get information to you and shouting.*

Me: *That's right. And it's like there is a certain recipe, and that is it and nothing else. I mean for a subject such as Chemistry or even any other practical subject … you know, it is not always black and white.*

Friend: *Ja [Yes]. I remember, they [the tutors] would give you the wrong mark for the [seemingly] wrong observation. If you don't write hydrogen is odourless, then you don't score a mark because if you smell a test tube [in which] they use acid to generate hydrogen, you are going to smell the acid.*

Me: *Yes, because it is part of that.*

Friend: *It is part of what is in the test tube.*

Me: *Part of the process, ja [yes], so you are going to smell that obviously.*

Friend: *Ja [Yes]. But if you write that on your sheet, they mark it wrong. They mark it wrong because the tutors themselves who mark … I don't know who they use these days, but in those days, they used to be kind of medical students who were struggling to get through to the second year.*

Me: *They were not competent enough to be able to really know. And even so, I wonder how many lecturers were really competent in that way?*

Friend: *Ja [Yes], competent in the practicals – that is a good question because in no course that I have ever encountered has [sic] people sat down and integrated the practicals with the course. The curriculum and the practicals are totally disconnected. You do the practicals because that is the practicals that have always been done … The curriculum is something else. They are totally disconnected. I think nobody can tell you why they are doing these specific practicals. Titration specifically is such an important experiment … [I]f you can do the titration, you … have enough manual skills to work in the lab, and if you can do the calculation, you know enough … to say you understand something about Chemistry … [T]itration should be done in triplicate at least, and it is such a nice experience to be able to do your triplicate analysis … It is so nice to be able to master that thing of titrating it so that the indicator is just on the balance point instead of being one colour or the other – [it must be] where it is just balanced. It is so satisfying, but if you rush the thing in the first year, you don't get that satisfaction.*

What also changed, is that the students no longer have their own lockers where they can lock away their own glassware. They get everything put out ready for them, which means they don't have the opportunity to build up ownership of their glassware and learn to be responsible for it. You got a set of glassware, and you paid a deposit in case any of it broke, so you can learn to take care of it.

Me: *So, is that what you experienced? … I [also] can't recall that I really had ownership, especially when I think back to other practicals, say for example, [Plant Science and] Zoology [and Entomology]. Everything was already there, and I saw it [during my visits] in … [both] labs yesterday as well. Everything is already packed out neatly* [Figure 22] *because [of] the practical facilitator … She [the Zoology and Entomology practical facilitator] teased me, you know. When I said [asked], "Can I take photos?" she said, "Yes, just don't touch anything because everything is already set out neatly". But I do recall that [while being an undergraduate student].*

Figure 22: Zoology and Entomology (left) and Plant Science (right) practicals neatly prepared for the students
Source: Own photograph

Friend: *Well, it is expensive, and it is a lot of work, so if you don't have enough staff … and you have to keep control of a lot of keys, and so on, and so on. So, I think people think it is a lot of work, and it is difficult to manage. Maybe it is, but I think it is not necessarily an improvement in the system.*

The discussion with my friend evoked the same feelings that I had felt many years ago. It was as if I were reliving my undergraduate years while walking with him through the Chemistry building. Feelings of worry and uncertainty overwhelmed me as they had before, and as a result, I truly loathe

the subject ("getting angry or resentful" according to Maslow [1998:6]), a subject that should be so interesting and valuable. Upon examination of this dialogue together with investigating my accompanying Chemistry notes/tests, I remembered that I had a three-hour Chemistry practical once a week, which sometimes continued for up to six hours. Each practical consisted of the following components: the 'pre-prac.' lecture, presented by the lecturer in the classroom/hall (Figure 23) to prepare us for the practical before we commenced; the actual practical in the labs, including the recording of our observations on an answer sheet for submission; the practical report in which we needed to detail every step followed on an A4 paper for submission; and the written test on the practical carried out.

Figure 23: Seats in the Chemistry lecture hall

(I normally sat near the middle)

Source: Own photograph

Further contemplation of the Chemistry practical made me realise that the whole process was a repetition of information. Initially, the pre-prac. information was given to us and discussed by the lecturer in the lecture hall. Then the actual practical, already set up in the labs for us, took place, using the information given during the pre-prac. lecture and following the given instructions step by step. Next, we compiled a report on the practical that we had carried out and finally, we wrote a test on the practical. In effect, a *threefold* repetition of information took place and still, my marks were only average for someone repeating the same thing three times. I personally needed to score 100% for everything. It makes no sense to present any subject in such a way – trying to instil learning through constant repetition. I cannot see that the practical enabled me to understand the work fully or gave me insight into this branch of Chemistry and its value in my degree.

I never knew what mark to expect from the practicals. Sometimes, I did not manage to complete the practical successfully and on time because everybody was always in such a rush and always trying to

determine from one another whether or not the instructions had been followed correctly. Most of the time, I did not know if the observations obtained from my experiment matched the observations of the lecturer/tutor on their memorandum for the practical. If my observations were not exactly the same as theirs, even if what I acquired resulted from carrying out the experiment, I lost marks. This issue is specifically confirmed by my friend's experience. These worries consumed a great deal of time, which resulted in the purpose of the practical being defeated. In addition, I could never prepare my own practical since the preparation had always been carried out before I entered the laboratory. This resulted in feeling disconnected from the practical and removing any sense of control even further. Again, this is confirmed by my friend's experience.

Furthermore, the practical mark only contributed 20% towards the final-year mark. The final-year mark constituted the marks from two semester tests and the practical mark, as stipulated in the study guide. Chemistry, supposedly an exceptionally practical subject, did not even focus on the practical component. What should have been a wonderful way to experience things for myself (first step in the authentic learning cycle), and thereby discover (learning from the experience as indicated by the third step in the authentic learning cycle) what Chemistry was all about, was in the end, only an empty, artificial shell. This reminds me of my first exposure to the teaching and learning culture (school).

Also, several of the tutors were not fully competent when facilitating learning and marking the practicals because some of them were in our exact position a year or two before. Often, they did not really want to be tutors but could not say no to the experience or to some extra money, so I never knew whether or not I had really received the mark that I deserved. One of my Chemistry lecturers reports in a written interview:

> *Teaching in the initial years of the twenty-first century was already challenging due to a growing number of students entering the university not sufficiently prepared at school. New programmes to address the unpreparedness of these students in subjects such as Chemistry had to be developed and put in place. I was part of the team involved in these Chemistry courses. It took some time to realise that many of these students were not fundamentally interested in Chemistry, but needed to pass the subject to move forward to graduate towards a career in other subjects in the NAS [Natural and Agricultural Sciences] and other faculties such as medicine and engineering. Students had to be convinced that Chemistry serves a fundamental role in all other sciences. I found marking of assignments, practical reports, tests and exams most frustrating, tiring and time consuming. Lecturers had very little teaching support staff in the initial years of the twenty-first century.*

Unfortunately, I personally doubt that this aim of convincing students of the role of Chemistry in obtaining their degree has been achieved. This episode reminds me of a piece that I read in the book,

David and Goliath, by Malcolm Gladwell (2013:74), which allows me to place the scenario within the global teaching and learning culture:

> The trouble of Caroline Sacks began in the spring of her freshman year, when she enrolled in Chemistry … She got her grade on her third midterm exam, and her heart sank. She went to talk to the professor. "He ran me through some exercises, and he said, 'Well, you have a fundamental deficiency in some of these concepts, so what I would actually recommend is that you drop the class, not bother with the final exam, and take the course again next fall." So she did what the professor suggested. She retook the course in the fall of her sophomore year. But she barely did any better.

I subsequently asked one of my Chemistry lecturers what, in her personal experience, she thought were the most important lecturing responsibilities that she needed to fulfil to be a successful lecturer. Below is her answer, as occurred in a written interview.

> *Although the nett overall goal to be achieved at the end of a module, is to teach Chemistry and should be constant (fixed), the teaching environment (approach and teaching methodology) have [sic] drastically changed from a "chalk and talk" approach to a blended teaching and learning approach with more "exam training" (with the need to stick to similar type[s] of questions to those used in class or tutorials) due to pressure on pass rates. The drop in staff:student ratio has produced enormous challenges.*

It seems that questions equivalent to those posed in classes and tutorials should be asked in the tests and examinations so that the students can pass this subject. To me, this implies that providing you can memorise the answers to the questions discussed in the classes and tutorials, you can pass the tests and the examinations. The practical work is also based on this rule where the pre-prac. lecture, the answers to the actual practical, the report on the experiment and the written practical test are mere repetition. This discussion reminded me of comparisons with other subjects and very similar experiences, which demonstrated that in general, other subjects with their respective modules were presented in a corresponding way. Overall, this experience reminded me of the teaching and learning culture in school: a repetition of work that needs to reproduce that of the teacher. This stands in total contrast to authentic learning, and I am of the opinion that this teaching and learning culture is not in accordance with Maslow's hierarchy of motivation (1943, 1954) and thus does not support personal growth.

Another feature of my experience as a student emerged from the photographs I took of the lecture hall, the lab and the staircase; I realised the physical structures also contributed a great deal to my undergraduate student experience (Figure 20 and Figure 23). I remember the big, cold, lecture halls with hard seats and the many staircases where students crowded between classes … Nothing in these

lecture halls/rooms has changed except for the addition of more sophisticated technological devices such as the data projector and the security cameras. Most lecture halls – and even the laboratories – look cold, clinical, sterile and 'encaged', definitely most uninviting and uninspiring (Figure 21 and Figure 22). These places certainly do not represent a challenging real world in its uncompromising supercomplexity (Barnett, 2007:36-37). Are these places where students supposedly learn? How can these structures in any way be considered supportive structures or authentic environments such as those encouraged by Barnett (2007:40) where real learning can take place?

5.3   MY FINAL-YEAR PLANT SCIENCE PROJECT

Below is an extract from the transcript of a face-to-face, semi-structured, audio-recorded interview with a Plant Science lecturer that acted as my supervisor for a final year Plant Science project. The extract is the highlight of the interview, covering the project. The contemplation and analysis thereof follow the extract.

Supervisor: *I remember you very well and I remember the project [the development of a standard biotest for the functioning of the opening and the closing of the stomata]. I was a bit worried about the project at that stage because it was an idea that I had from my own experience in Science. The background was that when I was a student, [there was a professor] working on the parasite* Striga asiatica, *which was a very big pest on maize at that stage in the country. It was really a big economic problem; that was in the early 60s. He had the idea that perhaps the* Striga *plant [parasite] produces a toxin and that the toxin is what is causing the maize plants to wilt. The current idea was that the maize plants wilted because of the amount of water and salts that the parasite withdraws from its host, but as the Prof pointed out, at that stage, the parasites are often so numerous on the roots of the maize plant, but so small, so very, very tiny, that it is impossible for those small little parasite plants underground to withdraw such an amount of moisture that it will cause the big maize plant to wilt. Then there was research [conducted by] the German people, a certain German group ... and [they] found that one of the fungi gave off a toxin, which causes wilting of tomatoes. So, the Prof had the idea that perhaps the* Striga *plant [parasite] was also producing the wilt toxin, which causes the maize host to wilt. My initial end project when I was at university ... was to identify and prove that the wilting was caused by a wilt toxin. I did my best at that stage, but I really couldn't get to the bottom of the problem, mainly because the parasites wouldn't grow when we sowed them onto the soil with maize plants. So, I never could get enough experimental material, but I always was interested in this problem: Does the* Striga *parasite really cause wilt by producing a toxin? That would have been a very, very unique and interesting find. So, when I had a few third-year students to hand scientific projects out to, I thought that this would be a good idea. I remember you very well. You were quite*

enthusiastic and a lively student, bringing a vibe into the laboratory, so I was quite happy to have you as a student.

Me: *Okay, thank you so much. So, on that note, I do want to (because this is very precious to me) hand over this email to you.* [The English translation is inserted directly after the interview]. *You can just throw your eye over it or read through it.*

Supervisor: *Yes, I think perhaps this [the reason for the email to the BOT 364 course coordinator] was because we didn't have very good results from a point of showing a definite effect of the parasite or of the toxin … Ja [Yes], one would have liked to have the students to discover and realise there is a wilting toxin, and I was disappointed because that didn't happen, but I know the effect that it [not having good results] would have on the students. I was worried about you for being discouraged into Science, you know, that it would put you off from Science.*

Me: *No, on the contrary … I went on to an Honours and a Master's degree [in Science].*

Supervisor: *Ja [Yes].*

Me: *I want to tell you today that thinking back about this – because you know, this was in 2004 and directly afterwards, 2005, I continued with my Honours degree – so thinking back about this project and stumbling upon this [email] and so on, I realised that it was one of the very few times in my undergraduate years that I really felt being exposed to what I needed to be exposed to and that is, really being in charge of my own learning.*

Supervisor: *Ja [Yes]. Thank you, I appreciate that Nadine … I never tried to downgrade a student or not to have him have success. My whole approach to people and to life is to stimulate and to help whenever I possibly can. So, the fact that you got that difficult project was not because I did not want you to succeed. I hoped that you would do well and that perhaps you would be able to discover this wilting toxin that was eluding my grasp. You know, when you get third-year students for projects, you had to start thinking about what can I give them that would be stimulating and challenging. There are a few standard things that you have to do over and over again, but you know, I always try to think a little bit more out of the box than just giving a standard third-year project.*

Me: *Obviously, this was quite a unique experience for me, being an undergraduate student, so therefore, it meant a lot to me … I cannot recall vivid academic examples of, you know, this was a 'wow' moment for me as an undergraduate student. So, most of the time … it was just some sort of overall picture of I go to class, and I sit, and I receive a lecture. That is why I say this meant a lot to me. I remember sitting in the evenings up to, I don't know how late (but no, this is not to make you feel bad) in the Plant Science building, and everybody was so afraid for my sake because they say*

there are ghosts there [in that building] – but I mean that didn't put me off – I sat there alone with that microscope …

Supervisor: *Ja [Yes], perhaps exposure is good, you know; it mustn't just be too tough that you discourage the student. That is always a risk that you have to take, you never know. Ja [Yes], as I say, Nadine, what I can remember was that you were enthusiastic, energetic. I remember that very well, and I was very worried because your project didn't give results that one would sort of publish or that would stimulate you. It was a question of a negative type of thing; it didn't work out. Now, in Science, things always work out because a negative result can be a very good result. It is a result, but that is not the way that a normal person experiences that. Students especially always want to have a positive result, not a negative one. They want to say, okay, I found the wilting component, you know. It is not so exhilarating to say I did not find any wilting components. So in that sense, it was a worry. I always worried about students not getting good results or not getting the results that they regard as good. But I mean, your result was good in the sense that there probably isn't a wilting component; we would have found it. That technique should have shown it because we used the same technique that … [the scientist] used to discover the wilting compound of the fungus toxin. So if there was a wilting compound, it should have [been] found … but for a student, that is not an exhilarating result. So in that way, I was worried about you. But I remember you as a positive, energetic student.*

The English translation of the email mentioned in the semi-structured interview is presented on the next page.

Sent: *Tuesday, April 13, 2004 7:45 PM*

Subject: Nadine

Hi [Colleague],

I think I drove poor Nadine to the brink of exhaustion and, as you know, physiology work is always a bit risky. Nonetheless, I'm happy with what she has achieved – for a third-year project; of course, I did tell her that it would definitely not be sufficient for an Honours-level project. I hope you agree. So I didn't involve you as much as I should have and I annexed the poor girl.

I attached a figure of the results. She also measured the stomatal state of xylem sap of Striga-*infected and uninfected plants and the figures are:*

- *xylem sap of Zea host (wet soil): 1.8 um*
- *xylem sap of Zea host (wet soil): 4.4 um*
- *xylem sap of Sorghum host (infected): 4.2 um*

Unfortunately, I couldn't get uninfected Sorghum, but I think she's got enough ammunition and she's gained experience in the following:

- *drawing up a literature database*
- *mixing buffers*
- *weighing out small masses*
- *mixing dilution series*
- *obtaining serviceable epidermis strips*
- *preparing and incubating tissue for bio-assays*
- *mounting tissue*
- *using a microscope*
- *measuring distances under the microscope and applying factors*
- *studying the opening and closing of stomata with the help of microscopic measurements and observation*
- *using Excel software for data processing and presentation of results*
- *learning about the complexity of living systems and the multitude of factors that have to be considered for proper experimentation*
- *learning about the importance of planning and documenting (and why she had to compile a proper protocol!)*

Unfortunately, I couldn't let her do sufficient repetitions and adjust conditions for optimal results, as it would have taken too long. As long as she realises that this is preliminary work, serving only as a baseline for future studies!

This is the story so far, roughly. Hope you're happy! Regards

I initially felt nervous probing the lecturer about this project. I felt uncertain because I did not know if he would remember the project. The nervousness was replaced by pleasant surprise since he remembered the project very well and he was willing to share his experiences with me. The memories together with the feelings of being involved in the project came back to me. Our interview together

with my notes, project report and the email concerning this project contributed to reconstructing my memory of this experience. I remember at first feeling excited but uncertain about the project because I had never been engaged in this type of project on my own and, therefore, did not know anything about conducting such a project. I quickly developed confidence as I proceeded with the project. I worked long, hard hours that often extended into the evenings but in the end, it was worth it. I felt really proud of the end result presented in my final project report.

As mentioned in this semi-structured interview, I realise once more upon contemplation that this was the only time as an undergraduate student that I really felt ownership in a subject. This raised my interest in the project and motivated me to work even harder, sometimes working long and lonely hours. Here, I can refer to the presence of my 'will to learn' that Barnett (2007:18, 101-112) and Frankl (2008:105) describe so aptly.

I cannot recall the lecturer who acted as my supervisor forcing me to work these hours – I did it because I wanted to. In fact, he only assisted me in the lab once – at the start of the project and then never again. Not only was I motivated but also, I realised the responsibility of such work; I believe I was moved to Maslow's 'esteem' level of realising my responsibility towards myself, the project and my supervisor. I think one of the reasons for this was that I worked alone on the project and not in a group as practicals in certain other subjects often required. Therefore, the work could not be divided or given to someone else to complete – I was the only one to do it. As I said during the interview, "I was in charge of my own learning". This project presented me with meaning (Frankl, 2008:105), which is in accordance with what I can now identify as the second growth level of Maslow's hierarchy of motivation; I wanted to develop the necessary knowledge and skills to do my best in my project.

It was interesting to me but also raised some concern that the lecturer seemed worried that he had not promoted my interest in Science enough because I had not obtained the results that he had anticipated for the experiment. The concern lies with the idea that in order to be a good scientist, the anticipated results need to be obtained. I believe that the perception that scientists are judged to be real scholars based solely on the results of an experiment is very dangerous. In fact, the *whole process* that I underwent while being continually engaged with the experiment opened up a new world to me. I did not have specific results in mind while conducting the experiment, so in that sense, I had no expectations. I realise only now that this indeed took a lot of pressure off me; I was allowed to concentrate on what I was doing in the moment, which ensured that my focus was much better because I was not worrying about what the results of the experiment were supposed to be. As can be seen in the supervisor's letter to the module coordinator, this project did indeed serve as a baseline for my later studies as I continued on to an Honours degree and a Master's degree in Natural Sciences.

By comparing the two undergraduate experiences, I realise that the purpose of both the Chemistry practical and the Plant Science project was to obtain results, and moreover, I was expected to obtain the 'correct' results. However, there was a major difference between the two experiences. Even though my Plant Science lecturer emphasised his concern for me in not obtaining the desired results, I experienced the project as invaluable due to the *process* I went through. In that sense, I can again refer to Frankl (2008:105): It is not merely about finding meaning but the *search* (the process) for meaning as my primary motivation that matters the most. With this, in conclusion, I am reminded of the statement of Maslow (1966:29) that supports authentic learning (Slabbert, De Kock & Hattingh, 2009:68-73) and Kolb's experiential learning theory (1994):

> Perhaps it is better to say that all of life must first be known experientially. There is no substitute for experience, none at all. All the other paraphernalia of communication and of knowledge – words, labels, concepts, symbols, theories, formulas, sciences – all are useful only because people already know experientially.

5.4   CONCLUSION

The example of the Chemistry practical made me feel confused because everything was simply repetition, and this only contributed to me despising the subject. Contemplating this discussion made me realise that I was not in control of this subject. I believe the reason for this was that I could not claim the work as my own because I always needed to rush through it without knowing why I had been compelled to take this subject. Just having to get the work done, irrespective of whether I understood it or not, resulted in stress and irritation towards Chemistry.

In contrast to the above experience, taking ownership of my Plant Science project instilled two very important values in me: responsibility (part of Maslow's first growth level) and motivation, seen as my 'will to learn', as proposed by Barnett (2007:101) and thus part of Maslow's second growth level.

In the following chapter, Chapter 6, I introduce you to yet another teaching and learning culture – that of being a postgraduate student in the Natural Sciences. This chapter involves sharing the high and low points of these years in the form of a vignette, a narrative and a visual essay.

CHAPTER 6: BECOMING A SCIENTIST

6.1   INTRODUCTION

Writing autoethnography is not an easy task. To examine oneself and one's life in a way
that fosters thoughtful, engaged, genuine, and rigorous critique requires immense time,
introspection, honesty, and courage. And given the scientific imperialism (Pathak, 2008)
of the academy, it also requires, at the very least, a disruption of the intellectual training
that most of us have received.

(Pathak, 2013:595)

This part of my autoethnography is divided into two sections with three epiphanies reflecting "writing [that] is not simply academic; it's personal and artistic too" (Bochner & Ellis, 2016:57). Initially, I refer to my life as an Honours student in 2005 in the form of a vignette, followed by reference to my life as an MSc student from 2006 to 2010. Thereafter, I allude to the following year in the form of a narrative of my supervisor. This is succeeded by a visual essay. This part of my autoethnographic narrative is supported by Tedlock (2013):

> One by one she considers expressive, transactional, and poetic modes of writing: expressive writing foregrounds energy and emotion; transactional writing emphasizes analysis and theorizing; while poetic writing creates literary texts. Twisting these strands together, she produces an evocative analytic text. (p. 359)

> Taken together, these essays reveal that writing and performing vulnerably from the heart with passion and analytic accuracy allows one to emerge from a flat soulless representation of social worlds outside the self into sensuous, evocative research that encourages and supports both personal development and social justice within the world. (p. 361)

Before you join me on my exploration and in view of the above, I would like to inform you that from this autoethnographical stage onwards, my autoethnography becomes more evocative in nature and is, therefore, loaded with a higher emotional charge than before. In fact, I am possibly at times fierce and radical in my views of events and other human beings. However, I could not draw a veil over this part of myself. Lamott (1995:226) reinforces this by maintaining that

> [i]f something inside you is real, we will probably find it interesting, and it will probably be universal. So you must risk placing real emotion at the center of your work. Write

straight into the emotional center of things. Write toward vulnerability … you have a moral obligation to do this. And it is a revolutionary act – truth is always subversive.

6.2   BEING IN THE FIELD: A VIGNETTE

The following vignette is representative of my fieldwork days in Namaqualand.

It is an icy August morning. One of the students (a black lady from Gabon) with whom I share a room in one of the little brick houses built for research purposes in the Goegap Nature Reserve, switches on the light at 5.00 a.m. I'd had yet another late evening packing plants into the plant press for identification purposes and for transportation back home and to the local herbarium, so I squint my eyes tightly to protect them from the bright light.

I am usually the last person to go to bed. There is too much work that needs to be done after a day in the field to go to bed early. I need to tie up the loose ends at the end of each day. I use the evenings to capture some of the data collected during the day and to pack the plant press. Otherwise, I will fall behind with the work. Fortunately, I seldom need to cook dinner for us; the others take turns at preparing our evening meal. I am grateful for that. To compensate for their trouble, I help with washing the dishes.

It is a new day in this solitary piece of desert, and I need to get up and get dressed, eat breakfast and head out into the field again. Today, we need to drive off-road, using our four-wheel-drive vehicle to visit a distant part of the reserve, so we start our drive early. Because the morning sun is starting to shine brightly, I know that by the time we reach the survey site, the petals of the flowers will be opening up, enabling me to identify the different plant species. It is very difficult – and with some flower species, even impossible – to identify them with the petals closed.

We set up the line transects, and the survey commences. I make sure that I write down all the names neatly when it is my turn to do the writing, and I make sure that I identify the species correctly when I need to make the identification (Figure 24).

This morning, my hands are so cold that I struggle to hold the pencil – my fingers are numb. It feels as if I may lose a finger. I think of the words of a guy that I once met at a mutual friend's birthday party: "So, you work in the field? But you shave and you wear make-up!" I smile and start stretching my fingers.

The day develops into yet another hard-working episode, and we make good progress with the surveys.

I eat my lunch in silence: a peanut butter sandwich. I need to regain strength and brain power to continue with the rest of the day's work effectively. While one or two of the others are busy taking photos, I make a couple of rough graphite sketches of nearby flowers in my notebook.

Just as we commence with the remaining day's work, a fellow student warns me not to step on the puff adder that lies within our line transect right in front of me.

I freeze.

The reptile is so well camouflaged that without the warning from the student, I would have stepped on it. I would have stepped on it! The guys start to laugh and take photos. I back off. This is one of the deadliest snakes in the world!

It is now so hot that I develop a heat rash on my hands – the parts of my body that are most exposed to the sun. I look at my hands in disbelief.

This is so typical of desert climate: extreme cold replaced by extreme heat within a few hours. I lift the collar of my shirt up higher, make it tighter around my neck and adjust my hat. I turn my focus to the work again and forget about the fright I got when I saw hundreds of tiny red, raised dots on my hands.

We have only a week in the reserve to complete the work, and I cannot waste time worrying now.

We return to the house at sunset after a successful day. I am covered with flower pollen up to my knees and blanketed in dust. Time to take out the plant press and start layering and labelling the unidentified species in the press. I need to use my headlamp because there is a power failure and it is already twilight. The work goes slowly tonight. Every now and then, I need to adjust the strap of the headlamp because it slips off my head the whole time. My hands are itchy, and they burn from the heat rash. The rest of the team start to prepare dinner and take turns to shower. I will only take my shower before I go to bed – when all my work for the evening has been done.

I fall asleep in front of the laptop; my head is on my knees.

Figure 24: Fieldwork in the Goegap Nature Reserve

(I am focussed and not aware that this photograph is being taken of me)

Source: Fellow student

6.2.1 My feelings

Even though the day started early and I felt the previous day's tiredness still clinging to me, I was excited and motivated to get out of bed. Although my African fellow student woke me up a tad earlier than I liked, I appreciated the help she offered in the field. I also appreciated her support with cooking and enjoyed chatting about our research despite our struggle to communicate because of the language barrier (her first language is French).

I could never predict what would happen in the field at any given moment. Even though I was prepared for the day's work ahead, I could not foresee what might happen while I was working in an uncontrolled environment. I felt uncertain. The early morning temperature took its toll by numbing my fingers and making it *very* difficult to write. This was often a distraction that created frustration because it slowed down my work. I was terrified to see a snake suddenly in front of me. It still gives me goose bumps to think that I was only centimetres away from a highly venomous, even deadly, snake. What would have happened to me if my fellow student had not warned me about the snake? I also got such a fright when I saw the heat rash on my hands, and I feared this unusual sight that I had never seen before. It worried me. But I knew that I could not waste energy on worrying, so I turned my attention to the work.

The day may have left me tired and worn out from the extremely emotional and physical efforts, not to mention the brain power usage, but I felt content. Although we were alone in the field, disconnected from the outside world, I felt restful. The silence made me feel satisfied. In a way, it even made me feel relaxed. A day that started with excitement and uncertainty ended with a feeling of contentment and satisfaction. So many emotions in one, single day … This place offers so much!

I definitely felt proud to call myself a 'science girl'! It still excites me to think of that day in Namaqualand.

6.2.2 My contemplation

The reason why I felt excited to start the new day's work even though I was tired was because I was extremely driven. The explanation for this is that I was eager to make progress with the field work. I felt I could contribute to the bigger picture of nature conservation and, therefore, my work was important to me, to the sciences and to society as a whole. I can say in retrospect that the first two growth levels of Maslow's hierarchy were certainly fulfilled.

The unexpected occurrences of the numb fingers and the heat rash on my hands distracted me for a while from doing my work effectively. I also acknowledge that the terror caused by my encounter with the deadly snake made me stop. I needed to recover from both these occurrences before I could go back to work. Although the above conditions were challenging, I managed to regain my focus. I managed to control my emotions and continue to do my work well. I knew the survey must be completed. Upon further contemplation, I realise that I demonstrated self-discipline. Focus on my work returned easily, and I did not allow external factors to rule me, even though these external factors seemed powerful and threatening.

I also realise only now, upon contemplating the remark of the guy at the party and re-experiencing what I went through in the field, that I transcended my woman-image: I am not seen as the 'typical' woman. I believe this stems from the encouragement I received from my dad and grandma: I should not ever allow anyone to tell me who I am and what I must do, just because I am a woman. In their eyes, I could do anything I set my mind on!

hooks (1994:45) encourages me to contemplate why I love the 'snapshot' that was taken of me in the field so much (Figure 24). It is one of the few images that I have of me in Namaqualand. And it is a photograph that captures me being a scientist in my rugged fieldwork clothes with fieldwork apparatus in both hands, looking downwards to the plants and being completely focussed and in the present with what I am doing, totally unaware of the photograph being taken of me.

Being in the field from early morning to late afternoon among the flowers in the middle of nowhere and without contact from the 'outside world' made me feel in touch with myself … my *true* self. Words fail to express the experience, but what I do know is that the feeling of my true self arose from my core. It truly felt like a physical spot from which my true self emanated. This is so profound; the intuitive feeling that I grew up with and experienced so powerfully, started to emerge again. I believe the silence and the solitude that nature offered me, helped me to get to know myself. This feeling of being able to be myself, in the desert of all places, made me carry out my work with confidence under such challenging conditions. This was my project and not just some module that I needed to attend to and pass for my degree without knowing why. I felt I belonged – even if it was in an isolated desert area, maybe even *because* of the solitude. I realise that I sought the silence in the solitude because it made me aware of who I really am. Chopra (2003:18) confirms why I felt this way: "Spending time in nature enables you to sense the harmonious interaction of all the elements and forces of life, and gives you a sense of unity with all life."

I also insert the following transcription of a recording from my verbal journal:

> *I miss it [being in Namaqualand] with a sore heart because it was during those years and those visits that I really knew, in a way, who I am, because there are no external factors that can take away your attention from what you need to do. What I mean by that is there is no cell phone reception; there is no technological or any other manmade disturbance that can interfere with your work there. So, it was an absolute pleasure to be there and to be at one with nature in that way, and to know that this is not trial and error. You need to do the work. You need to do it properly. You cannot just go back any time to redo the data collection.*

Of equal importance is that I realise now the immense impact that this experience had on me as a student. 'Learning' in the classroom, an artificial structure enclosed by four walls, differs greatly from learning in a real-life situation in an authentic environment (Slabbert, De Kock & Hattingh, 2009:72).

6.2.3   Conclusion of my vignette

Several highly important revelations are made in this part of my autoethnography. These revelations are based upon contemplating the context and the specific educational experiences that relate to being a student and to the teaching and learning culture. It was during these postgraduate years while being alone in the field, that I believe I was developing as a human being. This, despite the harsh reality of wild animals and reptiles surrounding me such as the puff adder, not always knowing exactly what to do, sometimes feeling alone and without 'connection to the outside world and society' and often

asking myself: Am I doing this right? What will the consequences be if I am not doing this right? What is the impact of my work on the 'outside world'? I was, in effect, probing myself in order to improve not only my quality of work, but also my being as a whole. I had a great sense of responsibility towards my work and also perseverance in order to continue with the work under difficult circumstances. In this sense, I feel I have met Maslow's esteem and cognitive needs.

Another important observation regarding the role of the student as an individual, is to acknowledge the importance of silence – to embrace silence to get to know oneself truly.

Therefore, I deduce that being a student involves getting to know oneself in an authentic learning environment, with silent examination in solitude (not necessarily physical isolation) as an assisting aspect to this.

6.3   IS IT ABOUT COMPLIANCE?

I was naturally excited to begin my MSc degree after my supervisor recommended that I do so since my Honours project had the potential to develop into a larger project. I had good background knowledge of the project and immediately continued with it at the start of 2006. I would like to share my supervisor's comments that were provided in a written interview, initially with regard to her role *in general* as an MSc supervisor and thereafter, in terms of her role as *my* MSc supervisor. This illuminates the differences between a general MSc project and a project such as mine.

The purpose [of being an MSc supervisor] would be:

- *Firstly to come up with a project (within your [the supervisor's] funding capabilities) that would suit the student's interest and capabilities;*
- *Secondly to guide the student to find the appropriate literature on the topic and the methodology;*
- *Thirdly to ensure that the student understands the methods and can undertake the study with the necessary supervision in the beginning;*
- *Fourthly to assist the student in the initial data analysis and interpretation; and*
- *Fifthly to ensure that the student has become independent in all the previous stages and would be able to undertake a PhD study independently.*

Moreover, it would be important for me [the supervisor] to instil a love for learning as well as an appreciation for the environment and plant ecology in the student. However, it is sometimes during their master's study that the students realize [sic] that their reasons for doing the study in the particular subject was [sic] not driven by their own interest but rather by other factors.

In general an MSc student would not suggest a project, but would request a topic from the supervisor. The student should then normally do some background research to become familiar with the topic and after discussing the methods with the supervisor would then write a research protocol. This protocol would serve as basis for further discussion and refinements of the methods.

After ensuring that the student understood the methods the fieldwork/labwork stage would begin. In general the student would be accompanied during the first field surveys or first experiments. Only after being sure that the student was comfortable with the method would he/she be allowed to go further on his/her own. Basically the same pattern would be followed in the analysis of the results as well as the interpretation of the results (i.e. guiding the students for the first part and then leaving them to continue on their own).

From the supervisor's side a master's study is often quite a balancing act. Because the topic is usually on your [the supervisor's] own research it does sometimes become difficult not to use the student as a technical assistant and to force it into your [the supervisor's] own direction leaving the student with little scope to make the project his/her own. Furthermore, you [the supervisor] also want to be able to distinguish between those students who are merely doing what is necessary (even although they might be doing that pretty well) and those students who are using their own initiative to come up with novel ideas and not simply applying a template.

My supervisor then elaborated specifically on *my* MSc project as follows.

Your MSc was a special case because it was basically a continuation of your Hons. That meant that during your Hons you also had the opportunity to do a seminar (background literature) related to your project. You also had some course work on vegetation dynamics that was related to your project.

Your particular project was also special in another sense. Because it was a long-term ecological study you basically had no choice in the methods to be used. These were therefore prescribed with no choice as to changing them in any way.

Your project was also special in the sense that a team assisted you during the entire survey period because this was deemed essential for ensuring the quality of the long-term data set.

I felt satisfied and thankful that due to the special circumstances, I could continue with my Honours project. This renewed my focus and allowed me to put all my energy immediately into re-engaging with the project. It brought me joy to resume my project without delay. In a sense, I even felt lucky that this was my given scenario. However, I realise now that it was exactly *because* of these special

features that I felt restricted to a great extent from experimenting in a novel way to enhance the quality of the project and was denied the opportunity of discovering things in my own way. I was once again, as in my earlier teaching and learning culture of being a school student and an undergraduate student, denied authentic learning. I merely followed instructions.

However, I knew that I did my work well and that I did what was expected of me, and this brought some relief. I did not know until now that my MSc project was indeed a special case when compared with the 'general' MSc projects. This disappoints me. I now realise that unknowingly, I was merely a peon used to complete another's research. My supervisor's narrative opened my eyes and created a new perspective of my MSc project. I cannot help but feel deprived of what could have been an authentic project.

However, the special characteristics of my MSc project obviously brought positive outcomes to the research and definitely made it easier and quicker to engage with the project.

I also felt comfortable because many facets relating to the project had been sorted out already. This clarity and the fact that I was engaged with familiar work put me at ease. I did, however, exploit the advantages that my MSc project offered – from using and studying the work I had done in my Honours year to accepting others working with me on my project while appreciating their assistance. I was oblivious to what a so-called 'general' MSc project entailed. I would have appreciated it if this information had been communicated to me at the start of my MSc at the beginning of 2006. It may not have changed my mind about the project, but I think my relationship with my supervisor would have been more open if this information had been shared with me.

From this epiphany, I deduce that the facilitator plays an enormous role in facilitating learning in students so that students develop their own voice. This experience is comparable with my experience in school and my experience of being an undergraduate student.

6.4   BEING SILENCED

It was Sunday, 31 December 2006. It was a beautiful last day of 2006, and I spent it with my dear friend on his farm. We went for a walk mid-morning, and we left our cell phones at home. Somewhat exhausted but at the same time exhilarated by a lovely time together, we arrived later that day back home. I was reclining in the lounge while my friend went to pour us something cold to drink. When he came back into the room, he had his cell phone in his hand and was presenting it to me. He said that my brother wanted to talk to me. My brother's voice sounded strange, and I immediately knew something was terribly wrong. I could hardly hear him when he said that something serious had happened to our dad. Without hearing him saying it, I instinctively knew … I dropped to my knees

and cried as I had never cried before. I cannot recall exactly how I got home, but I ran into the house and was struck by an uncanny, sterile silence.

I walked to his bedroom, but … he was … not … there. He had already been taken … away. I was too late … to say goodbye. The silence literally punched me to the ground … again … but this time I did not cry. I wanted to scream at the top of my voice, to shatter everything around me, but nothing came out of my mouth … nothing. I was a-l-o-n-e! And in the midst of the aloneness, there was only …

Silence

Silence

Deathly silence became my enemy.

It haunted me everywhere I went.

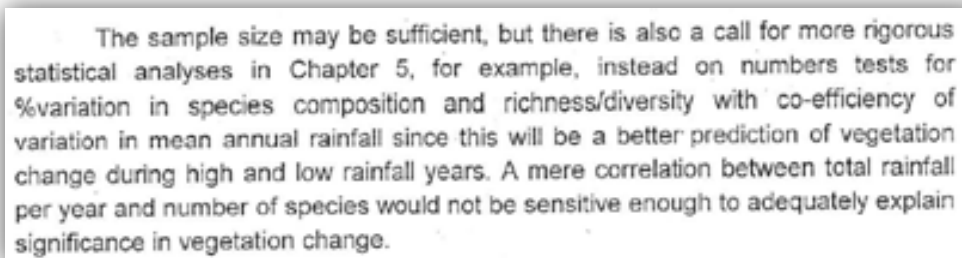*I wanted to run away from it at all costs.*

I was desperate.

The silence that I once could not get enough of in the vast openness of Namaqualand now plunged me into the terror of grief. I wanted to run away from every hint of silence because the only thing it sounded like was – DEATH. The best way that I could find to silence this enemy – pun intended – was to throw myself with every fibre of my being into my MSc studies. The death of my father affected me much more than I ever expected. I did not dare to take a break in my relentless engagement with the work that my MSc required of me because it would open the door to helpless despair. I worked like a mindless machine, and whatever I was required to do, I attempted to do it to perfection. No wonder my supervisor reported as she did in the written interview when I asked her what she remembered of me as her student: *"One thing that stands out during your MSc is the unexpected loss of your father. This had a large effect on your personal life, which spilled over to your studies."*

I never realised my supervisor saw it this way. She never discussed this with me on a personal level. Today, ten years later, she writes this to me. I feel betrayed in a way. I feel that if she knew this, which she obviously did, she should have discussed it with me and worked with me on a plan forward for a successful and earlier completion of my MSc. I believe that if there had been a bond, even professionally, between my supervisor and me, it would have helped me through that difficult time. If I had been acknowledged as a human being and not merely as a student, I believe I would have handled my studies better under those devastating circumstances. During such a traumatic phase, one needs all the support one can get. My supervisor clearly divided my personal life and my studies and saw them as two different entities. Until now, I really felt that I had failed her, but my eyes have been opened and I see that rather, she was the one failing me. I remember taking my supervisor out for coffee one day fairly soon after the death of my father – this happened only once. I told her that I felt no need to attend my MSc degree graduation because my father would not be there. I had such heartache and upon contemplation, I realise that I was also doing my MSc to make him proud.

My supervisor saw me in tears that day and yet, she just looked down at her coffee and did not utter a word. To me, this felt as if she had no sympathy or empathy towards me despite my fragile circumstances. As an essential significant other in my life at that time – and in the absence of my father – she was fully aware of my vulnerability and yet was aloof to it. In 2010, about three and a half years after the death of my father, I finally finished my MSc. I was exhausted, physically, mentally and emotionally because of my relentless pursuit of excellence as required by my supervisor

and was confidently expecting a corresponding result from her and the external examiner of my dissertation.

Early one autumn morning, my supervisor brought me the results. How excited I was! I paged through my reviewed dissertation and noticed the many comments that the external examiner had made, and then I read the summary of his remarks (Figure 25) written by him on 23 March 2010.

> The sample size may be sufficient, but there is also a call for more rigorous statistical analyses in Chapter 5, for example, instead on numbers tests for %variation in species composition and richness/diversity with co-efficiency of variation in mean annual rainfall since this will be a better prediction of vegetation change during high and low rainfall years. A mere correlation between total rainfall per year and number of species would not be sensitive enough to adequately explain significance in vegetation change.

Figure 25: A general comment from the external examiner's report for my MSc

I was tremendously shocked and upset by the examiner's report, which clearly indicated that he was not at all happy with my work. Subconsciously, I was desperate to honour my father with the success of my MSc degree. I knew that this would never have been what my father expected of me. I felt utterly disappointed.

I immediately arranged a meeting with my supervisor, where she sat to my surprise in a state of shock as well. I could see without doubt that she did not expect this reaction from the external examiner. She commented: *"Normally, an external gives better marks than the supervisor. This is not the case here"*. She went further and tried to justify the situation by mentioning that the examiner was not from an academic institution and that maybe, this was the reason that he had pulled the dissertation apart. I remember clearly how I asked for my dissertation to be remarked by a different external examiner. My supervisor replied, *"That will take several months. It will be a delayed process, and it is not worth it because it will frustrate you even more."* Then she admitted that she herself had not given me a good mark for my MSc and that re-examination would not be an option because it would not change my marks much. This comment aggravated my shock, turning it into a quiet but blinding anger.

I left the issue there.

But I left upset – to say the least.

I felt betrayed because I had made every effort to follow my supervisor's requirements in order to achieve perfection in my work and yet, as she had indicated, she had awarded me poor marks for my

dissertation. I managed to curb the worst of my anger and realised that the only way that I could fulfil the requirements for my MSc degree would be to make the necessary amendments and corrections recommended by the external examiner. I, therefore, started by probing the external examiner's comments in relation to what I had done in my dissertation. I discovered that the external examiner's comments were indeed valid, but what disturbed me more was that his comments related to instances where I was required to follow my supervisor's instructions in spite of my own feelings of discomfort with what I assumed was appropriate under those conditions. Unfortunately, my drive towards acceptance by someone so important in my life had blurred my better judgement, and I had complied.

Despite this realisation, my supervisor not only advised me but also expected me to change only the minimum of what was recommended without any satisfactory justification; my better judgement and success was subject to my supervisor's status and authority. One issue that I remember clearly is that after analysing the collected data, the results in some instances, revealed a remarkable difference from results obtained in earlier years. Although this discrepancy was obvious to me, it seemed not to bother the other more senior members of the research team. I expected that such results would be critically interrogated by the research team at some point, but this never happened. All that happened relating to this difference was an informal, indifferent speculation that took place between people passing one another in the corridors. It seemed as though this observation was something too insignificant to contemplate because taking it into consideration might have interfered with the progress of the project.

Surprised and disappointed, I finally came to realise that *getting* results in a project was more important than *how* they were obtained and *what they really meant*. It left me with the impression that this had become general practice in the scientific fraternity. The object was to get the work done, irrespective of the ethical imperative of the quality thereof. This reminds me of my findings in regard to my Chemistry practical experience as examined in the previous chapter of this thesis. It seems to be so easy to be unethical, although it may not be intended. The disgraceful quality of my results for my MSc degree, a measly 63%, proves the point.

The intensity and the rigour to investigate a natural phenomenon accurately and thoroughly and to reveal some of its secrets that had occupied my whole being and had compensated for my loss were thwarted. I felt utterly betrayed, but more than that, the thought of how my father would have felt betrayed by me after all that he had sacrificed for my education paralysed me. Having completed my MSc under these circumstances, I had no interest in continuing with an academic career. I desperately wanted to escape that environment. But I needed to stay busy – occupied. I accepted the best job I could find, a temporary contract for a first-year lecturer and conference manager for the Applied Centre for Climate and Earth Systems (ACCESS), via the Geography Department. Besides my normal responsibilities, I offered my services to anyone who needed them. I was so occupied that there was

no time for anything else. I enjoyed it – or that is what I thought. I was so exhausted at the end of the day that I fell asleep even before I hit the bed. When I woke up, my head was at my office way before my body arrived. I flourished – or that is what I thought.

Then …

My grandma died …

She died while I was working close to the Kruger National Park, a seven-hour drive from home, during the second part of the ACCESS conference. I received the news just before a (black) friend and colleague from the Zoology Department stepped in on the scene of me still holding the phone in my hand after my mom and I had hung up. He held me so tight … he did not even ask what was wrong … he just held me. Between the tears and his hugging me, I could barely catch my breath.

It was as if I were running full speed into an unbreakable glass pane with a dizzying effect. It took some time to regain control over my senses.

And when I did, there was only … S I L E N C E.

Although I know for certain that my mom and brother constantly love me dearly and genuinely care for me , it felt as if I had lost the two pillars that kept my life aloft, untouchable, inspirational and protected from all of life's destabilising onslaughts. I was stripped naked, vulnerable, afraid and alone. I did not want to be at home – there was only silence. I could not go to university – my life as a student had ended.

I had nowhere to go, and I had nothing to do.

I was …

Devastated.

I could not burden my family with this. I did not want them to think I was a weakling. I knew I needed to get out of this – and soon. There was nothing else that I craved more desperately than the powerful, protecting, inspirational and motivational love of my father and the kind, wise and supportive love of my grandma. It was as if I had launched a lifesaving campaign to find their love again – at all costs. I was naturally a hard worker despite my disappointing life experiences as a student. I also knew that I was smart. With these assets, I more than fulfilled my immediate responsibilities and helped wherever I could make a contribution. I excelled in everything that I did – this impressed my employers, and I felt wanted and loved. That is what I thought. I soon realised, however, that there were things that made me feel uncomfortable, things that made me move to another occupation, sacrificing the 'love' that I had received and making a fresh start to find it in my

new job. This pattern became more and more exhausting. In my desperation to find what I needed, I increasingly dropped my guard to please my employers to the point of reluctantly allowing abuse. I completely lost all sense of who I was. I went to bed exhausted, empty and alone and woke up in the morning to pick up the pieces in an unending spiral of increasing …

It was a hot night in November 2010 – somewhere.

I woke up from a shocking nightmare that I could not remember.

I was covered in cold sweat.

The room was dark and filled with an appalling odour – of death.

All around me was chaos.

I did not want to experience this!

I pulled the sheet over my head in a desperate attempt to go back to sleep and escape all of this.

No matter how hard I fought to escape this horrendous reality, it would not let go of me.

I rolled round for hours until I was exhausted.

It was as if a mirror had been placed in front of me, and I had been forced to look at myself.

The sight shocked me. I did not know the face in the mirror.

I would be compelled to confront my fate if I continued on this path – and I knew it had no future. And then …

I was taken back to my carefree childhood, my authentic self.

A time when I was often allowed to look into a future life of greatness, abundance and brightness.

And someone who had prophesied: You are destined for great things!

This catapulted me inexplicably out of my bed and into a frantic process of – rediscovering myself:

Who I really am, what I am truly capable of and what my ultimate purpose is.

The Natural Sciences did not bring me joy anymore. Deep down, I realised that I was being called to undertake a serious search for meaning – at least in the immediate future. I proverbially packed my bags to go on that journey.

This is my life-defining moment.

Eddie Vedder's (2007) lyrics in the song, *Long Nights*, dramatically encapsulate how I felt in that significant moment.

Long Nights

Have no fear
For when I'm alone
I'll be better off than I was before

I've got this light
I'll be around to grow
Who I was before
I cannot recall

Long nights allow me to feel …
I'm falling … I am falling
The lights go out
Let me feel
I'm falling
I am falling safely to the ground
Ah …

I'll take this soul that's inside me now
Like a brand new friend
I'll forever know

I've got this light
And the will to show
I will always be better than before

Long nights allow me to feel …
I'm falling … I am falling
The lights go out
Let me feel
I'm falling
I am falling safely to the ground

It had been an emotional rollercoaster ride for about five years of my life, with constant ups and downs that had resulted in inevitable self-destruction. In this process, I had lost my identity – my sense of self. My life was "in question" (Richardson, Fowers & Guignon, 1999:220).

Who ... am ... I?

"This is a central question of the autoethnographic life … So, for me, autoethnography is spirited writing … we write spirit into being."
(Poulos, 2013:475-476)

The loss of my father, which occurred near the end of the first year of my MSc project, affected me greatly. Unfortunately, I felt that my supervisor did not support me emotionally or help me to regain my focus in order to complete my MSc successfully. I did not plan this chapter to become a visual essay (Bartleet, 2013:451); however, as soon as I started writing this section of my autoethnography, my feelings on paper emerged intuitively as visual text. The way I constructed the writing and represented the flow of words and the spaces between the words throughout this epiphany specifically emphasises two things: the tremendous role of silence that I discovered so different from that in the field and the chaos I experienced, ignited by loss.

Primarily because of the death of my father, I seriously questioned the essence of the student-supervisor relationship. I conclude that this relationship is of great importance in all dimensions of being human – and does not regard a student as merely an academic entity consisting of only intellectual intelligence. The student has to be seen, therefore, as a fully developed human being.

Unfortunately, the results stemming from the data in my MSc project were, in a way, disappointing, but this did not seem to bother anyone very much. This is indeed a loss. Where I previously felt that the external examiner was simply being senseless with his recommendations, I now understand that he was offering alternative, better ways of projecting the data. I, therefore, deduce that all that mattered was obtaining results – not the quality thereof. It was important to improve the *quality* of the work by cross-examining the project, as did the external examiner to a certain extent.

Within this chapter, I share three consecutive major blows. My dad's death came as a tremendous shock. This was followed by the second shock of my awful MSc report and results. The third shock came after that with the death of my grandma. Words truly fail to describe properly all I experienced during those five years of immense pain. The visual text intuitively appeared without me planning to use it, but I believe it aids in carrying over the effect of deep impact. In a strange way since I am

indeed writing about the death of two of the most important persons in my life, I assume this reflects Maslow's third growth level. I wrote this chapter in an artful, aesthetic way. In this sense, I see autotethnography as 'creative arts' therapy; by creating something poetically, I transformed suffering into something meaningful (Esping, 2011:62, 64). "Thus the way the art work [visual text] is constructed, reworked – areas obliterated and reshaped – can be deeply revealing, giving immediate access to areas of inner conflict and ambivalence" (Hogan & Pink, 2012:231).

Autoethnography's "dual identity" (Reed-Danahay, 1997:3) is related to W.E.B. Du Bois' (2008:3) "double consciousness" and also referred to in the articles 'Autoethnography and Existentialism: The Conceptual Contributions of Viktor Frankl' (Esping, 2010) and 'Autoethnography as Logotherapy: An Existential Analysis of Meaningful Social Science Inquiry' (Esping, 2011). Double consciousness allows for the "social scientist and sufferer" to intertwine the personal and the scholarly (Esping, 2010:203, 206) in order to find meaning. Indeed, Taylor (1989:48) argues that "[a]utoethnography responds to the call to question what is important, good, just and/or meaningful." Within this lies the value of authoethnography as logotherapy, not only for the researcher but also the reader. In support of Frankl's (2014) logotherapy proposal, Esping (2011:60-61) maintains:

> This search for meaning is facilitated through the realization of three types of 'values:' (a) creative values, in which a sense of the meaning in one's life is derived from what one is able to give to the world, (b) experiential values, in which a sense of meaning is derived from what one is able to take from the world, and (c) attitudinal values, in which meaning is derived from the ability to change one's attitude toward unchangeable circumstances. The process of autoethnographic writing offers numerous opportunities to realize creative, experiential, and attitudinal values simultaneously.

Finally, and most significantly, I realised that I needed to move on with my life and free myself from this deep pit in which I had been for several years. In coming to this realisation, to a certain extent, I found myself to be in the second-last growth level of Maslow's hierarchy: Self-actualisation. Just as I did when I was a very small child, I once again became aware that I have a life calling – a purpose for which I was born. I could have only reached this level of self-awareness by contemplating my life – alone, intensely, over a long time and in silence.

Who am I, what am I capable of and what is my ultimate purpose?

Inevitably, this required of me to confront and overcome my greatest fears: my tendency to run away and my tendency to try to fix my life by seeking the answers *outside* myself rather than by seeking the

answers *within* myself. For me to reach this critical stage involved *a great deal* of contemplation, which took time because there is no shortcut in becoming who you really are. This relates beautifully to the notion of autoethnography and reminds me again of Poulos (2013:595): "To examine oneself and one's life in a way that fosters thoughtful, engaged, genuine, and rigorous critique requires immense time, introspection, honesty, and courage." Importantly, this in turn relates to the notion of authenticity: "It has to be fought for, won and sustained" (Barnett, 2007:40). "Writing autoethnography is [consequently] a quest for meaning, for truth, for discovery. Writing autoethnography is *search*, and research" (Poulos, 2013:475) in which "every autoethnographic narrative of suffering refuses to be an end in itself; it anticipates and seeks something beyond suffering" (Bochner & Ellis, 2016:50). In this sense, this chapter signifies "the longing to tell one's story and the process of telling is symbolically a gesture of longing to recover the past in such a way that one experiences both a sense of reunion and a sense of release" (hooks, 1995:5).

6.5   CONCLUSION

Chapter 6 stands for a "non-linear process [that] allows the artists to draw on a range of creative experiences and reference points, so that distinctions between the personal, artistic, and social become entangled" (Bartleet, 2013:451). This 'improvisatory' mode of inquiry permitted me to explore the 'unexpected', to materialise (Bartleet, 2013:451) without losing its unity (Bendrups & Burns, 2011:69).

I conclude this phase of my life as follows:

The chapter commenced with a vignette from a day in my life as an Honours student. This teaching and learning culture exposed me to an authentic learning environment in the sense that I set about engaging with the world from which I obtained my data. In this way, I felt one with the project. Such an environment allowed me to get to know myself, thus enabling me to grow as a person. Although this was the case, I was unable to develop my own voice regarding the research project.

Furthermore, this chapter exposed three major shocks that brought havoc to my life, initially making me lose my sense and meaning. Upon contemplation one sleepless night, I realised my life purpose again. This represented my turning point, and I finally realised that I needed to move on. I can relate to Frankl's (2008:82) experience in the Death Camps when he overcame meaninglessness:

> Suddenly I saw myself standing on the platform of a well-lit, warm and pleasant lecture room. In front of me sat an attentive audience on comfortable upholstered seats. I was giving a lecture on the psychology of the concentration camp! All that oppressed me at that moment became objective, seen and de-scribed from the remote viewpoint of

science. By this method I succeeded somehow in rising above the situation, above the sufferings of the moment, and I observed them as if they were already of the past. Both I and my troubles became the object of an interesting psychoscientific study undertaken by myself. What does Spinoza say in his Ethics?—'Affectus, qui passio est, desinit esse passio simulatque eius claram et distinctam formamus ideam.' Emotion, which is suffering, ceases to be suffering as soon as we form a clear and precise picture of it.

Maslow (1987:69) declared that it is a "false impression that a need must be satisfied 100 percent before the next need emerges". Humans "may find life to be meaningful explicitly because of situations of danger to their lives, situations represented by the dichotomy of life and death, in particular" (Olson, 2013:2). Frankl's (2008) narrative depicted in his book, *Man's Search for Meaning*, implies that even though one's basic needs may not be satisfied, one can still reach self-actualisation. Nelson Mandela, imprisoned for 27 years on an island, is also an example of never relinquishing meaning in life. Mayes (2010) asserts that using Frankl as the archetype, people can find meaning, "even a connection with God" in unbearable circumstances, while someone living a very rich life with seemingly everything he/she wants, may in reality "lead a life of despair born of meaninglessness" (Mayes, 2010:28).

In the following chapter (Chapter 7), I reveal how I moved on and how this journey led to a personal transformation on a scale never experienced before.

7.1   INTRODUCTION

Although I went through a process of self-destruction, I fell safely to the ground – only by the Grace of God. And in the stifling darkness, my childhood vision lit up my soul: *You are destined for great things*. The words exploded inside me – they could not be contained any longer.

I'll take this soul that's inside me now
Like a brand new friend
I'll forever know

I've got this light
And the will to show
I will always be better than before
(Vedder, 2007)

It seemed as if I were watching a high-speed movie of my life and as it played, it would slow down and highlight aspects of each of my recent, short-lived occupations that I had thoroughly enjoyed. I realised that I flourished when my responsibilities involved engaging with people in the field of Natural Sciences, which I loved dearly. My inner nature that Maslow (1968:5) refers to is my natural love for nature *as well as* people, prompted by a healthy curiosity since childhood. Then, it slowly became apparent that these experiences constituted a vast array of closely related quasi and pure educational practices. While the depth of my accredited educational experiences did not match that of my experiences in the Natural Sciences, my urge to merge the two fields became so dominant that it gradually transformed into my vision. Although I could not yet add any substance to this vision, I started to explore available options that would enable me to enrol for an academic programme in education. This would lay the foundation for realising my vision.

I was still at a difficult stage in my life. I was still trying to process the death of my dad, the anti-climax relating to the results of my Master's degree and the death of my grandma about a year later, but at least I knew that I had to move forward and take action to realise my vision. My "will to meaning" (Frankl, 2008:105) propelled me forward. My investigation established that the most appropriate way for me to achieve my purpose was to enrol for a Postgraduate Certificate in Higher Education (PGCHE). The transfer from the relatively exact Natural Sciences to the relatively inexact human science of education, due to the radical differences between their nature and structure was initially overwhelming, to say the least. The essence of this education programme at the institution

where I enrolled revolved around the design of an action research idea, which would result in the innovation and/or the improvement of my higher education practice. The fact that the programme revolved around this type of design, provided a vehicle through which I could improve my higher education practice, which was obviously extremely attractive to me in view of my vision. However, since I was not engaged in such a practice at the time, my first obligation was to find a suitable practice. Fortunately, one of the lecturers proposed that under his mentorship, I act as a part-time lecturer for his Grade 10–12 Life Sciences student teachers who were enrolled for the Postgraduate Certificate in Education (PGCE). My transfer from student to lecturer exposed some of the major misconceptions that I harboured about education.

As my induction, I visited these student teachers during education practice at their schools and came to realise that it is not the teaching but the *learning* that defines education (Barnett, 2007; Ackoff & Greenberg, 2008). Within the demanding challenges of the 21st century, the quality of the learning is of vital importance (Hargreaves, 2003; Van Merriënboer & Paas, 2003; Könings, Brand-Gruwel & Van Merriënboer, 2005). Besides becoming a competent e-learner, the importance of learning to learn (Matijević, 2014), to work confidently despite the challenges and uncertainty of an unknown future (Barnett, 2007) and to become powerful real-life learners is undeniable (Claxton, 2008:157). I was surprised to find that the key to learning quality is to be found in how we naturally – *authentically* – learn:

> Children are born true scientists. They spontaneously experiment and experience and re-experience again. They select, combine, and test, seeking to find order in their experiences – 'Which is the mostest? Which is the leastest?' they smell, taste, bite, and touch – test for hardness, softness, springiness, roughness, smoothness, coldness, warmness; they heft, shake, punch, squeeze, push, crush, rub, and try to pull things apart. (Fuller, 2010:82)

Such holistic experience of the nature and structure of the constituents of reality and the power of their interconnecting relationships, together with the children's discovery of which of their responses towards these relationships may be more appropriate than others – all first-hand and hands-on – constitute the *quality* of their learning. When confronted with escalating difficulty, we also witness children accessing their potential in the development and growth of *personal* human qualities or virtues such as courage and resilience that allow them increasingly to overcome the obstacles they are experiencing and subsequently, to improve their learning quality. "We're born to learn" and to keep on *learning as long as we live* in this authentic way (Smilkstein, 2011). The challenge of education, however, is to ensure that the quality character of personal development is maintained and at the same time, ensure that a possible haphazard, trial and error, inefficient learning is prevented. My curiosity about how this is possible was soon addressed when I was exposed to 'a new pedagogy', that of

facilitating learning (Alexander & Potter, 2005:179). Mohanan (2005:5) indicates that facilitating learning is fundamentally different from teaching; functionally, it is the direct opposite of teaching, and its sole purpose is to ensure the highest possible quality of learning.

This inspired me to engage in the required action research project of the PGCHE programme. For this purpose, I turned my focus to understanding its theoretical foundation. I could summarise this as a cyclical process of research while acting within a particular practice that consists of six steps (identify, plan, act, observe, reflect, review) sequenced in one or more iterative spirals (Whitehead & McNiff, 2006; Greenwood & Levin, 2007; Stringer, 2007; McNiff, 2013; Bradbury, 2015; Herr & Anderson, 2015). In my case, this process would innovate my newly adopted education practice. Since I am the object of scrutiny in this unfamiliar education and action research environment (McNiff & Whitehead, 2011), I approached my imminent personal transformation with some apprehension. I formulated my research question in the following way: How could I innovate my higher education practice from the current dominating transmission of knowledge and skills, to ensure that the highest possible quality of learning will ensue with the subsequent personal development towards maximising my potential?

7.2   MY RESEARCH DESIGN

My research challenge required a qualitative participatory action research approach through an interpretivist view of the practitioner's endeavours. My research was practitioner-based, because the aim was to transform a traditional transmission-of-knowledge education practice into an innovating, facilitating lifelong authentic learning practice. Since I am both the practitioner and the researcher taking an active part in the research itself, while innovating my education practice, the research constitutes a participatory action research mould of inquiry that consists of many singular action research cycles and a number of action research spirals that may contain one or more cycles.

The sample of participants was the entire cohort of students who had enrolled to specialise in Life Sciences education in the PGCE programme. The lecturer responsible for the education of these students, who allowed me to become their lecturer and subsequently became my mentor, was included in the sample. I collected data through direct observation of my own education and audiovisual recordings, making field notes as I was conducting my education practice and keeping a reflective journal. The assessment of the students' education practice took the form of an audio and/or visual recording of a semi-structured interview. Data was recorded formally during and after I had conducted an educative event. Data analysis was done through manual coding in thematic categories.

7.3   MY ACTION RESEARCH IN PRACTICE

The purpose of this epiphany is not to be exhaustive in all the details of the action research cycles and spirals, but rather to represent the complexity that action research can accommodate within its structure. It exposes the purpose of facilitating lifelong authentic learning as personal development of the highest order, towards maximising human potential as a result. Although I followed all the steps in all the cycles of the spirals diligently, the detailed steps have been replaced with a holistic narrative of the findings, which best serves the purpose of my thesis.

7.3.1   Finding my higher education practice

I will now discuss the events of the first semester with the first spiral's cycles.

Cycle 1: Three attempts at finding my higher education practice

In finding my higher education practice, I initially considered mentoring a group of Kenyan undergraduate students enrolled in the Physical Sciences, followed by possibly tutoring a group of postgraduate students in Plant Ecology. However, I found my mentor's proposal to become a formal part-time lecturer for his Life Sciences student teachers, the most appropriate and doubly challenging in view of the tautology of educating educators. Visiting them at the schools where they were busy *observing* what education in practice entails, I came to the conclusion that education is in essence the transmission of knowledge and skills because neither myself nor the students had had any exposure to facilitating learning at this stage. Because of my education experiences as a student (assistant, tutor, mentor and as a postgraduate student, presentations at conferences, etc.), I felt that I would be successful in teaching students to do this.

Throughout the entire process of my action research project, my mentor, who was also my facilitator of learning, was iron-fisted in giving advice and in answering my questions. He demanded that I always carefully considered what I wanted to do and why and insisted that thereafter, I critically reflected on my experiences in a substantial evidence-based way.

7.3.2   My first experience of facilitating lifelong authentic learning

I will now discuss the events of the first semester with the second spiral's cycles.

Cycle 1: My first experience – challenging the student teachers to improve their transfer of information with good PowerPoint presentations

I had prepared some notes on the characteristics of good PowerPoint presentations after a previous experience in which I was awarded a prize for the best presentation. After presenting these notes to the students, I showed them a variety of PowerPoint presentations that ranged from bad to good. My presentation did not turn out well, and my discomfort, which I hid from the students and my mentor, surprised me. I wrote the following comment in my reflective journal:

> *I have presented many times in my life to a wide range of audiences, and I was quite confident that my presentation would go well. I realised, however, that to be competent in my field of expertise, Natural Sciences, did not necessarily make a good teacher.*

I realised that even if I had superior knowledge about the content (information/knowledge), teaching it required a serious, professional, educational approach and practice that I did not have – yet.

Cycle 2: Improving my education practice by introducing learning style versatility

At this point, the students attended their first school-based learning at the respective schools to experience education in practice. During my PowerPoint presentation in the previous cycle, the whole brain-learning model was displayed. The students showed considerable interest in it, and I seized the opportunity to challenge them, this time, to design a lesson to present to their learners with a PowerPoint presentation based on the learning versatility that the model portrayed. I had to study all the relevant documents regarding the students' school-based learning requirements and the relevant assessment rubrics. For professional reasons, my mentor briefed me thoroughly before the visit to the school to assess the students' school-based practices. Although my mentor took the lead in the assessment of the students, he would increasingly and unexpectedly demand my substantive contribution. I dared not falter in the presence of the students and their mentor teacher.

Despite my attempt at teaching what the students needed to do, I was quietly disappointed with what they exhibited concerning learning style versatility, although they were quite satisfied with their exhibition. However, the thoroughness with which my mentor and the students' mentor teacher exposed the sufficiencies and the deficiencies of the students' practices, was a revelation to me of the professionalism that I needed to achieve, but which seemed almost unattainable. What was encouraging though, was that I could confirm most of their comments because I had carefully observed what the students did. Nevertheless, the way forward would require a much more concerted effort from me, to access the abundance of latent potential that I had available for this achievement.

Cycle 3: Improving my education practice through enhancing learning style versatility

The students were presented with challenges that constituted the enhancement of their learning style versatility. The first challenge was not to use a PowerPoint presentation and to avoid transferring information as far as possible. In addition, the students needed to ensure that the learners became active participants instead of remaining passive recipients. Although the purpose was to enhance my learning style versatility practice, it was the assessment of the students that would reveal its achievement. From this point onward, I was in full control of the assessments of the students. I used my constructed assessment observation rubric in addition to the rubric that the students would use, to assess my assessment practice. The face-to-face assessment revealed that my assessment practice still needed considerable improvement. I realised that I was not prepared enough and I was nervous because I could not depend on the assistance of my mentor as in the past. Upon reflection, I could identify the following fundamental principles relating to my education practice: I should not ask for suggestions regarding how to improve something, unless I can provide at least one recommendation for how it can be achieved; I tend to go back to issues already covered; my questions should be asked in the order: (i) How do you feel about the lesson? (ii) What went well? and (iii) What was challenging?; fluency in my assessment is crucial, as is the order and structure in which the questions should be asked; I should know why I ask the specific questions; the questions should be precise and direct; I comment too much and ask too little; I should ask 'evocative' questions rather than 'confrontational' questions; I have an unnecessary long run-up before I ask a question; and I do not adhere to a specific logic or a given structure during the assessment process.

The students at least exhibited an awareness of learning style versatility and what whole brain learning could offer. However, learning style versatility is not enough if the demand for *quality* is not added to the challenge. I insert an excerpt from my reflective journal in support of my reflection:

> *A highlight for me in Cycle 3 was my interaction with the students after they had presented their improved learning style opportunities (the feedback). Although I felt the session ran fairly smoothly, I realised I could improve my facilitating learning a lot! Another crucial revelation was that versatility in learning style is not nearly sufficient. The demand for quality needs to be added to the challenge.*

Cycle 4: Improving my education practice through learning style versatility by enhancing learning quality

I provided the students with learning material that introduced them to facilitating learning in the transcendental paradigm of education, which transcends all the restrictions and limitations that the

other paradigms (transmission, transaction and transformation) present. This was in order for them to engage with the resolution of a demanding real-life challenge in its uncompromising supercomplexity, with maximising human potential as an imminent result. This challenge was either to use a previously presented lesson and transform it, or to design a new *learning task* (as opposed to a 'lesson'), using the provided learning material as the foundation. In effect, the challenge was to design a learning task in the transcendental paradigm for the most challenging learners. Unfortunately, the students interpreted this challenge incorrectly, and there may have been many reasons for this. The introduction to something this novel was too quick, the transformation of a lesson to a learning task was not reasonable and to design a learning task that would not be operationalised (as opposed to presented) was irrelevant. In short, my learning task presentation did not meet the clarity criteria; this was obviously a reflection of my deficiency in learning style versatility because I could not make appropriate provision to accommodate the required level of learning and the represented learning styles.

Although the challenge was unsuccessful, I realised the importance of emotional encouragement and support in facilitating my students' learning when they became upset because they could not fulfil the requirements that I could not articulate properly. Fortunately, I had a professional facilitator of learning as my mentor who could emotionally encourage me during this disaster that was a personal failure to me. It took a great deal of courage to acknowledge this, as well as time, to ensure that the students gained the best possible understanding of this learning task and its function, as preparation for what would be required during their second semester school-based learning period. Appendix E on the CD accompanying the thesis represents my action research project of the first semester.

7.3.3   Improving my facilitating lifelong authentic learning practice

I will now discuss the events of the second semester with the third spiral's cycles.

Cycle 1: Improving my education practice by challenging students to design and operationalise real-life challenges in the transcendental paradigm

The time arrived during the second semester school-based learning period, that the students had to engage in the ultimate of facilitating learning, through learning tasks designed and operationalised in the transcendental paradigm. They had designed and operationalised several such learning tasks for their classes, and I requested them to invite me to assess the one that was the most challenging to them. Although there was thorough preparation for this period, the challenges that the students encountered were evident and difficult to resolve. These included: translating curriculum content to a real-life challenge – at that moment, finding the most appropriate and demanding real-life challenge

for the learners that they would genuinely want to resolve, because of the immediate and personal impact it would have on the quality of their lives; formulating the real-life challenge for presentation; presenting the real-life challenge in the shortest time possible and in such a way that the learners would feel so compelled to resolve it speedily, that they would spontaneously engage in the endeavour; ensuring that initially, learners work individually (metalearning) and subsequently in small groups (cooperative learning); and during the learning task feedback, refraining from having a conversation with the learners and/or answering their questions, instead of continuously challenging them to improve their learning quality to the extent of maximising their human potential. Although these challenges persisted to a certain extent, there was evidence of improvement. However, lack of sufficient improvement was a reflection on the quality of my facilitating learning. Improvement is possible only through experience. For this reason, I designed a final learning task for them.

Cycle 2: Improving my education practice through confronting students with a comprehensive, professional, real-life challenge

In this final challenge for the students, I designed a comprehensive learning task in which they were confronted with all the challenges of learning task design, while my facilitating of their learning in this task served as an exemplar, illustrating how the other challenges of facilitating learning could be conquered. The challenge that they were confronted with, was to interpret and improve the ecology section of the curriculum. The students also had to design a learning task that would convince the Life Sciences education authorities that a long-term ecology project is essential, because of the holistic academic and personal development of learners that it can produce, to conserve the country's invaluable natural resources and environment. The students individually had to identify the most appropriate and best possible terrain and investigate it thoroughly and intensively to determine whether or not it would be conducive to achieving the abovementioned outcome in depth, scope, diversity and quality (difficulty/challenge). Thereafter, the students had to negotiate a decision regarding which terrain would be best. Following this, the students needed to design the required learning task, so that when they started their careers as facilitators of learning in the following year, they could eventually operationalise it with their own learners.

Although I have had many opportunities to facilitate learning, as a comprehensive and particularly as an exhibition of expertise in facilitating learning, this has been the most nerve-wracking experience I have encountered. It took endless, repetitive preparations and every ounce of effort, energy and courage to arrive at this event. And yet, when it came, I was not quite ready for its reality. After an uncertain start, my thorough preparation was rewarded, and I became increasingly comfortable with my learning task presentation and my appropriate interaction during the learning task feedback. Similarly, the students' initial uncertainty, revealed by their asking questions and expecting answers,

was soon replaced by fewer questions and better responses to my challenges to improve the quality of their actions. Although I became increasingly comfortable, I could never entirely relax because of the continual need to be aware of what everyone was doing. I did not want to lose an opportunity for a facilitative intervention, that could elevate the quality of the students' learning and the activation of their latent potential.

This was a very exhausting exercise, and although I knew that it was not a failure, I could not determine my success until I received responses from my students and a critical friend of mine, the coordinator of the PGCHE programme and the mentor who assessed me. They delivered constructive criticism on certain aspects that I knew I had presented with deficiencies, but their overall commendation of my facilitating lifelong authentic learning, was a timely reward and a valuable inspiration for pursuing my vision.

Cycle 3: Towards pursuing my education scholarship – my PhD proposal

I was privileged to experience education at a postgraduate level from the perspective of both an educator and a student; this allowed me to understand that education is not determined by the teaching or the educator. It is, in fact, what needs to be achieved by the student, that determines the nature and structure of education. The first part of the development of my scholarship in education during my PGCHE year, confirmed that it is the learning of the student that defines education, with emphasis on the fact that the learning of the student needs to be facilitated. Thus, the issues of *what* the student needs to learn within the unique and challenging demands of the 21st century and *how best* to go about it, need to be addressed. For this reason and because I have experience of being an educator, I chose the student as my focus in pursuing my scholarship in education. Since I have been and still am a student, I decided to find the answer to the critical question – What does it mean to be a student in the 21st century? – through an autoethnographic narrative study. This study includes all my experiences of being a student within the culture of other students, and because being a student is always future directed, it includes interviews with international experts in the field of education, philosophers and futurists who transcend my individual perspective into the realm of universality. Within this academic autoethnography of pursuing my scholarship in an action research approach, Whitehead (2016:139) explains: "In the creation of a living-educational-theory each individual generates their own unique explanation of their educational influence in enquiries of the kind, 'How do I improve what I am doing?' " In this context, I also ask: How do I improve *myself by* what I am doing?

7.3.4. Pursuing my scholarship in education

This spiral represents the pursuit of my scholarship in education, which is based on an action research approach of an autoethnographic narrative to answer the question: What does it mean to be a student in the 21st century? It therefore represents in effect, my PhD thesis.

The course of my action research in the second semester is depicted in Appendix E on the CD accompanying the thesis.

7.4   FINDINGS

I was confronted with three major challenges in this research project. Firstly, at the start of the year, I was uncertain about most aspects of this action research project. Beginning the year in a totally new field without having had an education practice, was rather daunting. I really struggled to find my education practice, and after several unsuccessful attempts that left me in much doubt about my enrolment in the PGCHE programme, I was very relieved when one of my lecturers suggested that I facilitate his PGCE Life Sciences students.

The second major shock came when I was exposed to the process of facilitating learning. I needed to act as a facilitator of learning for the first time in my life after being exposed to the traditional teacher-centred approach to learning. Having encountered my education practice for the first time, while simultaneously needing to ensure improvement was a formidable task. I felt confused because the way I was taught for most of my educational life, differed radically from the process of facilitating learning. I started to seriously question my past life as a student, comparing it with what I was currently experiencing. I felt deeply disappointed, hurt even, in realising that I had not really learnt much throughout my life as a student. On the contrary, the education system took learning away from me by constantly supplying me with a one-memorised-recipe answer to an unrealistic question.

Thirdly, as a facilitator of learning, I needed to cope with the restrictions and limitations of the current education practices, as they manifest in a teacher-centred transmission of information. My mentor, a typical facilitator of learning, did not provide me with any answers during the times when I felt lost. He did, however, provide me with the necessary emotional support and encouragement to reach my own understanding of facilitating learning.

Regarding facilitating learning in my students, at first, I felt very awkward in facilitating the students, because I was still so new to the facilitating learning process myself. I tended to 'teach' the students rather than facilitate. However, I was being scrutinised by a mentor and although I felt tremendous pressure because of this, I knew the mentorship would help me a great deal, especially in overcoming

my initial fear of facilitating the students. I was withdrawn in the beginning, not wanting to be in the foreground too much when I visited the students' schools, but my confidence grew significantly over the year. Sometimes, being exposed to facilitating learning for the first time, the students themselves acted very rebelliously towards me, especially in our one-to-one reflection sessions after they had presented their respective classes. This conflict made me feel embarrassed, offended and sometimes even incompetent, but I gained confidence in what facilitating learning entailed. Embarrassment gave way to believing in myself as the facilitator of learning – I needed to facilitate the process of maximising my students' potential so that they also developed personally. I carried a great responsibility that precisely entailed confronting the students, so that they could become the best human beings that they could be.

Within the context of the research question, the findings can be summarised as follows: My design of learning tasks follows a natural sequence of lecturing, which is designing lessons for PowerPoint presentations followed by students being required to do so in practice during their school-based learning period. The students achieved some success in these learning tasks, but there was still a vast need for improvement. Surprisingly, one of the students had already implemented learning style versatility with an element of whole brain learning during the second part of her lesson, by diverting to a practical lesson in which learners worked in small groups on completing questions on a worksheet. Although this was to be commended, many deficiencies needed to be addressed. Eventually, the students managed to engage in learning style versatility and elements of whole brain learning. One student, unfortunately, utilised an inappropriate learning format to achieve intended outcomes and thus, this lesson was a failure even though learning style versatility and elements of whole brain learning were achieved.

I succeeded in circumventing the limitations and restrictions of current education practices through challenging the students by designing a learning task in which learning style versatility and whole brain learning were fully exhibited. However, the interpretation of one student regarding the learning task was flawed, and success in this endeavour was only partial.

I succeeded in improving my assessment practice, by utilising all the possible resources that I had at my disposal. These included the official document for school-based learning and assessment; the assessment rubric and assessment forms; my mentor and his assessment; the students' mentor teachers and their participation as practising experts; my participant observation during assessment supervised by my mentor; my individual development, thus taking control of the assessment; and the design of a practice theory of, and for, my assessment practice in the form of an observation sheet, to be used by me as a reflection of my assessment practice and a feedback form used by students to assess my assessment practice.

I have become very conscious of both the importance and the difficulties of ensuring the best possible and most appropriate facilitation of lifelong authentic learning and, therefore, my improvement is vast. The lessons learnt from my first school-based learning period, offered me the opportunity to take my learning experiences forward into my students' next school-based learning period. With the second school-based learning period, my mentor generally let me take the lead in facilitating learning, because I was more confident and by that time, I had more experience in facilitating learning. Although it took longer for one student to reach this paradigm, I was satisfied to see how the students ultimately transformed to the transcendental paradigm.

7.5   META-REFLECTION

Unlike Grossi (2006:67), I did not immediately feel that I belonged in this education culture. I did not even feel safe! I was not at ease, out of my comfort zone for sure, but I also realised that this is exactly what I needed, that it is part of my "will to learn" (Barnett, 2007:101). I needed to transcend my previous circumstances (described in the preceding chapter) and rise to become who I am meant to be. However, "[w]e have what we may call the desire for reputation or prestige, recognition, attention, importance or appreciation" (Maslow, 1943:382). I thought that stepping into the PGCHE programme with an MSc degree would give me the necessary recognition and attention … I was completely led astray by this thought! Suddenly, my previous reputation as a scientist did not matter to either my fellow PGCHE students (some of them even being medical doctors) or to the lecturers (to whom only facilitating learning mattered). My reputation did not even matter to my Life Sciences students! I was not much older than they were (possibly the same age) with experience in university lecturing and tutoring, not teaching in a school per se …

It was only later in the PGCHE programme that I believe I reached the second and third basic needs of Maslow's hierarchy – safety followed by belongingness and love. I realise now that I *did* belong due to a divine revelation that I would continue with a PhD. I was extremely motivated! With this revelation in mind, I started to believe in myself as a facilitator of learning, and I consequently started to receive respect from my Life Sciences students, which satisfied my esteem needs. I quickly reached the first growth level – cognitive growth. I realised my responsibility towards myself and my students and that made me quickly grow in knowledge. Upon a one-to-one meeting discussing my action research proposal, the course coordinator of the PGCHE who acted as my lecturer of the Professional Development module reported that he had never seen such a representation of action research spirals and cycles focussing on the parallel development of an education practice and a person (Appendix E on the CD). To me, this construction together with the construction of my practice theory of and for facilitating learning (Appendix A on the CD) represented a form of beauty, albeit in a scientific way. I trust that the construction of something powerfully new (my representation of the action research

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spirals and cycles and my practice theory of and for facilitating learning) not only satisfied the third growth level (aesthetic) of Maslow's hierarchy of motivation (1943, 1954) but was also a crucial step in bringing me to the next growth level; I quickly became amazed by and even started to admire the art of facilitating learning.

Living the theory that I constructed resulted in what I believe was my first encounter of self-fulfilment that symbolised self-actualisation. Self-actualisation can be defined as continuous self-development (Maslow 1971:48) with "full use and exploitation of talents, capacities, and potentialities" Maslow (1970:150). I felt I was moving into my life purpose. To my astonishment, I did not remain there: I quickly developed to a level of transcendence in which my purpose was to facilitate the students in realising *their* potential. Moreover, I realised that I reached the last level, transcendence, when I saw the students self-actualising. The following feedback from a student supported my conviction: *"This was a difficult year but worth it. Even my parents noticed how I changed".* In fact, I believe the process of facilitating learning allows for transcendence (allowing others to self-actualise, that is, for the student to realise his/her potential). The student's feedback confirmed my belief that when you are confronted with a real-life challenge and when you are immersed in a situation where you cannot *but* solve the challenge, *that* is the situation in which you will learn, and not only learn but also develop as a *whole* human being. Barnett (2007:164) refers to this as the qualities of knowledge that are "personal insight and understanding".

It is clear upon contemplation that I truly jumped from one growth level to the next, resulting in a year of personal transformation for not only my students but also myself. This presumption is supported by my mentor (taken with his permission from a recorded ad hoc conversation).

> *There was lots of frustration, there was ... And I could see you really fight in terms of these things, because there is no doubt that these were very opposing forces that was [sic] working. On the one hand, you really want to carry on with this new adventure, but on the other hand, you're not familiar with this stuff, and it was a process through which you need to go ... and that was very interesting to see your development ... You sometimes got very occupied by a frustration and that kept you from moving forward. And, as time went by, you just went on and went on and went on, you know, and I think through a lot of conversation with you and encouragement, you went on through the process. And slowly but surely, those moments of frustration got less and less and not so frequent, et cetera. You, yourself, became much calmer, much more contained, et cetera.*
>
> *And that was a wonderful thing to see develop ... And the PGCHE course was a very difficult course, besides that fact that it was therefore in education, which you were completely unfamiliar with, it was very, very difficult ... all people really struggle with that. But you managed to go through it, and you managed to go through it in such a way*

that it was so good to see that you were developing more and more to not have those
frustrations take away your energy, but you overcame that and it became more and more
a question that you much quicker went over it and could spend your energy on the next
challenge, rather [than] on the frustration ... And that was a good thing for me to
witness.

I learnt and developed so much in a single year, not only concerning academic knowledge and skills, but also, and more importantly I believe, in myself as a human being. After the completion of the PGCHE programme, I was an entirely different person. To me, this indicated a breakthrough – undeniably a *transformation* – not only of what it means to facilitate learning but also of what it means to be a student: to learn specifically by experiencing the highest possible quality of learning through engaging with an authentic real-life challenge (Slabbert, De Kock & Hattingh, 2009:66, 72). My real-life challenge was embedded in facilitating learning in Life Sciences student teachers.

The other significance of the study, however, lies within the value of what action research as a living theory method can offer in providing meaningful insight into personal development. The action research steps that I painstakingly followed allowed me to reflect deeply on my actions (before, during and after). This self-reflection made me realise that I wanted to continue with a PhD (as illustrated by Semester 2, Spiral 4). Even though my PhD is an autoethnographic narrative, the basis of the research reflects the action research steps. As Whitehead (2016:139) argues, action research as a vehicle for my autoethnographic journey contributed to my justification of my educational influence when I asked: How do I improve what I am doing? At the same time, this provided the opportunity to ask: How do I improve *myself* by what I am doing? The intertwining of action research and autoethnography is clearly defined by Reason and Bradbury (2001:1) when they claim action research to be

> a participatory, democratic process that enables practical knowing in the pursuit of
> worthwhile human purpose. It brings together action and reflection, theory and practice,
> in participation with others, in the pursuit of practical solutions to issues of pressing
> concern to people, and more generally the flourishing of individual persons and their
> communities.

7.6   CONCLUSION

I believe it is vital to understand what facilitating learning is. Facilitating learning is *not* showing, teaching, telling, demonstrating, illustrating or implementing the multitude of teaching strategies, methods and techniques, and it is especially *not* acquiring the knowledge or theory first in order to

apply it in practice. It is the process of initiating learning by designing the most powerful learning environment possible in the form of a learning task that comprises a demanding, authentic, real-life challenge in its uncompromising supercomplexity that is given to learners to resolve and for which the required knowledge is not available and the requisite skills are not known. This demanding real-life challenge encountered by the learners is not an example or exercise for applying already acquired knowledge in practice. Learners are confronted with an unsettling, puzzling, unsolved problem or challenge of which the resolution results in the improvement of the quality of life. This demanding real-life challenge serves as a focus, a stimulus and a challenge that compels learners to utilise everything they have previously learnt to analyse the challenge in order to identify the actual problem and to understand the knowledge and the skills needed to solve it.

I also believe that it is crucial to realise the importance of the aim of education. The outcome of the aim of education is universal and since it contains the concept of sustainability, it aligns well with my Natural Sciences experiences. I also associate well with the notion that education has to prepare learners for living in real life, and having the actual experience of resolving the real challenges of life in the moment makes education meaningful at every moment. This also relates to my research in the Natural Sciences, which was nothing less than resolving the challenges of real life. The moment I realised this, it became apparent that a research project and an educative process are fundamentally the same: experiencing a real-life challenge and a will (value) to resolve it. This ignites a flurry of explorative resourcefulness to find ways in which the challenge could possibly be resolved (skills). The resolved challenge manifests in the construction of new knowledge. This process results in the acquisition of a wealth of meaningful existing knowledge and skills and/or a possible demand for devising a new skill(s) and the construction of new knowledge – as the resolved challenge – which was aimed at increasing the quality of life, nothing less.

Indeed, the rapidly inconsistent change that takes place every moment in the world makes the future radically unknowable. We cannot, therefore, rely on the future to reveal itself so that we know what to expect. Neither can existing knowledge or skills (representing the past) inform us about the future. Since we cannot rely on resources outside ourselves to cope with an unknown future, the only aspect over which we have control is ourselves and what we are capable of achieving. This is why the aim of education cannot focus on how much we know but rather on our capacity to learn. Do we have the virtues/qualities/dispositions to prosper despite the uncertain age of insecurity that we live in? (Hargreaves, 2003).

Chapter 8, presented as a visual essay, shares two 'mystic experiences' that I encountered during the years of being a PhD student.

CHAPTER 8: THE MYSTERY OF TRANSFORMATION

8.1 INTRODUCTION

The point or goal of the story is to come to terms with, explain, or understand the event(s): Why did this happen to me? How can I understand what these experiences mean? What lessons have I learned? How have I been changed? Often, an autoethnographer's story is a tale of two selves, a journey from 'who I was' (before my epiphany) to 'who I am' (now), after living through these events.
(Bochner & Ellis, 2016:64-65)

The above quote refers to my epiphany in which I was "transformed by crisis" (Bochner, 2000:270), as explained in Chapter 6. Through "dramatic action", I moved from "[the] 'self I was' to the 'self I am' now" (Taylor, 1989:48). The self 'I am' refers to who I became at the end of my PGCHE year (Chapter 6). However, as Maslow (1971:48) maintains, the self is *continuously* developing. For this reason, I continue the story of my personal growth and transformation in this chapter, reflecting on my PhD years and revealing my 'mystic experiences' in terms of self-actualisation and realising my authenticity. I represent these as a visual essay through which I endeavour to produce both an 'argument' and a 'feeling' for you as the reader (Rose, 2016:439).

8.2 WHY?

It is the paying attention, the looking and the taking note of what we see that makes images especially important to art, scholarship and research.
(Weber, 2008:42)

Although I have always loved art, it truly bothered me that I never had formal art education. So, in October 2013, I decided to enrol in art classes presented by a professional artist in a nearby neighbourhood. I must admit that another reason for starting with these classes was to take a break from my research every now and then. Little did I know then the prime role that my art would play in my research.

In the middle of the year in which I took Philosophy classes, I decided, with encouragement from my supervisor, to spend time alone over a weekend in an attempt to connect to my true self. In passing, my supervisor prompted me to express my experiences during this weekend in some form of art. The product of the weekend proved to be a painting. Prior to my art classes, I had only made a few drawings and paintings and have no record of them. I want to emphasise that I had only just become a

student of art in practice when I went on this uncertain outing alone. Having arrived in the middle of nowhere, I felt very cold and lonely on my first evening. I wished that I were not alone. I listened to the wind howling outside my room and pulled the blanket that I had thrown over my shoulders more tightly around me.

Within my solitude, I realised that a weekend spent alone does not happen often at all and that I must make good use of this opportunity. I decided to go to bed early for I knew that the following day, I needed to work on my product – whatever the result might be. The next day, I slept in until the sun was already high in the sky. Although I knew I needed to create a product, I felt uncertain, confused and even afraid of where this process would lead. I was procrastinating. It was only in the late afternoon that these feelings were replaced by a feeling of being unrestricted. I regained my focus and at last, started to make progress with the painting. Initially, I could not really grasp why I needed to endure such an emotionally uncertain time all alone, constructing something that at the time, was completely unknown.

As I looked at the pure, white canvas lying in front of me, I struggled to bring myself to pick up the brush and start painting. It took me some time to make the attempt. I could not predict the process to come, let alone the end result. However, within the quietness of my solitude, I managed to transcend 'the block', this barrier, by contemplating my true self in silence and commenced with the painting. Thus, it became a spiritual experience. As I progressed, I began to feel more unimpeded with each brushstroke that I put on the canvas. I started to feel free to paint what my inner being told me to paint on the white canvas. I started painting spontaneously, from my spirit, without any intentional product in mind. My choice of colours was also completely unintentional. As the brush splashed through the colours and landed on the canvas, the canvas filled and meaning started to emerge. The painting began to represent non-dualism (a philosophical concept: the essential interconnectedness of everything) – my relationship with the transcendental and being immersed in the bigger whole. I stood back in awe. And in awe, I became composed to interpret what I had produced. I named the painting, *Ode to Liberation*. I was free. This signifies my first mystic experience.

My painting (Figure 26) appears on the following page. Please take the time to let my painting speak to you, and feel free to write a few notes about what it means to you.
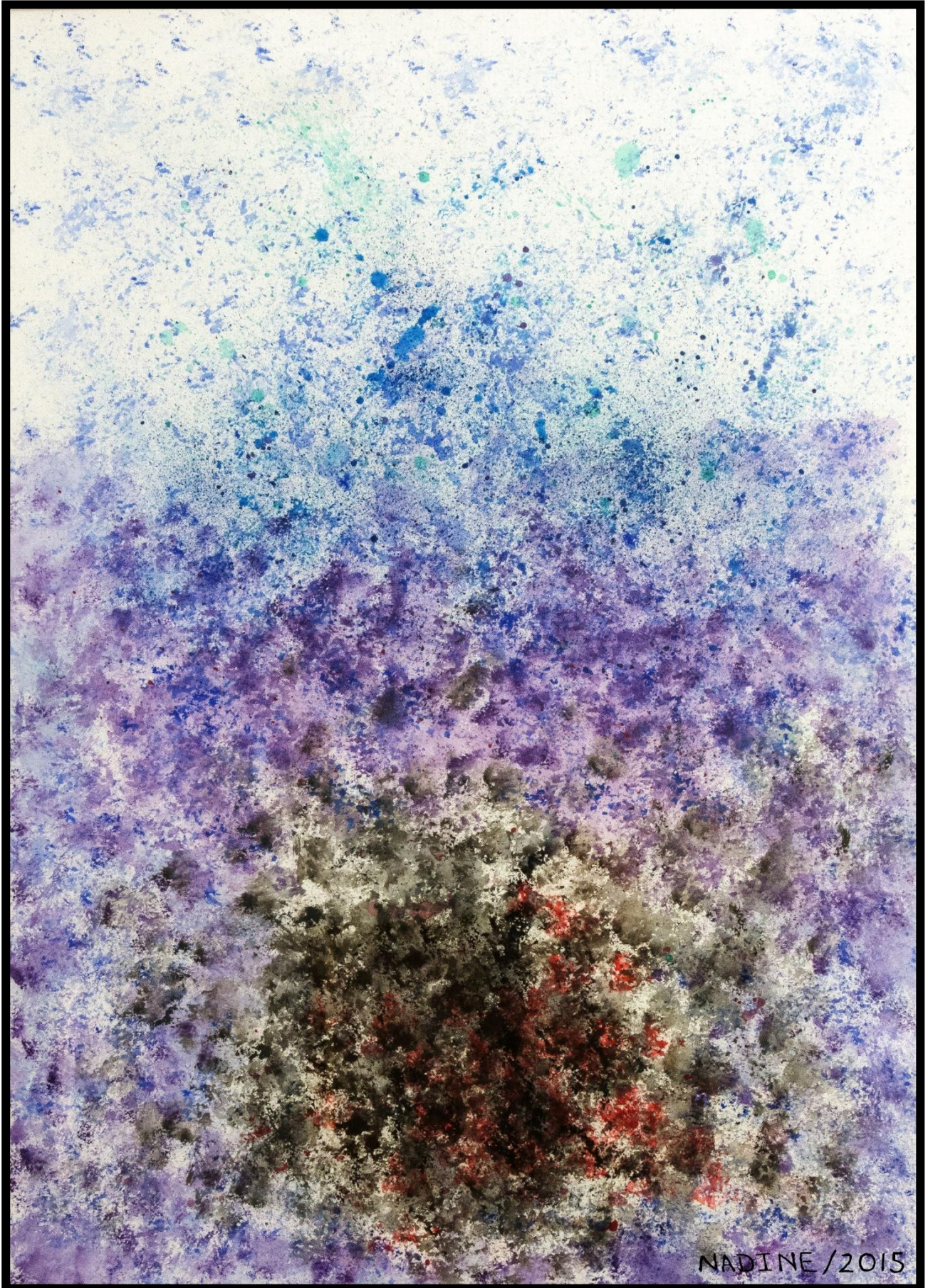
Figure 26: *Ode to Liberation*

Thank you for being a participant in my autoethnography. With great delight, I will now share my interpretation of the painting. For those of you who may be unfamiliar with art, this is a watercolour painting. For those of you who are familiar with this medium, you may notice the unusual use of this medium to create such an abstract painting. Watercolour is usually used to create soft and dreamy paintings, mostly involving nature (landscapes and/or animals). This unusual approach symbolises the breach from who I was to who I am now.

The black and red colours represent my negative, polluted being and signify the hurt, dirt and infection in my life. However, these colours diminish and become dominated and replaced by purple and blue. The portrait orientation of the painting indicates my relationship with the transcendental. The purple and blue colours are spiritual colours, indicating that we are spiritual beings, and the splashes of sea-green represent the cosmos and nature, our physical home, implying not only Earth but also Earth situated within an ever-expanding universe.

These positive colours conquered the negative colours, black and red, confirming that my spiritual intelligence is the ultimate, dominating experience in my life. I then realised that all the colours were embedded in white, which represents the simplicity that we can use to address the supercomplexity of the world. If you have simplicity, you can live in spontaneity, which is your spirit. "Our life is frittered away by detail … Simplicity, simplicity, simplicity!" (Thoreau, 1985:69). I am reminded of the Golden Circle concept of Simon Sinek (2009), illustrated below (Figure 27).
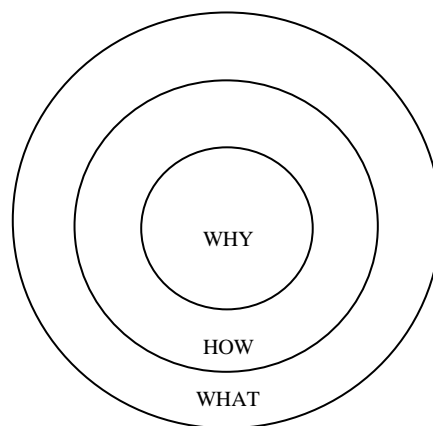
Figure 27: The Golden Circle
Source: Sinek, 2009:36

Sinek (2009) explains that the 'Why' – *your purpose* – forms the centre of everything. The 'How' implies the process, and the 'What' is the product. Within this case, my purpose ('Why') is initially to find my true self (the 'Who am I?'), the 'How' is 'to be a student' and the 'What' is the product of facilitating the transformation process of other human beings to become the best possible human beings that they can be (as seen in the findings and meta-reflection from the previous chapter). I

thereby serve others to help them find themselves (their true selves) so that they will be able to deal with the supercomplexity of the world by living an authentic life and being lifelong students notwithstanding the world of conformity.

8.3   WHAT?

Approximately midway through my PhD, my mentor and I began to speak a great deal about transformation and the fact that I still needed to transcend 'the block' within me to become the person I needed to be. I still needed to 'get out of what I am not'. Consequently, I tried to find a metaphor that represented transformation to which I could relate. I saw in my mind's eye, the seagull, Jonathan Livingston Seagull (Bach, 2003) and was reminded of the metaphor of flight, with the seagull soaring high above the sea, following his dreams despite seeming limitations. Although personally, a highly inspirational fable that I read in 2012, for me, it did not quite represent transformation. After another meeting with my mentor regarding my autoethnographical work, the thought of transmutation, specifically the transmutation that a butterfly undergoes, made me realise that nowhere else can such an extreme conversion be found. This inspired me to such an extent that I started to contemplate the lifecycle of the butterfly as a metaphor for my transformation.

The choice of my metaphor was confirmed when one morning on campus while busy collecting data for my autoethnography, I bumped into a friend of a friend who worked at the university. I was looking for parking when I saw her going for a morning stroll. I stopped to greet her, and I asked her if she wanted to keep me company. She agreed to accompany me until I found a parking spot. I insert an extract from my Morning Pages (my early morning diary entries based on free-flow thoughts):

> *What is interesting about this encounter and its divine intervention, is, I saw a butterfly necklace around her neck on which I complimented her and then she said yes, the butterfly represents the renewal of her life every week, because she receives chemotherapy every week [she has lymph cancer] so they started with treatment in March and the treatment ends end of September. She said her sister and she started this whole thing [of the butterfly as a symbol] to represent the metamorphosis of the butterfly. Another thing that I mentioned to her is that it represents nothing else but transformation which is quite profound because for me it also refers to the transformation of the human being and it is a continuous process. So, it is the metamorphosis of the butterfly but it never ends, because when the butterfly eventually climbs out of the pupa, its mission will be to, in the end, lay eggs. So, the eggs will again become a caterpillar and the caterpillar will form a pupa and the pupa will again become the butterfly which again will lay the eggs, etc.*

I came to understand that anyone could relate to this metaphor and, therefore, it could be seen as *a universal metaphor for the transformation of a human being*. On 5 July 2016, I wrote the following electronic entry after a very challenging day during which I was once more confronting my own fears.

05/07/2016

Today, I feel very uncertain, and I feel very lost. However, feeling so uncomfortable, energy is generated within myself and with this energy, I, the butterfly, will emerge from the pupa, and free me of that what kept me from revealing my brilliance to the world.
The butterfly is at last formed within the pupa, wet-winged, but perfectly developed, and therefore ready to emerge from the chrysalis (butterfly pupa) – the breakthrough through the thick, hard shell. This moment the butterfly awaited, even when she was still only an egg. Will the butterfly in this struggle fall out, hard, unable to recover from this fall ... or will the butterfly even fail to emerge ... and die?
No, the butterfly, even though careful and uncertain, will climb out and spread her brilliant wings. It will load the energy in her veins and prepare for take-off, to soar on the wind ...
Effortlessly.

The first part of the depiction signifies my search for meaning (Frankl, 2008:105). I felt driven to uncover a metaphor to represent transformation. I felt divine intervention when I 'accidentally' met an acquaintance during my search. It left me in awe. I felt free; I realised that even though the acquaintance was the butterfly, I was *also* the butterfly. The electronic entry is an emotional response in its own right and is accompanied by the feeling of immense uncertainty as I, symbolised by the butterfly, ask myself the life-depending question: Will I emerge from the pupa and '*do ... or die', 'fall ... but rather fly*'? This experience reminded me, to my great surprise, of the butterfly that I found dead under the grapevine in my grandparents' yard when I was still a small child. I now know that I cannot be this beautiful butterfly because this butterfly fell and died … His brilliance is gone forever. *No, I must have the will to transcend my challenges so that I can fly.*

I insert the transcript of a section of my Morning Pages:

> *So, if you undergo transcendental experiences, you eventually undergo transformation ...*
> *so, this [transcendental experience] leads to transformation. I believe that the past*
> *couple of years of being a PhD student specifically led to this point, obviously today, the*
> *5th July 2016, it led to this day of getting to the point of transformation and really*
> *experiencing a change in character and to really do what I need to do and to show my*
> *brilliance to the world in a way that I should.*

Upon contemplating the depiction, I realised that the feeling of uncertainty made way for a feeling of wonder. I also realised that the phrase, "I must come out of what I am not", meant that I needed to

emerge from the pupa, an ostensibly dead being, to become the brilliant butterfly. And then, I am to fly and not fall. I was ready to spread my metaphorical wings and transform into the being I was meant to be.

A couple of months after I had discovered the previously elucidated metaphor, I needed to submit a progress report consisting of my PhD research to date and including a timeline with objectives to be reached until the date of submission of my PhD to the external examiners. My research had stretched over four years already, and I needed to ask the Faculty permission to extend my study and explain why I had not complied with my original timeline of four years as submitted at my proposal defence on 7 October 2014. I knew this was standard procedure and although I was pressed for time to complete this document, I saw it as a formality to ensure that I was still 'up and running' with my research. In one week, I compiled a substantive progress document to submit. I was proud of what I had already achieved. Constructing this document made me realise exactly what I had already accomplished and what I still needed to achieve.

The Faculty sent me an email only *two days* after I had submitted the document. I was caught off guard completely. I was wondering how this could be since I had submitted a document that would undoubtedly take more than two days to study. I insert my electronic diary entry for the day after I received the email.

12/11/2016

I really felt torn apart today …
It was a seriously rough week. I needed to submit my progress report, and my supervisor was proud of the substantial document I submitted in order to ask for extension for my research. Today was probably the most difficult day since I started with my PhD: I received an e-mail yesterday to notify me that I will only get an extension on my PhD until 31March 2017. That is 5 months less than I bargained for. 5 MONTHS!!??!! I feel that I worked on this research for almost four years – it took a lifetime to get to this point – and now in four months' time it will (must) be over. I had terrible nightmares last night!
I had a rough day of trying to make sense of some of my data and I felt like giving up.
I then decided to contact my supervisor to share with him the work that I did today, and also to tell him how I felt. We had a conversation of about an hour long on my research priorities. He reminded me of this important task that I need to complete, and that it is my task and my task alone and that nobody can do it for me.
This is make or break time.
It feels like the uncertainty is going to kill me!

I felt devastated and powerless. And so extremely angry with my supervisor. I was furious that he seemingly did not care, and I believed he was not protecting me when he, more than anyone else, knew how important this work was to me. It felt as if something in which I had invested most of my

time, effort and money had been taken away from me. I had nursed my research and felt it grow and in a moment, it had been taken away from me. I walked up and down in the house, tried to cry, tried to scream, tried to speak … but no sense came from my mouth. I was in such shock. I did not know *what* to do or how to deal with this.

My purpose … no … my *life* had been severely threatened.

By death …………………………………………….

Ultimately, after some communication between my supervisor and the Head of Department, the Head of Department met with the Dean of the Faculty regarding the extension issue. The result of the meeting was that I would be allowed to submit my thesis on 31 August 2017. This, however, gave me only a small measure of relief because although I now had an extension, I had 'hit rock bottom'. I had to find a way to transcend this trauma and although I felt drained, I had to find some way to give my all in the last months of my PhD.

Upon contemplation, I came to understand that the experience of 5 July 2016 (*The butterfly*) was in fact an *illusion*. However, this illusion was also a prophecy. The words predicted the trauma caused by the feedback on my progress report. Little did I know that it was only after I had hit rock bottom – and had been confronted with reality and had looked really *deep* within myself – that I could truly rise. This reminded me of Deepak Chopra's famous saying (Miles, 2016): "*All great changes are preceded by chaos*."

Then, I came to a vital understanding about what it was that was keeping me from fulfilling my purpose. Over the preceding two years, I had allowed my emotional intelligence to maintain the structure of 'the block' instead of using this energy to access my spiritual intelligence. I started to use the energy – created by this emotional chaos and trauma after being affected so profoundly by this experience – to access my spiritual domain. By doing this, I was able to reach a higher order of consciousness where the emotional intelligence deliberately broke the structure down so that I could reconstruct the dissipated structure.

This pivotal moment is a paradoxical irony. I needed to 'die' before I could become a 'new' human. The Bible (English Standard Version), in fact, says the old self dies and the new self comes to life (John 3:3-7). Through this, I am reminded of the tale called 'The Story of the Man and the Butterfly' (Author unknown):

> *A man found a cocoon of handing on a small bush and as he watched, a small opening appeared in the cocoon and inside was a butterfly trying to get out. He sat there and watched the butterfly for hours as it struggled and struggled to squeeze its body through the tiny hole that it had made in the cocoon. Then the butterfly stopped, as if it was stuck, as if it couldn't get out and it couldn't go any further.*
>
> *Then the man decided to help the butterfly out.*
>
> *He took a pair of scissors and snipped off some of the cocoon making the opening much bigger.*
>
> *The butterfly then emerged easily, but it was not as it should be, it had a swollen body and small shrivelled wings. The man continued to watch it, expecting that any minute the wings would enlarge and expand enough to support the body, though this never happened.*

The butterfly then spent the rest of its life crawling around with shrivelled wings and it was never able to fly.

What the man in his kindness and haste did not understand, was that the small hole in the cocoon and the struggle required by the butterfly to get through this opening, was nature's way of forcing the fluid from the swollen body into its wings so that the wings could then unfold and enable the butterfly to fly.

The story of the man and the butterfly spoke to me in two intense ways. Firstly, without challenges to overcome in life, I realised that I would go through life without experiences and I would not be able to develop into the person I needed to be. I would not be able to fly! Secondly, I *alone* had to fight this battle the right way to develop from deep within myself. "It [authenticity] has to be fought for, won and sustained" (Barnett, 2007:40). But how? To take action, to *do*! If I did not act, I would not transform. It was my responsibility to carry this out. Upon contemplating all of this, I deduced that I satisfied Maslow's first and second growth levels. By remembering and realising that it is my responsibility to fulfil *my* purpose, I reached a level of self-awareness that satisfied my second growth level.

This guided me to my second mystic experience – a peak experience that attests to a much longer-lasting intensity than my first peak experience and is characterised by beauty (the third growth level) and self-fulfilment (the fourth growth level). You will soon see what I created. It was during my happiest moments that I created this piece of work. Maslow (1968:103) refers to this experience as being closest to my real self (self-actualisation), while Slabbert, De Kock and Hattingh (2009:75) refer to this as my "authentic self". But at the same time, I experienced a transcendence, going *beyond* the self and feeling more integrated and, therefore, "less spilt between an experiencing-self and an observing-self" (Maslow, 1968:104-105). "The creator becomes one with his work being created" (Maslow, 1968:105); I became the artwork and the artwork became me. I became free of the 'blocks' that my supervisor previously referred to and became my most creative self (Maslow, 1968:107-108).
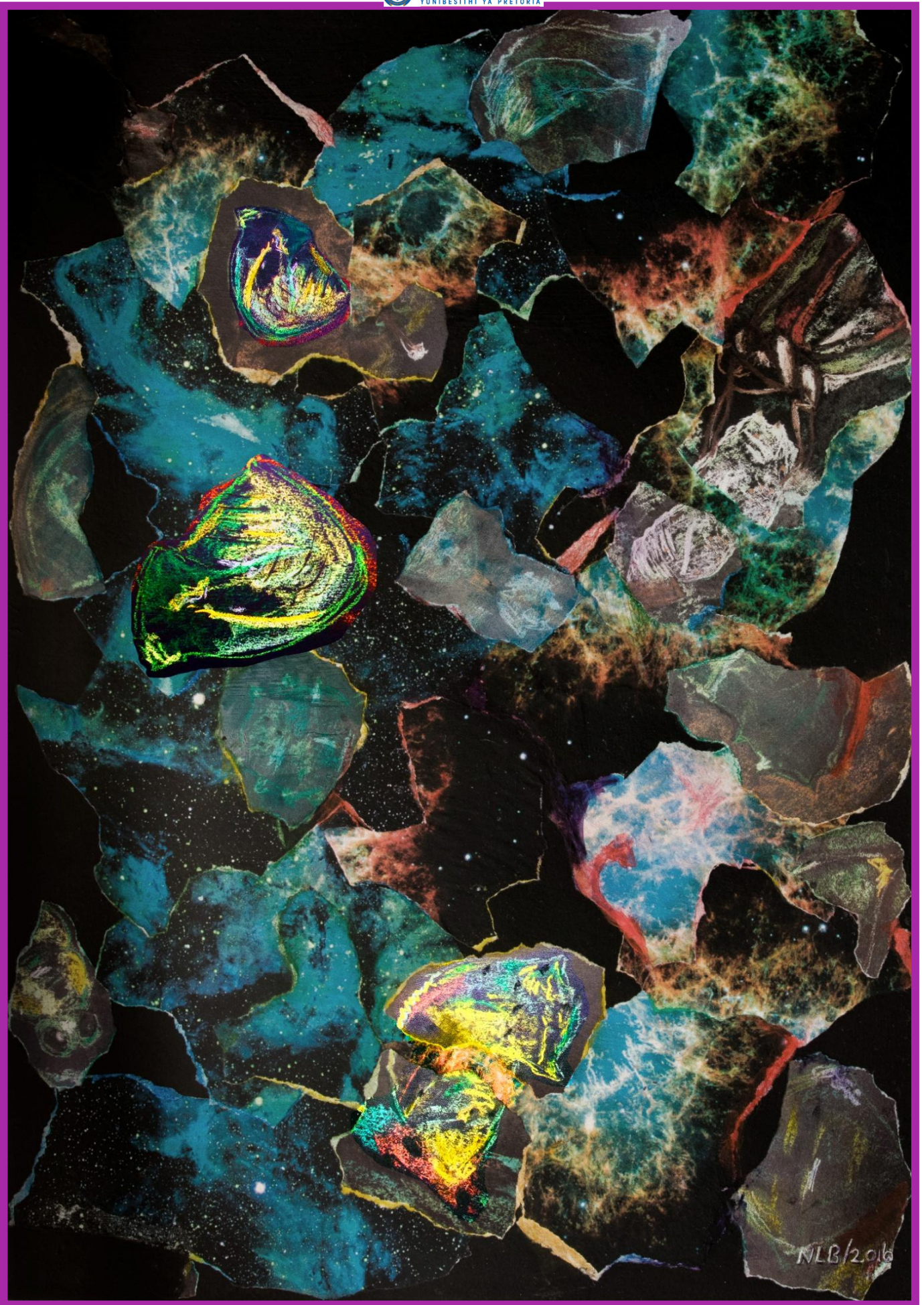
8.4   HOW?

My representation of my transformation follows, and words truly fail to describe its transcendent meaning because of its immense spiritual power. Please feel free to take some time to contemplate the images and make some notes if you wish.

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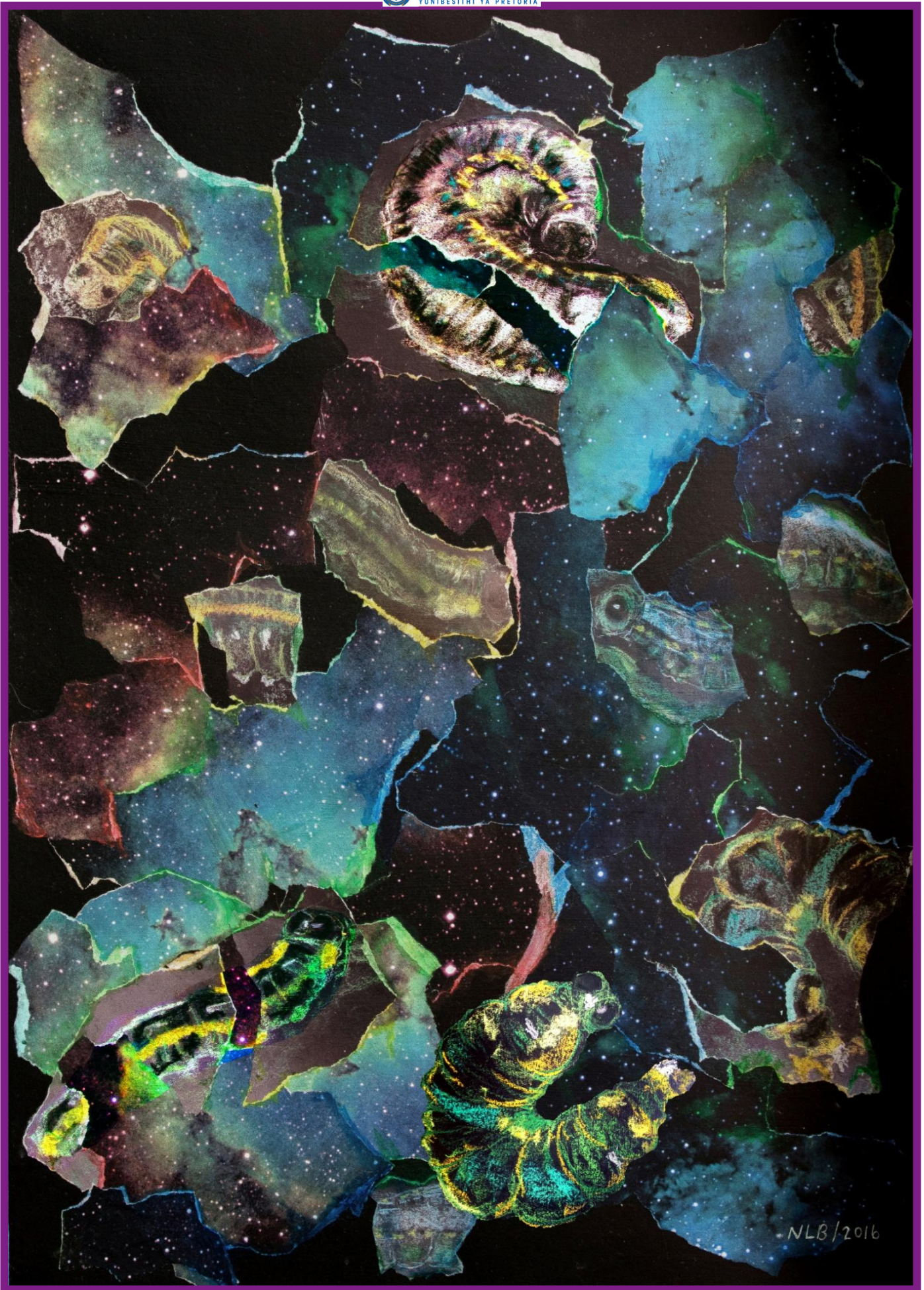
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Thank you once more for being a participant in my autoethnography. I will attempt to present my interpretation of my artwork. In effect, I used the *Ode to Liberation* art piece, a dissipated structure, to construct the four novel collages. I brought the pieces of the first artwork together to form something creatively new. These four pieces of artwork were in the format of collages. I used mixed media to construct them (acryl paint, watercolours, pastels, crayons, neon crayons and photographs) and did not limit myself to only one medium as with my previous artwork. I am able to draw a parallel to the teaching and learning culture regarding this. The teaching and learning culture should allow for an integrated holistic experience, an imperative within our supercomplex world, and not simply memorisation.

These collages form a collective whole, which speaks of holism (as referred to in Chapter 2, Section 2.3.1.2). It resembles the metamorphosis of a butterfly. The cycle is a process of development from the egg to the caterpillar, to the pupa and finally, the butterfly. It represents the extreme transformation of where I was to where I am now (Bochner & Ellis, 2016:64-65). The butterfly symbolises me as a student within an authentic learning environment that is symbolised by the universe in which the stages of the transmutation of the butterfly are embedded. The universe (nature) supports the lifecycle of the butterfly. Therefore, this teaching and learning culture supports maximising my potential – this culture insists on my authenticity (Barnett, 2007:40). In this sense, the aim of education as defined in Chapter 1 (Section 1.8) is fulfilled. These collages subsequently also reflect the universal aim of education. In this sense, they relate clearly to the teaching and learning culture. Dispositions and qualities in the form of essential human virtues are acquired through this pedagogy called authentic learning as personal development of the highest order (Alexander & Potter, 2005:108) and the ultimate transformation of the human being as educational purpose, nothing less (Barnett, 2007:101-103).

The last collage characterises this ultimate transformation as self-actualisation (Maslow, 1968:153) and authenticity (Barnett, 2007:41-51). Moreover, the butterfly is flying up and away, symbolising the highest growth level to be reached – that of transcendence, "the essential quality of human existence [that] renders man *a being reaching out beyond himself*" (Frankl, 2014:xvii).

I can report my growth progress (Mitchell, 2008:367) as being linked to my watercolour painting, to the electronic representation of death and to my multimedia collages. After the construction of my watercolour painting, I experienced a huge set-back caused by the feedback on my progress report, and I moved back into the deep, black pit. I represented 'death' with a completely black page – nothing could escape it. Upon contemplation, I realised that this stage symbolised me as the dead butterfly, the one I had found underneath my grandma's grapevine. Conversely, the end result of the collages symbolised a vibrant, flying butterfly that represented my transformed, self-actualised being, aware of my authenticity and my potential.

I move on to discuss my two art constructions – the watercolour painting and the collages. I constructed my watercolour painting as an uncertain, doubtful student. I created a dissipated structure that represented the escape from having no voice to having freedom. However, it is also only one painting that I completed within approximately one hour, and despite the deep message that emerged, it is still a commissioned painting. I felt compelled and pressured to construct it. For my second artwork, I created collages, the making of which stretched over approximately eight months. The collages developed without pressure and with no aim in mind. They were created from an inner motivation. But more importantly, although I had a 'mystic' experience with the first painting and underwent a sense of self-actualisation, it was only with the construction of the collages that I moved into the highest growth level of transcendence. The collages represent a process and a product and in this sense, they relate so well to authoethnography (Ellis, Adams & Bochner, 2011:1). Ultimately, the meaning of the collages can be best summarised by Turak (2014:2):

> Whether you call it personal development, personal growth, self-actualization, self-transcendence, or spirituality does not matter. What matters is realizing that the reason you were born is to become the best human being you can possibly be. Personal development is not a tool for reaching a bigger goal. Becoming a complete human being is already the biggest and most noble goal you can aspire to.

Throughout meetings in the final year with my mentor, he repeatedly confirmed that I was writing authentically, from my spirit. "*Don't you feel free*?" he asked. The following feedback especially was of immense emotional encouragement to me: *"I am in awe of the level of scholarship you have reached. You opened yourself by examining your life after you hit rock bottom November 2016, and now nothing can hold you back. You are unstoppable."* Yes, I am liberated and can reveal myself to the whole world. I feel free. This experience is reminiscent of the quote of Jaworski (2011:185):

> When you are in this state of surrender, this state of wonder, you exert an enormous attractiveness – not because you are special, but because people are attracted to authentic presence and the unfolding of a future that is full of possibilities.

I opened myself to being mindful of what can happen by confronting everything 'head on'. I am in control because I do not live in the past anymore, and I do not worry about the future anymore. This is the epitome of the whole spiritual process of my autoethnography – I am realising who I am as I am moving into my life purpose.

Here I am, what must I do?

I sacrifice myself for the greater purpose, but I lose nothing because I stand to serve.

Who am I? I am returning to whom I am supposed to be – the person who I was when conceived. I was when conceived: *Purity – the purpose for which I was created.* As a consequence of the above realisation, I can say two things about myself (in random order). Firstly, I can say, **I truly am liberated**. I show myself not only to myself but also to the world. I am free, but much more importantly, I know *what to do* with my freedom. The Johari Window comes to mind, "a model for self-awareness, personal development, group development and understanding relationship" (Chapman, 2003:1). I show myself in all four of the quadrants of the Johari Window (Figure 28) and as a result, reveal myself as a whole to all. Indeed, one needs to discover one's 'own, true voice' and as Lamott (1995:198) says:

> We write to expose the unexposed. If there is a door in the castle, you have been told not to go through, you must. Otherwise you'll just be rearranging furniture in rooms you've already been in. Most human beings are dedicated to keeping that one door shut. But the writer's job is to see what's behind it, to see the bleak unspeakable stuff, and to turn the unspeakable into words – not just any words but if we can, into rhythm and blues.
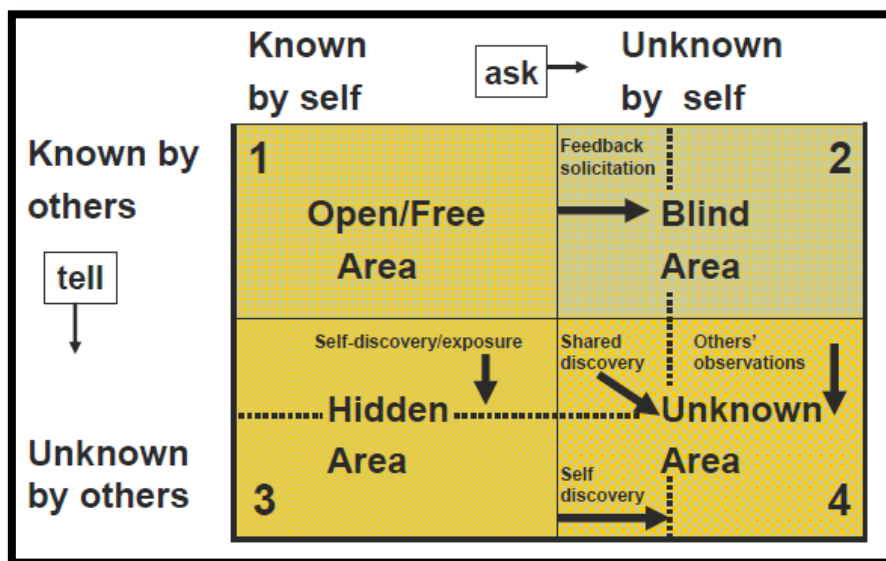
**Figure 28: The Johari Window Model**

Source: Chapman, 2003:20

Adapted from Johari Window of Luft and Ingham (1955)

Barnett (2007:165-166) describes what he calls "trajectories of becoming" as follows:

> The lower trajectory, we may say, is a trajectory in which the student moves steadily forward. Here, the risks are low. If she falls to earth, little damage will have been done.

She sticks to the well-known authors and scholars, and familiar positions and understandings, and offers sound and careful analyses of all that information … [h]er pedagogic being is authentic, but it is a limited authenticity … The higher trajectory, with its steeper gradient, is the trajectory in which the student takes off, free of the 'they' of her surrounding voices. Here, the student comes into her own. She reaches out and up; she becomes herself. She not merely uncovers, but discovers her own voice. This is a pedagogical self that is now 'for itself'; the former trajectory was merely 'in-itself' … In this higher trajectory, the student makes her own possibilities: she goes beyond the given situation.

Secondly, I can say: **I am pursuing my authenticity**. I am reaching 'into infinity' and flourish in the uncertainty created by *myself*. This implies that I have not only 'epistemological courage' (to believe in my beliefs), but more importantly, I have 'ontological courage' – the belief in *myself* that will arouse my 'will to learn' (Barnett, 2007:166). In Figure 29, I am represented as 'flying by oneself' (framed in blue).
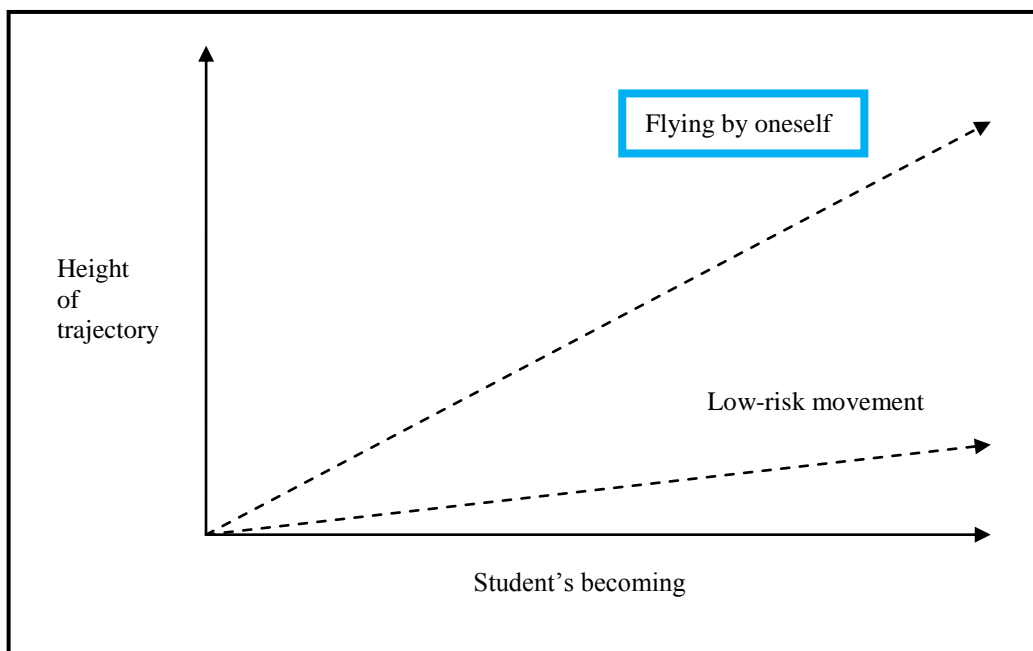
Figure 29: Two trajectories of becoming

Source: Barnett, 2007:166

At this profound stage of my autoethnography, my living theory of being a student up to now, and as shaped by my autoethnographical experiences from birth, can be constructed.

My life experiences revealed that I was being limited by the education system. The system expected me to 'learn' by memorising information that was provided by the teachers/lecturers (that they had mostly extracted from textbooks) and subsequently, by replicating this information when assessed through writing tests/examinations. There were, however, several highlights, especially during my PGCHE and PhD years, when I really learnt by struggling within a real-life situation, thereby developing as a whole human being and acquiring the necessary knowledge and skills containing personal insight and understanding to solve the challenge.

8.5   CONCLUSION

I realised upon contemplation that my true self does not involve my looks, my job, etc. My true self is my Spirit, my authentic self, which is constant. I believe that not only my art, but also my mentor who encouraged me was undeniably provoking the search for myself, my true self, and assisted me on this journey. With the aid of my mentor, my art classes and writing this autoethnography, I discovered how I could reach my true self. I realised that it is a continuous battle involving a daily renewal of thoughts.

There were many lowlights, especially during the first years of my PhD. I could never have guessed, however, how it would culminate. I transcended the challenges and reached a new level of being, every time. The highlight of it all is definitely being able to write this autoethnography. This life-changing high is totally different from the lows I experienced because it transcends all the traumatic experiences by far. The irony is, I needed the trauma to be able to transform.

My whole life represents a spiritual journey. Although the 'old baggage' kept me back, there were always 'clues' of confirmation that I am a spiritual being. I needed to eliminate many things in order to reach higher levels of spirituality. I needed to have the self-awareness to find the right answers and to construct meaning from a chaotic dissipative structure because one's purity is affected more and more as this supercomplex world continues to intoxicate it from the day one is born. Therefore, you must fight, win and sustain your authenticity (Barnett, 2007:40). Finally, you may be wondering: Did I find clarity regarding what it means to be student in the 21st century?

The following chapter, Chapter 9, exposes yet another part of my search for meaning in which I reached out to various experts from different fields of specialisation. This helped me answer my secondary research questions in order to construct my unifying living theory of being a student that is revealed in the final chapter.

CHAPTER 9: WHAT DID THE EXPERTS SAY?

9.1   INTRODUCTION

My journey in search of what it means to be a student in the 21st century took me to many places – places that a few years ago, I would never have imagined revisiting. Returning to these places evoked memories that caused me to relive experiences apparently long forgotten. I had an insightful look at my educational life from early childhood to the present (being a PhD student) and contemplated all the significant experiences. Although I was aware that these experiences contributed significantly to what it means to be a student, I was still not completely sure what it meant to be a student. I realised I needed advice from a universal and international culture to assist me on this vast journey. For this reason, I felt the need to seek confirmation of what it means to be a student in the 21st century from a universal teaching and learning culture, by conducting interviews with international experts from various fields of specialisation and determining their perspectives. The quotes I have used were carefully selected (from the table in Appendix D on the CD) to explain the essence within the context that emerged from the interviews. (Please see Chapter 3, Section 3.7.4.2, to refresh your memory on the data analysis.)

Since these experts contribute to my narrative, they ultimately aid in providing answers to my research questions. Hence, I decided to provide their answers in relation to my secondary research questions. My primary research question is answered in the final chapter, Chapter 10.

My life narrative of being a student should be understood in relation to a universal culture. Consequently, my mission is to answer my secondary research questions by linking my narrative, the theory constructed from the universal education system (stemming from Chapter 2), and the experts' narratives. Before I share the answers to my secondary research questions, I will elaborate on my experience with the experts.

9.2   EXPERIENCING EXPERTS

I was ecstatic to be able to converse with expert philosophers, educationists, futurists, psychologists and neuro-scientists from all over the world about my research topic. I felt incredibly privileged to have had this opportunity to meet people so interested and willing to participate in the study, despite being only given my research title in the invitation and no other details about the research! These experts provided me with incredible insights relating to each and every question I asked in addition to confirmation regarding what had happened in my life as a student. I felt the urge to immerse myself

immediately into the analysis because of these authoritative persons who had shared their indispensable views with me so unselfishly and authentically. In the beginning, I was afraid of merely hitting the 'Send' button when I invited the prospective participants to take part in my study and even more afraid when I needed to hit the 'Call' button on Skype for the audiovisual communications. However, there was never a time that I did not feel great during or after an interview. Tired perhaps, yes, but so incredibly inspired!

9.2.1 Feedback

My optimism in regard to the interviews was equalled by most participants; they were keen to react to my emails (in which I thanked them for their contributions) and excited to see the transcripts of the interviews. Below are email comments/feedback from various participants:

➢ *"Best of luck with the project and when you have results to share I would like to see – perhaps you'd like to write a short summary to be published [on my website], a possibility at least."* (Participant 9)

➢ *"So, yeah, thank you, this is fascinating to me. I'm glad you're doing this study."* (Participant 7)

➢ *"Thank you so much, Nadine! I am excited to learn more from your study."* (Participant 7)

➢ *"It was an absolute joy to speak with you today."* (Participant 17)

➢ *"I'm grateful for our time as well, Nadine. You know how to reach me!"* (Participant 4)

➢ *"[Y]ou have an open invitation – you can call me, you can email. If I can serve you in any way, Nadine, please don't hesitate to get in touch."* (Participant 4)

➢ *"Nice to hear from you and of your progress. I would certainly enjoy seeing the transcript."* (Participant 1)

➢ *"Thanks Nadine! I look forward to seeing where it all goes."* (Participant 5)

Although the above feedback means *a great deal* to me, I have isolated the next comment (taken from an interview) since it contributes to the significance of this study: *"I think you've asked questions that have allowed me to, kind of, talk about the big issues that I think exist in education"*. (Participant 10)

9.2.2 A construction

Six categories (with accompanying sub-categories) emerged in the following order from the data, of which one category, Category 5, can be highlighted as the overarching core category. (Appendix C and D on the CD can be consulted regarding the construction of the categories):

Category 1: The current education system

- o Sub-categories: message to students (characteristics); consequences; value of investment; Internet universities as an alternative

Category 2: Technology

- o Sub-categories: use of technology; artificial intelligence (AI); technology influences; examples of technology use

Category 3: Learning

- o Sub-categories: what is learning; how do we learn; the purpose of learning

Category 4: What the education system should look like

- o Sub-categories: what the message should be; the purpose of university; what should change

Category 5: The 21st-century student (as core category intersecting the other five categories)

- o Sub-category: functions

Category 6: The 21st-century lecturer

- o Sub-category: functions

Consequently, I provide you with the model (Figure 30 and Figure 31) that I constructed from the entire interview experience.

THE 21st-CENTURY STUDENT

Should:
- **discover the truth about him/herself**
  Who am I? What am I? Where do I go from here?
- **be a metalearner, taking charge of his/her own learning**
  - therefore attaining the fundamental human virtues
  - will is the fundamental disposition
  - to thrive in an uncertain future
- **possess the three components of any activity**: serve others with self-awareness (inherent divinity as the truth about him/herself), no expectations and enthusiasm
  - where self-awareness is attained by self-management: managing one's affairs by the Self (inner consciousness) to reach the truth about him/herself
  - and thereby being an active member of the community, showing empathy and compassion
- **demonstrate the 21st-century skills-set** such as technical ability, conceptual ability, analytical skills, desire to connect things (learn), desire to keep learning (be a lifelong learner), ethics of learning, anticipatory learning and deeper historical knowledge, and flexibility in the mind to unlearn.

is confronted with technology → **opposed to the actual focus being *highest quality learning***

learning should be facilitated by

TECHNOLOGY
can enslave or liberate us, depending on how we use it

Artificial Intelligence: replicates human tasks but does not have cognition

Technological influences:
Communication
Pro: wonderful device if you control it
Con: removes us from face-to-face society
Neuroscience
Cons:
- can make memory digital
- can numb the pleasure centre

Examples of technology-driven education models
- Minerva
- Flipped classroom
- Makerspace

Use/role of technology:
The classroom
Pros:
- can assist teaching process
- can assist learning process
Cons:
- teachers do not know how to use it
- **focus is on technology and not the highest quality learning**
- is deep learning discouraged?
- apps cannot bring true understanding, only hard labour
- Google is not a learning tool

LEARNING

Learning is struggling to understand what you discover from a new, unknown experience

How?
- the brain finds patterns and makes meaning
- by discovering a connection with an emotional experience
  for the purpose of
- providing millions of opportunities in life
- to *do* something with that knowledge

THE 21st-CENTURY LECTURER

Should therefore:
- **design the most powerful learning environment** to evoke all of the student's potential
  - so that the student can have the same experiences as the lecturer
- **facilitate learning**
  - by providing the student with an ill-structured problem so that
    - firstly, the *intra-personal* virtues can be attained by the student; and
    - secondly, the *inter-personal* virtues can be attained by the student within the community of truth
- be **an expert** in his/her field
- see how his/her **work connects** to a global context
- **see the student as a person**
- be **imaginative** (within a module but also in a *specific moment*)
- know how to **activate the circuits of executive brain function** in the students
- foster the relationship between the **student and discipline**
- **possess the three components of any activity**: serve others with self-awareness, no expectations and enthusiasm
- **demonstrate the 21st-century skills-set** such as technical ability and the desire to learn and to keep learning

Figure 30: Holistic model of interviews – Part 1

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CURRENT EDUCATION SYSTEM

Message is:
Students
- are passive recipients of information
- must engage in recipe learning
- must retain and repeat info given by lecturers

Consequences

Neurological
- no learning takes place
- brain is imprisoned by not developing the executive functions
Future preparation
Students are unequipped as they lack:
- hard *and* soft skills
- self-directed learning
- evaluation and cognitive flexibility

University education/degree investment value in question

Internet universities as an alternative
Pro: Access anytime, anywhere
Con: Isolation

WHAT THE EDUCATION SYSTEM SHOULD LOOK LIKE

Message should be:
Students must
- deal with life in its supercomplexity through development of potential:
    - the fundamental human virtues
        - to thrive despite uncertainty
- engage to cooperate: be part of the learning process
- develop what they need to develop and contribute to relationships
- learn and synthesise multiple perspectives into new ways of thinking

so that students can

- **become themselves** (i.e. fully human) by discovering the truth about themselves: their potential
- **transform** to the highest order of being human
    - by being critical actors
    - staying lifelong learners responsible for their own learning

What should consequently change in the current education system and how?

Everything – through the fundamental human virtues, including
- assessments by assessing hidden efficiencies such as the fundamental human virtues
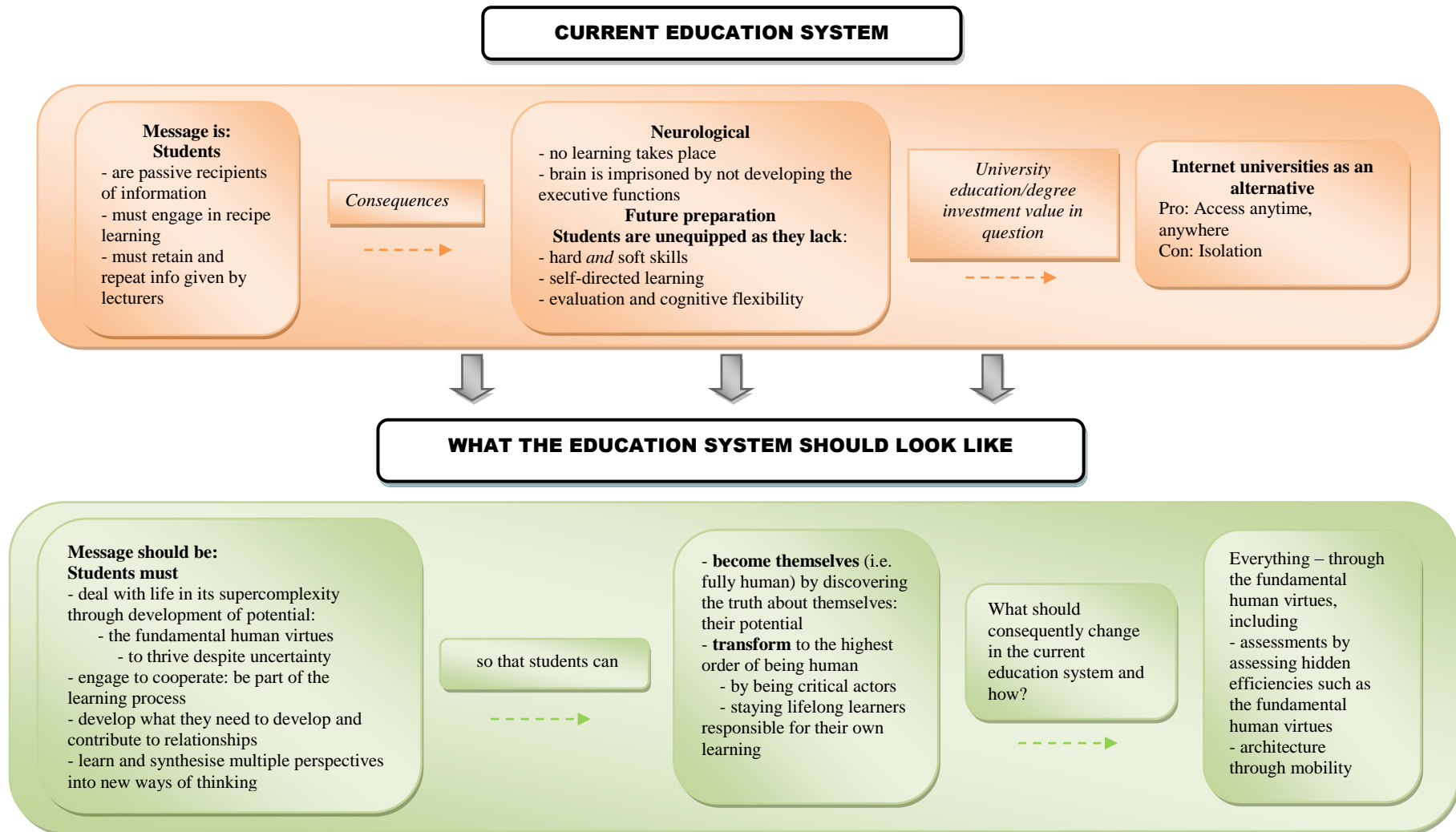- architecture through mobility

Figure 31: Holistic model of interviews – Part 2

9.3   THE ANSWERS

It must be said that the construction of this chapter of my autoethnography is by no means a technical summary. I have instead become increasingly conscious of my autoethnography's inescapable contemplative nature that needs to act to the greatest extent possible in the holistically integrated unifying theory of my life as a student in the 21st century. I can now answer my secondary research questions.

9.3.1   About current education

How does current education portray what it means to be a student in the 21st century?

During my early childhood, I unexpectedly discovered new things through activities in which I was spontaneously submerged, and this brought me great joy and excitement. As a pre-schooler, I was thus exposed to *unintentional* learning. When I was sent to school, I experienced another way of learning: strict, *intentional* learning. I did enjoy going to school though, because I learnt many new things. To me, a characteristic of primary school was receiving homework regularly, which included practising my reading skills at home. I often read aloud to my mom from prescribed story books. My *disciplined mind* was, therefore, developed by doing my homework in addition to learning the work my teachers told me to learn.

When I reached high school, I received even *more* homework, and much of the syllabus was learnt by memorising. I often wrote tests and examinations in which I was required to reproduce the information that I had memorised. After 12 years of being a school student, I was thrilled to go to university. Here, I was exposed to a type of independent learning; however, there was mostly no need to prepare for my classes since I received no homework (or at the most, very little). I attended lectures on a daily basis and during these lectures, I needed to make notes on what the lecturer was saying. During this time of my life when I should have been an independent adult due to enter the world of work in a few years, it seemed that I merely had to comply with the 'rules and regulations' of the lecturer: to memorise what he/she gave me and to repeat this information during a test or examination. I had no freedom of choice, and all I was allowed to do was to memorise information, even for very practical subjects such as Plant Science, Zoology and Entomology.

My opening question to each expert was constructed from my undergraduate experience (Chapter 1, Section 1.6). I started by reading the depiction presented below to the participant. I then asked whether or not the participant agreed with the general picture that I had portrayed, and if so, I enquired what he/she thought was the message from the university to the students.

The students are not usually expected to prepare anything when they go to their classroom, ranging from small rooms to large auditoriums furnished with desks and chairs that are mostly arranged in linear patterns. Here they wait for their lecturer to give a lecture for which the classrooms are particularly equipped with from low to sometimes very sophisticated high technology. The focus of the lecture – even if high technology is used – is dominantly knowledge-centred and, in disciplines, that have a practical component, skills are also taught and need to be applied. This is the daily routine until a test or exam needs to be written. When this happens, the students need to learn (memorise?) the knowledge and skills that they have been taught and give an as accurate as possible account thereof.

The majority of participants agreed that the picture described to them is fair. The following quotes from various participants substantiate this view. (I did not add these answers to a category because they stand alone to portray whether or not the participants and I were in agreement before I continued with the other interview questions.)

➢ *"Yes, I think so. I think not much has really changed in the last hundred years, except perhaps sometimes they use a whiteboard instead of a blackboard."* (Participant 16)

➢ *"The dominant experience of students in university is indeed as described."* (Participant 1)

➢ *"I agree with your assessment of the current state of affairs."* (Participant 3)

➢ *"I would agree with that statement. I think that is how most universities function ..."* (Participant 2)

➢ *"I do think that is probably still the dominant model for teaching and learning in universities."* (Participant 9)

➢ *"Yeah, I would agree that that's an accurate picture ..."* (Participant 5)

➢ *"[T]he basic perception of education is that there will be one that knows and the one would stand up in the classroom and would tell the students what they need to know."* (Participant 15)

Although there are exceptions, the following can be said of the results as a general but *universal* observation: A *very bad* message was conveyed to me, telling me to go to a classroom restricted by four walls, to sit in one of the seats arranged in a linear position, to wait for the lecturer to start talking so that I could write down what he/she said and to memorise this information because I would need to replicate it in a test or examination. The common denominator that emerged from my life experiences and from the interviews with the expert participants, is that a student learns a subject, the content of

the subject forms the focus and the student is then tested on this by writing a test or an examination. Participant 9 describes the message:

> [T]he task of learning is all about, kind of, letting information flow in and then trying to retain as much of that as you can. And repeat it back when asked. ... [I]nformation comes from an authority and your task is to grasp it and repeat it back.

In Summerlee and Murray's (2008:1) confirmation of this, they question the right of the existence of the university. The investigation of the physical learning environment (the photographs I inserted from my undergraduate autoethnographical phase, Chapter 5) also revealed that no real quality learning can take place in such an artificial environment.

Therefore, my life as a primary and high school student and as an undergraduate student, revealed that students must replicate what the teachers/lecturers do and obey them unconditionally. In addition, the autoethnographical interviews show that current education considers technology to be the solution to our problems, with the implication that the focus of current education is on technology. Moreover, according to the high school autoethnographical interviews, a major concern is that it seems that the current education system does not hold the students accountable for their actions; this system consequently does not aid the development of a student who adds value to society.

For most of my modules during the time I was an undergraduate student and studying for my degree, I was assessed by theoretical examinations, and even for the practical subjects such as Chemistry, I merely repeated given information before, during and after the practicals. The most important revelation during my Natural Sciences postgraduate student life, was to see how a supervisor treated a student merely as an intellectual entity. Another shocking discovery was the realisation that *getting* results in a project was more important than *what the results genuinely meant*. This leaves me with the impression that this 'trend' has become general practice in the scientific fraternity. The object is to get the work done, irrespective of the ethical imperative of the quality.

My PGCHE year was the transformative year of my life because I was exposed for the first time to 'facilitating learning' as opposed to 'teaching', and I realised that the education system had deprived me of learning for most of my life. I was also exposed to powerful literature that confirmed this. Barnett (2007:3) was the most significant as he made a completely shocking statement in the context of an education system that revolves almost entirely around knowledge and skills: "However, 'knowledge' and 'skills' … cannot begin to offer us a sufficient set of ideas for a higher education in the twenty-first century".

Despite identifying the need to develop into the best person I could be, the way I was being taught did not allow me to think for myself or to be creative and mostly required me to 'copy and paste'.

The expert interviews I conducted, confirmed my belief about the current education system (constructed as Category 1), and the participants agreed with the portrayal I had constructed from my memories of being an undergraduate student. Furthermore, from the rich nature of the data constructed from the interviews, it became evident that current university education represents a typical passive learning *process*, in order to acquire a content *product*. An elaboration on the process and product follows.

a) <u>The process</u>: This can be defined as sustained passive learning, an experience of non-learning that entails memorising information; it is an undertaking in which the student is a passive recipient of what the lecturer provides. This information could also be material that is easily available online. It reflects passive pedagogical relationships.

b) <u>The product</u>: This can be defined as the student retaining material provided by the lecturer to replicate when writing a test or examination.

This education system represents a counter-productive, content-based learning model and the participants corroborated this and described it as "disturbing", "unfortunate" and "problematic". The consequence of the current education model, is that no real learning is taking place and the executive brain function is therefore limited. This model, in fact, *counteracts* learning because it imprisons the brain's development:

> *[T]hat type of learning experience [passive learning] is very costly. It costs time, precious years when the brain is peaking in many areas and can benefit by explorations and curiosity, interaction and expanding its boundaries. So, it's costly to wrap up these years and confine the brain with passive information doled out.* (Participant 1)

In addition, the students are definitely *not* prepared for their lives after university, because they lack practical skills, and more distressingly, soft skills such as *"self-discipline, self-management, working in teams, perseverance. And you can go on to all those ... basic skills"* (Participant 15).

Students question the value of investing in a university education or degree:

> *There are lots of benefits to attending university that are there beyond the classroom, ... collaboration, opportunities to be with others, to have access to faculty with different expertise. All of those are great as part of a learning experience. However, they can't always be considered worth the bang for the buck with the high expense of attending university today and if what someone's going to get from university is passive doling out of information that they're then asked to memorise and respond back to on tests, then is it really worth it?* (Participant 1)

However, the alternative, namely Internet universities, has the disadvantage of physically isolating students:

> *And I think that anybody who thinks that education is going to be something that can be entirely self-directed, that can be done entirely in isolation, I think has misunderstood what education is … Part of education is socialisation, and part of education is interaction, and part of education is collaboration. And so … those are also, I think, critical skills for the world that we find ourselves in – our ability to collaborate, to engage, to connect. So, your emotional intelligence affects both your self-awareness as well as your connections with other people.* (Participant 10)

Technology emerged as Category 2 because it plays an inevitable role in not only education, but also in every human being's life. At this stage, what emerged from the interviews was the use of technology in general, and many participants agreed that it can be used for *"good or for evil"* (Participant 5) to free us or to constrain us. An understanding of philosophy principles will help against technology abuse. Technology itself does not have a *"value judgement"* (Participant 5), and it can be used either to enslave us or to liberate us. From the interviews, we can ascertain that ethics play an immense role in regard to how technology is used.

Artificial intelligence as the next sub-category for Category 2 surfaced. Participant 16 warns that *"machines are now able to replicate most tasks that a human can do in about one second or so"*, while Participant 11 believes that *"the role of artificial intelligence is going to increase far beyond what we think is currently possible. And the possibility is that artificial intelligence could, in fact, replace most professions as we currently know them."*

The next sub-category, technology influences, reveals that technology is not the solution to all problems and that it must be used with mindfulness and must be used only as a tool. The focus of education should be on the highest quality of learning (and not technology), compelling the student to work hard to solve a challenge and reach insightful understanding. We are also specifically warned about the addictive nature of technology, which can automate us. We need to be extremely careful about how we use technology because it can become addictive and convert us into unconscious beings:

> *So, we're relying on computers and cellphones and iPads and things like that to remember things. And yet memory is very important in the paradigm of man, because memory has to do with consciousness and, if we make memory mechanical or digital, then we are, sort of … almost abdicating our own consciousness. Our consciousness, instead of becoming present and in the moment, starts becoming digital. And our whole behaviour pattern starts becoming mechanical. And we look at things reactively, instead*

of proactively. (Participant 8)

We are seriously cautioned to avoid becoming automated in our actions and so digitising our memories and to avoid becoming addicted to technology and trying to attain quick solutions by multitasking between the products that technology can offer. This not only affects the physical brain negatively but also our spiritual lives. One can get addicted to technology in the same way that one gets addicted to cocaine, resulting in a *"numbing of the pleasure centre"* (Participant 17). If you numb the pleasure centre, you are also, in effect, numbing the area of the brain where we take pleasure in our relationship with God. *"So, spiritually, I see an apathy that has crept into many spiritual people ..."* (Participant 17).

The role that the above category (Technology) and sub-categories (artificial intelligence and technology influences) play in the lives of students, are further discussed within the answer of my last secondary research question.

Participant 10 confirms my belief that technology is often seen as the (false) solution to our educational problems:

> *And so, I think there's a danger in thinking technology is the solution rather than thinking that technology is just a tool. And that has happened – it's crazy, you know – they just dump a thousand iPads at a school and say, 'Right, job's done now', you know, 'we've given them technology.' Whereas, no, you haven't. You've given them a tool that they don't know how to use.*

Although technology-driven education models are currently in use (such as Minerva, flipped classrooms and Makerspace), the actual focus of education emerged as the *highest quality of learning*:

> *You can jump on the technology bandwagon and you can use tablets for the sake of tablets but if they, if that learning, or if those tablets or, or laptops does [sic] not fit into a global, holistic view of what is the* highest quality of learning*, it'll, to a certain extent, be a gimmick rather than a valuable tool.* (Participant 2)

Similarly, Participant 12 raises his concerns that the technological age deprive the student from "deep [real] learning":

> *There have been issues now in the literature that you will know of, for the last forty years, about deep students, 'deep learning' as it's called in the literature, well, to what extent in a mobile age, in a technological age, in an Internet age, is deep learning facilitated or tacitly discouraged?*

The importance of acknowledging what learning entails, emerged as the third category. This acknowledgement appears not to take place in the current education system. Learning means: *"I need to struggle through all this confusion, everything, to eventually get to the absolute nucleus of it. And when I get that, then I understand it"* (Participant 15). Ultimately, learning is struggling to reach an understanding of what was discovered in the course of a new and unknown experience. It takes hard labour to enable a student to reach a certain level of understanding – an app cannot do this:

> *Learning is authentic when learners are confronted with a personalised, real, demanding, real-life challenge as it is constituted, in other words as it is found, in life in its uncompromising supercomplexity. This is, to me, very crucial – that fact – because that is what real-life is confronting us with; life does not provide us with an app to solve this or to solve that. ... If it was the case, we would have solved all the problems already ... therefore to simply then think 'I can just use this app to solve that problem' ... I go back to the very important thing ... the world is in a grain of sand.* (Participant 15)

This reiterates the part of my lived experience that is related to being an undergraduate student:

> *But it was not only* what *I was required to learn (the different subjects with the different modules for the degree), but mostly* how *I was obliged to learn, that puzzles me: memorising information, provided by the lecturer in the format of notes and/or a textbook, and replicating it in a test or exam.* Where *I was compelled to learn, i.e. the classrooms and buildings (the architecture), also played an important role. Most of these learning environments I experienced did not allow me to really make the most of my learning experience, because I was restricted by four walls. Thus, to me, quality learning entails going through the process of hard work, with the focus therefore on* how *one attains the knowledge (not mere information) and skills. Learning therefore, is not memorising information or following a recipe to get to an answer, or merely testing one's IQ by providing answers to conceptual problems.*

The answer to the first secondary research question concludes this section. According to my life experiences and the expert interview participants, it seems that the current education system focuses on two entities:

> ➢ *Information*: so-called 'knowledge and skills' merely presented as ineffectual material that the learner must memorise and regurgitate during a test/examination in a restricted, clinical, physical environment; and

> ➢ *Technology:* believed to solve all our problems instead of being used only as a tool to assist the *real* focus of education, namely the highest quality of learning.

9.3.2 About the challenges for education

What are the challenges that confront education in the 21st century?

There can be little doubt that knowledge and skills are generally accepted as the outcomes of education. It is also generally assumed that acquiring knowledge is the prerequisite for attaining the skills needed to apply the knowledge effectively in practice. Indeed, this notion is thoroughly ingrained in our educational systems. My autoethnography made me aware of this type of experience as a student, even in the Natural Sciences and even on a postgraduate level. I needed to study the relevant 'knowledge' that was transmitted during a preceding lecture to prepare myself for the practical for which I received instructions on how to execute the *experiment.* My achievement as a student was to match the results of the experiment – to the results that were given to me beforehand.

Not only is this notion of education thoroughly ingrained, everything that deviates from it seems to be vehemently rejected. When I disengaged myself from the relatively illusive comfort zone of the shallows of the Natural Sciences into the experiential murky depths of the Educational Sciences, by becoming a part-time lecturer in that discipline, I experienced the students' dependence on being taught. On one occasion, I gave my Science Education students an assignment to design a demanding challenge that school learners needed to resolve on their own. The students were in uproar on two accounts. The first complaint was that I had not taught them how to do something like that yet, and the second was that the learners would not be able to do something like that because they would need to be "taught the theory first". On the first account, they were absolutely right – but they had already experienced whatever they needed to accomplish this task during my earlier sessions with them, which were called learning shop sessions. The students' complaint on the second account – closely related to the first – helps partly to reveal the answer to my second secondary research question.

The generally accepted education practice of teaching the theory (knowledge) before applying it in practice (skills), is described by Korthagen *et al.* (2001:200) as a fundamental misunderstanding about teachers and teaching. Korthagen *et al*. (2001:200) say: "Any attempt to use exercises and training elements after the introduction of theory, with the aim of promoting transfer to practice, is like starting with the walls of a house and then laying the foundation". Freudenthal (1991:48) calls this type of education practice an *anti-pedagogical inversion*, and I agree.

We need to revisit the concept of knowledge (as appearing in the research conducted for my educational framework; see Appendix B on the CD), in order to continue with the contention regarding the acquisition of knowledge and skills. I have established that what is generally assumed to be knowledge is, in reality, only information because it represents only a minute fraction of a holistically integrated process, in which all the human qualities of the knowledge-creator were simultaneously involved to produce the result. Learning to acquire not only information but also

knowledge, is a complex process that can never be mere *acquisition*. Re-living my life experience, I became acutely aware of the fact that it is not knowledge (or skills for that matter) that should be acquired in education, but *how* it should be acquired that is of paramount importance.

All my expert participants confirm this view in describing the deficiencies of the current dominant education practices and the associated message that the practices transmit to students about what education is (Category 1). This message is aptly summarised by two participants:

> *The message – or 'hidden curriculum' – of this kind of pedagogy is clear: To be a student is to be a passive recipient of 'expert' knowledge*. (Participant 13)

> *The dominant message is one of, as it were, 'Be like me'. That is, to put it more formally, higher education has become over the last 200 years largely a matter of, in the jargon of Pierre Bourdieu, 'a matter of reproduction'. So, students are expected to, as it were, reproduce the culture in which they find themselves. And academics, by and large, or teachers in higher education in universities have, by and large, seen themselves as passing on traditions and fields of knowledge, which they've expected students to assimilate. And so, rather relatively passive pedagogical relationships have developed.* (Participant 12)

What has become evident in answering this research question up to this point, is that it is not knowledge and skills that define education, but the way in which they should be acquired. In other words, the type of *learning* that defines education is of a particular kind. Indeed, Participant 5 argues that in the education culture

> *knowledge is stuff. A lot of times it's a kind of stuff you can look up online and that is something that we are challenging, because a big tenet of our work is that technology is changing, fundamentally changing, what the jobs of the future will be and what the needs, individual needs, of the future will be and societal needs. So, all of those will be changing and it'll be moving away from keeping large amounts of information in your head. So that messaging that your function is … seeing how much information you can keep in your head, that's part of the problematic messaging.*

According to the expert participants, the message that the university gives (Category 4) should denote much more complexity, seriousness and depth than the current university message. Students themselves must be able to deal with unpredictability. This implies engagement with life in its uncompromising supercomplexity, by being part of a community of important relationships to develop personally (acquiring the fundamental human virtues – potential – and practising it) in order to thrive in risky circumstances.

Having arrived at this conclusion, I refer again to Claxton's (1999:11) simplistic but profound definition of the type of learning that qualifies as education, as the foundation for pursuing discourse on this matter. According to Claxton (1999:11), learning "is what you do when you don't know what to do". The emphasis here is on what you *do* when you don't know what to *do,* and not on what you do after you have been *provided* with (taught) what to do when you don't know what to do. Therefore, to 'acquire' *knowledge*, students must be subjected to the personal challenges and processes that resemble the original endeavours of the creator of the knowledge (existing as information) as closely as possible, in order to arrive at the qualification of their personal understanding and insight that will satisfy their search for meaning. Participant 5 supports this in a neurological sense by claiming, *"[W]e learn by making meaning. So what we know, that [sic] the brain does, is it finds patterns and it makes meaning".*

Why is this so critically important? Because, according to Frankl (2008:105), our primary motivation in life is our *search* (a process of active enquiry) for meaning – not the *provision of* meaning – which will abruptly *end* the search and *quench* the primary motivation. *"[W]e learn by* making *meaning"* (Participant 5). I have placed the emphasis on 'making' to highlight that it is a 'search' for meaning. It is, however, important to note that only if this effortful search for meaning by the student is fulfilled by the student *alone* will it have the significance, that upon eventually finding the meaning, the student will reap the *natural* reward of the *"deepest joy"* (Zull, 2011:53-80). This joy, caused by the physical excretion of the exact amount of the pleasure drug in the brain without the threat of addiction, ignites the *motivation* for another, more challenging experience, and this demands yet another more effortful *search* for meaning. This type of learning is fundamentally emotional by nature (Immordino-Yang, 2016), as confirmed by Participant 14 in *how* we learn: *"So, to me, discovering a connection with an emotional experience is what makes you learn".* The purpose of learning is to see the endless possibilities – *"millions of opportunities"* (Participant 14) – that life offers us and to do something with what we have learnt. *"[Y]ou have to be able to do something with that knowledge"* (Participant 5).

From my educational framework's research, this somewhat peculiar type of learning that defines education, is obviously authentic learning in the purest sense of the word. When it is indicated that this type of learning results in the deepest joy, it does not mean that authentic learning – the kind of learning that really matters in education – is only fun. In fact, we should be very careful not to make learning fun artificially, because the *process* of authentic learning may certainly not be fun. This is aptly described by Claxton (1999:15-16):

> [It] is often hard and protracted, confusing and frustrating and it is necessary to be able to
> stick with it and recover from setbacks … [It] involves exhilarating spurts, frustrating
> plateaus and upsetting regressions … Even if learning is going smoothly, there is always

a possibility of surprise, confusion, frustration, disappointment or apprehension - as well, of course, as fascination, absorption, exhilaration, awe and relief.

If authentic learning was really created during play, the student would always be rewarded with the most appropriate and associated level of authentic joy and be motivated to tackle the next challenge.

> Children should be able to do their own experimenting and their own research … the essential thing is that in order for a child to understand something, he must construct it himself, he must re-invent it. Each time one prematurely teaches a child something he could have discovered himself, that child is kept from inventing it and consequently from understanding it completely. On the other hand that which we allow him to discover by himself will remain with him visibly… (Piaget, 1970:715)

Although this type of learning makes sense for all the right reasons, the concern that you may be having is the same as mine, in that there is simply no time for an education that aims to 'reinvent the wheel' and that allows for all the random original trials and tribulations of the original knowledge-creator until a resolution is achieved. This reinvention will be a senseless endeavour *unless* we take note of the qualitative extension of Claxton's (1999:11) original definition of learning: "Learning is what you do when you don't know what to do" and subsequently become increasingly competent at why, how, where, when and what to do when you don't know what to do. The question that education needs to answer, is not how much a student knows but how well a student can learn. The product of education is, therefore, not knowledge but *learning*. Consequently, the question is which particular and unique type of educational intervention is necessary to accomplish an *authentic* knowledge construction by the student and continually demand the highest possible learning quality in the shortest possible time with the least possible resources and the most effective effort.

From the expert interviews, I can deduce that the purpose of the education system should be challenging students to *"become themselves"* (Participant 12) and to find the truth about themselves. Therefore, education *"cannot be limited to the intellect"* (Participant 13) but *"must include emotions, relationships, and every other salient dimension of what 'being human' means"* (Participant 13) to become *"fully human"* (Participant 13) and to develop *"dispositions"* and *"personal qualities"* (Participant 12). Thus, *"[e]ducation is [should be] all about the transformation of the human being to the highest order"* (Participant 15) by challenging students with *"real-world experiences"* (Participant 7). With regard to Maslow's hierarchy of motivation, this means that the teaching and learning culture should facilitate students to such an extent, that the students undergo self-actualisation, becoming themselves/fully human and maximising their potential/authenticity. This correlates very well with my personal construction of transformation, as seen in Chapter 8, Section 8.4.

The message to the students, therefore, should be: Deal with life in its uncompromising supercomplexity to which you don't know the answer, or even if there is an answer, or what the solution might be. You can rely solely on yourself to solve this challenge, because you have potential where potential refers to the fundamental human virtues – *"ethical competences of moral excellence"* (Participant 15), consisting of intra- and interpersonal virtues.

As a student of the Science of Education, I had the privilege to be challenged to construct such an educational intervention. My own education over many years, as well as several other experiences in which I was functioning as an educator of some kind, led me to think that I could determine what this intervention should entail. After constructing my first practice theory (it was the *theory* that I was constructing from my own experiences of education as they happened in *practice*) and being exposed to the many complex demands that such an intervention must address, I realised that in fact, I did not know how to construct this practice theory. I started to explore every possible avenue in order to devise some resolution to this challenge. The continual rejection of my conceptual proposals because they did not represent new thinking – a paradigm shift – and the unending demand to overcome the 'stuckness' of what is already known, had me at my limit several times. I had to fight to liberate myself from the known. Finally, when I acknowledged my ignorance to myself, it was as if I had opened up and was able to see new things, new relationships – and they made sense.

Each apparently insignificant event excited me, because it seemed as though one thing led to another and in the right direction. I became increasingly confident and determined to achieve success. At last, exhausted and emotionally drained, I stood back. It took some time to realise what I had produced. With all my past experience of educational practices as a point of departure, together with exploring the challenges confronting education in the 21st century and the continuous process of improving my education in practice to address these demands increasingly, I have, in essence, constructed my own perception of how I would practise education to achieve improvement of my education practice. I was in awe to realise that within less than a year of being exposed to the Science of Education, I could construct a radically and qualitatively different paradigm that represented, for all practical purposes, the direct opposite of the traditional notion of the dominant education practice of 'first teaching the theory and then applying it in practice'. I had constructed what is formally known as my own practice theory *of* (because it was derived *from* practice) and *for* (because this is what I use *to design* my own educational practices) facilitating learning, which I refer to in Chapter 1 (Section 1.8) and Appendix A on the CD. Since it is my own construction – previously non-existent – I have complete insight and full understanding thereof. Thus, I can also deviate from its seemingly 'rigid', 'recipe-like' process structure in any appropriate way, because I have an inherent knowledge of the individual concepts, their functions and the interrelatedness between them, to ensure that the highest possible quality of learning will be achieved in whichever way it is most appropriate within any particular context.

I could not have been more proud of myself, and I experienced the stillness of deep joy in discovering more and more of who I am, in realising what I am truly capable of and in identifying my ultimate purpose.

However, most striking in the answer provided by my autoethnography and its related explorations to the secondary research question 2, is that it not only reveals the type of learning described in the preceding paragraphs but also the quality of the learning that the 21st century demands of a student. To determine what the quality of the learning entails, one needs to return to one of the most profound statements and challenges for education in the 21st century, that of Barnett (2007:7): " 'knowledge' and 'skills' cannot begin to offer us a sufficient set of ideas for a higher education for the twenty-first century".

We are confronted with the morally obligated and value-laden ontological challenge, of determining the kind of human beings that are required in our perplexing contemporary world that will determine the quality – and focus – of our education. The type of learning established is authentic learning, but its quality is determined by the level of authenticity that the student achieves and the subsequent potential that the student fulfils – irrespective of the subject or academic discipline at hand. For this reason, maintaining learning is fundamental to facilitating learning, because its sole purpose is the improvement of the quality of the learning. The purpose of the facilitator of learning, is to ensure that he/she becomes redundant in the learning process of the student as soon as possible. The rigour of facilitating metalearning, therefore, compels the ontological attainment of fundamental intrapersonal human virtues that cultivate an active, effective, independent, lifelong learner. Similarly, the rigour of facilitating cooperative learning compels the ontological attainment of fundamental interpersonal human virtues that cultivate an active, effective, interdependent, lifelong learner. Surely, students who have been challenged to develop completely and fully utilise the potential of their fundamental human virtues and who exhibit a continuing improvement of their associated ethical competence of moral excellence in whatever they do, are the kind of human beings that are called for in the 21st century.

My autoethnography and its associated explorations are testament to my progress in pursuing my authenticity.

The critical question here is: What does this all mean for the challenges that are confronting education? *"The entire education endeavour should really be about how do we create … a continuous learning environment and a continuous learning desire"* (Participant 9) that allows the student to *"engage in it [the subject] with wholehearted involvement"* (Participant 6) and to stay a lifelong learner. In view of us being witnesses of the seismic scope of the most significant changes in human history, Dreyden and Vos (1999:21) are adamant that these changes "force(s) us to completely rethink everything we've ever understood about learning, education [and] schooling."

This is explicitly confirmed by Participant 13 and Participant 15 as they address the question: What are the most important things that need to change in our dominant undergraduate university classrooms?

> *"Everything! Everything needs to change. It ... has to be a paradigm shift – everything needs to change."* (Participant 15)

> *"I can't possibly give a brief answer to the question of what needs to change – except to say, 'Almost everything!'"* (Participant 13)

Besides my autoethnography, the interviews with all my expert participants also confirm the abovementioned statement of Dreyden and Vos (1999:21). The participants' answers to the relevant questions (as summarised in Figure 31) reveal how the message of what it means to be a student in the 21st century should be presented and how the education should be portrayed.

In summary, being a student in the 21st century is in principle, not an epistemological task of the acquisition of knowledge and skills, but it is primarily, the ontological challenge of the student as a human being in pursuit of his/her authenticity through personal development of the highest order, and nothing less.

9.3.3   About my life experiences

What do my life experiences as a student reveal about what it means to be a student amidst the challenging demands of the 21st century and beyond?

The answer to this research question unfolded primarily from a reflection on my autoethnographic life experiences in relation to several important concepts that emerged from my educational research framework. Information gained from the interviews that I conducted with experts also assisted in responding to the question.

In essence, my life experiences as a student in the 21st century have not differed from most other students – even in the global sense – with the exception of course of students in some of the most advanced institutions such as the Singularity University. This was confirmed by the experts whom I interviewed, through my experiences with students locally and in my engagement with students from both national and international universities during my travels. Despite the possible differences in personal circumstances among the students, it is noteworthy that when I queried what is currently expected from a student, a significant agreement was revealed regarding the image that I provided during my autoethnographic interviews and my expert participant interviews. However, it is concerning that agreement on this 'traditional' image of being a student still holds true in the

21st century, irrespective of the fact that we are witnessing unprecedented changes of seismic proportions in almost all domains and on all levels of life. One of the primary proponents of this change is the advent of technology. Despite the implementation of education, even in highly sophisticated formats in some cases, if what is happening in our education classrooms is stripped of all its gadgetry paraphernalia and we penetrate the actual purpose of education as it is currently revealed in practice (with the usual exceptions to the rule), this in essence constitutes simply another format through which existing knowledge and skills are transmitted, accessed and/or manipulated as the primary foundation of our education.

Besides the obvious consequences of the penetration of technology in our lives, technology has brought about a revolution that is not often part of the central conversation as it should be. This revolution starts with the expansion of the human capacity to acquire and retain what is still the current foundation of education – information. This is indicated by Participant 9:

> It's been some time since I've used this illustration, but if you go back maybe 200 years, for example, to the founding of the United States and [to people such as] the famous Thomas Jeffersons [sic] and so on, who were very intelligent people, as their contemporaries were elsewhere in the world, they tended to have their own personal libraries of a few hundred books, which they read over and over and over again. And it literally was – in some sense, it's possible to acquire and learn and then retain in your mind virtually all of the important information in the world. But that's not true anymore, because [of] ... obviously, the great explosion in information. So the subtle message is ... acquiring all this information and keeping it in your mind when everybody knows that's sort of an impossible task.

Cyberspace, however, has the capacity to store an infinite amount of information. This information is increasingly replacing textbooks that contain the knowledge and skills to be acquired in an educational context. Even if existing knowledge and skills are accessible, the challenges are significant. The available quantity of knowledge and skills (information) has increased from an information *overload* to an information *explosion*, and this eventually results in information *ignorance*. This is not because of the quantity of the information that exists but because of the overwhelming abundance of information that is too vast to access.

Besides information ignorance, the relationship between the units of information increases the *complexity* thereof exponentially. Since I may be unaware of information in cyberspace that is either equally valid to mine or is the complete opposite, the subsequent "multiplicity of incompatible interpretations of the world" (Barnett, 2015:249) has made it a *supercomplex*, unknowable reality (Barnett, 2015). At the same time, since changes in the world are so ridiculously vast and

exceptionally fast, the chances are that knowledge and skills and indeed the technology that is currently available may become out-dated even before the student graduates.

What is most significant in regard to the accessibility of technology within the context of the origin of the revolution referred to above is that at the same time, it is a dilemma. The knowledge and skills available in cyberspace can be *accessed* by anyone with a compatible technological device. The advantage is that technology provides everyone with access to a voice that has global reach. Thus, anyone is capable of *producing* information and adding to what already exists in cyberspace without fear or favour and for all practical purposes, without restriction. This information is assumed to be 'expert' knowledge and skills, and everyone's contribution is valued equally, seemingly by virtue of the unlimited possibility of consumption by everyone on the internet and through the possible viral power that the information may have. This is indeed one of the most powerful revolutions to date, although it is seldom referred to as such. Grulke (2000:3) announces that the revolution that we are experiencing in our contemporary world is the revolution of you and of me and of the *empowered individual*. The source of our individual power is provided by technology, which is an incredible advantage.

In reality, being a student without technology is unimaginable. We have no choice but to exploit everything that technology can offer. However, we are confronted with a serious dilemma: How are we going to achieve our educational objectives within the provocative dangers of the very 'instrument' that we inevitably rely upon? Most of us have experienced this dilemma through the disadvantages of technology. Some of my experiences demonstrated that the author of the information (knowledge and skills) may be anonymous and that the authority, validity, credibility and trustworthiness of the contributed information are not necessarily guaranteed, thus forfeiting accountability. These experiences were confirmed by the interviews.

In addition, the advantages of artificial intelligence (AI) are immense. Evidence shows that the rapid developments in technology are increasingly fulfilling the tasks that human beings previously fulfilled, with humanoids that are even sensing and showing emotion and quickly becoming superhuman. This may not only eliminate the human weaknesses and deficiencies with which we need to contend but also, it may escalate our freedom and power to unimaginable levels. The world-renowned technology entrepreneur, Elon Musk, warned in 2017 "that artificial intelligence is the greatest existential threat to humankind" (Parkin, 2017:70) since we do not know where or if the capabilities of computers will end. Under these conditions, the critical question is: What can the human add to what a computer can already do? Artificial intelligence, the same source of our power and freedom, may ultimately be the downfall of our educational project and even our human existence – as may Virtual Reality (VR). The difficulty in distinguishing between the real and the artificial cyberbullying, identity theft and/or abuse, the loss of identity and more particularly the creation of a

false identity are providing the opportunities and possibilities of being trapped in all types of moral challenges. The promise of instant gratification through technology has enormous advantages, but its alluring power to addict may be devastating, with an addiction as acute as that to heroin (Huddleston, 2016). This is why I want to share the narrative from Participant 17 that addresses this matter:

> *I'm speaking from the world in which I live in as an educator, one who's taught at the university, one who now talks a lot about digital addiction, which is [an] epidemic globally. I globetrot quite a bit … so what I would say to students is that … they need to be aware of the addictive nature of what's in their pocket because it has been the single biggest interruption and it's not been so much the porn and the gaming, as it has been the multitasking, which is, in Neuroscience, we call that switch-tasking. So, what has happened is the grades have gone down in schools where one-to-one laptop and tablet programmes have been implemented. So, I find myself in those circles quite a bit because the marketing and the advertising that says, 'in order for your child to be successful later in life, you must give them the latest and the greatest and the younger the better.' Well, the empirical evidence is not working out the way the marketing team said that it would. So, we have to look at the cognitive breakdown, and it is exactly what happened as a result of the switch-tasking. So, it's not their IQ. These students have the ability to be about as smart as they want to be, but how they're interacting with the technology is affecting the brain; the grades are going down. So, what I would like to … make them aware of is the addictive properties of multitasking, of what's in their pocket. But there comes a point in which denial sets in because once addiction sets in with anyone, whether it be the cocaine, whether it be alcohol, whether it be the screens, we don't believe that we're truly addicted. We can overcome it or we can handle it. We can understand why our friends can't handle it, but we can handle it. So, the younger we educate them about that and get their parents on board to set some boundaries, the better.*

> *The area in question is an area deep in the middle of the brain called the nucleus accumbens and, in layman's terms, that is the pleasure centre. So, anytime we do anything that causes us pleasure, that is the area of the brain that is receiving these little drips of a neurotransmitter called dopamine. Now the issue … with cocaine … is because when you look at the brain scans of people who are addicted to the stimulant known as cocaine and the stimulant as a screen or screen activity, those brain scans show that the addiction is the same in both. And the reason is, addiction is addiction. So, the delivery mechanism for cocaine is through the veins primarily and it goes into the bloodstream, stimulates the brain, releases this chemical called dopamine and dopamine gives you pleasure, so you want more and more of it and that is the hook in the addiction … So*

when you are looking at screens – particularly things that are very interactive such as pornography, such as video games, such as social media – you are generating dopamine. So, if you don't control it, eventually, what you're going to do is get the hook in. You have addiction and that's why the heads stay down and we talk now about things like FOMO, fear of missing out, and we talk nomophobia, which is an anxiety disorder when you go without your phone or the battery goes flat. The area of the brain that starts to get affected is the area called the pleasure centre or the nucleus accumbens, and the brain starts to fight back when you get too much dopamine by building a barrier, a chemical barrier around it. ... The more we do it, the taller that wall [chemical barrier] gets, and it's the brain simply trying to defend itself by pushing the dopamine out. So what happens ... is a condition comes about called anhedonia, and anhedonia simply means a numbing of the pleasure centre. So, emotionally, you get to the point where you don't care or feel unless you are stimulated a lot. So that explains addiction. You've got to keep doing more and more and more of the activity to generate large amounts of dopamine so that eventually, it spills over or penetrates that barrier and you get your fix.

Although I was very fortunate not to succumb to this extent, this technology addiction occurs in many forms and with all types of devices. The addiction is increasingly destroying lives to the extent that it has earned itself the psycho-medical identification of technology addiction, or more specifically, Internet Addiction Disorder (IAD). Another dilemma of technology as it is currently applied in the educational context within the Instructional Design space, is rigid technicist format. This prevents some of the most powerful human qualities from developing. For example, the provision of mobile and computer applications (apps) is preventing the development of the student's creativity in the design and implementation process. Similarly, the availability of a multitude of apps is depriving the lecturer from creatively designing a demanding real-life challenge for students to resolve. Participant 15 explains the disadvantages of apps from a lecturer's point of view:

I don't have to really think anymore because I just say, 'Where's the app?' And I get the app, and the app is already designed for me. I do not need to put in that kind of labour and that kind of thinking and that kind of critical thinking if the app was [sic] not there. So, if this is what education is, then we say to students, 'Right, there are the apps', you know? Or I say as a lecturer, 'Here are the apps. I'm going to do this.' I don't need to sit down and design anything ... and this is the critical point ... it's not about the way in which the learning takes place in the sense that I can now just have apps. Because ... it is all about ... what the student will be learning.

What I'm saying now is new. It's something that just really crossed my mind. So for me [as a lecturer], there's no real labour in designing, in creating something. For the

students, they follow just what the app says that they need to do. So, the question, the critical question, is not 'How do they go about this learning?' but 'What is it that they eventually learn?'

With this in mind, I want to recall some of the highlights of Hawken's (2009) commencement address to the students of the University of Portland. This address was also the impetus for this study. Hawken (2009) made the statement that our planet came with a set of instructions but we seem to have misplaced them. He exposed that accredited research evidence over the last 30 years has shown an increasing destruction of our planet and the living that depend on it as their source (Hawken, 2009). This implies that our accumulated knowledge, skills and technology may not only be dysfunctional in attempting to change this situation but may even be the *consequences* thereof. We are in fact knowingly and actively contributing to our own demise and that of the planet and have become effectively incapable of not only stopping it (Harari, 2011) but also reversing it. Drucker (2000) explains the reason for this dire situation, stating that history will not refer to the greatest revolution of our time as technology or the internet or the Fourth Industrial Revolution. Instead, the greatest revolution will be the fate of the individual within an individualised society needing to cope with the bamboozlement of unbridled freedom of power and choice where the demand for being personally accountable for choices made, is receding. "It is the unprecedented change in the human condition" (Drucker, 2000:8) where personal responsibility of individuals will be paramount. "For the first time, they will have to manage themselves. And society is totally unprepared for it" (Drucker, 2000:8). Within this context, the profound challenge of Hawken (2009:para. 2) directed at the students becomes clear: "[Y]ou are going to have to figure out what it means to be a human being on earth". It is not by mistake that Hawken (2009) speaks to the students as human beings, indicating the relationship between being a student and being a human being. Dewey (1897:78) asserts that education is not a preparation for a future life, but it is living life itself – now. In answering my research questions, I recognised this 'equality' because that which is valid for the human being in general is so much more foundational for the student. Hawken (2009:para. 2) indicates the resolution to the challenge posed to the students: "Basically, the earth needs a new operating system, you are the programmers".

Within the context of the preceding paragraphs, I realised that the purpose of my research may ultimately be the finding of a new operating system not only for education but also for human existence in general.

As the programmers who need to design a new operating system, we need to determine what constitutes the system. The work of Barnett (2007) became a primary resource for confirmation of the lived experience of my exploration of being a student and the relationship with a new operating system. As indicated in the study, Barnett (2007:7) claims that knowledge (the epistemological

domain of education) and skills (the practical domain of education) cannot begin to offer a sufficient set of ideas for education in the 21st century. We need a stabilising domain that will serve as the *foundation* for the other two domains to prevent our educational project from imploding. Barnett (2007:7) identifies this as the ontological domain, which within the context of education is the domain of human existence. Colvin (2015:11) describes this ontological turn in our new operating system from the outside (knowledge, skills and technology) to the inside (our authenticity) as a fundamental change in the nature of our being from what we know (knowledge) and can do (skills) to who we *are* as human beings in general and as students in particular. With this, the new operating system is revealed as being the *student* – as a significant human being. So, what is the nature, the ontology of this significant human being? Ontology is the main interest of Heidegger (1962) who, in very simplistic terms, presented the philosophy that, as human beings, we are conceived as inherently authentic beings, but through the many and powerful external opposing forces that demand conformity with the existing world, our authenticity is suppressed throughout our development before birth. These opposing forces continue after birth, causing us to live inauthentic lives. However, our Being remains endowed with the potential to become authentic (Heidegger, 1962). Our authenticity defines our human *nature*, who we really are, what we are truly capable of, and finding and fulfilling our ultimate purpose according to our unique talent(s).

Having found the nature of our authenticity, we need to know what constitutes its *structure* or *content*. Authenticity is identified by several concepts such as human dispositions, qualities, attitudes and virtues. Unlike knowledge, skills and technology, "they 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" (Barnett, 2007:102).

In calling for this ontological turn in the educational challenge of being a student, Barnett (2007:9-10) suggests a fundamental change in the focus of our education. This suggested change should be from *acquiring* finite knowledge, skills and technology from an 'outside' source to *activate, completely develop and fully utilise* (maximise) these durable human qualities that already exist as potential 'inside' us as human beings. It is through pursuing and attaining our authenticity that we have the capacity not only to *acquire* existing knowledge, skills and technology with accompanying insight and understanding, but also and more importantly, to *construct new* knowledge, skills and technology so that these can be utilised with life-enhancing prudence. In fact, Barnett (2014:199-202) insists that without these human qualities that constitute our authenticity, nothing of educational substance is possible.

Authenticity is such a vital aspect of education that it is essential to be more specific about the 'content' of our authenticity. One of the most interesting recent developments in defining our being has been subject to investigation in the form of testing the existence of the 'moral-self' hypothesis.

This hypothesis has been confirmed by several researchers including Strohminger and Nichols (2014), and its significance is that it is not our knowledge, skills and technology (acquired from the outside) that define us but our morals (values inherently on the inside). In this regard, Azarian (2015) states that our fundamental nature is not what we know or can do but *what we stand for*. In this context and by scrutinising the relationship between Aristotelian ethics and authenticity, it can be deduced that the content of our authenticity is our moral character. Our moral character is embodied in virtues and more specifically, ethical virtues such as those of Aristotle. Aristotle defines virtues as *ethical competences of moral excellence* (Hursthouse & Pettigrove, 2018:"1.1 Virtue"). Within the realm of education, Slabbert, De Kock and Hattingh (2009) identified fundamental human virtues as being divided into two categories: intrapersonal (curiosity, courage, motivation, initiative, effort, perseverance/resilience, common sense, responsibility, independence, joy, love) and interpersonal (humanisation, communication, empathy, justice/forgiveness, love, leadership). I, therefore, came to the following conclusion: The student's authenticity – and particularly the *fundamental human virtues* as the 'content'– is the new operating system, not only for life as a student but also for our existence, survival and prosperity. Critical in this regard is that a virtue cannot be taught or learnt, "it characteristically comes only with experience of life" (Hursthouse & Pettigrove, 2018:"1.2 Practical Wisdom").

Having come to the revelation of the *structure* or *content* of our new operating system, I query how this operating system *operates*. The answer may be simple, but the reality is profound. The operating system serves as the foundation for living our lives and is the ultimate benchmark of who we are and who we can become. Probably the most important feature of this operating system is that it provides the remedy for the potential destruction of the freedom and power that each individual possesses. The fundamental law that defines freedom is: *The greater the freedom one has, the higher the moral standard one has to uphold!* This law is equally valid for humans and humanoids and needs to be heeded – by both. Figure 32 (on the next page) reminds us of the possible consequences if authentic humans lose control of technology.

Fortunately, all human beings have been inherently bequeathed with all these ethical competences of moral excellence – our fundamental human virtues – as potential! In this sense, we are not individually unique. What makes us unique individuals is our unique talent(s) and how we become increasingly excellent in our talent(s) through operating within our fundamental virtues in order to utilise our unique talent(s) as our service to the world of which you and I are an *integral* part. This being the case, our authenticity defines a new, vitally important, reliable, durable and *functional operating system* but only if that operating system is managed continuously.
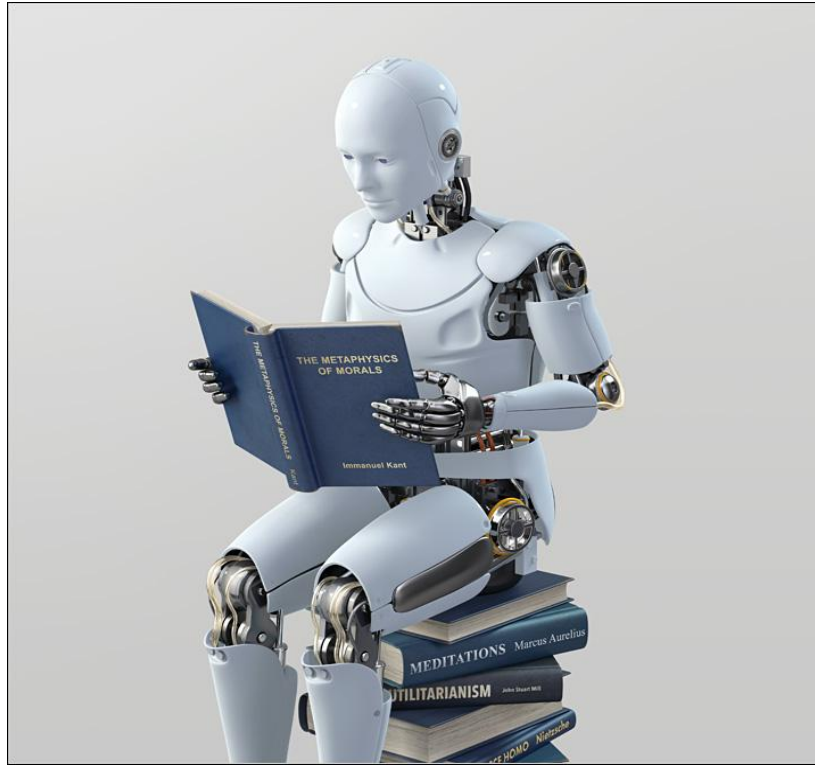
Figure 32: 3D computer-generated image of a humanoid
Source: Harwood, 2017

To clarify, talents are not only those referred to in the field of the Arts. All of us are endowed with one or more talents in several of the many domains of life. Talents are competencies that come to us naturally and are often referred to as *callings* that can be transformed into a vocation when we are engaged with *work*. Work, according to Gibran (2010:39), "is love made visible", and when we work with love, we do "Good Work" (Gardner, 2008b:15) that is technically excellent, meaning what we think, do and produce is excellent in all respects. We work with complete engagement, that is, we are totally absorbed in what we are doing to the extent that nothing else matters. Our own needs disappear, and we do not stop working until we have completed the work, irrespective of the time it takes. Our work is ethical in all respects, meaning that we are always doing the right thing with practical wisdom (another virtue that is closely related to the virtue of common sense), even if no one is watching (Gardner 2008b). Since our authenticity consists of virtues that are ethical *competences* of moral *excellence*, it is thus our authenticity that ensures that the work we do, whatever it may be, is excellent. This excellence is within the context of efficiency; the work is performed within the shortest possible time and uses the least possible sources. Engagement with the work is through the most appropriate amount of effort in order to fulfil all the objectives of the task. In fact, the ultimate *purpose* of our authenticity is to become increasingly *efficient and excellent* human beings. This is the foundation of what it means to be a student in the 21st century. Due to the importance of this and as indicated in the research conducted to construct the educational framework (See Appendix B on the

CD), Barnett (2007:40) claims that an education that does not insist on authenticity in the student is no education.

Finally, the most important action we need to fulfil regarding our new operating system is the demand of Drucker (2000) to *manage* it. The management of our authenticity is vital for its functionality. Management includes accessing, igniting, attaining and improving our authenticity towards moral excellence. I present the *self-management* of our new operating system in two major sections: the highlights as revealed in the interviews with the experts and the highlights as revealed through my own autoethnographical lived experiences with support from the educational framework of the study.

Category 5 of the interviews with the experts represents the core category of the interviews, namely 'The 21st-century student'. This category deals primarily with the functions of the 21st-century student. This emerged as students needing to discover the truth about themselves, ultimately discovering their authenticity in this context. Participant 8 makes this clear:

> *And so this is very important from a student perspective because really, what we're taught most about is the outside world as students. We're taught about trying to manage the environment outside of us. But do we see any improvement? We don't. We actually see things are getting worse, and the reason for that is, probably, that ... we're not looking within ourselves and seeing where the fault is within ourselves and trying to remedy that and then using that as a basis for trying to understand the exterior world.*

I concluded Chapter 6 with the fundamental question: Who am I? This implied that I am searching for my authenticity. By the end of Chapter 6, I started looking *within myself*. Participant 8 echoes my quest by revealing:

> *Now ... what philosophy tells us – that man's primary purpose in life is not to be a managing director, or a mother or a father. We play many different parts [roles] in life, and it's not to say that those parts are not important, but they are not the most important thing. Man's most important function [role] in life is to discover the truth about himself ... In other words, to answer that [sic] questions, Who am I? What am I? What am I doing here? Where do I go to from here?*

My quest for determining who I am was rewarded. In Chapter 7, my lived experience as a postgraduate student in the Educational Sciences was described as an immersion in the challenges of *accessing my authentic being*. This is articulated by Participant 15 with the emphasis on the virtues in play:

> *Authentic learning is an immersion of yourself in a demanding real-life experience that challenges to the extent that it ignites your curiosity and at the same time your courage*

to venture into the unknown. ... [Y]ou engage with the challenge and as you go along, you are constantly in a reflective mode in making sure that you go through the process with motivation and taking initiative to do the exploration with the required effort and persevere through the difficult aspects. And then even while you are exploring and .... even because of your exploration, you start to construct this real-life experience with great responsibility and independence. The result of this construction of yours brings you joy, and you care about or love the things from which you have learned so much you see ... This gives you the motivation to look for another challenging real-life experience that you want to explore, and you take the initiative to immerse yourself in that experience. And this is the cycle where you access and ignite your virtues ... and also at the same time, attain and improve the level of excellence of some. You see, you live the virtues because that's the only way you can attain ... or even improve them.

Participant 5 voices another function of the 21st-century student – being an active metalearner:

So, what the student looks like is that they are actively meta-aware and trying to grow along all of the dimensions.

In terms of Maslow's hierarchy of motivation, students must reach a level of self-actualisation (personal growth and self-fulfilment; achieving his/her authenticity). Therefore

[T]he being of the human is the be all and end all ... In other words ... the [attainment of the] qualities or dispositions [of which 'will' is the fundamental disposition and] will is ... ontological through and through. (Participant 15)

Another function of the 21st-century student declares that a student must achieve the following three components of an activity:

a) Self-awareness: being aware of your *"inherent divinity"* (Participant 8); opening up consciousness and intellect (in philosophical terms, discerning between right and wrong) Self-management is attained by self-awareness: management of one's affairs by the Self (inner consciousness) to reach the truth about oneself.

b) *"Renunciation"* (*"non-expectation"*) (Participant 8): doing something because you know it is the right thing without expectations regarding the result

c) Enthusiasm: being enthusiastic and doing what you do with passion – *"So, any activity that one embarks upon, and this would apply to students as well, it's really important that they're enthusiastic."* (Participant 8)

Throughout the entire study, it became evident that the student is also a human being and, therefore, is an active member of society. However, the significance of this human being as a student is to become fully human. Being a student, therefore, is ultimately learning to become an asset through serving society through empathy and compassion. Participant 8 asserts this as follows:

The three components of an activity, which distinguish an activity from that which is a service to oneself and others and that which is potentially a disservice, in other words, where it's done just mechanically and there's no appreciation for being able to do the service, there's no empathy and there's no compassion in the service.

Together, the three components mentioned above imply the quality of the act of service in which you are engaging with passion and no expectation. This enables access to who you really are. Participant 8 indicates how this is achieved:

But to the extent that you apply yourself consciously in an activity, you have control … because now, the power of consciousness is something that you're working with and it's a pool of incredible creativity and potentiality.

I wish to elaborate on the 'renunciation' component (which may not be as easily understood as the other components) in order to highlight its relevance to being a student. In relation to this, Participant 8 raises his concern about the 'Fees Must Fall' event, emphasising the importance of self-awareness:

So you see, the reaction of students now, or recently … the 'Fees Must Fall' and all the other things that they're dissatisfied about is because … there is an expectation. Rather than using the power of consciousness, self-awareness, to be able [to] access the intellect, to be able to discern between right and wrong, all that they're doing is that they have an outcome in mind and to the extent that that outcome is flouted or not realised, then one resorts to behaviour that is undisciplined and that is destructive. But the truth is, from a philosophical point of view, that all you [as a student] need to do is discover the truth about yourself or embark on this journey of self-discovery and then no goals are necessary.

Being a student, therefore, is not about having a goal and taking action to achieve it at all costs. Although having a goal or outcome is ineluctable and necessary, it is the *way* in which the goal is achieved that is of utmost importance. Such achievement is through a constant intrapersonal interrogation and exploration of the holistic self by itself. Among several other researchers, Zohar and Marshall (2000), Dimitrov and Wilson (2002) and Covey (2006) identify the **body** (physical intelligence – PQ), **mind** (mental intelligence – IQ), **soul** (which includes the will and emotions, collectively known as emotional intelligence – EQ) and **spirit** (spiritual intelligence – SQ) as the

inseparable constituents of human individuality. But more importantly is that authentic human experience emerges when the "four vital constituents of our nature – ***body***, ***mind***, ***soul***, and ***spirit*** – are simultaneously activated … while in constant dynamic interaction with the environment" (Dimitrov & Wilson, 2002:48). "Spiritual Intelligence is the central and most fundamental of all the intelligences because it becomes the source of *guidance* of the other three" (Covey, 2006:53) in pursuing excellence. That is why the eventual outcome of a demanding challenge without expecting a particular outcome, may even surprise us because of its superior quality in the sense of the harmony with what is ultimately meant to be within the bigger picture. In essence, this is the purpose of metalearning where individual students take complete responsibility for and control over their own learning through the process of planning, executing, monitoring and assessing their learning in order to become active, efficient and *independent* lifelong learners. It is through metalearning that the student is able to attain the *intrapersonal* fundamental human virtues.

Enthusiasm is closely related to what was stated earlier, regarding will as our foundational disposition. Enthusiasm is also closely related to renunciation in the sense that it is ignited by realising that even in the smallest of acts, one is always busy fulfilling a higher purpose of serving the harmony of that which is much bigger than oneself.

The final function of Category 5 of the interviews represents the '21st-century skill-set' of a student. The function that is prominent as a foundation within the context of authenticity, is that of a lifelong learner because one will never be able to achieve 'complete' authenticity since the journey is always a process of becoming more and more authentic. Because achieving authenticity is the ultimate purpose of being a student, achieving it requires the demanding professional practice of *facilitating learning*. Please refer to Table 1 (Section 2.3.1.3) for the summary of the professional practice of facilitating learning, as adapted from Slabbert, De Kock & Hattingh (2009:102-119, CD-ROM). Their work is one of the sources from which I eventually created my practice theory that was designed to access, activate, attain and improve a student's fundamental human virtues.

'The 21st-century lecturer' was the final category (Category 6) of the interviews. This category denoted the functions of the lecturer. As indicated above, the most prominent function of the 21st-century *lecturer* is indeed to be a *facilitator of learning*, which is fundamentally different from the general conception of a facilitator. In this regard, the 21st-century lecturer needs to see the student as a holistic human being whose authentic potential has to be maximised, thereby providing the student with a demanding, authentic real-life challenge so that the student can develop through the highest possible quality of learning as an excellent authentic human being. The facilitator of learning, therefore, is not primarily focused on the content or the knowledge, skills and technology but on maximising (completely developing and fully utilising) the student's virtues. In this sense, the highest

possible quality of learning is the focus. This is achieved through a continuous qualitative interaction through Socratic questioning, which is so well described by De Quincey (2005:173-174):

> Socrates was a master at penetrating behind the perceptual and emotional surfaces to the deeper core 'presence' of the other. To be in dialogue with Socrates was to find one's precious opinions and certainties, which were based on appearances, dismantled and shattered – and then, as a result, to discover some deeper truth about oneself … We could equally say, however that Socrates was hunting for virtue (an ethical quest) – a quality of the soul.

During this exposure of the student, the primary function of the facilitator of learning is to underpin the student's vulnerability with emotional encouragement and support.

The following paragraphs reflects on my autoethnograpical lived experiences as they relate to the management of my authenticity. Although *how* these virtues are to be attained is critical, the attainment of these virtues as the *focus* of education is crucial. I was privileged that the answer to the above query about the self-management of our authenticity came to me in a very significant way when I crossed over from the Natural Sciences to the Educational Sciences in the field of Humanities Education.

I have shared my lived experience in the PGCHE and PhD phases of my autoethnography with you. With the risk of being repetitive, I must emphasise that from the outset, I was subjected to a learning process that was alien to me. Within this completely unfamiliar discipline, I was confronted with the challenge of constructing my 'theory of education'. While I was still desperately seeking answers to questions with regard to what I was letting myself in for, my questions surprisingly were being replaced by more questions and challenges. In essence, I had to find the answers myself by reflecting on my experiences during the years of my education in practice – from childhood onwards – and subsequently, by constructing my own practice theory of those experiences. When I eventually proposed my constructed theory with careful optimism, it was brutally interrogated with the questions, "How do you know that this represents the best possible theory of education?" and "Will it produce the highest possible quality of learning?" My attempts to answer immediately were promptly interrupted by "Provide substantive evidence". I had to assess each and every intermediate construction critically and provide the substantive evidence from sources that I had to locate myself without 'guidance'.

At the same time, I was confronted with significant experiences regarding many other ways of conducting education that are traditionally known and that produce results way beyond the *application* of knowledge and skills. I was, therefore, *constructing* the knowledge that I had previously acquired primarily through instruction, while being subjected to a relentless demand for

continuously improving the quality of my learning process and its product. I soon realised that this is the process through which the depth of my personal understanding and insight into the construction of knowledge and skills that I was attempting, could become trustworthy as far as possible within the constraints of the educational episode. I eventually constructed a holistically integrated practice theory *of* (as it occurs in the practice) and *for* (designing the best possible practice) facilitating learning. Each of my expert interviewees explicitly condoned a different variety and number of components thereof, while the absence of their rejection of any component may have indicated an implicit general agreement with the whole.

It was when I became a tutor and part-time lecturer that the reality of facilitating learning in practice was exposed. I became acutely aware that the focus of facilitating learning is not so much on learning to know but on learning to be. I subsequently realised that facilitating learning is a critical challenge and highly professional practice, as I indicated in my corresponding autoethnographic exploration. This is embodied in designing the most powerful learning environment possible, with a demanding, personalised, real-life challenge at the centre that is to be resolved by the students themselves.

Facilitating learning also ensures that students' learning is maintained until the highest possible learning quality is produced – a process demanding at least some level of personal development. This was my experience as a student. Having constructed my practice theory, I very quickly learnt not to be misled by its relatively simplistic concept-map format. This only reflects its fundamental principles (concepts) and the relationship between them. The actual practice of facilitating learning depends primarily on the students' unpredictable overt and covert responses while they are busy resolving the real-life challenge. The continual demand for learning-quality improvement is achieved by specific Socratic content-void but quality-demanding *question-answer* interventions (from the facilitator of learning), *response* interventions (from the student) and higher level *challenge* interventions (from the facilitator of learning). It is these instantaneous, purposive and creative short bursts of human, face-to-face, question-response-challenge interactions that originate from the unpredictable responses of students while they are busy resolving real-life challenges, that make facilitating learning unique. This, in my opinion, is something that may be impossible to computerise, as are other types of critical interventions such as *cooperative learning* in which small groups of students help one another in the group to improve the quality of their learning and become active, efficient, *interdependent* lifelong learners. This is not 'group learning' because cooperative learning must adhere to strict requirements to qualify as such. They are the composition of heterogeneous groups in all respects with four learners per group that function as base-groups which may transform into many varieties of numbers in particular groups. In addition, individuals in the group are held individually accountable for the group's work, and as such, there has to be positive interdependence and positive, face-to-face interaction between the group members. Simultaneously, the quality of each member's cooperation has to be frequently and regularly assessed. It is through cooperative learning that the interpersonal

fundamental human virtues are accessed, ignited, attained and improved towards excellence. Through my experience of being a student *and* being a lecturer, I realised how important it is that metalearning precedes cooperative learning because metalearning challenges each student initially to resolve the demanding real-life challenge individually, in order to contribute to the cooperative learning group to the extent that each individual will demand that his or her contribution is incorporated in the final submitted product, rather than only the 'best' contribution of one of the members. I experienced how this causes conflict, sometimes serious conflict in what is described by Palmer (1998:99-106) as the community of truth, which is perhaps the key to ensure that students become more and more authentic. Palmer (1998:104) defines truth as "*an internal conversation about the things that matter, conducted with passion and discipline*". Palmer (1998:101,103-104) articulates most of my experiences of the community of truth and what may also be expected so aptly in the following statement:

> In the community of truth, as in real life, there are no pristine objects of knowledge and no ultimate authorities … In the community of truth, as in real life, truth does not reside primarily in propositions … [In the community of truth we share our] observations and interpretations, correcting and complementing each other, torn by conflict in this moment and joined by consensus in the next … At its best, the community of truth advances our knowledge through conflict, not competition … conflict is open and sometimes raucous but always communal, a public encounter in which it is possible for everyone to win by learning and growing … This community of truth can never offer us ultimate certainty – not because its process is flawed but because certainty is beyond the grasp of finite hearts and minds. Yet this community can do much to rescue us from ignorance, bias, and self-deception if we are willing to submit our assumptions, our observations our theories – indeed ourselves – to its scrutiny.

The community of truth operates especially between students during cooperative learning, but it may also operate during the entire process of facilitating learning between students and the facilitator of learning.

Although I received good assessments for my facilitating learning practices, it remains one of my most challenging experiences. Even with imperfections, the resultant transformational learning quality of students is irreplaceable. Only further extensive experience will propel me beyond my inception status in this regard.

Fortunately, my entire lived experience of the professional practice of facilitating authentic learning as a student and as an educator, revealed facilitated learning to be the epitome of continuously demanding *self*-management in a way that it develops into an inherent trait to produce the highest possible quality of learning. This is ultimately a perpetual achievement of authenticity with each and

every learning opportunity. Scrutiny of my PGCHE and PhD autoethnography phases confirms this. I realise that the practice theory of facilitating authentic learning that I was constructing and employing as part of my lived experiences as a student and as an educator may be one of many others, but its solid foundation and its practical implementation addresses what has proved to be at least one of the most pivotal needs of education – reclaiming the lost moral high ground that primarily constitutes education.

I conclude with the answer to the research question posed at the beginning of this section. According to my autoethnographic exploration and the expert interviews, I have little doubt that a student's self-management of this new ontological-philosophical operating system of authenticity is the key to being a student amidst the challenging demands of the 21st century and beyond, because this operating system not only fulfils a fundamental need in education, but it also achieves the ethical imperative of being a student in the 21st century.

9.4   CONCLUSION

Chapter 9 reflects the powerful findings made towards the end of my journey as I attempted to answer my secondary research questions with the aid of the experts' interactions. The chapter culminated in the most important finding – the new operating system.

The final chapter provides the answer to my primary research question, my "autoethnographical truth" in terms of "usefulness" (Bochner & Ellis, 2016:158), with the hope of advancing the field of education and autoethnography. Chapter 10 also presents limitations of the study and future implications.

CHAPTER 10: FINDING MYSELF – CONTINUOUSLY

10.1   INTRODUCTION

This journey took me to depths of myself that I did not know existed. Never would I have thought that I would discover so much about myself and benefit from the discoveries when I began.

(Stinson, 2009:92)

Disclosing my autoethnographic narrative in writing was a difficult journey. In fact, it was one of the most complicated endeavours I have been confronted with. Although this journey is selectively constructed and is ongoing since I continue to live my life (Richardson, 1997:6), the inevitable outcome of this autoethnography is a person who has been drastically transformed. The reflection on my "visual-verbal" (Suominen, 2003:169) journey, which was filled with struggles and challenges in addition to moments of intense happiness, resulted in knowledge construction of personal insight and understanding. Fenwick (2000:248) argues that

> [r]eflection, a constructivist perspective, is a prevalent and influential adult learning theory that casts the individual as a central actor in a drama of personal meaning-making. The learner reflects on lived experience and then interprets and generalizes this experience to form mental structures. These structures are knowledge, stored in memory as concepts that can be represented, expressed, and transferred to new situations.

The analytical autoethnographic elements of Anderson (2006) directed my writing in a scientific-intellectual manner, while the research of Bochner and Ellis (2016) provoked my spirit to write in an evocative way. My narrative, therefore, emerged from my whole being (Ellis, 2009:15). Shields (2013:207) says "language is all we have to connect us, and it doesn't, not quite." "Although we may begin with language, it is deep below the surface of language that we create new meanings for ourselves and with others" (Dunlop, 1999:59).

This exploration provided me with a voice to which I hope others can relate. In this respect, my narrative is greater than my life, expanding to others (Richardson, 1997:6). Dunlop (1999:61) refers to this as "self-othering … a dialogic process of recognizing the other in self and the self from the position of the other as the prerequisite to developing a transformed relation to difference". "Through autoethnography's capacity for self-reflexive and self-critical accounts of experience that can heal, change, validate, and engage others" (Bochner & Ellis, 2016:158), the others, in effect, get to know themselves and re-vision their own lives (Richardson, 1997:6).

This chapter is divided into three parts. Firstly, I attempt to answer my primary research question: What does it mean to be a student in the 21st century? Here, I call on both the value and the contribution of autoethnography. My answer reveals one significant breakthrough as a body of emerging knowledge in the field of education. Secondly, I discuss the meaning of my autoethnography regarding its true test: What is the impact of my autoethnographic narrative on the reader? (Ellis, 2004:195). I answer this question by initially providing a personal reflection and thereafter analysing the six letters of verisimilitude from the readers and the feedback from the transcriber of the expert interviews. This analysis was guided by the content analysis of Mayring (2014). The analysis resulted in four emerging themes of significance to education and/or autoethnography. Thus, within this section, my autoethnographic truth was in effect evaluated by the readers and the transcriber. Thirdly, I investigate the limitations of the study and recommendations for future studies. To conclude my thesis, I present a last personal reflection on my study.

10.2   MY AUTOETHNOGRAPHIC BREAKTHROUGH

What does it mean to be a student in the 21st century?

I decided to provide an answer to this question, that is not a mere combination of the answers to my secondary research questions presented in the previous chapter, but an answer that reveals two dimensions to the study that were not represented within the particular context of Chapter 9. I have used my findings to identify these two dimensions and contextualised them within the type of human being that is indeed called for in the 21st century and consequently, the type of student that our education needs to bring forth.

The answer represents the meaning of my life experiences encapsulated throughout my thesis and embraces Socrates' philosophical outlook of "an unexamined life is not worth living", since MacMillan (2017:60) maintains that we can derive meaning from our lives through using existential philosophy. De Beer (2016:48) confirms my belief by saying that this outlook "holds particular meaning when choosing the lens of autoethnographic research."

10.2.1   The scope and depth of my lived experience

My lived experience, particularly as a student, is not necessarily unique. Many students may have had these types of experiences, differing perhaps only to a larger or smaller degree of intensity and occurring perhaps for a shorter or longer period of time. So what is the significance of my autoethnography within a more 'universal' context?

When I crossed over from the Natural Sciences to the Educational Sciences, I was exposed to a completely new way of being a student. I had to learn very quickly that the answers to my questions would not be coming from a lecturer, my textbook or from Google but from within. I became increasingly aware that my answer was only one among many others and, therefore, would be under serious questioning from all those who may have an interest. Since the demanding challenges with which I was confronted as a student, especially in the PGCHE and PhD phases of my autoethnography, were personal or at least personalised, resolving these challenges successfully was to my direct personal benefit and failing to do so, to my direct detriment. It was the unrelenting demand from my educators (lecturers, experts, peers and other significant others) to produce a level of clarity, rigour, accuracy and integrity in the knowledge that I was constructing, in the way in which I was communicating it and in the way in which I was utilising it until the required level of excellence had been achieved. If I were unable to do so, I would suffer the full-scale consequences of failing. I quickly learnt that in order to achieve the level of excellence that is expected, I had to adopt the same unrelenting demand for excellence from myself as did my educators. I realised that my educators were making themselves increasingly redundant with each new demanding real-life challenge that I needed to resolve, without compromising on the appeal for excellence. In fact, they elevated the demand instead. I remember one of my educators saying more than once: "Yesterday's demand for maximum excellence becomes today's minimum standard". It instilled in me the mindfulness, the self-awareness of an ever-increasing improvement in the quality of the work that I am producing. But with this escalating *decrease* in my educators' direct interventions to ensure the required result while intensifying their calls for excellence, there was no means of escaping the primacy of my own *self-management* while being a student.

This appeal to self-management became a reality during the PGCHE and PhD phases of my autoethnography. As I mentioned earlier, I was compelled to take full responsibility and control over my own learning through planning, executing, monitoring and assessing my learning in order to become an active, effective, independent (through metalearning) and interdependent (through cooperative learning), lifelong, authentic student. I was subjected to experiencing these practical realisations with personal insight and understanding, which subsequently became inherent theoretical conceptualisations to me. But the revelation was that the improvement in my self-management made a natural transition to seeking additional qualitative feedback on my achievements from my educators and other significant others, exactly as I had done as a small child when boastfully displaying my creations to everyone that I encountered. Since this became a voluntary action, I realised that I am not only exposing my frail and finite certainty, ignorance, bias, self-deception, assumptions, theories, observations and many more aspects to the severe scrutiny of others, but also, indeed, *myself* as a student and as a human being, exactly as I have done here with you. This exposure deepened with

every opportunity to an escalated vulnerability of not only my work and what I do but also of *myself* – and *who I am*. Questioning who I am lies at the heart of "autoethnographic life" (Poulos, 2013:475).

An unveiled finding of my autoethnography was the interconnected relationship between Heidegger's (1962) authenticity and Aristotle's virtues. It is this philosophical perspective that Barnett (2007:3) claims "is crucial to getting to grips with what it is to *be* a student in the contemporary world" that became reality during my autoethnographic exploration. We are born into this world as inauthentic beings, but we are endowed with the potential to become authentic. With virtues – ethical competences of moral excellence as the content and potential of our authenticity – not only *can* we become authentic but also, we *must*. It is the responsibility for which each and every individual will be held accountable. *Not* fulfilling this ethical imperative equates to, dare I say, *not* exhibiting our essential human nature, which may ultimately lead to our self-destruction. However, if we want to fulfil this responsibility, it means venturing into a learning of 'losing' our *limited* selves in the transformational crucible of our lived experiences and ultimately finding our *extraordinary* selves. To me, this was and has become a deep spiritual quest of pursuing my authenticity. From this perspective, Maslow's theory of self-actualisation assisted me in measuring where I was (or am) during each autoethnographical stage of my life. Through self-reflexivity, I could critically analyse my life. It has become my moral obligation (Escudero, 2014:6). It has become such a focus in my life that I changed my WhatsApp profile caption to: "An unexamined life is not worth living".

When I titled this chapter, 'Finding myself', the present continuous tense was intentional. I am on an adventure of personal development of the highest order – in scope and in depth. Do not be mistaken though. Just like an infant, I am still bearish and unstable and when being caught up in my own struggles through many trials and errors, I still become disillusioned and discouraged. But I have learnt that only I can remove the veil of my perceived inauthenticity to realise the potential of my authentic self through effortful resilience and celebrate every achievement of this journey – no matter how small. These achievements are the impetus for my perpetual pursuit of finding myself. I am continuously living a "search for meaning" (Frankl, 2008:105). In connection herewith, autoethnography became my way of life (Adams, Holman Jones & Ellis, 2013:669; Toyosaki & Pensoneau-Conway, 2013:559; Adams, Holman Jones & Ellis, 2015:22, 24). "It's a response to an existential crisis—a desire to do meaningful work and lead a meaningful life … [it] focuses on the fullness of living and, accordingly, autoethnographers want to ask, how can we make life better?" (Bochner, 2013:53). Therefore, my autoethnographic life stands for discovering what is most important to me "at the deepest level" and to "honor, explore, and extend that commitment" (Mayes, 2010:29) – in other words, pursuing my authenticity and fighting for it, winning it and sustaining it (Barnett, 2007:40) to the best of my ability. This ultimately implies "the height of ethical living" (Mayes, 2010:29).

10.2.2 The challenge of life after being a student

After graduation, students need to enter the world of work, advancing to a higher level of responsibility by serving the community, hopefully through a vocation. Within the context of this study, it has become clear that whereas employers in the past were looking for existing knowledge and skills that prospective employees should have acquired (from the 'outside'), employers are now specifying the quality of work that is expected from employees, which requires essential *human qualities* borne from the inside. After two decades of large-scale international research, Gardner (2008b:15) summarises the requirements of 21st-century vocations, and these embody the three E's of Good Work as follows:

i. Technical *excellence* in the clarity, rigour, accuracy and integrity of what is produced, the way in which it is communicated and the way in which it is utilised (as mentioned in the previous paragraph); being an expert in a certain area – even involving tasks such as keeping the streets or public amenities clean and in good condition.

ii. Full *engagement* when the work is so challenging that it demands a complete immersion in the experience; it pushes all human capabilities to the limit so that all four vital, inseparable constituents of our human nature, namely body (physical intelligence – PQ), mind (mental intelligence – IQ), soul (emotional intelligence – EQ) and spirit (spiritual intelligence – SQ) are simultaneously activated (Dimitrov & Wilson, 2002:6). Yet it is so meaningful that nothing matters other than the successful completion of the work, with neither space nor time available for distractions. For the one who does the work, it is a peak experience of flow in which everything seems to work in harmony, and extraordinary results are accomplished while "such a person becomes an increasingly extraordinary person" (Csikszentmihalyi, 2009:6). The vocations that are becoming most valuable in the 21st century are the significantly challenging positions, positions that human beings are insisting on being performed by other human beings since such vocations demand deep human interaction. Because Good Work inevitably involves other human beings directly or indirectly, the deep engagement with others is cemented in the unifying wisdom of empathy and compassion, the central qualities of working in the 21st century.

iii. Fundamentally *ethical* in that the consideration of whatever one does is subject to an explicit reflection on the ways in which one does or does not fulfil a particular role in society. This is explicitly demonstrated at the earliest of ages, and the level of abstraction increases with the increase in maturity. A person who knows the difference between right and wrong and chooses to do the right thing, is moral. A person whose morality is reflected in his behaviour in doing the right thing, irrespective of threatening consequences, personal or not, is ethical. Ethics are moral values in action. The GoodWork Project of Gardner (2008b:16) emphasised how vital this aspect of Good Work is and revealed that even "the best and the brightest, those

people that are the elite in your schools and already winning awards, knew what good work is" but chose to do unethical, compromised work to eliminate their competition. Gardner (2008b) was also upset about the glibness with which his own students accommodated such unethical behaviour. The response of this world-renowned developmental psychologist is profound:

> This finding changed my life. I am now spending my time in secondary schools and colleges. We are exposing young people to ethical dilemmas and having them solving [sic] them … thinking in the long run what kinds of human beings we want to be and what kind of world we want to live in … [because] we need more of those who have good character. That is why the issues of respect and ethics, which are so hard to measure objectively, are so terribly important. (Gardner, 2008b:17-18)

Needless to say, Gardner (2008a:141-151) demands an education that centres on Good Work and being a student, which means doing Good Work. Good Work can only be experienced as Good Work by the worker and the recipient of the work when it is done within the context of the three E's. With the world of work in the 21st century progressively demanding the qualities of Good Work, Colvin (2015:10) extends the following caution that an employee who does not support human experience and engagement as primary to the organisation's mission cannot be afforded. In fact, he warns that "organizations are finding not only that they have no jobs for the disengaged and socially inept, but also that such people are toxic to the enterprise and must be removed" (Colvin, 2015:10). This statement elevates the grave responsibility of education and the challenge of being a student in the 21st century. It amounts to nothing less than escaping the limiting consequences of existing knowledge and skills, as an operating system imposed from the outside to a *self-managing* operating system, a radically different and qualitatively efficient operating system of pursuing one's authentic potential on the inside:

> That's where we find the elements of the skills we need next. Developing those abilities will not be easy for some, and is likely to get harder for everyone, because as the abilities become more valuable, standards will rise. Even those who are good at them will have to get better. (Colvin, 2015:11)

This is the quest for education and what it means to be a student in the 21st century.

10.3   REFLECTIONS ON TRUTH

Before I investigate the effect of my narrative on the transcriber and the readers, I will personally access my autoethnography by examining the degree of authenticity that my autoethnographic narrative has reached, thereby providing you with a table of relevant criteria.

10.3.1   Personal reflections

O'Riordan (2014) proposed four criteria in order to assess an autoethnography – all of them ultimately address the degree of authenticity that a study has reached. I used the criteria derived from O'Riordan (2014:9) and summarised in Table 3 below for my personal reflection. In Table 3, I reflect on the standards of "autobiographical truth" (Denzin, 2014:13-15). Other reflections of my study in regard to truth are based on the work of, among others, Richardson (2000a, 2000b) and considering the analytical side of my narrative, I also used Anderson's (2006) proposed criteria as stipulated in Chapter 3 (Section 3.6.1).

Table 3: Evaluating my autoethnography

CRITERION	DESCRIPTION	RELATED CONCEPTS AND RELEVANCE TO MY STUDY	ENSURING THE CRITERIA
Rich insight	Ethnographic research is judged according to the richness of the insights into the subject matter that it delivers (Myers, 1999). A subjective process of self-consciousness inquiry plays an essential role in delivering these insights (Richardson, 2000a, 2000b; Anderson, 2006).	Reflexivity (Richardson, 2000a, 2000b) Analytic reflexivity (Anderson, 2006) Self-observation (Ellis, Adams & Bochner, 2011) Self-revealing writing (Schultze, 2001) Unique voicing (Gergen & Gergen, 2002)	Anderson's (2006:380) criterion "complete member researcher" refers to "documenting and analyzing action as well as to purposively engaging in it": I engaged: - with various personal autoethnographic materials as listed in 'personal data collection'; - in many semi-structured interviews and an ad hoc discussion to support my autoethnography; and - in many semi-structured interviews with experts around the world to investigate their experiences. The result of being engaged with the self and others ensure 'self-reflective data' (Chang, 2008:89-102) and "interactive self-observation" (Chang, 2008:94).
Resonance	Ensuring that the research meaningfully reverberates with and affects an audience,	Impactfulness (Richardson, 2000a, 2000b) Plausibility (Golden-Biddle & Locke,	I provided my readers with various writing styles and formats and in so doing, I believe I stimulated both their intellectual and emotional domains, but moreover, I trust that their spiritual

CRITERION	DESCRIPTION	RELATED CONCEPTS AND RELEVANCE TO MY STUDY	ENSURING THE CRITERIA
	even if readers have no direct experience with the topic being discussed (Tracy, 2010).	1993) Transferability (Lincoln & Guba, 1985) Aesthetic merit (Ellis, Adams & Bochner, 2011) Evocative writing (Tracy, 2010)	domain was permeated. These styles and formats are embedded in my autoethnography as - in-depth research to explain relevant concepts forming the educational framework of my narrative; - a broad description of the context of each autoethnographical phase; - specific educational experiences (epiphanies) that stood out during my life; and - the structured analysis for each phase, including my contemplation of each educational experience. In addition, throughout my autoethnography, I ascertain visual value (Richardson, 2000a, 2000b) by making use of figures, photos and art work.
Contribution	The value of narrative truth is based on what a story of experience does— how it is used, understood and responded to (Ellis, Adams & Bochner, 2011) rather than the credibility of the research per se.	Accessibility (Ellis, Adams & Bochner, 2011) Credibility (Lincoln & Guba, 1985) Understanding and contributing to social-life (Richardson, 2000a, 2000b)	I believe I fulfilled this criterion by investigating not only my life as prime participant but also by conducting interviews with participants, thus contributing to what my living theory says about what it means to be a student in the 21st century. This implies that Anderson's (2006:385) criterion "dialogue with informants beyond the self" is certified. The participants' responses, the feedback from my readers (in the format of 'letters of verisimilitude') and the feedback from my transcriber, mirror how my narrative is understood. I made use of 'peer review' in the form of critical professional friends in addition to people who had affected my life as a student so that they could confirm the reliability of the autoethnographical data. I also involved my interviewees and asked for their confirmation regarding their interview data. (I believe this action added to their trust in me as researcher.) This is referred to as "member checks" (Maree, 2010:86). All of the above contribute to the field of educational knowledge and also accomplish another criterion that Anderson (2006:387) proposes: Theoretical analysis. Anderson (2006:387) says, "I use the term analytic to point to a broad set of data-transcending practices that are directed toward theoretical development,

CRITERION	DESCRIPTION	RELATED CONCEPTS AND RELEVANCE TO MY STUDY	ENSURING THE CRITERIA
			refinement, and extension."
Sincerity	Sincerity is concerned with the degree to which a study is marked by honesty and transparency (Tracy, 2010) and specifically addresses the motives and intentions of the researcher.	Authenticity (Golden-Biddle & Locke, 1993) Dependability (Lincoln & Guba, 1985) Confirmability (Lincoln & Guba, 1985) Truthful fiction (Denzin, 2014) (meaning "faithful to facticities and facts. It creates verisimilitude, or what are for the reader believable experiences" [Denzin, 2014:13]) Expressing reality (Richardson, 2000a, 2000b) Narrative visibility in terms of being an active researcher portraying own feelings and experiences (Anderson, 2006)	I believe that sincerity has been reached within this study since I have been immersed in the academic culture my entire life. Hence, I attempted to portray a rich life of experiences as it happened. Apart from being a lifelong student, I acknowledge that memory can lead one astray. For this reason, and separate from all the many artefacts collected throughout my life, I involved other people that formed part of my academic life. Again, this implies that Anderson's (2006:385) criterion "dialogue with informants beyond the self" is certified.

Source: O'Riordan, 2014:9

10.3.2 Analysing the impact of my narrative on the transcriber and readers in conjunction with advancing the field of education and autoethnography

One of the prime moments of my PhD was provided by the written feedback from the transcriber, a 'coincidental' but exceptionally important participant, about my study in general and the expert interviews, and the responses from various readers who provided letters of verisimilitude about my narrative. Bochner and Ellis (2016:156-157) confirm my elation by maintaining that one of the greatest pleasures of writing is to see other people relating to your narrative. (To refresh your memory about these letters, please refer to Chapter 3, Section 3.7.2. The transcriber's interview and the complete letters can be seen in Appendix F and G on the CD).

Please note that regarding the letters of verisimilitude, I did not pose any questions to the readers at all, meaning that I did not prompt them to provide me with any specific answers. I merely asked them

in a casual manner to provide me with written feedback on my narrative and requested that their reaction include confirmation of the accuracy of my portrayal. I trust that this way of managing the letters of verisimilitude provides further truth to my autoethnographic narrative. The letters of verisimilitude must not be seen as mere confirmation of a narrative, but rather as an addition to the power of autoethnography. I believe this is what they offer to my autoethnographic narrative.

I also want to acknowledge the fact that I have placed large sections of the feedback from the transcriber and the letters of the readers (which are normally exclusively placed in the appendix) in this chapter, in view of their significance to my autoethnography and to demonstrate the contribution that letters of verisimilitude can make towards an autoethnography. Indeed, these reflect the true test of an autoethography (Ellis, 2004:195). In addition, the essence of the responses is embedded in a specific context, from which it cannot be removed without losing meaning.

I needed to read through the feedback from the transcriber and the letters of verisimilitude a few times until it had all permeated my thinking completely. I truly felt tears starting to prick my eyes as I thought: *I am busy with my life's purpose. I found meaning to my life because I am helping others finding meaning to theirs – and not only that – but also becoming the best persons that we possibly can be and undergoing personal development of the highest order.* My trust lies in what this thesis could mean not only to 21st-century students but also to *all* of us as human beings. I now think I know to whom I'll dedicate my life accomplishment: *To the humans of the 21st century and beyond.*

The notion of resonance is so appropriate for evaluating the evocative nature of my autoethnographic narrative and, therefore, I refer to the chapter 'Reflection on Truth and Memory Work' in *Evocative Autoethnography* by Bochner and Ellis (2016:156-169) to evaluate my narrative in conjunction with the responses I received from the transcriber and the readers. The analysis of the interview with the transcriber and the readers' letters resulted in key elements triggering thoughts about the usefulness of autoethnography, and I include large selections of the reactions of the transcriber and the readers to substantiate these elements.

Firstly, I refer to the transcriber's interview and the readers' written responses regarding the significance of using autoethnography and its impact on education. The transcriber's contribution resulted in the substantiation and climax of the usefulness of the study on a global scale. Why? Because she only transcribed the expert interviews. While she was busy with the transcriptions, I was busy writing my autoethnography to which she had no access. In addition, I did not provide her with a length parameter in answering the questions since I believed that doing so would detract from the authenticity of her answers. Although she did not have access to my autoethnographic work, she could deduce the importance thereof (Please take note that the transcriber herself formatted certain words within her written interview as bold):

*One thing I can say is that it [your autoethnography] seems to be a profound experience and curiously applicable research method, as you seem to be exploring **yourself as a human being** while your research question fundamentally focuses on **humanness**; in an almost poetic sense the study seems to come full circle.*

10.3.2.1 Strengths of my study and importance of engaging in an autoethnographic exploration according to the transcriber and readers

In her written interview, the transcriber makes the following statements regarding the strengths of my study, and these – which come to the fore as the student's potential and responsibility as focus of the study – prove to be in accordance with the findings of the secondary research questions in Chapter 9 (Section 9.3.2 and Section 9.3.3) and the primary research question in Chapter 10 (Section 10.2.1):

To me it seems like the study sets a good baseline for actual change in the education system, it's not just posing hypothetical solutions, but it investigates the most fundamental issues surrounding education – humanness and human potential. The reason I say this is because this study has not only involved education experts, but also participants from many different subject areas, in real-life situations apart from the education system per se, who were able to identify both the shortcomings of the current system and the challenges of the 21st century. To me, a strength of this study therefore seems to be that it showcases the importance of education as the basis for all of life as a human being and the need for change in how education is being done in the 21st century.

*Following that line of thought, I think another strength of the study is its focus on the student or learner **firstly** as a human being, i.e. holistically, and not just as someone who has to achieve academically and fulfil a 'successful' career (i.e. pragmatically oriented education). This is something that I feel is sorely neglected in the case of many students, as it is mostly those students who are naturally academically strong, sporty, arty or extroverted that really get the full benefit of the current education system. The potential of those students who are not 'natural achievers' or are 'average' by our modern standards (e.g. because of poor household circumstances, poverty, lack of self-confidence, lack of parental guidance, etc.) are not necessarily helped to reach their full potential by the current education system itself, which is very achievement-driven and competitive. Of course, there are exceptional teachers who are able to help such students.*

*On the other hand, I also think the focus of your study on a **student's** own responsibility amidst the challenges of the current education system and life in the 21st century is crucial. In the end, to be a successful human being in the 21st century, one cannot continue to blame other people or the education system for one's own shortcomings or failures, or expect other people to 'spoon feed' one*

for the rest of one's life and/or career. However, for those students who are not natural responsibility-takers, self-managers or who are not naturally self-aware, it is the responsibility of educators (along with parents, of course) to facilitate the development of these qualities.

In support of the establishment of autoethnography, specifically in the field of education (Richards, 2016:163), I have added the following extracts from the letters of verisimilitude, because they reveal the inspiration the readers received through my narrative, the importance of an autoethnographic approach and its potential to advance the field of education.

Mr N Malan:

When it became clear that your PhD project was going to be autoethnographic, I must admit that I had my doubts about the value of such an approach. (I am, after all, a 'hard' scientist, and like facts to be supported by numbers.) But I also realized that the scope of the problem does not readily admit itself to a figure-driven approach, and that different academic fields have different ways of validating ideas, and that numbers is only one way …

Having now read [a] large part of your thesis, I must say that I am impressed. I would not have imagined that a mere 'life story' could yield such rich material for research, and that it could be treated so rigorously. I have to admit that by comparison some science is not nearly as rigorous, despite being based on 'hard data'.

Dr K Mathabathe:

I believe this is a story worth telling and a much needed piece of research … I read your narrative with interest and felt so inspired to read about your experiences, challenges and successes as a student … Having watched your narrative process unfold and the copious research you have undertaken to get it underway I believe that I am well placed to vouch for the trustworthiness thereof.

Prof C Maree:

Being an academic at a university and a supervisor of master's and doctoral students for the last nineteen years, I enjoyed the fresh approach of integrating your own personal life narrative with the research process to contribute to science. Though you used your own life as a foundation, you included various document analyses, interviews and literature to ensure scientifically founded and grounded evidence to describe what it means to be a student in the twenty-first century.

Your explanation of the methodology used is clear and scientific and make[s] it possible for others to repeat it in education as well as other social / human disciplines.

10.3.2.2 The significance of autoethnography: Learning through the responses of the transcriber and readers

Learning is *the* essential attribute of being a student and since my educational framework of my narrative is embedded in authentic learning and its accompanying concepts as stipulated in Chapter 2 (Section 2.3), I would like to present the emergent themes from the transcriber's interview and the letters of verisimilitude from the readers, as interconnected to learning. For each theme, I firstly supply you with representative extracts from the letters or interview and secondly, I invoke the literature for addressing the relationship with the theme.

a)   *Learning through narrative: Self-reflexivity*

A first theme has been identified as 'Learning through narrative: Self-reflexivity', showcasing that not only myself as autoethnographer, but also the reader, is obliged to reflect on one's life experiences. Self-reflection can reveal deeper layers of consciousness and a better understanding of the self and/or a situation. Through their own self-reflections, the readers could authenticate my reflection.

<u>*Commentary of the readers:*</u>

The extracts taken from the interview and letters, from which this theme is constructed, are provided below.

<u>The transcriber:</u>

*The interviews and thinking about the question of not only 'What does it mean to be a student in the 21st century?' but also of 'What does it mean to be a **human being** in the 21st century?' has had a profound impact on my life. Firstly, it has made me reflect on myself as a student (in the past and hopefully in the future as well) and has facilitated a deeper sense of self-awareness by touching on the fundamental human virtues, the role of relationships in education, self-management, critical thinking and being responsible for one's own learning.*

<u>Mr N Malan:</u>

Although our undergraduate careers did not overlap, we had a number of lecturers and subjects in common, so reading the account of your undergraduate experiences brought back many similar memories and feelings.

<u>Dr K Mathabathe:</u>

Reading about your experiences as an undergraduate student in the Faculty of Natural Sciences reminded me so much of my days as a student … I must say, I can totally relate to your experiences of trying to survive and meet the minimum requirements for my first degree. Your narrative is a true reflection of what most students face.

<u>Ms T Shaw:</u>

You have provided a vivid walk down memory lane, and your work certainly has reignited a plethora of memories which I haven't thought about for years! So interesting hearing your thoughts and experiences of being an undergraduate student, many of which I can completely relate to and recall clearly. The accuracy of your recollection is remarkable and I remember very similar feelings and events of my years on campus.

Nadine has given a true reflection of what it was like being an undergraduate student. She has awoken many memories and feelings for me through her writing. I recall zoology research assignments and huge volumes of work to get through in very little time. Nadine's mention of the exchanging of notes after class ignites memories for me … I would scribble down everything the lecturer said, and often my notes were almost illegible due to the speed of writing and trying to listen simultaneously. We were always afraid of missing something.

<u>Mrs A de Jonge:</u>

I have read your narrative with much interest. I have to say at the outset that I learnt quite a lot about your past that I did not know about, especially when you were a child growing up in Villieria [Waverley], where I am living now for the past 20 years. It was enlightening to read about your childhood days and the role that your parents and family played in your life.

It's now clear to me, why you always give me handmade cards with beautiful messages – I see how you treasured cards and messages from your friends and family and showing it with pride and joy. It was very comforting to travel with you down memory lane and see all the sentiments you stored all these years, it was also a time for me to reflect on my own youth.

Prof C Maree:

It was a privilege for me to read your PhD thesis, especially the section on your experience as a PGCHE student. I recall many memories of our time as co-students and much of what you have written reflects my own experiences of PGCHE …

The most outstanding memories that I share with you, are the concepts of authentic learning and wholebrain learning.

Mr C Geldenhuys:

It was a privilege to read your thesis and get a different perspective of the science learning environment. Having received our postgraduate science education and training through the very same department, approximately in parallel (I was a year or two ahead of you and we met in your Honours year) and even the same supervisor, it was interesting to compare experiences. Even more so the lead up to that point in one's life. How one's home life, learning environment and important formative figures in one's youth contribute to moulding the individual. I was further surprised at our similarities in those formative years. At how an academically high achieving and promising learner throughout primary and most of the secondary school, seemed to lose the plot a bit towards the end. A somewhat lost matriculant faced with the decision to find a future direction of tertiary education independently, without an educational trust fund, followed by the same decision process at postgraduate level. The only major difference was that my undergraduate education was through a distance learning institution.

Unlike your journey – of which I now realise I only had a limited view of as you passed by my life's window – I continued on the science road. The very same Goegap Nature Reserve around which much of your Honours and Masters years revolved were [sic] also my port-of-call in my Honours year, and we conducted some field work together. Although I did not have a project there at the time, it ended up becoming my permanent home through a job opportunity that arose in Namaqualand.

Invoking the literature:

We always write for the ear of the other (Derrida, 1985) because we are always with others (Escudero, 2014:8).

> Being storytellers means that this is our way to bring some kind of coherence to the
> chaos of experience that bombards us daily. Narration is a sense-making act. It's what we

do as individuals but, importantly, as individuals situated within various social contexts. (Clark, 2010:3)

Because I study myself by looking inward, I constructed a "reflexive dialogue" (Humphreys, 2005:852) with my readers. Being a student in the 21st century is therefore a sense-making act through self-reflexivity, accomplished by engaging with narrative inquiry. Reflexivity is recommended an appealing approach to "the existentialist dilemma of interpretation" (Rosen, 1991:18), thereby connecting autoethnographic reflexivity to existentialism. In his article, 'Heidegger on Selfhood', Escudero (2014) concurs.

Merriam, Caffarella and Baumgartner (2007:213-214) cogitate that "as a means of understanding adult development, a narrative framework sees the life course as the unfolding story, one constructed and interpreted by the individual". I believe that both the student and the facilitator can benefit from self-reflexivity (Armour, Moore & Stevenson, 2001:1) because it is a vital component in realising one's authenticity. In this sense, autoethnography aims for personal development through the self-understanding of past and current learning experiences (Smith, 2006). It interrogates "aspects of teaching and learning by storying experience" (Lyons & LaBoskey, 2002:21). In addition, Wall (2016:8) encourages autoethnographers to "combine the power of the personal perspective with the value of analysis and theory, so that sociological understanding is advanced in ways it might never have otherwise been." In view of this, "[a]utoethnography's ontological value as social science, then, is determined in large part by its educational and otherwise beneficial impact on people other than the author" (Esping, 2011:62).

I believe the above is reflected throughout my narrative and in the comments of the transcriber and the readers.

b)   *Learning through logotherapy: The power of arts-based research*

A second theme has been identified as 'Learning through logotherapy: The power of arts-based research', showcasing healing and changing through using art in autoethnographic narrative.

Commentary of the readers:

I insert an extract from the letter of verisimilitude of Mr N Malan, regarding the art use in my thesis.

Including your artwork in your thesis is certainly a bold and unconventional approach, but I have to commend you on living your message: the whole being is educated, not just the intellectual side of it.

Taking art classes is certainly not an integral part of the sausage-machine, three-years-done-and-dusted, copy & paste PhD our institutions want to foist on the population.

<u>*Invoking the literature:*</u>

> *'You've made it clear that the writer must focus on how readers will respond to the text. But you also said you never really know what readers bring to their experience of the text. As a writer, how do you deal with this kind of uncertainty?' You can't eliminate uncertainty. But you can count on human curiosity. Most people are curious about how other people live their lives, especially what they do to get through trying circumstances.*
>
> (Bochner & Ellis, 2016:163)

Autoethnography has therapeutic value. I find this value especially true when using an artistic approach, and I am of opinion that this approach must not be underestimated and consequently overlooked in the field of education. Douglas and Carless (2013:102-103) assert:

> New scholars will be asked to step forward and take their place—and they must do so if the autoethnographic tradition is to continue. At the same time, methodological innovation will be required if autoethnography is to remain fresh and relevant. Indeed, perhaps methodological innovation is a hallmark of the approach and a requirement in every autoethnographic study.

I made use of art and photographs within my text combined with reflections, as presented in sections of chapters 1and 4 ("arts-informed inquiries into photography" [Benoit, 2015:22]) and chapters 6 and 8 (visual essays). Photographs aided me in provoking memories, especially childhood memories, and made me explore these memories in order to understand not only myself but also others (Grady, 2004:27). The visual essay became a vital tool for my self-examination because it "can occur on multiple levels, engaging multiple senses, producing a more visceral impact than does textual prose and hence eliciting greater intellectual/emotional response" (Kondo, 1995:62). By employing this approach, I intertwined the personal and the scholarly (Esping, 2010:203, 206) to find meaning. In this sense, autoethnography can be seen as logotheraphy: it acts as a significant driving force to find meaning in life (Esping, 2011). I can relate to Suominen (2003:163) in her declaration concerning writing in a "visual-verbal" way:

> [It] has changed my relationship to writing. Whereas I used to fear writing, through this process I have learned to write in ways that help me to find relief from stress, analyze loss, mourning, and ultimate happiness, find connections between nightmares and theoretical dilemmas, approach and conceptualize my artistic behavior, and investigate

different aspects of my thinking. It has taught me many lessons about myself … Through
self-reflexive visual and verbal narratives a critical understanding of the negotiated
reality between the researcher and his/her environment (described reality) may be
achieved. (Suominen, 2003:163-164)

c)   *Learning through experience: Exposing education challenges and allowing for education solutions (as seen in Chapter 9)*

A third theme has been identified as 'Learning through experience: Exposing education challenges and allowing for education solutions'. This theme is closely associated with the previous chapter, Chapter 9.

Commentary of the readers:

In support of the third theme and the findings of my secondary research questions portrayed in Chapter 9, I present you with extracts from the interview and letters of the transcriber and the readers respectively, revealing their similar beliefs and experiences, and how my narrative evoked their thoughts about the education system.

Mr Malan:

In reading your story I was a bit surprised to learn that you got your first degree on the four-year programme, and that you failed some exams. Because you're such a hard worker, I'd assumed that you passed everything on first try. That you didn't is probably an indictment of the education system.

It was good fun to accompany you on your visit to the Chemistry department lecture halls and labs. To me too it was interesting to see how the physical things have barely changed, and the way of teaching not at all. (As a side note, I recently took an opportunity to teach a practical at the third-year level. The practicals had not changed since 1992, when I was a third-year student myself.)

I have long considered myself a victim of the education system, to the extent that I homeschooled myself through Matric. I had always felt quite isolated in this. Having read your story, and your slow realization (in particular your third-year botany project) that education can be a very different experience from absorbing and regurgitating information, I feel validated. A true education should generate enough enthusiasm and excitement to stimulate working long hours.

I've also had the experience that 'higher education' is not necessarily higher in quality. Similar to your experience of including sub-standard material in your master's degree dissertation on advice of

your supervisor, when I expressed doubts about the quality and value of a chapter in my draft master's dissertation to my supervisor, I was told to leave it in: apparently the thickness of the publication was worth more than the value of the work.

Mrs A de Jonge:

I found your interviews with teachers and personnel of the primary school where you have been, very interesting. I can totally relate, as I am a primary teacher too, being in the profession through much changes and turmoil. The story about you coloring the fridge blue really hits home – this just amplifies the role and responsibilities of being a teacher in a child's formative years.

Weinberger's 'for every fact on the internet, there is an equal and opposite fact' really is true. I try to teach my learners to keep that in mind when using "oom google" for information. I think in this informative age that the pro's [sic] and cons of technology is a subject much debated – usually between older people and the 21st century learner. I must confess, I love the technology and being able to acquire information in an instant. It's good not to be dependent on the say-so of a teacher as in the days before computers and Google, but really getting out there and explore. The remarks of teachers you've interviewed is a universal assumption – especially people who chose teaching and mentoring as a career – when teaching primary school, you invest 10% academic knowledge and 90% skills and values. It is, unfortunately, the only timeframe where you can mould a young mind to become a responsible adult.

I do apologize if I hammer on the same tune, but the extract from Fishman, you used in your research just bring [sic] it all together by saying 'integrity lays the foundation of responsibility', and the wise words of Barnett: 'Where the will is present, everything is present, everything is possible. Where it is absent, nothing, educationally speaking, is possible.'

This just emphasize[s] your journey in the different stages of your life as a student, and frankly most other life-long learners.

The Buckley's story of the red flower will stay with me and will make me more aware of what I am doing while teaching young minds. I thank you for that.

Prof C Maree:

Furthermore, I appreciate the acknowledgement of the person as a whole person with body, mind and spirit and how these influence learning. You were able to capture the essence of being a student in the twenty-first century in terms of being a holistic being, the search for meaning, and the importance of finding meaning for deep and purposeful learning.

<u>Dr K Mathabathe:</u>

Speaking as one who is also responsible for teaching at an institution of higher learning, I also believe that a lot can be learnt from the experiences that you shared. Those tasked with the opportunity to teach should do so with the intention to prepare students for the real world of work and an uncertain future rather than to drive the agenda of rote learning.

I have been fortunate in that I possess the experience of both being a student and an educator at the same institution. I have seen the university evolve with time and I must say although we are not there yet I have witnessed the university take some important steps to make learning relevant and inclusive. I was interested in reading about how being in the same lecture halls brought back memories and a sense of uneasiness. I agree I would feel the same way.

I could relate to your experience of doing an MSc and feeling like you were carrying out instructions based on your supervisor's ideas of a research project. I too felt that it was only with my PhD that I found my voice and truly took charge of what I was doing.

<u>Ms T Shaw:</u>

I too failed Chemistry in my first year, and it was very disheartening. The sheer volume of work and pace of lectures was [sic] just impossible to keep up with. I completely agree with Nadine's feelings on this subject. Parrot learning everything by heart and feeling terrified and frustrated as one could not understand concepts or keep up with the quantity of work covered, and the horribly confusing practical sessions ... Chemistry was the cause of a huge amount of stress and despondency for many of us during our undergraduate years.

<u>Mr C Geldenhuys:</u>

The ontology of the child to occupy a meaningful space somewhere in society is a difficult thing to comprehend. Your views and discussion of this process is [sic] enlightening and something that I have not given much thought. Education systems seems [sic] to be necessarily systematic and rigid, most notably in the sciences, but the challenge is to maintain and even develop the individuality of the person. It is from individuality and free thought that some of the most important discoveries/revelations are made. In my own simple world view I can't help but think that the general perception prevails that responsibility for developing the individual student must inevitably diminish from the pre-school level to tertiary education level. I found the suggestion that even at post-graduate level educators have a responsibility for guiding a student to release his/her full own potential of character-specific traits thought provoking. The need to acknowledge the individual soul.

I like how this study seems to be saying that education in order to deliver successful human beings is a combined effort between educators and students; that relationships are at the basis of this effort.

I have come to realise that critical thinking is something that is suppressed by most educators (and even most people in general) and it is something that is not encouraged even on a tertiary education level. I believe children are natural critical thinkers, often asking 'Why?' questions, but that quality is suppressed in most learners as they mature.

*Generally, this study has strengthened my beliefs about the shortcomings of the current education system and how it focuses on achievement and not on developing human potential, which includes self-awareness, self-management, empathy/relationship, critical thinking and spiritual awareness. Nonetheless, I now see how the responsibility of mitigating and eventually overcoming these shortcomings lies with both the education system (which I cannot change anymore, but hopefully studies like yours could) and the individual graduate (i.e. reaching my highest potential is now in **my** hands). So, I'm really grateful to have had the opportunity to be a part of this study.*

Invoking the literature:

I envision that experiences of students and facilitators of learning embedded in an academic culture can advance the field of not only personal development, but also education (Rossiter & Clark, 2007:71). This can be achieved by displaying lives through autoethnographic narrative: "When we appreciate the centrality of narrative to meaning making, we begin to understand the importance of stories and storytelling to the education endeavor" (Ellis, 2004:175). I believe I emphasised my concern for advancing education through writing meaningfully about my life experiences as a student. Indeed, Hunt (2014:6) maintains that autoethnography "is a useful approach to professional education and lifelong learning."

Thus, I trust that exposing and scrutinising my epiphanies throughout my narrative contributed towards not only personal growth but also educational growth in me and my readers as they received perhaps a fresh stance on what the culture of education should represent. A benefit of my study, in fact, lies in its contribution to the field of educational knowledge, firstly, by exposing the state of affairs of the current education system and secondly, by suggesting how the education system should be transformed in order to resolve the challenges that the 21st century poses.

Rossiter and Clark (2007:10) argue that autoethnographic narrative provides a way to make sense of our experiences. My narrative, therefore, necessitated me to engage in self-reflexivity. Palmer

(1998:76) insists that "learning demands solitude" for reflection "but also in the deeper sense that the integrity of the student's inner self must be respected." I believe my self-reflexivity allowed me to rebuild a 'meaning-making' standpoint embedded in authentic learning. My belief is supported by Fenwick (2000:248): "A learner is believed to construct, through reflection, a personal understanding of relevant structures of meaning derived from his or her action in the world". My meaning-making is supported by the autoethnographic interviews and the experts' interviews (as portrayed in Chapter 9). In addition, the meaning-making constructed of my autoethnographic study, is also substantiated by the feedback from the transcriber and the readers through their letters of verisimilitude. Indeed, constituents of the new operating system, as referred to in the final secondary research question (Chapter 9), featured throughout their feedback (the will, values [virtues], human potential and self-management).

Autoethnography permits interaction and thus, my readers learn through interacting and participating with my experiences. Indeed, Palmer (1998:76) warns that "[l]earning also demands community", inviting "the voice of the individual *and* the voice of the group" [own emphasis]:

> But when my little story, or yours, is our only point of reference, we easily become lost in narcissism. So the big stories of the disciples must also be told in the learning space—stories that are universal in scope and archetypal in depth, that frame our personal tales and help us understand what they mean. We must help students learn to listen to the big stories with the same respect we accord individuals when they tell us the tales of their lives. (Palmer, 1998:76)

d)   Learning through transformative behaviour: Personal growth

A final theme has been identified as 'Learning through transformative behaviour: Personal growth' and refers to the significance of autoethnography in portraying one's transformation as a human being. Apart from this, the self-reflexive nature of autoethnography in itself, also allows for transformation of both the autoethnographer as well as the reader.

<u>*Commentary of the readers:*</u>

In support of this theme, I present you with extracts from the interview and letters of the transcriber as they allude to my transformation as a human being.

<u>Mr N Malan:</u>

Our friendship is closely entwined with your career at University. We met after a talk I presented to a group of school-aged children on my visit to Antarctica at the science centre where you worked as intern ... We ended up having a long conversation after everybody else had left. From what I remember the conversation centred on relationships, and how they survive the separation of an Antarctic expedition. That a presentation about 'hard science' could engender a discussion about relationships show[s] how human-centred you are, and is probably an indication that a career in education is the right one for you.

I remember spending much time with you while you were working on deciding what to do next after your master's degree. (Portuguese lessons, I remember with a smile.) I witnessed the exploitation of your willingness and energy at the hand of the geographers, and your disappointments at various PhD opportunities not realizing.

You did not choose to do a PGCHE as a default; I don't know who recommended it to you, but you should think of them with gratitude. I don't think I have ever seen somebody develop so rapidly, and so thoroughly absorb the values taught in a course of learning. I remember attending the presentation of your Entrepreneurship project.

The PGCHE course also introduced you to the person who would become your PhD supervisor. I think it does him credit that he saw the potential in you, and wished to develop it. Or perhaps I should say 'exploit it'.

I have no doubt that a PhD would be an appropriate part of your academic career, and as is clear from the way you blossomed when you were doing science education, a PhD in education was a good choice ... Your supervisor certainly offered you a challenging project. I see parallels with your third-year botany project: a hard question, lots of painstaking work ...

In closing, I want to leave you with one of my favourite quotes:

'Learning is a peculiar compound of memory, imagination, scientific habit, accurate observation, all concentrated, through a prolonged period, on the analysis of the remains of literature. The result of this sustained mental endeavour is not a book, but a man.'

Mark Pattison was a university reformer, and I think you would have agreed with much of what he's had to say. I also think that he would agree with me that the mental endeavour represented by this thesis resulted in a splendid woman.

<u>Dr K Mathabathe:</u>

I really applaud you for opening up your life to such scrutiny through your thesis.

I also empathise with what you went through having to juggle loss through the death of your loved ones with completing your postgraduate studies. I started my PhD studies in 2013, in 2014 I lost my brother, in 2015 I lost my mom and the worst blow was losing my dad in 2016. I will admit that it does take something out of you knowing that those who eagerly waited to see you graduate will never be there to witness it.

Your narrative is evidence of the struggles and growth pains you had to endure to get to where you are today. A product of the PGCE (Postgraduate Certificate in Education) myself I believe the merging of your academic experience from the natural sciences with the PGCHE was a perfect match to transform you into a facilitator of learning who is well-equipped to prepare learners for an unknown future and to maximise their potential. There is so much I can say from the lessons I have learnt through reading your work but I will conclude by saying that I congratulate you for finding your voice through your PhD.

<u>Ms T Shaw:</u>

This remarkable young lady experienced a huge amount of hardship throughout her university career, but despite all this, I believe she came out stronger and more driven than she ever could have imagined herself. Nadine has overcome numerous challenges, and has put her heart and soul into her studies, so much passion and dedication she has devoted to following her dreams.

I can certainly attest to the huge amount of effort that Nadine has put into this thesis, the countless late nights, the anxiety and stress of meeting deadlines, the blood, sweat and tears, the endless hours spent dedicated to getting this mammoth task done … Nadine has truly given this thesis her absolute all and I feel so proud to read her work and share in her memories.

<u>Mrs A de Jonge:</u>

I also know of the hardship in completing your writing and the sacrifices you made to accomplish your goals.

I knew your father back when he was the sexton of our church. What a remarkable man! I know that he would have been very proud of your accomplishments.

Prof C Maree:

In your thesis you were able to highlight the importance and relevance of authenticity in learning and personal growth for finding true meaning amidst a complex modern world which is exhilarating fast due to availability of technology and Internet.

Well done on capturing the changes, challenges and opportunities occurring in education (and the world) in a very senseful manner and explaining education in the 21st century at the hand of your own life.

Mr C Geldenhuys:

It felt immensely personal to read through your work, even emotional and disarming, which is quite unexpected for a person used to the cold, hard, fact-based, cause-and-effect, milieu of the science environment.

I remember your many endearing attributes: an inquisitive mind, your work ethic, your positive outlook on life, your most genuine concern with the lives and wellbeing of students and colleagues, your empathy, your love of helping and teaching. Your affiliation with the Scienza educational centre on campus was a natural progression given your set of traits and the circumstances. I was surprised when I learned some time ago that you had changed focus to education. My surprise probably stemming from the long road I know you had travelled in your science studies up to then. But now, having read this thesis and with the benefit of perspective that time provides, it is not [at] all hard to see how your life's journey had taken this course to the junctures of science, education, philosophy and human development. It seems an absolutely natural fit and where you can probably make your greatest contribution to society (search for meaning). And this is probably the single goal that you value most in your professional capacity. And which your father and grandmother would have approved of.

If you shall permit me a plant ecology analogy, I am reminded of how one finds it difficult to observe change in the environment if you observe it on a continuous basis. This is especially true of the desert environments. It is only once you have a lengthy reference set, or if you revisit after many years, that you can readily observe changes that have occurred. The same principle applies to you, your journey and your growth as an individual.

Your own autoethnographic study is a very clear example of how a person continues to develop in adulthood as a continuously evolving being.

I suspect if we met now after these many years, we would become acutely aware of the change perspective of time. Much like how a parched, bleak desert moonscape can give rise to fields of colour in spring …

To me, the ultimate value of the transcriber interview lies in the effect that the content of the expert interviews had on her. Throughout her answer, her personal development, portrayed especially by her spiritual growth, surfaced continuously. This touched me deeply. The segment of her answer in which she specifically refers to her religion (*"This in turn has made me rethink the way I view religion …"*) is universal in the sense that it can function for any religious view:

In terms of practical effects, it strengthened my suspicions about the negative effects of especially social media on one's ability to learn and interact with others. Consequently, I have quit all forms of social media, which I came to view as just another 'level' to manage in an already 'super-complex' world, which often steals time that could otherwise have been more productively used (e.g. on reading or actually interacting with people). On the other hand, I have also come to realise the potential of technology (the Internet in particular) to facilitate independent learning and I have subsequently enrolled for courses via Coursera and FutureLearn in classical music history, philosophy and the theory of translation. This has further promoted my personal growth both intellectually and even spiritually.

*On a deeper level, the study's focus on the student as a human being has opened my eyes to myself as a human being, with interests and a **being** outside of the field in which I was trained (environmental sciences). It has rekindled my interest in the arts (specifically music and literature) and other intellectual pursuits (theology and philosophy in particular), which I now view as essential to life as a **human being**. To put it differently, even though I still think practising one's career and contributing to the economy of the country is very important in the 21st century, I have come to realise that the most important thing is not what one does, but **what sort of a person** one is (and the humanities – geesteswetenskappe – including educational sciences is crucial for this). This in turn has made me rethink the way I view religion – Christianity in my case – and I have realised that **being human** (i.e. having an emotional, intellectual and physical life on top of having a spiritual life) in all its glory and depravity is essential to understanding God and His plan of salvation through Jesus Christ. I also happened to read CS Lewis's* Mere Christianity *during the time of the transcription and he says that Christ wants all of you: 'I don't want so much of your time and so much of your money and so much of your work: I want You'.*

I feel privileged to have listened to experts whom I never would have had access to. Somehow the whole experience of listening to them has in some way made the topic a reality in my own life ... it has been educational in its own right.

Invoking the literature:

> *[O]ur actions achieve intelligibility in a narrative sequence which provides insights on our character traits, the goals we pursue, the values we endorse, and our different ways of living. In the frame of this narrative and temporal sequence, the story of a life continues to be reconfigured by all the truthful or fictive stories that a subject tells about him- or herself. Our life undergoes a constant process of reconfiguration.*
> (Escudero, 2014:9)

Throughout the reconfiguration of my life-narrative, I was mindful to write authentically – from my deepest Being, my spirit. "People who appreciate the gifts of autoethnography realize that when they dive deeply into the ocean of private thoughts and feelings, they can make contact with what is staunchly universal" (Bochner & Ellis, 2016:158). This declaration is confirmed by Angrosino (1998:97) who states that the reader should be able to empathise with the narrator, because this results in an understanding of the lives of others in terms of behaviour and feelings. I believe that by writing about my deepest thoughts and feelings, I convey what this autoethnographic exploration means to me: Pursuing my authenticity. I trust that the comments from my readers confirm this.

> Usually some degree of emotional turmoil accompanies the vulnerability required to scrutinize yourself and reveal to others what you find. Almost always, the insights you gain about yourself and the world around you make the pain bearable, even welcome at times. (Ellis, 2004:xx)

Through autoethnography, I could communicate, to some degree of emotional turmoil, my personal growth throughout my life, and this represents who I was compared with who I am now (Taylor, 1989:48; Bochner & Ellis, 2016:64-65). It reflects a transformation of an inevitable unfathomable nature (Anderson & Glass-Coffin, 2013:61). However, autoethnography is not only viewed as a way to know

> but also as a way to critically act in the world, and a way to understand the construction of the self. For them, since social justice is a collective journey to actualize the possible rather than simply accept the actual as finished, the autoethnographic project provides a fertile ground for individual and social transformation. (Sparkes, 2013:513)

Indeed, autoethnography in itself offers "deeper changes in the inner self … It is to a greater or lesser extent, a road of transformation" (Willis, 2004:323).

10.4   LIMITATIONS OF THE STUDY AND RECOMMENDATIONS FOR FUTURE STUDIES

Firstly, I convey the limitations of my study by presenting the response of the transcriber of my expert interviews. The transcriber clearly implies that the study is exceptionally challenging. To my question regarding how she experienced the transcription of my expert interviews, she responded as follows:

*I think asking the question, 'What does it mean to be a student in the 21st century?' is really important because I think it's not a question that is often asked outright. However, it seems to be a difficult question to answer because just being a human being in the 21st century is so complex, with so many facets of life having to be navigated and managed (especially with this whole new 'extra' reality of the Internet in general; the availability of information and opportunities; and social media and other distractions in particular). So being a **student** that is, being in a life stage where one is being prepared (to a greater or lesser extent) for life in the 21st century seems to me to be even more complex. In fact, it is so complex that I think people don't really think about it in a self-conscious manner. From my experience as a student, most students (and even educators) seem to be just swept along by, for example, the masses of information and media and technology, without exercising real control over it, that is, consciously using the facets of technology to their advantage. So, I think even **starting** to think about what it means to be a student in this age, that is, consciously grappling with the issue – what your study seems to be aiming at – is crucial, both for educators and students.*

Secondly, I mentioned in my research design that it is 'A design to satisfy my curiosity'. Since it indeed was from my own perspective, the limitation of the study is situated in its very broad and complex nature. One of my readers, Mr N Malan, confirms this:

Perhaps your thesis is just another battle in a long war. But in a world that needs a new 'operating system' you are fighting a good fight, and I'm happy [to] be on the same side as such a fierce warrior.

However, this limitation also provided a significant benefit. Through the triangulation of the substantive variety of data resources and especially the autoethnography of my PGCHE and PhD phases in which I was both student and educator, the study revealed a significant breakthrough of what it fundamentally means to be a student in the 21st century in terms of the self-management of a new operating system – my authentic potential through pursuing my authenticity.

Although there may be only one essential breakthrough in this study, its scope and complexity is vast. Every component indicated in the professional practice of facilitating learning that constitutes a qualitative extent of universal relevance, especially regarding its relationship with the findings from my expert interviews, warrants investigation. Overall, the 'objective measurements' of the abstruse qualities of respect and ethics may be the most challenging, while at the same time, may be the most vital considerations in being a student in the 21st century. I hope to engage in this endeavour systematically.

10.5   CONCLUSION

To conclude not only this chapter, but also my thesis as a whole, I close with a final reflection prompted by my exploration:

Autoethnography has become my way of life – my lived experience. Indeed, autoethnography is the reason for experiencing myself, the 21st-century student, as the new operating system, while implementing the crucial function of self-management.

Because of autoethnography's significant contribution to this supercomplex world, it has changed my life in such a way that I doubt I will engage with any other type of research: "It's a response to an existential crisis—a desire to do meaningful work and lead a meaningful life" (Bochner, 2013:53).

As a student, I am pursuing my authenticity towards excellence. As a human being, I follow suit. I challenge you as the reader of my thesis to do the same.

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