

Engaging within Zones of Proximal Development on Facebook

The case of using Facebook to support learning and mentoring on a NQF Level 5
Environmental Education, Training and Development Practices Learnership

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ABSTRACT

This study focuses on two roll-outs of a, year-long National Qualification Framework (NQF) level 5, environmental education learnership in South Africa and attempts at enhancing collaborative learning at workplaces using a familiar social networking site called Facebook. This study uses the Facebook group sites created for the workplace course component of the course as one of the means of data collection. Additional interviews and focus groups with learners and administrators on both Environmental Education Training and Development Practices (EETDP) courses also informed the study.

The study is located within the context of the rise of the information age, its effects on socio-ecological landscape at large and ways of using social networking sites in order to facilitate scaffolding and meaning making within zones of proximal development for environmental education learnerships. It also looks at the model of apprenticeship and workplace based learning as it is broadly located at the nexus of the SAQA-led academic inquiry into workplace based learning and professional development.

It was found that the use of Facebook on the EETDP learnership allowed for collaborative learning to take place between peer to peer interactions as well as between tutors and learners. It was also noted that scaffolding processes requires both technical assistance and strong instructional input from course tutors. One of the most important findings in terms of collaborative learning and engaging within the Zone of Proximal Development (ZPD) was that learners were able to communicate more effectively and freely with both fellow learners and tutors on course after participating on the Facebook group sites. The study offers recommendations on how a social networking platform like Facebook can be utilised effectively for environmental education. The study recommends that scaffolding of workplace based tasks and concepts needs to be better integrated with the course and in both online and offline interactions between learners. It also illustrates how social networking sites can become powerful tools for creating meaning making when combined with course work.

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Finally, I would like to thank Mark Zuckerberg for creating Facebook and allowing a fifth of the world to communicate with each other and thus hopefully continue to inspire action and change.

Dedicated to my mum

Indrani Chetty

16 July 1945 – 6 December 2010

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HYPERLINKS USED IN THIS THESIS

This thesis is HTML embedded with hyperlinks so readers reading this on screen (using the CD accompanying this printed edition of the thesis) will be able to access the relevant Facebook group site on which this study focuses – as constructed at the time of the study. The web pages that are inserted in the document will differ from the images present in this thesis as Facebook updated their group pages in 2011. The content and archive of interactions, however, is still visible and it is possible to scroll down to verify or probe specific conversations in depth. The EETDP Facebook sites have been archived since the creation of the group page. They can be accessed here for each site group respectively:

Site 1: <http://www.facebook.com/policies/?ref=pf#!/groups/179018056277/>

Site 2: <http://www.facebook.com/policies/?ref=pf#!/groups/129648630403134/>

Throughout this thesis the name of Facebook will be used to denote the company. All rights are reserved and names used with permission. In order to view the group pages readers will need to have a Facebook account. To create a Facebook account all that is needed is an email address and the whole process takes less than five minutes. I have opened the EETDP (Environmental Education, Training and Development Practices) Facebook pages to the public and it is no longer a closed group. To find the group all that is needed is to type EETDP in the search bar and both groups referred to in this thesis can be found. Alternatively simply click on the hyperlinks above. The CD accompanying this thesis has every web page copied and pasted into Microsoft Word as produced during the fieldwork period of this study i.e. from 2009 to 2011.

All URLs are provided in the reference list (also hyperlinked) and are referenced together with author name and World Wide Web page address.

CHAPTER 1

THE RISE OF THE CYBORG – POSITIONING AND INTRODUCING THE STUDY

“Man is but the servant and interpreter of nature; what he does and what he knows is only what is observed of Nature’s order in fact or in thought; beyond this he knows nothing. For the chain of causes cannot by any force be loosened or broken, nor can Nature be commanded except by being obeyed. And so these twin objects, human knowledge and human power, do really meet in one; and it is from ignorance of causes that operations fail.”

Francis Bacon, 1620, Aphorism 1 from *Novum Organum* (1878)

“Pre-cybernetic machines could be haunted; there was always the specter of the ghost in the machine. ... But basically machines were not self-moving, self-designing, autonomous. They could not achieve man’s dream, only mock it. They were not man, an author of himself, but only a caricature of that masculinist reproductive dream. To think they were otherwise was paranoid. Now we are not so sure. Late twentieth century machines have made thoroughly ambiguous the difference between natural and artificial, mind and body, self-developing and externally designed, and many other distinctions that used to apply to organisms and machines. Our machines are disturbingly lively, and we ourselves frighteningly inert.”

Donna Harraway, *A Manifesto for Cyborgs*, 1985

This introduction will explain the context of the study and the tools that it used online in an attempt to engineer collaborative learning and enter the zone of proximal development with learners on an environmental education learnership. The study is based on two roll-outs of an National Qualifications Framework Environmental Education Training and Development Practices (EETDP) Level 5 learnership during 2009 and 2010, conducted by WESSA (Wildlife and Environment Society of South

Africa) SustainEd, with particular focus on the scaffolding of the workplace tasks as it evolved on the Facebook social networking site.

This chapter does not focus on the details of the EETDP course as this is done in the next chapter, but rather frames the broader context of the study, and locates it in the field of emerging Web 2.0 techno-social development, the environmental crisis and environmental education research. I am aware that wider studies on Web 2.0 platforms and their use in education, including social networking sites (and Facebook) are available – see Chapter 3 for more information on these. Here I indicate that this is an under-represented area of scholarship in **environmental education in southern Africa**. It therefore maps out the context of the social networking site in its current state, and provides a brief overview of the current state of the socio-ecological crisis facing humankind in order to position the study, and to help to understand this current gap in the field. Research questions are outlined and a brief introduction to the chapters is provided.

1.1 Introduction to Cyborgs/Us

Donna Haraway's (1985) statement that human beings have become cyborgs in her 1980s discourse on socialist feminism, science and technology is hard to refute and even more so now. She also provides a very lucid definition of the word cyborg as “creatures simultaneously animal and machine, who populate worlds both ambiguously natural and crafted” (1985, p.189). Haraway also states that even though this is the work of contemporary science fiction, the boundary between science fiction and social reality is an optical illusion. Human technology, from the rise of the industrial age, has allowed us to travel further distances in a shorter space of time and allowed us virtually (and sometimes literally) to interact with the world as half-man/half-machines. From the smart phone to the fridge, the screwdriver to the tent peg, solar stoves to remote controlled electric gates, like wizards of mythological fantasies we can command and communicate with people and things at a distance or close-up. But it is truly the invention of the circuit board which has integrated itself into our lives seamlessly. Haraway also conjures up the silicon chip when she states:

Modern machines are quintessentially microelectronic devices: They are everywhere and they are invisible... The silicon chip is a surface for writing; it is etched in molecular scales disturbed only by atomic noise, the ultimate interference for nuclear scores. Writing, power, and technology are old partners... [B]ut miniaturization has changed our experience of mechanism. (1985, p. 88)

We are hardwired so to speak and Harraway continues to proclaim that in “the late twentieth century, our time, a mythic time, we are all chimeras, theorized and fabricated hybrids of machine and organism, in short, we are cyborgs” (1985, p.191).

The fact that we are *cyborgs* can be appreciated at a glance because of the ubiquitous nature of our technology and in the way it has (with a few minor glitches) integrated itself into every facet of our 21st century lives as described in the above opening paragraphs. Is Harraway’s (1985) statement true, that “our machines have become disturbingly lively and we ourselves frighteningly inert”, has it in essence rather distanced us from nature even more precariously so? Has it changed the way we interact with each other positively or negatively, and has it impacted and contributed to the way we learn and learn about the world and nature? The latter question will broadly be the primary concern of this study¹ and the first will be dealt with as a means of understanding how we use the current technological platform engineered by the rise of Web 2.0.² Social networking sites are a relatively recent phenomenon on the web. They allow users to present themselves through an online portfolio and maintain connections with other users (Ellison, Steinfield & Lampe, 2007, p.1). With the advent of social media the rate at which humans began to communicate changed the pace of how knowledge is transmitted and imparted. Throughout this study Bacon’s prophetic words will provide the necessary tension, because the core of this study is about relationships, more specifically, our relationship with nature, with technology, with each other and with learning.

¹ Note: More specific research questions are defined and presented below in section 1.4 in this chapter.

² Web 2.0: the name first coined by Tim O Reilly (2009) not so much as a version number but more as a description of the internet’s new modes of functionality.

1.2 Facebook in the Information Age

Richard Wurman (1989) in his book *Information Anxiety* claims that the weekday edition of the New York Times contains more information than the average person in the 17th century would have encountered in a whole lifetime. According to Jungwirth and Bertram (2002) more information has been produced in the last 30 years than in the preceding 5000 years. These two previous bits of information were taken off the internet after just a few minutes of online “browsing”. A study by Berkley researchers Lyman and Varian (2003, p.2) concluded that worldwide information production increased by 30% each year between 1999 and 2002. It seems that all of sudden almost every aspect of life around the world is being recorded and stored in some information format. The internet has almost brought to life the ancient Tibetan idea of the Akashic records; which, in esoteric Tibetan culture, is the name given to the veritable repository of all knowledge of information, both future and past and thus the sum total of all wisdom (Ashley-Farrand, 2009, p. 261). Of course the internet has quite some way to go before reaching such spiritual heights but it is indeed the (almost) infinite digital warehouse of most current human knowledge, understanding and interests. If each age is defined primarily by what human beings were consuming and producing with tools, then the information age is apt for our present era as we seem to consume information at rapid rates, at the click of a button and the entering of words into search bars. The computer has become one of the most valuable tools created, emerging from the fiercely competitive days of early Silicon Valley in California in the ‘70s and ‘80s where teenagers tinkering in their parents garage would produce the biggest industries of the century (Steve Jobs and Steve Wozniak). By 2010 Apple had surpassed Microsoft as the world’s most valuable technology company and the following year it came to displace the top petroleum companies, becoming the most valuable company in the world (Isaacson, 2011, p. 562) and convincing all that we have truly entered the *information age*.

Online social networks have grown exponentially but none more meteoric than Facebook, the platform which currently has more than 1 billion members (it would be the second biggest country if it were a geographical entity). Madge, Meek, Wellens and Hooley (2009) define Web 2.0 technologies as those that “involve information sharing and collaboration between users” (p.141). Social networking sites have increased the number of connections between users and thus the amount of data shared. The interesting

aspect about Facebook is the opportunity it provides for one to create an online personality. Ellison, Steinfield and Lampe (2011) state that “the social information-seeking strategy is intriguing because it encapsulates the organic interplay between offline and online communication found on many SNSs [social networking sites]” (p.886). This is one of the reasons why I have chosen to use and investigate Facebook as a learning strategy because it allows for people to share online. Facebook has indeed become a new means of connecting as significant as the telephone when it was first introduced. Ellison *et al.* (2007) also state that Facebook is different from the telephone in that it allows one to glean information from personal profiles in a way that you cannot do from a ten digit telephone number thus allowing for “digital crank calling” (p.887) or for befriending virtual strangers. So thus Facebook allows stalking, the invasion of privacy as well as enabling networking and socialising. Like all tools it can be used with good or bad intentions. Yet its relevance to education and especially to environmental education has not been adequately researched and this is what I hope to do in this short study.

1.3 Technology and Sustainability

“Yet it is worth restating the obvious – the history of oil is the history of imperialism, in one guise or another.” Giddens, 2009

The march of oil and the fossil fuelled industrial age is what Giddens (2009) is alluding to here. Progress comes at a cost, mostly an environmental and social cost involving dispossessed people and habitats. This section attempts to briefly outline the impact of technology on the environment. The necessity of ecosystem services will be briefly introduced and the dilemma of climate change will also be discussed in this section, as they form the wider backdrop of environmental education; and this study is an environmental education study.

In the background of the context of the economic and technological juggernaut that is *advanced capitalism*, is the current social and ecological crisis faced by all life on this planet. South Africa is geographically at the bottom of a continent that will be hardest hit by the reality of climate change (IPCC, 2013, p.24) as current global human lifestyle practices indiscriminately dislocate the Earth’s fragile ecosystems. The IPCC report also

states that the “warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia... and the concentrations of greenhouse gases have increased” (IPCC, 2013, p.4) Climate change can also be described as the culmination of humanity’s actions upon the ecological system. The present trajectory of development is not sustainable³ ecologically and South Africa itself is at the top of the list of environmental culprits in the 21st century according to Winkler (2005). In 2005 South Africa was the largest emitter of greenhouse gases in Africa, 11th in the world and yet only had an economy which ranked 24 (ibid.). Winkler (p.21) states that this is primarily because of the abundance of coal in South Africa which forms the foundation for a cheap energy policy. Cheap energy⁴ in the form of fossil fuels (coal, oil and gas) has propelled the modern economy and created burgeoning cities teeming with humans but it has also initiated the geophysical inevitability of climate change. Fossil fuels release carbon into the atmosphere creating a blanket effect around the Earth which induces a warming of the planet where even slight changes in climate spell ecological catastrophe. Carbon sinks do exist naturally but extensive deforestation and urbanisation are causing these sinks to disappear rapidly; our emissions are outstripping the capacity of the Earth’s sinks (Lohman, 2008, p.11).

Lohman (2008) also cites veteran climatologist Wallace Broecker of Columbia University who states that “the earth’s climate system has proven itself to be an angry beast... when nudged, it is capable of a violent response” (p.9). Climate change, because of humanity’s addiction to petroleum, will cause erratic weather patterns and other climatic uncertainties that marginalised populations will not be able to cope with given their dependence on natural resources (this is already occurring as indicated by the IPCC, 2013). Even urban communities will falter due to their over-reliance on a transport and an economic system that might not be able to cater for their needs. The final climatic conclusion is anyone’s guess with all ‘traditional’ classes of the population (i.e. high income, middle class and low income) being deeply affected. Climate change is like the HIV/AIDS virus: it does not discriminate and unites humanity in one cohesive global risk position. This is described by Beck in *Risk Society* (1992) and is further

³ *Sustainability* is an ambivalent term – in this study I refer to sustainability as the ability for the human community (any size) to satisfy its needs and aspirations without diminishing the chances of future generations.

⁴ This energy is cheap only in its own internalised economy: if the cost of carbon is externalised, economically we find that the source is not so cheap after all and creates poverty, environmental catastrophes and a diminished society (Ekins, 1986).

elaborated on in his subsequent work, "risks are industrially produced, economically externalised, juridically individualised and scientifically legitimised" (Beck, 1995, p.140).

The Millennium Ecosystem Assessment (2005) conducted between 2001 and 2005 found that 60% of our ecosystems across the planet are degraded. In fact it claims that "[O]ver the past 50 years, humans have changed ecosystems more rapidly and extensively than in any comparable period of time in human history, largely to meet rapidly growing demands for food, fresh water, timber, fiber, and fuel" (Millennium Ecosystem Assessment, 2005). According to the State of the Environment Report of South Africa (Department of Environmental Affairs, 2006, p.22) "the major drivers of environmental change are population growth, economic activities, governance, and levels of technology and innovation". The equation below demonstrates this simply:

$$\text{Impact} = \text{Technology} \times \text{Population}$$

The Millennium Ecosystem Assessment Report (2005, pp.10-11) details the ecosystem services necessary to sustain human "well-being". However, as Prugh and Assadourian (2003, p.12) illustrate, even in the most catastrophic of events "given the adaptability and geographic dispersal of human beings", it is very difficult to accept that as a species we may be wiped out. Our tenacious and dominant grip on the planet enables us to damage the Earth with bigger and immeasurable impacts, more so than any previous generation of humanity. This is largely because of our endless flirtation with technology and the divisive nature of science. Mythen (2004, p.5) suggests that the risk-society denotes a unique phase of "techno-environmental hybridity" where culture and nature have become entwined, the same feelings echoed by Harraway in the 1980s.

According to Beck (1992, p.57) "statements on risk are the moral statements of a scientised society". Even if we cannot wipe out our species through careless indifference does that allow us to annihilate billions of individuals for the "well-being" of a few? The range of environmental issues that humanity faces in the late-modernity phase of the 21st century are (to name a few): *lack of food security, biodiversity loss, droughts, desertification, deforestation, accelerated extinction, water shortages, extreme weather conditions, global warming, soil erosion, the increase in "pests" and viruses, alien vegetation, polluted rivers, air and land and the increase in waste production* (most of these issues were addressed with an educational response by the learners on the

Environmental Education, Training and Development Practices (EETDP) course, which provides the empirical context of this study and is described in Chapter 2).

Issues can be defined as being specific to a particular context, time and place. They are symptomatic and make themselves visible in our day-to-day affairs. Issues can usually be identified, and proactive and reactive measures can be taken to mitigate or prevent them. Risks on the other hand are invisible and hard to identify. They occur through “automatic operation of autonomous modernisation processes” (Beck, 1992, p.22). Their symptoms are global as they “develop a tendency to unify victims in global risk positions” (Irwin, 2001, p.225). Issues are problems that arise between the interaction of society and the environment in the present because of the actions of our collective past. Risks are posited and exist in the future. They occur because of patterns in our present behaviour. Thus the risks that plague 21st century populations are dynamic and will evolve based on our current environmental practices. Mythen (2004), in discussing Beck's work, indicates that “the risk society perspective concedes public responsibility for environmental degradation” (p.3). As in Oscar Wilde's *Picture of Dorian Gray* (1890) we live our lives as if all is fine on the surface heedless of the festering social and ecological wounds that we are creating. Risks always have an inherent element of anxiety because of inherent future implications. Risks and how society perceives them are open to manipulation and control. As Giddens (1999, p.15) states, “in our current society, ‘manufactured risks’ are more problematic than external risks”.

Our current trajectory and human development pathway does not seem to bode well and we face extinction of a multitude of species before the end of the century. Thus the race is on, and it seems to require ecologically literate citizens across the globe as implied by Orr (2004); citizens who are benignly responsive and adaptive to the changing social-ecological landscape or else face the current scenario of ecological and social catastrophe if we cannot abate the tide of “progress”. Environmental education is thus an attempt to create an ecological generation. What environmental education is and how one begins to achieve this optimally (with online social media tools) is a key interest and topic of this study.

1.4 Research Gap, Questions and Overview of the Study

Because of the complexity of environmental issues and risks (Beck, 1992), the environmental education possibilities of a social networking site proves to be an interesting research option as diversity, learning interaction and participation seems to be the key in most solutions to socio-ecological issues (Wals, 2007). In the 1992 State of the World Report, Worldwatch calls for “systematically reassigning the role of the media in addressing our environmental situation” (Ryan, 1993). More than 25 years later only a handful of ecologists are beginning to understand the link between the environment and the social dimension of our world. The educational power of social learning media has not been fully realised and according to Garrison and Arbaugh (2007), the adoption of e-learning platforms “has largely outstripped our understanding of the technology from an educational perspective” (p.56).

The literature review conducted for this study explores a few examples of Web 2.0 based environmental education, and no environmental education studies were identified in southern Africa that focus on *the learning processes* associated with web 2.0 platforms, social networking sites included. However, there are some that are emerging in other parts of the world. Simovska (2003), working in Denmark with youth groups in an environmental health programme, researched how internet-based learning interactions developed learners’ action competence in environmental health education, and her research shows positive learning outcomes. She reports on the emergence of a collective zone of proximal development, drawing on Vygotsky’s theory of learning and development (Daniels, 2008). Her study shows how students from four different cultures and countries use the internet to share their experiences on alcohol abuse amongst teenagers and how they learn from each other in a shared space (Simovska, 2003). Of particular interest to this research is Simovska’s depiction of the collective zone of proximal development which is constructed via the wider issues of concern (in the case of her study these were environmental health issues and possible alternative practice responses), scaffolded and mediated via learner peer interactions, and tutor/educator interactions.

In the case of my study, I have indicated above how an understanding of environmental concerns such as climate change and their complex nature provides a wide framework for the creation of collective zones of proximal development for environmental

education. In the EETDP course, these zones of proximal development are framed by course concepts, content and approaches that cohere with the risk society analysis of the concerns provided above⁵, including alternative response practices. In his study on sustainable agriculture (Mukute, 2010), although he did not use Web2.0 tools, showed that a collective zone of proximal development can be constructed via knowledge of both the existing situation (e.g. the loss of ecosystem services as described by the Millennium Ecosystem Assessments), and by an understanding of risk (as outlined above). Furthermore, he explored possible solutions and possibilities for new practices such as sustainable agriculture practices, organic agriculture and/or conservation farming which were seen by both learners and educators in his workplace learning study to be viable possibilities for expansive learning. I am interested in the notion of 'zone of proximal development' in this study (see section 3.2 where this is discussed in more detail), and particularly how learning can be scaffolded and supported in zones of proximal development via Web 2.0 tools, specifically Facebook. Both Mukute (2010) and Simovska (2003) showed how learning in such social-ecological zones of proximal development can be scaffolded and supported (in Simovska's case via tutor and learner internet-based interactions and in Mukute's case, via interventionist expansive learning workshop processes).

My research therefore contributes to an emerging, yet not well understood area of research in environmental education. The knowledge gap that it helps to address is the *learning and mediation processes (especially scaffolding) associated with Web 2.0 social networking tools (Facebook) in **environmental education**, as related to the social-ecological zone of proximal development presented in and via the EETDP learnership course*. My foundational understanding of zone of proximal development is provided by Vygotsky (1978) who wrote:

... an essential feature of learning is that it creates the zone of proximal development; that is, learning awakens a variety of internal development processes that are able to operate only when the child [learner] is interacting with people in his [or her] environment and in cooperation with his [or her] peers. Once these processes are internalized, they become part of the child's [learner's] independent developmental achievement. (p.90)

⁵ See section 2.2 for further description of the EETDP course.

Such a process requires scaffolding, as explained by Bruner, Wood and Ross (1976) where the “acquisition skill of the human child can be conceived as an hierarchical program where component skills are combined into higher skills” (p.89). In brief, scaffolding of learning involves forms of support provided by tutors, peers and/or mentors as learners move towards new skills, concepts or levels of understanding. In adult education it is recognised that peers may also be teachers and/or mentors, which makes Facebook a potentially interesting space for investigating these processes. It is a term which helps to portray the temporary, but essential, nature of the mentor's assistance as the learner advances in knowledge and understanding (see section 3.4 for further explanation). It draws attention to *supportive learning interactions and processes* involved in the zone of proximal development. In this study I seek to avoid interpreting this narrowly or too technically, rather providing a more holistic view of this concern.

With this as background, the main research question guiding this study was:

How can Facebook (a social networking online site) be used to scaffold learning and meaning making on the EETDP learnership?

To address this question I worked with the following research goals below. These guided the data generation and analysis of the study (as described in Chapter 3 and outlined in Table 3.2).

- In what ways do mentors and peers make use of Facebook to scaffold learning and meaning making on the EETDP learnership?
- What social processes are involved in using Facebook as a strategy to scaffold learning and meaning making?
- Does the use of Facebook contribute to expanding learning within the Zones of Proximal Development framed in and by the EETDP learnership course?

1.5 Overview of the Study

Investigating these goals in the context of the EETDP course, and the broader socio-ecological landscape, and the use of the public platform world of Facebook for teaching and learning, as introduced in Chapter 1, is an ambitious project. I have also found this

topic to be philosophically complex as environmental education praxis, when interpreted deeply and non-technically, lies at the edges of social change and a reconstituting of society, as has been described by authors such as Orr (2004) and Jickling (2009). I have tried to express this via the use of opening citations to each of the chapters that are for the most part philosophical, and draw on contemporary social theory (e.g. the perspective of Haraway used to open this thesis). The intention is to convey an understanding that the study I am dealing with is not merely technical, as could be erroneously interpreted within more conventional traditions of the Masters half-thesis. It is my hope that readers are able to appreciate this ‘layer’ of engagement with the study topic, and not see it as extraneous or ‘off track’ in relation to the more empirically framed aspects of the study.

1.5.1. Delineation

This study, confined by the boundaries of a half-thesis Master’s Degree, posed challenges for the way in which I have worked with the theory-praxis nexus. I suggest that this work should therefore be considered more as an introduction to this topic, as each of the theoretical concepts with which the study engages can be explored in much more detail, as could the empirical foundations of the study, and the interpretations offered. As indicated above, the study is also embedded in complex philosophical debates about the changing nature of human societies at the start of the 21st century.

For the purposes of this study, however, the question of applicability and effectiveness of the Facebook group sites for environmental educational courses was always kept in mind, helping to maintain the boundaries of the scope of the study.

1.5.2: Brief introduction to the chapters

The next chapter, *Chapter 2: Contextualising the Environmental Education, Training and Development Practices Learnership*, presents a contextual and historical description of the Environmental Education, Training and Development Practices learnership course, which formed the empirical context of the Facebook interactions and research reported on in this study.

Chapter 3: Key concepts and theoretical perspective to aid interpretation and analysis presents the key theoretical concepts used in this study in more depth, and a literature review of the use of Web 2.0 social networking sites is provided to further locate the study. The following concepts are discussed: *Zones of Proximal Development (ZPD)*,

scaffolding, meaning making, collaborative learning and mentorship and apprenticeship. There are many other related concepts but for purposes of scope and manageability in a half-thesis context, only key concepts are dealt with.

In *Chapter 4: Into the Great Wide Web*, I discuss the methodology used to navigate through the Facebook site in order to gain insights into how it enhances environmental education on the EETDP learnership. The research design is discussed in detail and the technical considerations of the study are considered.

Chapter 5: The Mirror then enters this represented data and attempts to analyse it for the presence of collaborative learning, ZPD, and other distinctions as identified earlier. These are like eddies and whirlpools of learning and knowledge creation and the attempt to augment traditional learning via online interaction on social networking sites is explored in some detail.

Chapter 6: The Pond: Echoes of learning completes the study by presenting the findings of the research through the main doors of understandings or conclusions generated through the sifting and analysis of the data. This chapter also includes recommendations for further research.

1.6 My Position in the Study

At the time that the study was conducted, I was working as an Environmental Education facilitator at the Wildlife and Environment Society of South Africa (WESSA), in a training unit called SustainEd. WESSA is the oldest environmental non-governmental organisation (NGO) in South Africa and it is an organisation committed to environmental education in the 21st century. SustainEd is the accredited training arm of WESSA and was responsible for the roll-out of the EETDP learnerships and other short accredited environmental courses. I was responsible for designing the materials for the EETDP learnership, and was involved in the assessment, facilitation and quality management of the course and the other environmental education courses offered by SustainEd.

In terms of the Facebook site activities, I was the site administrator and creator and I was responsible for allowing students and tutors access as well as for posting relevant tutorial

activities on the site. From this it is clear that I was intensely involved in the data generation phase of the study: a participant observer actively involved in the data construction.

I had left WESSA however, at the time of writing up the study (after the 2011 learnership had been completed). Thus, the writing up of the study benefitted from reflective hindsight, and this helped me to analyse the data with some 'distance' from the original strong participant involvement that I had during the data generation phases of the study.

Due to personal circumstances and a loss of a close family member (my mother), I was not able to write the study up immediately during and/or after the fieldwork had ended. This break in time allowed a further distancing from my intense involvement in the study during the data collection. I finalised the study in 2012/13, more than a year after the data had been generated. I do not think that this negatively affected the study; rather I would suggest that it enhanced reflexive engagement with the study and its data.

CHAPTER 2

CONTEXTUALISING THE ENVIRONMENTAL EDUCATION, TRAINING AND DEVELOPMENT PRACTICES LEARNERSHIP

“I wonder what you would like me to talk about. There are so many problems. The world is upside down. What would be of significance and have a meaning to talk about? What would be of importance to you? Is it that we are seeking something new, or is it that we are trying to find out the cause or the many causes of this extraordinary, unprecedented crisis in the world? And if you do find the cause of this extraordinary misery, confusion and strife between man and man, if you find the causes, will that discovery empty the mind of its problems? Will external environment, the pressures, the new inventions, the technological development, the scientific approach, will they actually dissolve and bring about a new mind and heart? Because it seems to me, as the house is burning, not only your particular little backyard, but the house of everyone... our house is burning, which is not a theory, which is not an idea, which is not something the expert, the specialist points out. It is not in the books with their peculiar, absurd answers. The house is actually burning... Education, except along the technological lines, has lost its meaning. Why should you be educated at all? To become a lawyer, a professor, a businessman, to spend your life, forty years of it, in an office...”

Extract from a talk given by Jiddu Krishnamurti, Varanasi, Benares, 1964

“The divide between the rich and poor, the privileged and the deprived, the powerful and the marginalised has become marked primarily by a differentiation in access to knowledge and information. Those who have access to cutting-edge knowledge hold the advantage in all arenas of social, political and economic life.”

Extract from a talk given by Nelson R. Mandela, at the 26th International Conference on Improving University Teaching, Johannesburg University, South Africa, 2001

This chapter introduces the EETDP learnership, and its construction in the South African National Qualifications Framework. It helps to show that the focus of this study lies also in adult workplace learning, which is where learnerships are most widely used i.e. as a form of structured and supported workplace learning. The chapter also helps to further contextualise why Facebook was seen to be a potentially helpful mediation process in this environmental education course. The chapter introduces the content and framing of the EETDP learnership which, as noted in Chapter 1, provides the assessment standards to which learners on the course aspire in terms of achievement, and which also guides learner interactions, internalisation processes, scaffolding activities and engagement on the course. The chapter also introduces the two Facebook sites that formed the specific empirical basis of this study.

2.1 Introducing Learnerships

2.1.1 Learnerships as a structured approach to organising learning in workplaces

The preceding two citations point to the fact that education and lifelong learning are not simple matters. It is also a highly complex and contested terrain. Jiddu Krishnamurti's early childhood and his life story is a fascinating study about a boy apprenticed to be a world teacher and philosopher, his "achievement" and renunciation of those very titles and the body of work he produced (primarily recordings of talks given all over the world and many of them converted into books). The young Krishnamurti was "found"⁶ playing on a beach close to the Theosophical Society Grounds in Besant Nagar, Chennai, India. C.W. Leadbeater was informed by Madame Blavatsky (the founder of the Theosophical Society) that the Master Khut Umi told her that the new world teacher will arise at the beginning of the 20th century and that he must find him. Leadbeater searched everywhere and finally found the boy Jiddu Krishnamurti when he was only 14 years old and stated that he was the most selfless person he has ever seen⁷ (Jayakar, 2003). The Theosophical Society then took the boy Krishnamurti and his brother and they were

⁶ The Theosophical Society virtually kidnapped the young Krishnamurti and his brother refusing to listen to the pleas of his distraught father

⁷ Leadbeater could see people's *auras*, the bands of energy around each human being in esoteric theory, and stated that Krishnamurti's aura was the "most wonderful aura he had ever seen, without a particle of selfishness in it".

brought up together in the headquarters of the society in London and its various other branches all over the world. What began was a regime calculated to enable Krishnamurti to take over *The Order of the Star* as “World Teacher”. In 1929 however Krishnamurti renounced the title and dissolved the order stating implicitly that the truth is a pathless land and nobody can lead one to the truth. Renouncing all the wealth of the society he dedicated his life to telling people about the “truth” till his death. Strangely by renouncing the very title of world teacher he became one of the greatest philosophers of our time inspiring many people from all walks of life. His comment that the house is burning in 1964 proves eerily prophetic in these scorching days of climate change⁸. His thoughts on education are interesting; from the quote above Krishnamurti is anticipating what Orr (2004) would conclude about the generation of ecological illiterate graduates as discussed previously in section 1.5: college graduates who blindly march in to fill the empty quotas of the workplace without considering the meaning of their lives and their relation to the environment, society and spirituality. Learnerships in the dialogue of the new South Africa are sometimes branded as being ornamental solutions to the current high unemployment situation in the country, where learners pass as cannon fodder only to be displaced once again when the learnership has run its course. The only real beneficiaries often seem to be the training providers who gain an income stream and the Sector Education and Training Authority (SETA) and the government departments who dutifully fulfill their quotas.

Nelson Rolihahla Mandela (1918-2013) needs no introduction and is one of the most quoted people in the world. I have taken the liberty to add his words here not only because so recently have we come to commemorate the loss of this great statesman but also because he was a tireless advocator for equal and complete education and for lifelong learning. Mandela himself used to read six newspapers every day, keeping up to date with the world and even calling it to task at times when he was in his twilight years (Mandela, 2011). His quote that precedes this chapter highlights the reality and potential of information technology (IT) in Africa. The quote also illustrates the challenges we face in *upskilling*⁹ South Africa coming as we do from a disenfranchised past.

⁸ Global warming is the now politically incorrect term for climate change. Environmentalists and educators binned the term after concluding that it sounded too appealing for people in colder climes. Global warming however gives one a stronger sense that “the house is actually burning”.

⁹ See section 2.1.2 for more detail.

In modern societies various approaches to organising and structuring learning have emerged, especially as it has become more obvious that learning does not only occur in classrooms and colleges, but can also take place in workplaces. In earlier times the most common approach to workplace learning was the apprenticeship, and until recently this approach was used widely in South Africa, especially for the training of artisans. However, after 1994 and with the advent of the National Qualifications Framework (NQF), which requires more technical control in the assessment of learning, apprenticeships changed to what are now referred to as 'learnerships'.

In this study, I used the theory of apprenticeships (see section 3.4) to explore the context of the environmental education learnership and the workplace based contexts in which the courses were delivered. Although different in their approaches, the learnership and apprenticeship models of learning are both essentially workplace based phenomena and thus the theory of apprenticeship seems relevant to a 21st century learnership. It was also important to understand the contexts of the EETDP course candidates. Further technical description of the structuring of the learnership and how it works in practice is provided in section 2.1.2 below. First I discuss the South African Qualifications Authority (SAQA) and the National Qualifications Framework (NQF), and how learnerships are framed by these policy structures as a form of adult workplace learning in South Africa.

2.1.2 SAQA and learnerships in South Africa

SAQA (South African Qualifications Authority) is a statutory body established under the Department of Education (DoE) in terms of the South African Qualifications Act (RSA, 1995). The same Act mandated SAQA to design and implement a National Qualifications Framework (NQF) which in turn has its own associated legislation (SAQA, 2004), which mandates and regulates the work of the institution. This same mandate was re-confirmed in the revised NQF Act of 2008. At its broadest level, the NQF was designed essentially to redress the past educational injustices engineered by Apartheid in South Africa. It was an education that disenfranchised and dispossessed more than it educated and the road to recovery both structurally and socially was, and continues to be, a mammoth task. Thus, according to Allias (2011) the NQF was seen as a "mechanism which could create sense and coherence out of the fragmented education and training system, but also which could drive the creation of the desired type of education and training system" (p.3).

The NQF was designed to allow for maximum flexibility, transfer of skills and in the process it sought to redress past injustices of apartheid education. The NQF was firmly focused on learning outcomes and thus it enabled training providers to offer courses competitively with established institutions. It did not go exactly as planned and 16 years later a new version of the NQF is being applied by SAQA, after revision of the NQF Act in 2008. However, for the purposes of this study, I will focus mainly on the NQF as it was when these learnerships were implemented and in the context of the EETDP learnership (see Table 2.1 below).

The classical definition of a learnership is that it is a work based route for learning and gaining a qualification within the NQF and includes levels 1 to 8¹⁰ (see Table 2.1). For the learnership WESSA SustainEd used the EETDP Level 5 qualification (see Appendix 1). Learnerships are designed according to the qualification's unit standards, which have a total number of credits depending on the qualification level reflected on the NQF. Unit standards are components or building blocks of NQF qualifications. Each unit standard is formulated in such a way that it can also be used as a skills programme.

¹⁰ The NQF levels 1-8, as used at the time of the learnership construction indicate the progression of a learner through the system from primary school to its culmination in earning a PhD.

NQF LEVEL	TYPE OF QUALIFICATION		TYPICAL LEARNING PROVIDERS
HIGHER EDUCATION AND TRAINING BAND (HE)			
8	Doctorate & Further Research Degrees		Universities, Professional Institutions & Technikons
7	Master & First Research Degrees		Universities, Professional Institutions & Technikons
6	First Degree & Higher Diplomas		Universities, Professional Institutions & Technikons
5	Diplomas & Occupational Certificates		Universities, Technikons, Colleges & Workplace
FURTHER EDUCATION AND TRAINING BAND (FET)			
4	Grade 12	High School, College & Workplace Certificates	Public & Private High Schools, Public & Private Colleges, Occupational Colleges and Training Institutions, National, SETA & Organisation-based Education and Training Schemes
3	Grade 11		
2	Grade 10		
GENERAL EDUCATION AND TRAINING BAND (GET)			
1	Grade 9	Senior Phase	Public & Private Primary Schools and High Schools, Private Colleges and Training Centres
	Grade 7	Intermediate Phase	
	Grade 5	Foundation Phase	
	Grade 3	Pre-school Phase	

Table 2.1: The National Qualifications Framework 1.0 (SAQA, 2004)

The EETDP learnership that forms the focus of this study is pegged at Level 5 on the NQF. It is therefore a post-matric programme, offering a form of training for people in workplaces who may or may not have higher education qualifications. Kraak (2005) suggests that this skill level can be described as an ‘intermediate’ skill level, and suggests that giving attention to this level of skills development is vital for the country’s development.

The learnership includes both structured work experience (the practical component) and instructional or contact tutorial learning (the theoretical component of the qualification). A learnership must relate to a specific occupation and can therefore be regarded as an occupation specific learnership. Thus in order for the EETDP to be a true learnership, WESSA (the implementers of the programme) sought suitable employers for the

workplace learning component of the course (which accounted for more than 60% of the course). The employers who agreed to the learnership were the Department of Environmental Affairs and Tourism (DEAT; now renamed DEA) and the City of Cape Town (CoCT) . The employers were also responsible for the payment of monthly stipends to the learners for the duration of the course. Figure 2.1 outlines the relationships within a learnership.

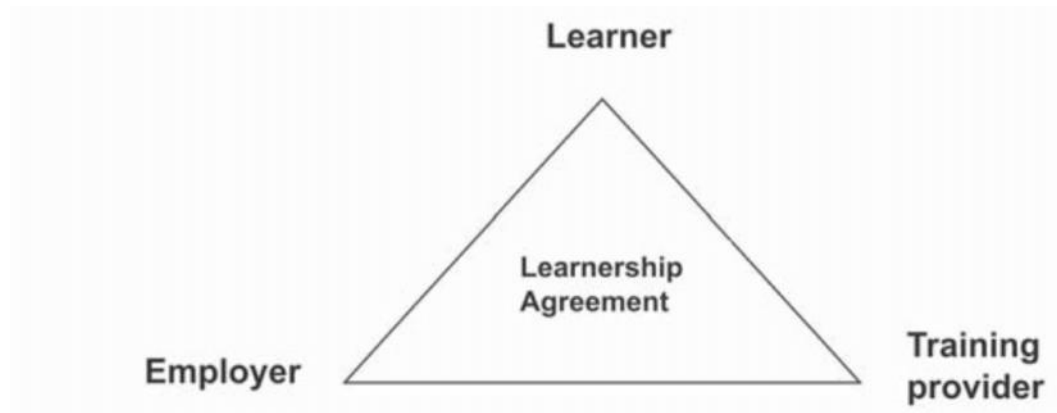


Figure 2.1: The learnership model consists primarily of three parties: the learner, the employer and the training provider (from du Plessis, 2007, p.37)

Thus, in the modern economy the learnership closely resembles apprenticeships: from the placement of learners in a workplace, to the progression and steady achievement of theoretical understanding of the craft or work, to the practical application in the workplace. It does not, however, fully encompass all the ideals of an apprenticeship, a system of tutorage that is rapidly disappearing in the face of mass education and where education itself has been transformed into a commodity.

True apprenticeships (a master transmitting complex and earned knowledge through sequential steps or through different ZPDs) remain in only a few cultural arenas such as the priesthood, classical music and martial arts studies. Such a level of tutorage could not, however, be achieved on this learnership course; it is perhaps necessary in environmental education where behaviour adjustment and understanding of the Earth's ecosystems might require close proximity to a mentor.

Learnerships, while drawing on some of the principles of apprenticeship, especially concepts of mentorship, are differently structured, and are qualifications based, formally assessed, and involve formal tutoring / teaching (of theoretical concepts and approaches) and workplace-based interactions which are meant to involve practice and reflexive reviewing of practice. They are normally structured over a period of a year, and involve regular group sessions (contact teaching) and times away in workplaces.

Kraak (2005) argued that learnerships were an important feature of a ‘multi-pronged’ approach to skills development in South Africa:

For a developing country such as South Africa, with a large proportion of its populace unemployed and possessing very low levels of skill, a privileging of high skills is inappropriate as the single focus of HRD. (p.63)

The implementation of learnerships in South Africa has not been unproblematic, and Daniels (2009, p.7) points out that post-1994, under the NQF Act and its related legislation,

... it is important to note that efforts to upgrade skills have to be linked with the National Qualifications (NQF). Therefore learnerships need to be targeted to various NQF levels, and this requires co-ordination between the training providers, the Sector Education and Training Authorities, and the Department of Education. ... [and] training is very poorly administered, highlighting poor co-ordination between the Department of Labour and Department of Education. Among Sectoral Education and Training Authorities (SETAs), there is also under-performance on their mandate.

From the above two quotes alone one can see that learnership dialogue in South Africa is not without its challenges. Primarily, because of the poor administration and the underperformance of the various SETAs, there is still a skills dilemma in South Africa and the learnership programmes designed to meet these quotas do not perform adequately. It was into this landscape that the EETDP learnership was launched.

2.2 The EETDP Qualification and Learnership

The EETDP qualification that has guided the EETDP learnership became part of WESSA's environmental education opportunities in early 2005. It was accredited by the Education, Training and Development Practices (ETDP) Sector Education and Training Authority (SETA), and WESSA permitted to offer this qualification in the form of an accredited learnership via its status as an accredited training provider, as mentioned in Chapter 1.

The main aim of the EETDP level 5 qualification, and the associated learnership offered by WESSA, was to create a new type of undergraduate, one who was not benignly blind to the environmental hazards of the workforce or part of the new regiment of Orr's "ecological illiterates" (2004). From the very first module its agenda was clear. It was designed to serve the needs of environmental educators, tour guides or any early practitioner in the field to orientate them to the global ecological crisis, and to improve their response practices, especially their education, training and communication practices. Its main mode of facilitation was learner oriented and the learnership sought to establish a growing ethical awareness and concern for environmental considerations in modern life (WESSA, 2009).

The purpose of the EETDP as outlined in the *Learnership overview and application procedure document* is to "strengthen the field of Environmental Education as a response to the deepening environmental crisis" (WESSA, 2005, p.1). The purpose and rationale of the EETDP, as identified by SAQA in the National Certificate: EETDP Level 5 qualification document, was to establish a pathway for environmental educators wishing to pursue a career in the field and "to prepare candidates to function as entry level environmental education practitioners" (SAQA, EETDP Level National Certificate, 2005). No formal degree exists in environmental education under the auspices of the Council for Higher Education (CHE) at level 5, thus the necessity to develop a course aimed at Level 5 (intermediate skill level) was vital. Currently the only alternative is post-graduate qualifications. Finally, in accordance with the principles of SAQA, in terms of redressing the injustices of the past, the EETDP serves as a means of enabling experienced environmental education practitioners in the field to formalise their knowledge, acquire credits and a formal qualification in line with the National Qualifications Framework, intended also to improve employability.

Workplaces are essential if one wishes to have mentors for students on a learnership. As mentioned above, learnerships are three-way agreements signed between employers, training providers and the relevant SETA (see Figure 2.2). They are designed to be 70% workplace-based learning and 30% tutorial time or contact time. Mentors were thus selected from each respective workplace with a maximum of two learners per mentor. However, because of logistics and geography of the employers' branches we could not always restrict the number of students and had to assign up to four learners to one mentor at times. Mentors were essential in helping and guiding the learners through workplace assignments.

Within the NQF, with short term training structured by unit standards¹¹ the meaning of mentorship changes from that of the earlier apprentice tradition (explored in greater detail in section 3.5). Most mentors were struggling with the level of complexity inherent in the unit standards of the qualification even though it is fundamentally pitched at Level 5 within the NQF framework (see Table 2.1 above). The complex content and concepts that need to be dealt with on the course exceed even a certificate at Level 6 and this has been noted by various students and even members of the Standards Generating Body (SGB) who designed the qualification on which the course is based.

The scope, complexity of concepts, and need to situate and support the course learning in a workplace context, has led to the need for ongoing innovation in establishing new approaches to providing workplace learning support. A need was expressed for an internet based networking site for mentors and students as well as facilitators (in the 2008 WESSA DEAT course) to join in on discussions. It was hoped that this could help create learning pathways and deal with obstructions and problems that were arising during the weeks in between the contact sessions as students sought to complete their assignments. It was also anticipated that in terms of workplace learning such a site could be extremely beneficial in orchestrating distance learning as well as providing a platform for candidates to engage with key concepts of the course with each other. The two roll-outs of the EETDP qualification (which this study focuses on, see Table 2.2 below) were based on unit standards at Level 5 (see Appendix 1) and attracted a large number of learners who had recently completed their matric certificates as well as those with diplomas in various sub-fields of conservation during 2009 and 2010. I was the course

¹¹ Unit Standards are the building blocks of an NQF qualification and each unit standard has credits and assessment criteria.

co-coordinator, designer and facilitator on the EETDP learnership during 2007-2011 as noted in Chapter 1.

This study focuses on two roll-outs/sites of the EETDP learnership during 2009-2011 as defined in Table 2.2 below, and seeks to examine in some depth the intervention introduced into the course of using social networking sites (a Facebook site) as a possible pedagogical innovation in supporting workplace learning.

Site 1:	Site 2:
<p>WESSA/Department of Environmental Affairs DEA 2009/2010 learnership: Started with 52 candidates largely based in Gauteng. All learners on this programme were in possession of a matric certificate and some had diplomas and first certificates. All learners were placed in various environmental education centres around Gauteng, Western Cape, North West Province, Mpumalanga and KwaZulu-Natal. All learners received a monthly stipend on this roll-out.</p>	<p>WESSA/ D G Murray Trust [DGMT] 2010/2011 learnership: Started with 14 candidates all based in the Western Cape and George. All candidates were in possession of a matric certificate and were unemployed. They were placed in voluntary roles in various NGOs around Cape Town and George. Learners did not receive a stipend in this roll-out but travel and accommodation costs were covered.</p>

Table 2.2: Description of the two EETDP groups involved in this study

In this study, as mentioned in Chapter 1, I aim to explore the potential of the Facebook social networking sites in scaffolding students on this specific workplace based course (the EETDP learnership), a process which took place via interactions on these two learnership programmes (Site 1 and Site 2 described above).

As mentioned briefly in Chapter 1, and which will be discussed in more detail in Chapter 3, scaffolding is a concept introduced into education by Bruner (1986) who suggested that educators use different strategies to develop learners' potential and learning capabilities within their zones of proximal development. Thus the strategy of augmenting the normal delivery of contact tutorials and submitting of assignments with constant and always available discussion groups and hints and tips on the platform of the Facebook

site could be seen as a deliberate influence ('a scaffold') by course tutors to create interest in course concepts and guide learners through tricky assignments.

The course content and roll-out procedures are outlined in more detail in Table 2.3 that follows, but essentially involved the following components for delivery and assessment:

- Four modules taught via five contact sessions. Each module was 'made up' of a number of unit standards that were required within the EETDP qualification. Each unit standard has its own assessment criteria, which created an expansive and complex assessment regime.
- Five workplace-based, applied assignments which were to demonstrate learners' competence in relation to the unit standard-based assessment criteria.

The Facebook site interaction was therefore planned to support learners to apply course knowledge to practice, and to engage with the course concepts and processes in between course sessions. The learnership course is structured as a year-long programme with five contact sessions throughout the year. Most of the work covered in the contact session provides theoretical background to environmental education practice. The course is largely workplace focused and thus 70% of the course needs to be completed at the workplace with regard to assignments and workplace based tasks. Thus, as mentioned already, the task of the mentor is vital to steer the learning process at the workplace.

However, there is a need for relational links between the course sessions and the workplace learning (applied learning). The Facebook site intervention was a means of trying to enable this. The context of the workplace is at the core of the EETDP learnership. As a learnership, placing students in respective workplaces while they "unpack" or continue to apply course learning in between contact sessions was vital in ensuring that the theoretical component of the EETDP was applied in the learners' respective workplaces. Most of the learners were placed in work contexts where they were practising or beginning to practice elements and aspects of environmental education. The role of the workplace was also vital in establishing a mentor for the learner throughout the duration of the course as mentioned above.

Table 2.3: The EETDP Qualification: Unit Standards and roll-out¹²

Module 1	Module 2	Module 3	Module 4	
“Education and the Environment”	“Education, Environmental Justice and Ethics”	“Education and Learning Support Materials ”	“Education and Evaluation”	
Contact Session 1	Contact Session 2	Contact Session 3	Contact Session 4	Contact Session 5
Purpose: To give the practitioner a background in environmental concerns, education and ethics and begin to enable the practitioner to critically analyse the context of their workplace or community.	Purpose: This module develops the critical analysis skills developed in Module 1. It requires the practitioner to go deeper into the nuances of their socio-ecological context, and determine the implications for developing an appropriate learning programme.	Purpose: To understand how education orientations work and how to adapt learning support material. By reflection on how the methods and materials used articulate with the broad goals and principles of EE to suit a learning context and programme.	Purpose: To evaluate a learning programme prior to implementation. The practitioner then refines the learning programme and conducts the implementation.	Purpose: Consolidation. Corrections to POEs prior to final submission. Completion of assessment documentation.
<ul style="list-style-type: none"> • Core 13637~ Network broadly to source information (4) • Core 13649~ Apply fundamental knowledge of environmental ethics to a field of work or study (6) • Fundamental 8367~ Understand and develop conservation ethics (4) • Core 13632~ Demonstrate knowledge of EE goals, principles and methods and their appropriateness in different contexts (4) • Core 13648~ Apply appropriate social protocols 	<ul style="list-style-type: none"> • Core 13650~ Demonstrate a general understanding of people-environment relationships and current environmental challenges (16) • Core 13640~ Research and analyse an environmental issue in terms of principles of environmental justice and sustainability and recommend possible solutions (8) • Core 13634~ Select, plan and adapt a contextually relevant environmental learning programme (6) • Fundamental 12376~ Assess and control pollution (2) • Core 13668~ Work ethically and professionally as an EE practitioner (3) • Core 13635~ Implement and evaluate an environmental learning programme (6) 	<ul style="list-style-type: none"> • Core 13636~ Select, adapt and use existing environmental LSMs and develop own supplementary learning aids (4) • Core 13674~ Identify and support learners with special needs (4) • Core 8618~ Organise oneself in the workplace (3) • Core 13651~ Review a variety of approaches to teaching and learning (4) • Core 13632~ Demonstrate knowledge of EE goals, principles and methods and their appropriateness in different contexts (4) • Core 13648~ Apply appropriate 	<ul style="list-style-type: none"> • Core 13632~ Demonstrate knowledge of EE goals, principles and methods and their appropriateness in different contexts (4) • Core 13667~ Reflect on own facilitation performance as an EE practitioner (5) • Elective 9937- Evaluate a course (8) • Elective 13661- Participate actively in a local environmental action programme (8) • Elective 123397- Evaluate a learning intervention (10) • Elective 10288- Organise a programme of learning (8) 	

¹² This is the second revision (2009) of the entire course as implemented for the two site groups discussed in this thesis. For the current roll-out, as implemented with new workplace tasks, see the SustainEd site online at www.wessa.org.za/sustained.

<p>in the workplace and community (4)</p> <ul style="list-style-type: none"> • Core 8618~ Organise oneself in the workplace (3) • Core 13651~ Review a variety of approaches to teaching and learning (4) • Fundamental 8662~ Analyse and communicate workplace data (5) <p>Learners will arrive for Module 1 details of their organisation, to allow them to begin workplace-based learning immediately.</p>	<ul style="list-style-type: none"> • Fundamental 8385~ Facilitate conservation understanding (4) • Fundamental 8367~ Understand and develop conservation ethics (4) <p>This module focuses on environmental and conservation ethics and injustice, people-environment relationships, in context of specific environmental issues and environmental education programmes.</p>	<p>social protocols in the workplace and community (4)</p> <ul style="list-style-type: none"> • Fundamental 8647~ Apply workplace communication skills (10) <p>This module focuses on the skills behind planning and developing a learning programme in a specific context. The context will be workplace-specific, and will be decided on jointly by the practitioner, their mentor, and the facilitator. Emphasis thus falls on planning a programme that is relevant and appropriate to a specific context.</p>	<p>This module focuses on evaluation theory and methods as well as organisation and implementation of a workplace relevant environmental education programme.</p>
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WORKPLACE ASSIGNMENTS

<p>ASSIGNMENT ONE:</p> <ol style="list-style-type: none"> 1. Research an environmental issue that will become the subject of a learning programme 2. Network broadly within a community of practice 3. Workplace documents and protocols 	<p>ASSIGNMENT TWO:</p> <ol style="list-style-type: none"> 1. Analyse your learners and the training needs 2. Plan the learning programme 3. Workplace documents 	<p>ASSIGNMENT THREE:</p> <ol style="list-style-type: none"> 1. Adapt learning materials 2. Develop the programme 3. Workplace documents 	<p>ASSIGNMENT FOUR:</p> <ol style="list-style-type: none"> 1. Implement and evaluate a pilot session of your programme 2. Workplace documents 	<p>ASSIGNMENT FIVE:</p> <ol style="list-style-type: none"> 1. Submission of supplementary evidence if necessary
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The mentor was often a superior or manager of the learner and thus the logic of the workplace component and concept of mentorship involved an up-skilling or scaffolding of the learner through the ZPD in environmental education in the workplace context. Scaffolding in the course took place 1) during course contact sessions; 2) at workplaces via mentors; and 3) on the Facebook site in between sessions.

As can be seen from the framing of the learnership course (Table 2.2) the EETDP learnership course provides learners with the opportunity to respond to an environmental issue directly in its context and to create active learning programmes and educational change projects that respond to their communities' needs as well as their workplace mandates.

2.3 Conclusion

This chapter contextualised the study by indicating how learnerships in post-1994 South Africa, under the National Qualifications Framework, were designed to address intermediate skill level competence and learning opportunities. In Environmental Education there were no formal learning opportunities available prior to the introduction of the EETDP learnership qualification and its associated courses as offered by WESSA. The concept of learnerships is based on the old idea of apprenticeships, but differs through a more structured approach to unit-standard based learning, competence-based assessment and a model that requires 30% contact teaching, and 70% applied workplace learning, all of which needs to be formally assessed. The model as a whole has not been without its problems as briefly noted above, one of which is that it is difficult to keep in touch with learners between course sessions, and to ensure that good mentoring actually takes place in workplaces. The Facebook site was a proposed means to address this problem, and as such it was also an interesting area to examine from a pedagogical innovation vantage point, as noted in this chapter.

However, to develop a deeper understanding of what such 'pedagogical innovation' involves in the context of the study's interest in scaffolding of learning in zones of proximal development via the Facebook site on a learnership, it is first necessary to deepen conceptual and theoretical understanding of the concepts used in this study that relate to the interest in 'pedagogical innovation' via scaffolding in the ZPD.

CHAPTER 3

KEY CONCEPTS AND THEORETICAL PERSPECTIVES TO AID INTERPRETATION AND ANALYSIS

“Master and pupil: It is part of the humanity of the master to warn his pupil about himself.”

Nietzsche, 1982, p.187

This chapter will look at the key theoretical concepts that informed this study. In order to provide a means of understanding what was going on in the Facebook sites educationally I have focused on four main conceptual areas in this study. They are 1) Collaborative learning, 2) Zones of proximal development, 3) Scaffolding and 4) Meaning making and 5) Mentorship and Apprenticeship. These, as explored in the context of a learnership, are given deeper meaning if one delves into the concept of apprenticeship, as this is one of the foundational processes that has informed the emergence of the learnership.

The chapter also reviews some of the literature on the use of Web 2.0 in Education, especially insights that can be gained from the literature on the use of social networking sites and how they relate to scaffolding of learning. The literature on the use of Web 2.0 is necessarily wide and growing, however, I chose to keep the literature review of Web 2.0 use in education (and environmental education where it existed – see Chapter 1) quite focused on the key concepts that I was working with in this study. The aim was also to maintain focus and scope within a half-thesis framework.

3.1 Collaborative learning

At the heart of this study was an attempt to aid the effectiveness of collaborative learning techniques for the purpose of environmental education. Many would consider nature itself the ideal place to learn about the environment, and without a doubt it is, especially collaboratively with a range of interesting, content rich exercises. On course we “played” many environmental education “games” in the context of the land itself. Contact tutorials were held in various nature reserves across the country, for example, the contact tutorials

for Site 1 (the DEAT EETDP 2009/10 learnership) were held at Walter Sisulu Botanical Gardens, Suikerbosrand, Pilanesberg Nature Reserve and Delta Environmental Park. Within the grounds of these nature reserves we conducted various collaborative learning activities including grassland studies, Mini SASS¹³ water studies and making eco meals. The sessions for Site 2 were all conducted at the WESSA Western Cape offices at ‘The Barn’.

As indicated in Chapter 1, however, the attempt of this study was not so much to focus on *all* the aspects of collaborative learning in the learnership context, but to find out the effectiveness of virtual learning spaces, artificial and far removed from nature in a sense, where collaborative or cooperative techniques could be used to improve understandings of environmental processes.

Dewey in his treatise *Democracy and Education* (1916) states that “the general function of education assumes namely that of direction, control and guidance ... the last best conveys the idea of assisting through cooperation the natural capacities of the individuals guided”. He goes on to add that the inherent idea of control implies that the individual at his basic nature is “egoistic, and thus antisocial” but as he eloquently adds “control in this view has a flavour of compulsion or coercion¹⁴ about it” (1916, p.381). Dewey states that “systems of government and theories of state have built on this notion¹⁵, and it has seriously affected educational ideas and practices” (ibid.) but individuals do not solely have an egoistic selfish drive they are also “interested upon the whole, in entering into the activities of others and taking part in conjoint and cooperative doings. Otherwise, no such thing as a community would be possible” (ibid.).

Collaborative learning builds on the interaction of a community of learners or researchers or even hobbyists. Bruffee (1993), an ardent advocator of collaborative learning, as cited in Barkley, Cross and Major (2004), states that

Rather than assuming that knowledge exists somewhere in reality ‘out there’ and that it is waiting to be discovered by human endeavours, collaborative learning, in its tightest definition, assumes that knowledge is socially produced by consensus among knowledgeable peers. (p.6)

¹³ Mini South African Scoring System for investigating river health.

¹⁴ As observed on in section 1.2 when discussing the open nature of the internet and certain governments’ attempts to restrict it and the Arab Spring.

¹⁵ Primarily on notions of Hobbes (1651) *Leviathan*.

In Bruffee's definition of collaborative learning he advocates for the teacher to become a member, "along with the students, of a community in search of a sea of knowledge" (Barkley et al., 2004, p.6). Collaborative learning in its simplest definition involves two or more students working towards common educational goals or outcomes.

The functionality of the Facebook site, as set up for this study (see section 4.3) was to record chronological data of all interactions around specific learning subjects, thus allowing for tracing collaborative (learning) interactions. In order to assess the effectiveness of the Facebook site for demonstrating the effectiveness of collaborative learning however, I had to choose elements that would define this aspect considering the very two dimensional¹⁶ and sporadic nature of the site i.e. I had to develop an understanding of collaborative learning as observed on the social network and the site possibilities of Facebook (as one would be able to do in a fieldwork learning context for example).

Johnson, Johnson and Smith (1998) listed some useful definitions of collaborative learning and I found these ideal for describing the chronological 'scroll down format' of the Facebook group pages' collaborative learning interactions. The authors mentioned five elements but I concentrated on three of the most visible aspects of collaborative learning relevant to the data for the Facebook sites. They are:

- **Positive interdependence:** The success of individuals is linked to the success of the group; individuals succeed; individuals succeed to the extent that the group succeeds. Thus students are motivated to help one another accomplish group goals.
- **Promotive interaction:** Students are expected to actively help and support one another. Members share resources and support and encourage each other's efforts to learn.
- **Group processing:** Students should learn to evaluate their group productivity. They need to describe what member actions are helpful and unhelpful, and to make decisions about what to continue or change.

(Johnson et al., 1998, pp.21-23)

¹⁶ Facebook is a 2D view of a 3D reality.

I will be examining these aspects of the theory of Johnson et al. in more detail in Chapters 4 and 5. It is a learning theory that is extremely useful for both offline and online groups.

3.2 Zones of Proximal Development in Environmental Education

The ZPD according to Vygotsky's classical definition (1978 – see section 1.4) is “the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (p.86). Thus collaborative learning seems to be an aspect or at least a part of the structural functioning of the ZPD. Vygotsky (1998) came to this understanding when researching aspects of child development and he also viewed this development of learners as a series of steps that systematically lead to understanding in which “context” is of crucial importance (p.156). ZPD as an educational concept is as widely misunderstood as scaffolding largely because of the strong visual implications of both these metaphors.

Some have tried to describe the zone of proximal development as a way to *bring down* the level of understanding to the participants or as a kind of *stretching up* of understanding. A more useful explanation comes from Schneuwly (1994, cited in Daniels, 2001) who describes the ZPD as a theory that attempts to understand the “operation of contradiction between the internal possibilities and external needs of the driving force of development” (p.56). Daniels goes on to state that the ZPD is a concept Vygotsky uses to explain the way in which social or participatory learning takes place implying a *process-based meaning* (Daniels, 2001). Wood, Bruner and Ross (1976) have described the tutoring process as “whereby an adult or expert helps someone who is less adult or expert” (p.89). In their seminal paper which describes how young children are “scaffold” by being assisted to accomplish more complex tasks, they state that the “acquisition of skill” can be described as “ a hierarchical program in which component skills are combined into higher skills by appropriate orchestration to meet new, more complex task requirements” (p 89). The text also illustrates how tutors can help young learners (in the case study by Wood, *et al* (1976) they were from the ages 3 to 5 years old). It illustrates how deliberate interventions from tutors form “scaffolding” that helped the children to reach the correct construction.

Lave and Wenger (1991) explain that the operational definition of ZPD has undergone many different interpretations. They suggest that these differing interpretations suggest a broader engagement, a more cultural and historical engagement with social aspects. They distinguish between a 'scaffolding', a 'cultural', and a 'collectivist' or societal interpretation of the original formulation of the ZPD. As discussed in Chapter 1, Simovska and Mukute both seemed to adopt a broader more societal interpretation of the ZPD as framed by the purposes and intent of environmental education programmes. In this study I have supported such an approach to the ZPD, but I have also focused more on the scaffolded interpretation of the ZPD, as this allows for deeper analysis of learning support in a course, as potentially also provided for by the Facebook site construction and use in this study.

As Daniels (2005) suggests, the *scaffolding interpretation* of the ZPD (as discussed by Lave and Wenger, 1991) is one in which a distinction is made between support for the initial performance of tasks, and subsequent performances without assistance. The *cultural interpretation* of the ZPD (as explained by Daniels, 2005) involves the achievement of more mature concepts (involving the merging of the scientific and everyday version of the concept), while the *collectivist or societal perspective* on the ZPD refers to the emergence of new forms of societal activity. This is the ultimate aim of environmental education, but this may not be entirely visible on the Facebook platforms.

For the purposes of this study I will explore via online and offline data generation mainly Wood, Bruner and Ross's seminal (1976) 'scaffolding' interpretation of the ZPD as outlined above. Cultural and collectivist interpretations of the ZPD are widely applied in *Activity Theory*. These are not as prominent in this study, although they may provide interesting educational revelations for most Web 2.0's platforms, but to do so may require a study of larger scope than this one. Lave and Wenger (1991) stress that social practice theory involves "relational interdependency of agent, world, meaning, cognition, learning, and knowing" or in other words "learning, thinking and knowing are relations among people in activity... arising from the socially and culturally constructed world" (p.151). This shows that these interpretations of the ZPD as explained by Lave and Wenger (1991) and Daniels (2005) cannot be very easily separated out in practice, but for analytical purposes they are helpful to researchers.

3.3 Scaffolding and Web 2.0 Learning

If the ZPD as a theoretical concept draws attention to how learning leads *development* then scaffolding theory hinges on supporting such learning in the zone of proximal development. It involves a stepped system of understanding through provision of support at various stages for engaging with either difficult learning concepts or experiences (Wood, *et al*, 1976).

Newman and Wasik (1999) argued that scaffolding is not a ‘one way’ process in which the ‘scaffolder’ constructs the scaffold, but that the scaffolding process in the ZPD involves negotiation between the more advanced partner/s and the learner (p.315). Daniels (2008) notes this as an interesting question for research, “The question here seems to be with respect to where the ... ‘scaffolds’ come from. Are they produced by ‘the more capable partner’ or are they negotiated?” (p.22)

If one example of scaffolding can be viewed in the way a mother teaches a child language by instinctively using more difficult concepts to “scaffold” the child in language acquisition then scaffolding is also to be seen as a step by step process on a linear road of knowledge acquisition. That is if we assume that the trajectory of knowledge is linear and that steps can be identified successfully by site administrators. Does this occur more naturally and what if one cannot account for how it occurs in the teacher/student relationship? As in the study by Bogner (1998) where a group of students undertake a mixture of simple field excursions that are a break away from the normal biology school syllabus it was found to have significant gains in students environmental knowledge and changes in attitude towards human utilisation of nature. Wals (1994) discussing young adolescents’ perception of nature reviews a variety of everyday events that ultimately colours young students perception of nature and their responsibilities towards it from such a diverse litany of issues as drug abuse, rape, fashion and religion

Bruner (1986) states that there exists a “sphere of meaning “of words in relation to each other and because there is no limit to the way expressions can relate to each other, meaning is always underdetermined, ambiguous” (p.64). Vygotsky (1978) spoke about the negotiation of meaning which essentially occurs in the zones of proximal development and this is helped by the scaffolding environment provided by communities of practice. Meaning making therefore cannot exist in isolation and needs as it were a social “aura” as indicated by the Lave and Wenger (1991). So is learning ultimately a

social act? Bielharz (2000) in discussing Bauman and his approach to the human condition states that “[U]nderstanding is nothing more than the struggle against incomprehension” (p. 69). Baumann (1991) also states that “[I]t is only the experience of incomprehension which makes us in a flash aware of the task of understanding” (p.15). Meaning making happens when a learner seeks, understands and comprehends.

This presents an interesting point of analysis of scaffolding on a social learning network site like Facebook (one which I sought to examine by way of interpreting and analysing the scaffolding processes on the site), as reported on in Chapters 4 and 5. Social networking sites allow individuals from diverse locations and cultures to explore and debate issues that affect them in a neutral zone and as part of a larger community – they potentially allow space for negotiated forms of scaffolding to emerge. Simovska (2003), referring to the value of internet based learning for environment and health education, reiterated this by stating that “inspirations from other cultures brings in a more global perspective” (p.113) which impacts on learners’ local practices. She also states that online learning environments create spaces where students can have the freedom to learn and “mutually create meaning in a democratic way” (ibid.). Knowledge interactions and generation on online learning forums are co-constructed and provides scaffolding that is simultaneously asymmetric (mentor/ student; master/ apprentice; learners/ administrators) and symmetric (peers) (ibid.), thus potentially supplementing or decreasing reliance on one mentor in the learning process. As indicated in the goals and in this discussion on scaffolding, this study sought to understand the dynamics of scaffolding reflected in such a site. The scaffolding on the Facebook sites was essentially the processes occurring between peers and mentor/tutor/administrators and students and besides task structuring there were also elements of feedback (given on posts), instructing (when administrators for example will post instructions for assignments) and questioning when mentors and students’ fellow peers will post questions on aspects of the course). How these aspects of scaffolding were “lifted” from the site will be further explained in Chapter 5, which is the analysis of the online data.

Cole, Griffin and Newman (1989) argued that the metaphor of ‘scaffolding’ needs to be critically viewed, particularly if it negates or underplays the importance of creativity in learning (p.68). Daniels (2008) remarked on how Vygotsky recognised the importance of creativity in learning: “The entire future of humanity will be attained through the creative imagination” (p.23). I therefore also consider scaffolding processes not only as a

technical instructional process, but also from the perspective of creativity in learning, which the social networking site may also facilitate (discussed in Chapters 5 and 6).

Scaffolding was first introduced into the education field largely as an instructional metaphor in a pragmatic or theoretical manner (Stone, 1998). Primarily it refers to a form of mediated assistance in which learners solve a problem with assistance and eventually alone. Vygotsky (1998) also stated that “what the child can do with assistance today he can do alone tomorrow” (p.88). Rogoff, Matusov and White (1996) argued that “coherent patterns of instructional practices are based on instructional models, and instructional models are based on theoretical perspectives on learning” (p.115). The instructional model used on the Facebook website potentially also allows students to participate and interact with each other regarding key concepts both during and after the contact sessions.

3.3.1 Web 2.0 learning

Web 2.0 seems to describe a recent evolution of the internet as one in which we turn from hunters and gatherers of information to virtual ‘prosumers’ of knowledge¹⁷. The internet is not a “single news source” as Towner and Dulton (2011, p.8) noted when they researched the United States 2008 presidential elections; rather it consists of several designs and different features of online new sources.

This means that information is packaged in a variety of different ways on the internet. During a brainstorming session at a Web 2.0 conference O’Reilly and other delegates developed several defining characteristics of the main differences between Web 1.0 and Web 2.0, as shown in Figure 3.1 that follows.

¹⁷ Prosumers: where users are simultaneously producers and consumers of information.

Web 1.0		Web 2.0
DoubleClick	-->	Google AdSense
Ofoto	-->	Flickr
Akamai	-->	BitTorrent
mp3.com	-->	Napster
Britannica Online	-->	Wikipedia
Personal websites	-->	Blogging
domain name speculation	-->	search engine optimization
page views	-->	Cost per click
Screen scraping	-->	Web services
publishing	-->	Participation
Content management systems	-->	Wikis
directories (taxonomy)	-->	Tagging ("folksonomy")
stickiness	-->	Syndication

Figure 3.1: Web 1.0 & Web 2.0: Features and characteristics (O'Reilly, 2009)

These “abilities” or evolutions are more impressive than they sound. The web is becoming increasingly personal and enables more and more sharing. O'Reilly (2009, unpagged) noted that the web does not have a ‘hard boundary’ but rather a ‘gravitational core’. Looking at Figure 3.1 above we can see how these “evolutions” in the way the web was beginning to be used have occurred. Wikipedia enabled a knowledge source almost as accurate as Encyclopedia Britannica to be co-created by users whilst BitTorrent allowed for duplication, dissemination, distribution, uploading, downloading and sharing of original music files, video files. Before Web 2.0 we could only receive this information passively and the web page creators were html and Java wizards. Soon, however, once people knew a bit of coding language they could create their own web pages but these were predominantly static with minimum interaction unless you were chatting or buying something online or leaving a comment. Web 2.0 made it easier and quicker for everyone who used the internet to create, send and use information on a scale never seen before.

This discussion on scaffolding and Web 2.0 learning brings into focus concepts of mentorship and apprenticeship, especially when the notion of scaffolding is applied to workplace learning contexts, as in the case of the EETDP learnership outlined in Chapter 2. I discuss these concepts now, as they provide a wider backdrop to the learnership.

3.4 Mentorship and Apprenticeship

This section deals with the theoretical perspectives on ZPD and scaffolding as described above, in order to gain perspective of the mentor's role. The mentors in the context of this study are not limited to the departmental officials and supervisors appointed for the learnerships but also include the facilitators and administrators both online and offline, as explained briefly in Chapter 2.

WESSA, as training provider for the course, provided workplace logbooks and guides in order to scaffold learning while course participants were in the workplace, as well as to support mentors with supervision. Mentors were nominated and selected by the DEA and they were mostly supervisors or in some cases the learners direct manager. The role of the mentor in these workplaces is similar to that of the master to the apprentice. The ancient tradition of apprenticeship will be explored primarily because an important component of the EETDP learnership is workplace learning. As this study is located at the nexus of the SAQA-led research into workplace learning, it provides a valuable insight into what needs to be achieved educationally. The role of the mentor in the EETDP qualification was thus vital for the successful completion of the national certificate as mentioned in Chapter 1 and Chapter 2. Indeed many of the workplace components of the course could not be completed without a mentor at the workplace.

The practice of apprenticeship and mentoring is evident in every culture and the history goes back even further to ancient cultures and the *guru/shishya parampara*¹⁸ tradition in India where a student used to live in a master's house to learn a craft. Normally the family of the student paid for his upkeep and lodgings and this was also common in England in the 14th century as described by Aldrich (1999, p.18). In ancient India, and especially in the classical music tradition, a *shishya* had to live close to the master, go to every performance, spend every moment practising his craft sometimes for ten years, depending on the instrument. Chaitanya (1995) in his book *Sargam – An Introduction to Indian Classical Music*¹⁹ noted that different instruments required particular periods of training. To learn the drum or *mridigam* in its proper context required five years, the

¹⁸ Sanskrit: *Guru*: teacher *Shishya*: student, *parampara*: a word similar to tradition or system in this context.

¹⁹ One of the most brilliant and succinct books on the subject, Chaitanya's work takes one into the very heart of the spiritual tradition on the musical system.

voice needed ten years, the violin 15 years and the *veenai*²⁰ required 20 years (p.12). Most students chose the *chela* to end their tenure where they had to sit in a hut alone with their instruments for a minimum of six months. Pandit Ravi Shankar is said to have spent one and a half years in *chela* while and Ustad Zakir Hussain spent three years. Nothing else exists besides the instrument and, sometimes not even seeing the sun for many months, the apprentice takes the time to assimilate everything he has learnt from the master and attain mastery. This self-imposed exile is similar to the state of *katabasis* for warriors in ancient Greek society as described by Robert Bly (2004) in his book *Iron John*. A young soldier completing his training was required to stay a maximum of three years in a hut of ashes. Here he must remain absolutely still until he can be reborn as a fiery warrior. Similar training regimes existed in Africa especially in the shamanic traditions and in training of the *sangoma*²¹.

Stephanie Bunn (1999), discussing different kinds of apprenticeship that still exist among the Kyrgyz nomads, illustrated a wide variety of apprenticeships, each requiring a specific regime and styles of practices from *shydrak*²² *master*, *manaschi*²³ and *hunter* (pp.80-84). In her tale of the modern day hunter Alpymysh, she describes how he learnt to hunt by watching a master and how he would sit alone in a dark shed talking with his hunting eagle (p.82). Indeed most disciplines requiring an apprenticeship form of training can only be learnt “at the feet of the master”. Certain traditions in *yoga* are dangerous and it is imperative that students learn directly from a *guru* (Sivananda, 1945). Most esoteric practices or guilds were very secretive and only through a series or progression could one gain insight into the higher levels (Black, 2010).

The idea, therefore, of a master scaffolding knowledge for a serious student eager to learn to master the craft as we have observed from the brief sketches of apprenticeship is part an ancient tradition. ‘Scaffolding’, as outlined above, is one of the concepts which looks at how teachers can mentor their students that derives from this tradition, but which plays out differently in modern education and training systems due to new structural framings of education and training (as explained in Chapter 2). The discussion above on apprenticeship and mentoring, highlights the importance of the mentor, and this role is difficult to fill in today’s structured educational environment. The use of the

²⁰ A 5000 year old instrument originating from the Carnatic music tradition in South India.

²¹ Zulu: African mystic

²² Kyrgyz: textile maker

²³ Kyrgyz: epic poem singer

Facebook system is one attempt to bring mentor and student closer together for a more consistent time period on the learnership course.

The discussion on mentor and student in current education and training contexts also raises questions regarding ‘agents’ training others. Popkewitz and Fendler (1999, pp.24-25) stated that the idea of the actor as agent is linked to humanistic theory, primarily with regard to the idea of progress. They state that the idea of “progress was embodied with anthropological motive” (p.25). The environmental education courses run at WESSA – such as the EETDP learnership – also seek to classify and organise change as shown by the course curriculum outline in Chapter 2. There are, however, many assumptions regarding the relationships between course learning and agency that need to be considered.

In *Thus Spake Zarasthura* (Nietzsche, 1882) we encounter the venerable teacher coming down from the mountains to impart his wisdom to the masses only to find them unsympathetic and more interested in their own mirth. Zarasthura claims that they are last men, worse than slaves, because they do not even perceive their chains. This can lead one to ask many questions about scaffolding, mentoring and apprenticeship, for example, are they artful processes, part mechanical and part intuitive? Or are they processes of administering the agent in a particular ‘progress’ direction (of our own definition, or shaped by socio-material realities)? And what if those we seek to ‘scaffold’, ‘mentor’ and/or apprentice to ourselves are unsympathetic to the interests we support in environmental education? And how does this become visible on a social networking site? Does the social networking site have the power to reveal such aspects of learning and learning support?²⁴

Lave and Wenger (1991) describe how the formation of the guilds led to one of the first material developments of the idea of “communities of practice” which begins to provide some theoretical perspective on workplace learning processes. The guild, or a group of apprentices under a master, was a community with distributed cognition where each member of the community of practice contributed to each other’s development in the field (Lave & Wenger, 1991). There is always a distance between the knowledge of the master and that of an apprentice or between what the apprentice needs to learn and

²⁴ These questions are beyond the scope of this half thesis however it is hoped that these philosophical meanderings help open the way to the examination of them.

his/her current understanding. This is in essence what Vygotsky (1978) described as the “zone of proximal development” where the master attempts to bring the learning experience down to the learner or the learner has to “stretch” him/herself into the new cognitive space. Lave and Wenger (1991) describe this phenomenon as “the distance between the cultural knowledge provided by the socio-historical context – usually made accessible through instruction – and the everyday experience of individuals” (p.76). As already hinted at above and in Chapter 2, mentorship is very difficult to maintain on a course with such large numbers and it has been identified by SAQA as one of the problems in workplace learning. With this in mind I hope to analyse the scaffolding opportunities inherent in social networking sites, with specific reference to the scaffolding processes observed in the social learning networking site of the EETDP learnership which was set up to support the learners in the 2009/10 and 2010/11 course cohorts. Particular attention will be paid to the mentor-student relationship, and the wider assumptions associated with scaffolding as outlined above in this section.

3.5 Conclusion

The main theoretical concepts outlined in this chapter will be used to interpret and make sense of the data generated for the purposes of developing a deeper understanding of the research question and the data generated in this study. An attempt to understand ZPD, collaborative learning, scaffolding and mentorship and their application online and on course thus informed the methodology and analysis. These theories also provided the lenses which were used to sift the analytical statements from the data. How they were applied in data gathering and analysis forms the basis of the next three chapters.

CHAPTER 4

METHODOLOGY – INTO THE GREAT WIDE WEB

... we recognise that environmental issues are not neutral, but of a socio-cultural and political nature and thus heavily value-laden. Environmental education cannot therefore be seen as simply the transmission of knowledge from one group to another, or as the simple 'reflecting back' of that knowledge through traditional examination or assessment methods (Lotz, 1999, p. 15)

In this chapter I reiterate the purposes of the study and explain how data was gathered from both the social media site as well as from the interactions with students and administrators on the course. The chapter details the methodology used in the study to establish the creation of ZPD and collaborative learning online on the social networking sites established in the two course contexts. I consider the different types of data used (online and offline) as well as the various methods of data generation that were essential to this study. The chapter explains the data analysis process, and also considers the ethics of the research and its applicability in a public space such as Facebook.

4.1 Introduction

The quotation by Lotz (1999) above alludes to the fact that environmental education is not simply another learning area but requires more a change of lifestyle and close relationship to the earth and all that lives on it. Simply completing an assessment portfolio is not enough, there is a need to change the way we think, live and act on the planet. The EETDP course thus encouraged critical thinking about our relationship with the environment and the skills required to adapt to changing environmental, social and economic changes.

My goal as a researcher was to understand how the Facebook site could be used to scaffold learning and meaning making on the EETDP learnership, within the Zones of Proximal Development (ZPD) as framed by the EETDP learnership course (see section 1.4 and Chapter 2). As indicated previously in Chapter 2, the course was modular in design and implementation and the study was conducted with two groups of learners.

4.2 Research Orientation

The study was also very specific in examining a specific trend or pattern online and was not oriented towards producing generalisations. The study can therefore be described as case study research with an interpretive, qualitative orientation (Cohen, Manion & Morrison, 2011). Bassey (1999) suggests that case studies are bounded studies (the boundaries of this study is the two case-based Facebook sites of the EETDP learnership as outlined in Chapter 2), not normally open to generalisation, although it is possible to make what he calls 'fuzzy generalisations' from case study research. Interpretive research focuses on the meanings that people make of phenomena that can be interpreted and derived from naturalistic data (Cohen et al., 2011).

The Facebook group sites were thus set up as primarily as a means of communication and mentoring between learners and tutors. The site development and subsequent evolution played a significant part in the visible data generated but this was inadequate to determine other aspects of the learning experience. Thus there was a need for triangulation with interviews, focus groups and observations. There were two main streams of data: online and offline interactions between students. The online data was mirrored back to the students offline (via interviews, focus groups and questionnaires) and then vice versa.

The data collected was predominantly captured qualitatively in words between students and administrators, whether online or offline, on the group wall pages, or questionnaire evaluations or from interviews and personal communications. These conversations were mostly in English, however, occasionally in isiZulu, isiPedi, seSotho, Setswana or Afrikaans (as can be seen on the Facebook group Site 1 and 2 walls).

As indicated above, the data was primarily qualitative and confined by the case of the two courses described in Chapter 2. Qualitative methods encourage a personal subjective approach to the study which, when analysing a platform like Facebook, was a more natural fit as Facebook is primarily and simultaneously a personal/public interaction. My research instruments for this type of data were interviews, focus groups and the conversations between learners and learners (their peers) and learners and the tutors/administrators on the Facebook walls.

I did use the quantitative approach however when I examined the nature, type and frequency of postings onsite. The interesting aspect of the quantitative methods was that it enabled me to see visually the growing *community of practices*²⁵ on the Facebook walls for the EETDP learnership. My research instruments for the quantitative data were questionnaires and the Facebook wall postings. Section 4.3 will deal with the strategy and design of my data generation methods. However there is one vital aspect to all of these learning interactions, nothing will be possible without the participants of the study. The participants of this study are implicitly defined below.

4.2.1: Participants

A learnership is essentially a yearlong collaboration between three different stakeholders as explained in Section 2.1.2: *SAQA and learnerships*. These stakeholders are namely; the learner, the employer and the training provider. What was interesting about the way WESSA as the training provider implemented these particular learnerships was the way the employer was directly and continuously involved in the implementation of the course. From representatives from DEA being present during the contact session and helping with logistics to the mentors in the workplace who were responsible for guiding a group of individual learners through the workplace protocols and even at times assisting with course work Mentors however were not part of the Facebook site, a reason that is for both difficulty of learners logging onto Facebook at work to the very perception of Facebook in the workplace a perception that has remained largely unchanged tied to The training provider, WESSA provided the facilitators, assessors and moderators from working with different NGOs as in the case of the DEA EETDP learnership 09/10 or in the case of the DGMT COCT EETDP learnership 10/11 working with a satellite branch such as WESSA Cape Town and the City of Cape Town (COCT). The participants, with their respective employers and roles, are detailed in the table below.

²⁵ See section 3.4 for more background on communities of practice.

Roles	Employers	Personnel
Assessors	WESSA DELTA Environmental Center	Jeannette Stewart Scott Walker Shanu Singh Patrick Dowling
Facilitators	WESSA DELTA Environmental Center Solly Mosidi & Co	Jonathan James Wigley Preven Chetty Londiwe Msomi Solly Mosidi Scott Walker
Administrators on the EETDP site	WESSA DELTA Environmental Center Solly Mosidi & Co	Ncami Mpangisile Londiwe Msomi Preven Chetty Solly Mosidi Patrick Dowling Scott Walker Jonathan James Wigley
EETDP Candidates/ Learners Learners were the main group members of the Facebook sites	Department of Environmental Affairs	Learnership candidates placed at various centers throughout the country
Moderators	WESSA	Preven Chetty Debbie Perry

Table 4.1: Table of participants of the EETDP Learnership and the EETDP Facebook Sites DEA EETDP Learnership 09/10

Roles	Employers	Personnel
Assessors	WESSA DELTA Environmental Center	Preven Chetty
Facilitators	WESSA DELTA Environmental Center Solly Mosidi & Co	Patrick Dowling Preven Chetty Andrea Gordon
Administrators on the EETDP site	WESSA SustainEd WESSA Western Cape	Ncami Mpangisile Londiwe Msomi Preven Chetty Patrick Dowling Andrea Gordon
EETDP Candidates/ Learners Learners were the main group members of the Facebook sites	Department of Environmental Affairs	Learnership candidates placed at various centers throughout the country
Moderators	WESSA	Debbie Perry

Table 4.2: Table of participants of the EETDP Learnership and the EETDP Facebook Sites DGMT EETDP Learnership 10/11

The above two tables define the participants of this study. As we can see learners and facilitators were essentially the administrators and group members of the site. This is a natural fit as administrators can control content and post new content online. Learners as group members can also post material online which includes discussions or activities just like administrators however they cannot delete content.

4.3 Data Generation: Strategy and Design

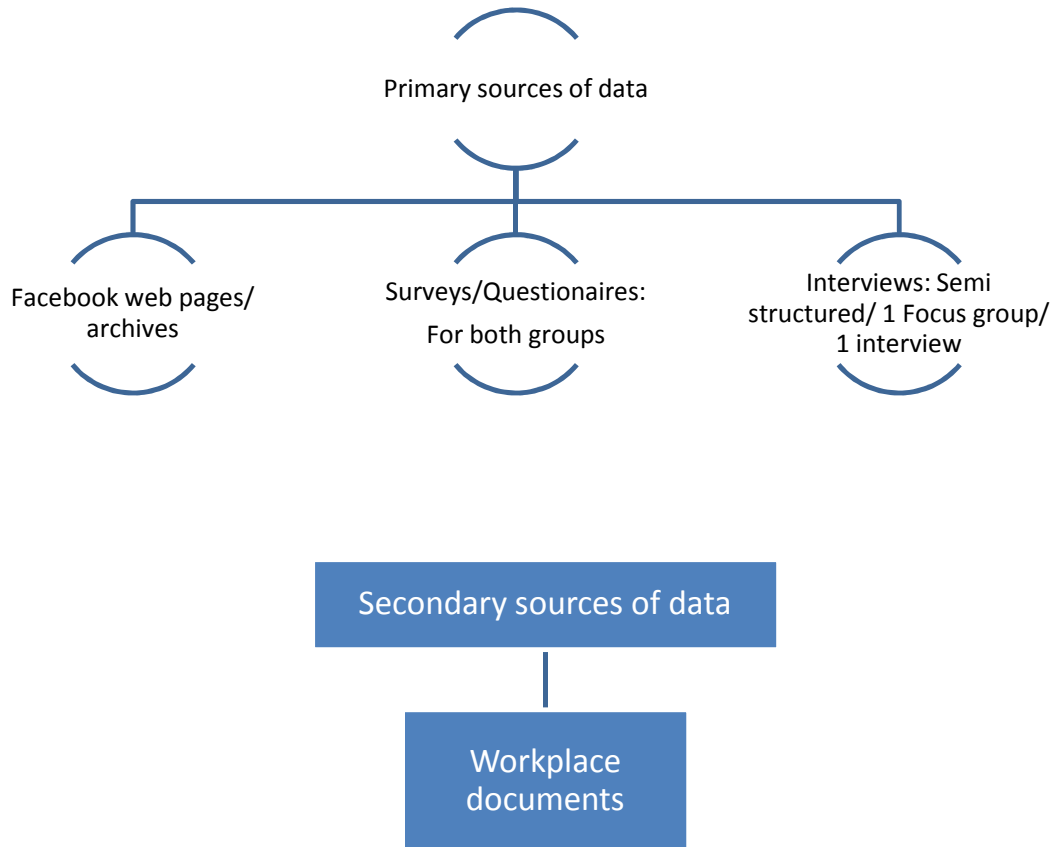


Figure 4.1: Primary and secondary sources of data collected during this study

The above figure shows the primary techniques and secondary sources gathered for generating data in the study. I now explain how and when the techniques were implemented and provide insights into how the data generation and data analysis process was related (full details of the actual data analysis and presentation is contained in Chapter 5).

It can be useful to view the research process over time. Figure 4.2 below provides a timeline of the courses and depicts the construction and use of the Facebook sites within the wider course process.

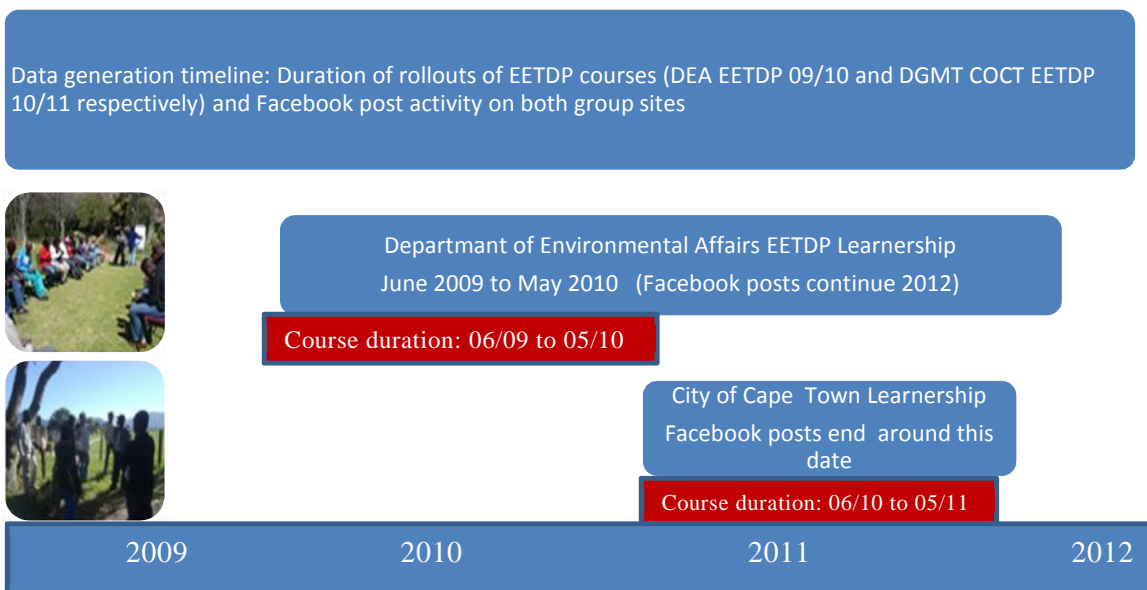


Figure 4.2: Timeline of events showing when courses started and the Facebook groups lifecycle in each course

I used the social networking website as a primary source of data, and added to the interpretations and insights from this data source with interviews, questionnaires, focus groups and observational notes. I also used a strategy of progressive focusing to achieve greater depth and insight into the formation of the zones of proximal development as evidenced, in order to address my research goals, as outlined in Table 4.2 below.

4.4 Data Sets

There were two types of data that emerged from this data generation process in this study. They are:

- Online data
- Offline data

4.3.1 Online data generation

Online data generation involved setting up the two Facebook groups. On Facebook one has the ability to create groups as long as one has an account on Facebook. One can create groups for any purpose and any number of *causes* (a Facebook term getting users

to join particular groups for particular beliefs/events/organisations). Creating a Facebook group is as easy as signing up (creating an account). Two Facebook groups were set up for the two learnership courses being offered by WESSA between 2009 and 2011. The first social networking group was created in August 2009 during the second contact session of the DEA²⁶ EETDP learnership group in Gauteng. This group was given the name **EETDP Learnership 09/10**. The timeline above (Figure 4.2) shows that this learnership ended in 2010 but as the timeline above shows posts on the site continued until 2012 and beyond. The second site **DGMT City of Cape Town Learnership 10/11** began in 2010 was set up in February 2010, and the course ended in 2011. In this rollout in Cape Town the posts only continued for as long as the course ran after the last contact sessions there were no posts added to the site by any participants. Data for this study was extracted from the sites between 2009 and 2011. During this study there was no way to view the frequency of postings a kind of basic mapping of the group interactions and which activities or discussion question elicited the most group interactions or interest. However recently Facebook has implemented on it's a site viewing data on your group pages by category or activity, from the group's inception to its current state. This would have been an extremely helpful tool during this study. Unfortunately it was not available at the time of the study, however I do attempt to categorise the group's interaction according to postings and categories (*see section 5.2: Online Data*).

²⁶ Note that the DEAT became DEA (Department of Environmental Affairs) in 2009.

Table 4.3: Data generation and analysis strategy

Research question	Research Tools /Data Generation	Analysis Strategy
<p>How can Facebook (a social networking online site) be used to scaffold learning and meaning making on the EETDP learnership?</p>	<p>The web-based learning interaction record (see sample below). This is called the ‘wall’ in Facebook terminology.</p> <p>Interviews to qualify interpretations focus groups and individual interviews</p>	<p><i>Phase 1:</i> Web Text Analysis to identify:</p> <ul style="list-style-type: none"> * learning interactions * scaffolding processes * relational patterns <p><i>Phase 2:</i> Use phase 1 analysis to identify interview questions</p>
<p>In what ways do mentors and peers make use of Facebook to scaffold learning and meaning making on the EETDP learnership?</p> <p>What social processes are involved in using Facebook as a strategy to scaffold learning and meaning making?</p>	<p>The web-based learning interaction record (primary text to analyse)</p> <p>Questionnaires to probe aspects of scaffolding that appear on the website and of the translations that took place</p> <p>Interviews to qualify interpretations (focus groups and individual interviews)</p>	<p><i>Phase 1b:</i> Text/Wall analysis to identify:</p> <ul style="list-style-type: none"> * links between scaffolding processes and workplace assignments and learning tasks * which scaffolding processes and learning interactions are most often used in relation to workplace tasks
<p>Does the use of Facebook contribute to expanding learning within the Zones of Proximal Development framed in and by the EETDP learnership course</p>	<p>Questionnaires to reflect the nature of the growing communities of practice and learners enacting in the ZPD.</p>	<p>Overall analysis</p>

In the contact session of the EETDP course learners were shown the site and web page and given instructions on how to access it. The method was explained and distributed to all participants as given below.

- Log onto your Facebook account. If you do not have a Facebook account, create one. All you need to create a Facebook account is an email address. The whole process takes less than five minutes and Facebook respects your privacy.
- Once you are onto your personal homepage of the Facebook site, go to the search bar and type in EETDP. This should bring up the three current (2011) groups associated with the name EETDP. Choose **DEA EETDP Learnership 09/10**. This should take you to the homepage of the group. It is blocked because it is a closed group.
- Click onto request to join group.
- In the next 24 hours a group administrator will accept your request.
- If you still experience problems please contact training@wessa.co.za

The second site developed for the 5th EETDP learnership group as outlined in Chapter 2 was named **DGMT COCT EETDP Learnership 10/11**. You can find this Facebook group by searching for part or all its name (highlighted in bold above for both groups). The DG Murray Trust funded this learnership in 2010/2011 and hence their name is in the title. This group can also be accessed the same way as outlined above and was created in the first contact session in June 2010 in Cape Town at the WESSA offices. All learners were informed about the Facebook group and given a baseline questionnaire to ascertain their familiarity with the site as well as their attitudes towards it and how they would use it. The detail of these questionnaires is explored in greater detail under the section offline data and research ethics. Both these questionnaires and the full set of responses are provided in Appendix 3.1 (for Site 1) and Appendix 3.2 (for Site 2). Since the completion of the data collection phase of this study I have made both groups open and thus accessible to anyone and thus you do not need to apply for membership as outlined above to view the group and you can also post comments or start discussions.

Ultimately the wall of the Facebook site can be seen as a sort of large and continuous document with hyperlinks. Patton (2002) states that documents or records are what are traditionally known as “material culture” in anthropology. He goes on to state that in

contemporary society “all kinds of entities leave a trail of paper or spoor that can be mined as part of fieldwork” (p.293). These can be as various as graffiti, suicide notes, love letters, and organisational documents. The use of the Facebook site then to provide fieldwork details did not require a large leap of imagination. I had to systematically, however, go through each screen and “paste” them onto a word document to provide a running account of the interactions on the site from present to past (in Facebook the latest posts and comments are at the top of the page and the past ones trail behind). I then removed the unnecessary²⁷ information for the purposes of the study using a simple but versatile programme called Paint. I had to systematically open each comment and post and review the discussion topics and video uploads to ensure I did not miss anything. This resulted in 69 pages of data from Site 1 and 14 pages of data from Site 2. The data was then coded and categorised into the two main categories. These data sets can be found in Chapter 5.

In order to present the online data in the study I had to gain permission from all of the learners and course coordinators and facilitators. For representing and analysing the primary data sets I have used the Facebook terminology itself of group members and administrators. Group members are all those that joined onto the site and group administrators are group members who have administrator privileges and thus can delete certain inappropriate comments or edit information on the page. The unique aspect about both these group sites were that the administrators were also the tutors of the course and were interacting with the group members during the contact session, so there was continuity from offline to online and vice versa. I was the group creator and thus was able to alter the basic elements of the group page itself and also had the ability to message all members of the group. All group members have the ability to upload content and posts and participate in discussion activities.

4.3.2 Offline data generation

Offline data generation occurred primarily through three research instruments:

- Questionnaires;
- Interviews; and
- Focus groups.

²⁷ ‘Unnecessary’ here refers to the adverts on Facebook, and my personal computer tool bars and document boxes.

4.3.2.1 Questionnaires

Four questionnaires were given out during the roll-out of both learnerships. The purpose of the questionnaire was to develop baseline data of the candidates' experiences previously with Facebook as a social networking site and to assess how they might want to engage with the site in the future. All results from the questionnaires are shown in Appendix 3. This also set in motion the design process of the research as the questions needed to be formulated, then given out during contact sessions and finally collected and analysed from both the research sites. There were numerous repetitions and thus the data sets were often grouped together where group members shared the same sentiments. Questionnaires revealed considerable information with regard to usage patterns and the levels of experience in social networking sites.

4.3.2.2 Interviews

Interviews enabled me to get to the heart of the study as most of the experience on the social networking sites were subjective and open to interpretation as seen from the basic orientation of the research design itself. As noted by Blanche and Durrheim (1999, p.281) the advantages to personal interviews are quite significant:

- In-depth information can be derived from semi-structured interviews;
- Respondents can ask for clarification if they do not understand any of the questions; and
- High response rate.

I used the interviews primarily to ask specific questions of the three group members who used the Facebook sites the most in order to mirror data back to them as well as to probe further and confirm some of the findings emerging from the document analysis. The interviews shed light on participants' feelings regarding some of the comments and usage on the site and also highlighted significant moments that occurred during the course as a result of the site. The interviews yielded valuable data on the social networking sites and their use in the course.

4.3.2.3 Focus groups

According to Blanche and Durrheim (1999, p.388) a focus group "is a general term given to a research interview conducted with a group". One focus group was conducted with the DGMT COCT EETDP Learnership 2010 group to determine why there was such a

lack of activity on Site 2. This focus group gave everybody a chance to speak and also debate essential aspects of the use of the social networking site in terms of enhancing workplace learning. The full transcript of this focus group can be found in Appendix 3. This also allowed me to mirror some of the functionalities of the site to the candidates as well as to determine why a majority of the course participants were not members of the group. This focus group also became an information sharing session on how to use some of the functions of the Facebook site, as can be seen from Appendix 3.

One could also view the actual wall pages of the Facebook group site as sequential focus groups or various focus groups or one big focus group itself. With one wall post sparking numerous threads and some discussions groups involving four and more participants, the beauty of the Facebook group was the ease with which data was continuously generated and produced online in real time, already archived and ready for use. Dolowitz, Buckley and Sweeney (2008) have noted that with the internet today it is possible to conduct a group interview even though learners may not be in the same room. Bulletin boards also provide this kind of running feedback in threadlike conversations. However, the intensity of a traditional focus group is missing in these bulletin boards with their simple names and text alone. What is interesting about Facebook is that being on Facebook with a profile allows one to interact in numerous ways and not only with words, something one could not do offline in a focus group unless one came prepared with a projector and screen.

4.4. Data Analysis

The main themes of the study i.e. collaborative learning, zones of proximal development, scaffolding and mentoring / apprenticeship were always considered from drafting the questionnaires to trying to effectively use the Facebook site in promoting learning site and The data was also analysed largely within the framework of these key themes. A philosophical orientation, evidenced in the quotes starting each chapter and consideration of various theories, has added to what could have been a more merely technical analysis.

Processing the data involved iterative analysis of both online and offline interactions between students and then mirroring the online data back to the students offline (via interviews, focus groups and questionnaires). The mirroring of the data occurred in informal group sessions when all participants were present and could discuss their

findings. This was done using a laptop computer connected to the internet and projected onto the workshop walls at Delta Environmental centre and at WESSA Western Cape. The participants were asked about their experiences with the site. Some spoke about how much they enjoyed the site; others claimed they could not gain access at the workplaces. The main purpose of this method was to represent back to the group as a collective what they were viewing on individual devices. There was also an attempt to scaffold further discussion during these sessions.

I conducted an extensive document analysis of both online and offline site data working in primarily *two main thematic categories with subcategories* in order to explore the formation of the ZPD in social networking sites. They are:

- Scaffolding processes
 - Task structuring
 - Feedback, instructing and questioning

- Mentoring and peer interaction for meaning making
 - Meaning-making interactions
 - Collaborative learning

Scaffolding was enabled by the use of the processes of task structuring and feedback. Feedback, instructing and questioning go together as feedback is often provided in a response to a question. The thematic category of mentoring and peer interaction for meaning making has two sub categories. Mentoring between mentor and learner or learner and learner is a form of collaborative learning and meaning-making interactions occur between peers and sometimes between mentors and learners thus these categories fall under the same theme. Each of these analytical categories were used to code the data. This was used to report the data in Chapter 5 from which analytical statements were developed to reflect on the data and communicate the study's findings in Chapter 6.

The other useful lens that was used to code the data was Johnson et al.'s (1998) definitions of *promotive interaction, positive interdependence and group processing* (as discussed in section 3.1) These definitions were applied to the data across the online data sets. These were explained in detail in *Section 3.1: Collaborative learning* and the datasets are analysed using these terms see *Section 5.2: Online Data*. Basically by using looking at the various posts on the Facebook group sites we were able to put them into

one or two of these categories as outlined by Johnson et al (1998). Collaborative learning was coded by identifying when learners “got together” online to discuss key concepts or where they were struggling with assignments.

Apprenticeship as explained in the previous chapter has a long and rich history but has all but been extinguished in the early 21st century. Mass education systems do not have capacity or time to invest in the traditions of *shishya* and master. The concept of social networking sites thus brings a new important dimension to the present discourses. In coding the data for scaffolding I could reflect on, drawing on these theoretical perspectives, the administrator’s or mentor/tutor’s role in helping the groups or individuals in the group understand concepts or assignments of the learnership during the period at the workplace. It was also used as a means of keeping contact with learners who were scattered across the country.

4.4.1: Trustworthiness

I also practiced member checking, which involves sharing one’s interpretations with research participants to verify them (Patton, 2002). This was achieved online on the site itself²⁸ and via email. Patton (2002) explains that trustworthiness in qualitative research is established by good quality and honest member checking, by careful triangulation of data sources to ensure more rigorous interpretations, and ensuring credibility by practicing ethical and rigorous research. I have tried to show how I sought to establish trustworthiness in the discussions in this chapter however there was a need to look out for biasness in the study as I was both facilitator and assessor and was deeply entangled in the designing, implementing and assessment of the course. Maxwell (2009) states that a, “bias refers to the way in which data collection or analysis are distorted by the researchers theory, values or preconceptions” (p.243). To avoid this I strove to look at the data as objectively as possible and did not ask leading questions in interviews or focus groups. I also tried to keep my roles as researcher, facilitator, Facebook administrator and assessor as separate as possible and did not overlap roles or use my influence to change the data in any way.

²⁸ Facebook made this process very easy: I simply typed up all the responses as can be seen in Appendices and posted them on the wall of the Facebook site. Participants remained anonymous in the questionnaires.

4.5 Research Ethics

Pink (2001, pp.36-37) states that a “consideration of the ethical implications of ethnographic research and representation should underpin any research project”. This is true for any research design, including interpretive research. Issues such as confidentiality, informed consent, “covert research”, as well as “ownership of data” need to be seriously navigated in a project of this nature. Facebook profiles are public domain. Facebook allows you to make connections with different profile users. Users log onto Facebook groups, no one owns the group pages, not even the administrators. Facebook is a very public and highly advertised space. The issues of privacy and access on Facebook have already been discussed in section 1.2.

Issues of copyright on Facebook were strictly adhered to as per the company’s own terms and conditions. Every personal Facebook page and group page is the property of the individual user or group members and Facebook. The Facebook logo has been shown anywhere where a page from the site has been captured for the purpose of this thesis. Instructions on how to become a group member for the sites was previously discussed in this chapter in *Section 3.3.2: Online Data*. Attempts were made at the beginning of the project to contact Facebook informing them of this study, however this proved impossible. There are so many groups, research projects, causes and personal agendas occurring on Facebook daily that I felt that as long as the company name was always used, its creators acknowledged and its integrity maintained, particularly in the sense of showing respect for Facebook’s users, there ought not to be any ethical problems, especially since the site was not dealing with sensitive personal issues or data and was more focused on professional learning.

In keeping with copyright and the rights of the users who joined the Facebook EETDP group sites, all participants were made aware of the purpose, nature and methods of the research and were asked to sign an agreement document before any significant data could be generated or used (see template in Appendix 3). This was according to the principle of informed consent. According to Dolowitz et al. (2008) informed consent is made up of three aspects or parts that need to be considered: “that participants are made fully aware that they are research participants; that they are properly informed as to the nature and purpose of the research; and that they were given the opportunity to refuse to participate or to withdraw from the project” (p.79). In this study all three aspects of

informed consent were considered thoroughly. The first and second aspects were covered by providing the agreement document for participants to sign as mentioned above. I introduced the study at this time and also instructed learners on how to join and access and make comments or post videos/photos and start discussion groups. This whole process happened during the first contact session for each group. It took about 15 minutes to introduce, distribute and collect all the agreement forms. The agreement forms also included a baseline data questionnaire (noted above) to assess how comfortable or familiar learners were with the Facebook site and their initial impressions of it.

All participants in this project were invited to join the website from the existing EETDP learnership structure. In this way there was no intentional or unintentional covert data gathering occurring as members were aware that their comments and postings would be used for this study. Waskul and Douglas (1996) have alluded to the aspect of the internet that actually blurs the distinction between public and private (p.131). However, one's Facebook posts are simultaneously private and public and all users know that any of their comments and postings are "fair game" and in a sense anyone out there in the wilderness of the internet could scalp them! Ethically, however this is not allowed and thus principles of informed consent were adhered to.

But there is a grey area to this concept of informed consent especially on social networking sites which project a kind of detached reality onto people. That is why it was important to make clear the purpose of the research (i.e. to augment the learning of the candidates) and I felt that this was ethically defensible.

The group sites allow you to contact more than 60 new people whether they are your friends or not. After every contact session or conference I would participate in during my career at SustainEd I would gain 50 new friends. The level of contact provides for another aspect of Facebook and it also allows for actual representation of personality.

It is important to clarify the purpose of the research and contribute to the learning of the candidates. It was made clear from the start to participants that in no way did any of their views or lack of participation affect their assessments (i.e. the Facebook participation was not part of the assessment structure of the course). All contributions made on the site were used and participants were informed of this process. Because of my role as facilitator and assessor I wondered whether certain information might be withheld from

me in interviews and focus groups. Participants were always encouraged to critically engage on a variety of issues – to dissolve the mystifying barrier of educator and learner and thus realign the politics of knowledge²⁹. All participants had the right to withdraw at any point in time during the duration of the research³⁰ and thus the third aspect of informed consent was adhered to.

4.6 Conclusion

As seen from the discussion of the methods above great care was taken not to rely solely on online data. Through the constant mirroring of the online data in offline events a clearer view of the value of the social networking site in workplace learning began to emerge. Also because of the fundamental concern of privacy laws on social networking sites and the respecting of individual identity representation there, I used additional data sources (questionnaires and interviews). Transparency was ensured at all times and because of the public nature of the social networking site most users were comfortable with having their comments analysed. No personal profiles were used to add to any of the analysis and both sites are now open to the public if they should happen to search for the group sites.

²⁹ This was aligned with the history of the programme and a commitment in environmental education to the NGO Forum Principles, as discussed in section 1.4.2.

³⁰ No participant withdrew till the end of the course, in fact most continued to use the group page to contact each other up to the time of writing.

CHAPTER 5

DATA REPRESENTATION – THE MIRROR

“The two directions - When we try to examine the mirror in itself we discover in the end nothing but things upon it. If we want to grasp the things we finally get hold of nothing but the mirror. This, in the most general terms, is the history of knowledge.”

Nietzsche (1982, p.244)

5.1 Introduction

In the opening quote for this chapter, Nietzsche (1982) is reflecting on the ethereal nature of the self and also of knowledge, for the two are intertwined. The reflection of self is the primary use of the mirror and it seems also to be the primary function and utility of Facebook. This chapter will represent the data from the sites of the Facebook groups via extracts from the web pages themselves, as well as provide a synopsis of wall posts and offline interviews. This chapter thus deals with total representation and analysis of the data generated online and offline during the study.

This chapter has two purposes which will overlap. It will seek to present some of the thick descriptive data³¹ gathered from the social network site, the questionnaires, focus group and the interviews from the key participants generated during the active years of the site and study (2009-2011) and it will reflect like a mirror the activities of the group members. I will show how I coded the data into categories in this chapter (allowing the reader to view fragments in the mirror but also piecing them together to form a coherent view). A second layer of analysis and interpretation is presented via analytical statements.

Facebook enabled automatic data generation by recording all elements of learners' interaction online. As a data device in terms of recording educational strategies and learning interactions it is invaluable. But what is the actual depth of various interactions and the nature of the learning onsite? And how are other factors, as seen in the offline data sets above, enabling or constraining such learning? How are effective ZPDs

³¹ The data taken from the wall of the Facebook group sites is considerable. It runs to more than 80 pages of conversations copied and pasted into Microsoft Word and can be found on the CD accompanying this thesis.

identified on the EETDP course itself using this medium? Data presented in this chapter will provide some perspective on these aspects of the research question and its respective goals. With this data presentation providing the ‘mirror’ on what occurred in the use of the social networking site in the EETDP courses, the research questions will now be addressed more substantively in this chapter using the theoretical frameworks established in Chapter 3.

In order to probe the depths of the site and the interactions that occurred in it, the lenses and tools (theories) which were explored in detail in Chapter 3 are needed. These theories form “a mirror” over the pond in order to make visible the zones of proximal development of all group members on the site. The method of theoretical triangulation is used to construct analytical statements from the coded data. Another aspect of the mirror is to reflect the implications of both the power and the hazards of social networking sites in helping environmental educators to deal with the current social-ecological crisis of the 21st century.

Data is represented and researched in two formats, the online and the offline as explained in Chapter 4. As already mentioned, on the completion of this thesis I have made the EETDP learnership sites open³² to the public. There were two EETDP sites created for the purpose of this study (see Chapter 3 for a detailed look at how these sites were set up and see Extract 5.1 and Extract 5.2 for how they look) and they are:

- EETDP Learnership 09/10; and
- EETDP WESSA WC/DGMT 2010/11.

³² Open essentially means that you do not have to request to join the site. You can simply like the site and then post comments or start discussion topics.

facebook

EETDP Learnership 09/10

Wall Info Discussions Photos Events Video

Write something...

Attach: Share

Options

Preven Chetty Hi everyone please check below this update as a comment with your responses on this facebook site for the learnership. It would be great if you could comment any additional points on this. It is anonymous but I am sure you might recognise your contribution. Feel free to make new comments. Thank you. P
Yesterday at 7:20pm · Like · Comment

Preven Chetty WESSA/DEA EETDP Facebook evaluation data 14/11/2010
This questionnaire was given to the 2009/10 EETDP group on 14 May 2010. The site has been running with this group of students from August 2009. These are the responses gathered.
Do you give
See More
Yesterday at 7:20pm · Like

Write a comment...

Phindile N Mafu (member) which activity/assignment was most boring &

Message All Members
Edit Group Settings
Edit Members
Invite People to Join
Create Group Event

Write something about EETDP Learnership 09/10.

Information

Category:
Student Groups - Community Groups

Description:
This site is for all EETDP learners old and new who want to upload information on the course or share photos or create forums for virtual

Extract 5.1: Site 1 (EETDP Learnership 09)

Facebook | EETDP WESSA WC/DGMT 2010/11

EETDP WESSA WC/DGMT 2010/11

Wall Info Discussions Photos Video Events

Write something...

Attach: Share

Options

Phindile Mangwana Hi Guyz
If there is anyone who is experiencing problems with module 1 and 2, please do not hesitate to drop me an e-mail at pmangwana@mailbox.co.za or phindile@wessa.co.za I'll be more than happy to assist, Best Phindile
November 7 at 10:52pm · Like · Comment

Preven Chetty is anybody having difficulties with the case studies- please post your concerns and queries here- i will guide u along but u need to ask for help first.
October 6 at 10:13am · Like · Comment

Preven Chetty For the next contact session please try and bring any relevant materials from your organisation related to your issue?
October 6 at 10:08am · Like · Comment

Preven Chetty Remember during your needs analysis try and involve all stakeholders and interested people. This will give you a diverse range and will be helpful when deciding what to put into your learning program

Remember the in between contact session 6 August for those of you in CT. We want to see serious progress by then or have heard from you about problems and issues before then. :) Patrick

Information

Category:

Message All Members
Edit Group Settings
Edit Members
Invite People to Join
Create Group Event

Extract 5.2: Site 2 (DGMT EETDP learnership 2010/11)

An overview of the methods of data generation for both online and offline data is presented in Chapter 4. These include:

- Site analysis (online data);
- Interviews and questionnaires (offline data); and
- Focus group (offline).

These methods revealed different aspects of the creation of the zones of proximal development within the social networking sites. Primarily this was examined using different aspects (or elements that happen) within the ZPD:

- Scaffolding processes
 - Task structuring
 - Feedback, instructing and questioning
- Mentoring and peer interaction for meaning-making
 - Meaning-making interactions
 - Collaborative learning

Data related to these categories is presented here sometimes combining categories, within their processes (*scaffolding processes* and the *mentoring and peer to peer interaction processes*), as I also found that there was a strong relationship between some of the categories indicated above. These processes were examined primarily in their respected types of data, *online data* and *offline data* as explained in section 4.3. I will now present and analyse the data types and the findings.

5.2 Online Data

5.2.1 Scaffolding formation as a process within the ZPD

This section begins with communicating the main tenets of the analysis of the online data using the *Analytic Categories: Scaffolding* from Site 1 and Site 2. This first layer of analysis is presented in tabular form (Table 5.1 for site 1, and Table 5.2 for site 2 below) for ease of reference. As can be seen from Tables 5.1 and 5.2, data is presented chronologically, as this allowed me to see the progressive processes of scaffolding and / or collaborative learning. Data codes indicated as DC#01S01SCFa etc. refers to the data set number, the site of the study, the theoretical aspect discussed in the codex and then

the number within that category. Participants are referred to using their initials in the last column in the data tables (Tables 5.1 and 5.2). This helps to show where the interaction took place, and how many learners were engaged with it; this shows interaction and also potential collaborative learning aspects. I also comment on the mode of scaffolding using concepts such as strong and weak scaffolding, with strong scaffolding being used for evidence of engagement with actual learning and weak scaffolding being used to refer to more technical aspects of scaffolding. As can be seen from the tables below, the site allowed for both of these forms of scaffolding. Finally, I refer to collaborative learning interactions/peer group scaffolding as strong scaffolding, as it reflects the broader, more open and negotiated notions of scaffolding discussed in Chapter 2. On the next pages are Tables 5.1 and 5.2 presenting data sequentially for each of the sites.

I use the word technical scaffolding to refer to advice and cues that the administrators provide with regards to assignment due dates, the next contact session, and how to create a post on Facebook and join the discussion. These are simple instructions that are of a technical nature and do not go into the depths of the learning process. Strong scaffolding refers to step by step instructions that administrators or learners provide to each other on the different workplace tasks. These involved guiding the learner from choosing a relevant contextual environmental issue to designing and implementing an environmental learning program. Learners will ask specific questions related to their specific context and the administrators/tutors task was to provide helpful and deep feedback to enable the learner to complete the assignment. In relation to these students also motivate each other which will fall under weak scaffolding as it is not directly related to course work. Strong scaffolding will mostly occur when learners were grappling with their assignments and where assisted directly by administrators and other learners.

Table 5.1: EETDP DC#01S1SCF [Data Codex #01 Site 1 Scaffolding]

Data Code (chronologic/numerical)	Description	Emphasis/ Theory	Participants
# 01S01Sa 9 Oct 2009	First visible post on the site is a response from a group member to the discussion topic put up by course administrator. Since the discussion tool is not visible on the main wall this might be one reason why not much input/feedback was given. This was the first “scaffolding” interaction after the site has been up for a month.	Strong scaffolding tool but low impact, little interaction but perhaps establishing the possibilities? Newness of the site and not enough members added yet might also be contributing factors.	PC NN
#01S01Sb 4 Dec 2009	Administrator is providing more information on a workplace assignment for module 2. The administrator is simplifying the instructions of a workplace assignment after requests from group members.	Strong scaffolding tool used by administrator however little input in terms of response from group members.	LM ZMN AMM
#01S01Sc 26 Feb – 2 Mar 2010	Prompts and reminders from course administrators on upcoming module 3 and tests. No response from group members.	Weak evidence of scaffolding as no response from group members. However, is it still useful?	PC LM

<p>#01S01Sd 17 Feb – 4 Mar 2010</p>	<p>General learner banter about workplace assignments, requests about specific case studies, no request is seriously engaged</p>	<p>Weak scaffolding but group members are engaging on elements of the course</p>	<p>LPL TM MM</p>
<p>#01S01Se 22 Feb – 3 Mar 2010</p>	<p>Group member enquires what to do about POE activity in work book. Administrator answers question directly four days later. Another group member enquires about whether she can get mentors log books emailed but gets no response</p>	<p>Weak scaffolding, learning is present but focuses on the technical aspect of the workbooks rather than context. Another aspect of the social networking site is that administrators cannot attach presentations or documents</p>	<p>LPL PC MM</p>
<p>#01S01Sf 17 Mar 2010</p>	<p>Administrator responding to general matters, group’s upbeat and positive comments by motivational talks and also giving encouragement to the group for the piloting of their programme. One group member “likes” the comment.</p>	<p>Weak scaffolding touching on certain aspects in programme but not easy to understand as instructions. Motivational talk which is repeated a lot on this site by both administrators and group members alike.</p>	<p>PC LNM</p>
<p>#01S01Sg 26 Apr 2010</p>	<p>Administrator explains two pieces of work that need to be completed by all group members. The inability to attach documents to the site is explained and all members are made aware that these have been emailed to their workplace mentors.</p>	<p>Strong scaffolding tool – however weak in response. Despite this, it supported the highest recorded handing in rate of all submissions of these items in this last programme which proves that it might have contributed in part to the urgency</p>	<p>LM</p>

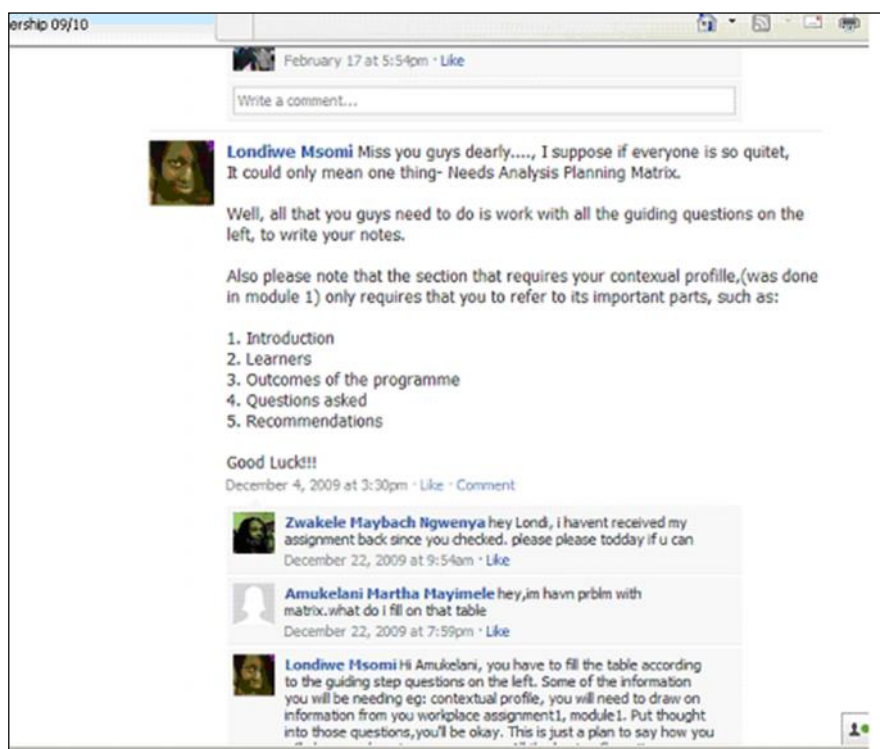
		of the task at hand.	
#01S01Sg 4 – 6 May 2010	Direct response to learners on wall requesting help with documents. Administrator responds by providing details of how to get the document from the mentors.	Weak scaffolding instance of administrator helping group members however not direct educational help only technical even though scientific help was requested.	LM NZ
#01S01Si 18 May 2010	Group members place their own discussion topic although most of the modules have been covered and there is introduction and discussion on people environment relationships. The discussion group however receives little engagement.	Strong scaffolding/ peer to peer interaction/ mentorship. The generation of the topic also shows better understanding of the social networking site and their coursework.	DDD
#01S1Sj 25 May 2010	Group member asks about extra work since programme has been completed. General banter follows on workplace skills. Another group member jokes that they have to start again from module 1.	Strong scaffolding as engagement with workplaces and course content is strongly shown in this general discussion.	LPL TN LNM

In site 2 this was difficult to do as learners participated across posts not necessarily commenting on what was posted. Thus the dates span the time of all responses to a particular post.

Table 5.2: Analysis of scaffolding from Site 2

Data Code (chronologic /numerical)	Description	Emphasis/ Theory	Participants
#02S02SCFa 19 July 2010	Group administrator gives guidance on first workplace assignment i.e. contextual profile providing some anecdotes and hints. One learner likes this. Deep engagement with issues and discussion between learners and administrator on the nature of their relevant topics and relevance to the assignment. Two learners talk about their difficulties and challenges.	Strong scaffolding	PD TL MPK
#02S02SCFb 3 August	Discussion topic opened on environmental justice. A question based on own interpretation of contexts and questions asked around environmental justice. Administrator responds with building up of the scaffold of further engaging with the questions from a strong justice point of view. One learner (Mzwethu) also responds showing good connection to the question and exploring the issue further. The administrator who initiated the topic then responds but fails to generate any interest or maybe because the topic was considered closed did not draw any more posts or comments.	Strong scaffolding/ Critical engagement and discussion however limited participation in term of actual group size.	PC PD MPK
#02S02SCFc 3 August	Group administrator posts helpful hints and advice on workplace assignment 1 of EETDP. Fleshes out the instructions of the assignment requirements and provokes deeper thinking. Only one learner likes this. A useful tool but has it been seen and used?	Strong scaffolding/ under utilised by group.	PD MPK
#02S02SCFd 10-12 August	Group administrator attempts to engage learners in discussion by posting up material current world topics relevant to the upcoming Module for the learnership. No response is elicited from group.	Scaffolding but very weak has no group engagement with topics or posts.	PC

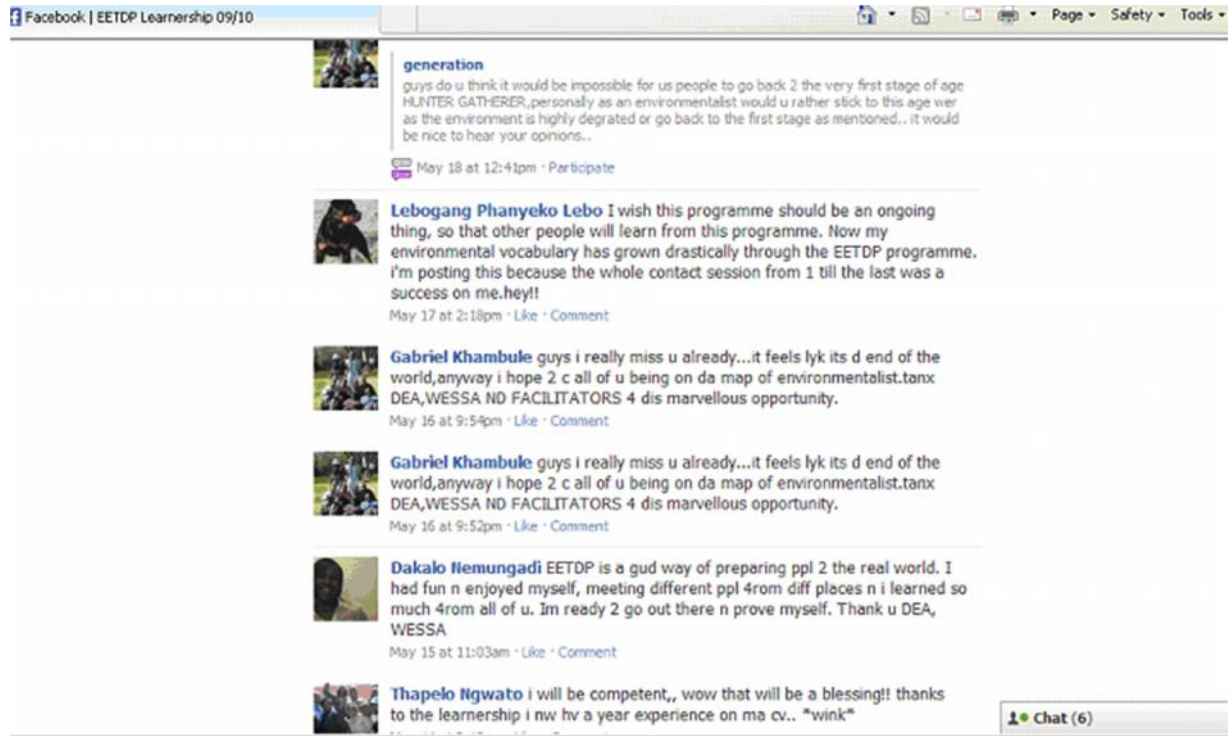
From the above it is possible to see that the scaffolding processes were both technical and conceptual, sometimes both. Technical modes of scaffolding seemed to dominate, but as the course progressed and as an understanding of the role of the site developed, more complex scaffolding and collaborative learning interactions took place. There was evidence, however, that the technical scaffolding (e.g. reminders to send in assignments) did lead to stronger delivery which in turn would imply more engaged learning. Thus the technical and conceptual modes of scaffolding cannot easily be separated. The table above also gives some insight into the relationship between scaffolding and collaborative learning. Most often it was the administrators that provided scaffolding, although as mentioned above in Table 4.1, this was often what I termed ‘weak scaffolding’ after reviewing the data. In Extract 5.3 below Londiwe Msomi, as course administrator, was able to provide strong scaffolding in terms of the requirements for Assignment 2 of the EETDP learnership (which is the developing of a Needs Analysis) by providing a format to guide learners.



Extract 5.3: Strong scaffolding for learners on Site 1 (#01S01Sb in Table 5.1)

I also noticed even when strong scaffolding approaches were used by me, they did not always generate a response (see instances in DC#01S01SCFb and #01S01Sg in Site 1,

Table 5.1 above and #02S02SCFc and #02S02SCFd in Site 2, Table 5.2 above) In the instance of the collaborative learning interaction on 18 May 2012 (Site 1, Table 5.1 above), where participants put up their own topic and went into dialogue about it, it is possible to see how peer group interactions can also be a scaffolding process.



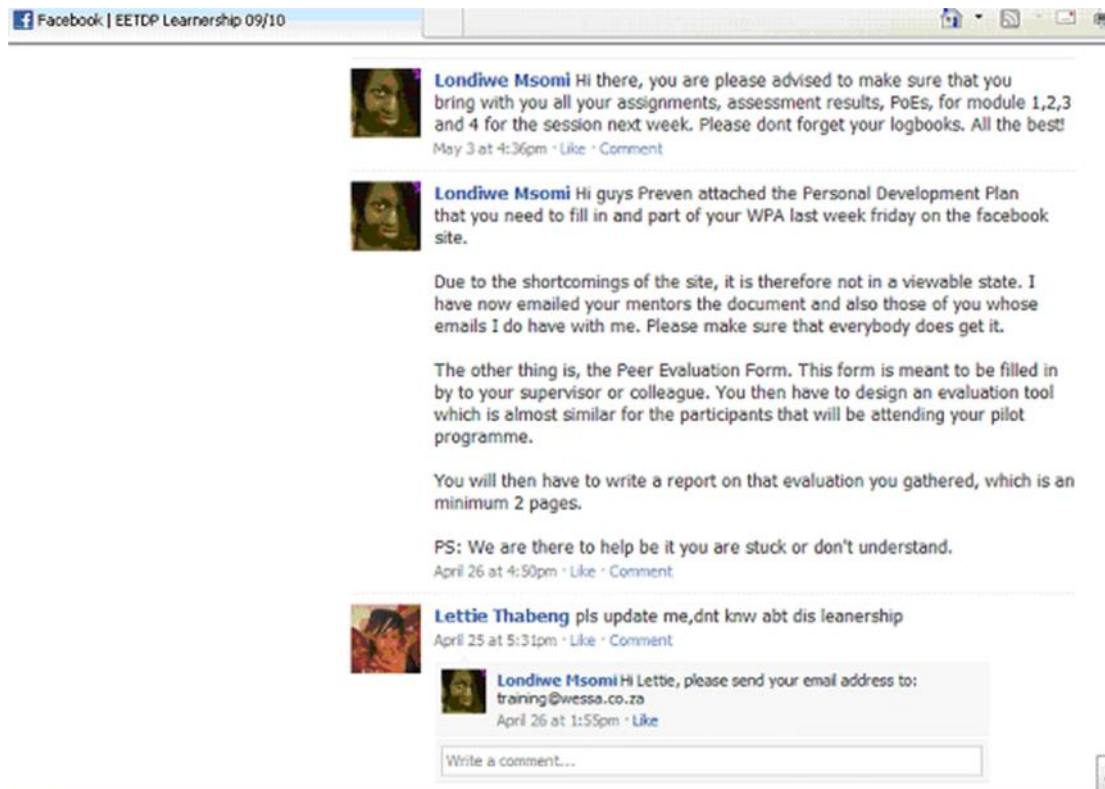
Extract 5.4: Scaffolding by students initiating own discussion (see #01S01Si in Table 5.1)

As can be seen above the discussion is posted by learners in an attempt to encourage participation yet it was not successful as few learners contributed to this topic. There seems to be discussion when administrators post topics but learners do not appear to take topics posted by others as serious discussion topics. However, this is still strong scaffolding as learners have successfully mediated the site and used it to enhance or discuss their learning. From the data summaries presented above, it is possible to see that scaffolding was identified as an important process in both study sites. From mastering everyday or active concepts to scientific/conceived concepts, candidates on the course were able to improve their personal knowledge and performance even if this was often of technical processes associated with the course (see Extract 5.5 below for example). This was mentioned on the site by many learners and also in the focus groups and interviews (see offline data).



Extract 5.5: Discussion boards on the EETDP site 1 highlighted on the main wall

The discussion boards on the Facebook page in both sites 1 and 2 were the most neglected yet (in relation to the group's wall page) could potentially be the most powerful tool for streamlining and focusing discussion and conversation. They were never as popular as the wall comments that the group members appeared to enjoying engaging with freely. The example in Extract 5.5 above shows that two group members have responded to and used the discussion boards for help on the workplace assignments. This is an example of strong scaffolding generated by group members themselves. Here it also appears that some group members have mastered the technological and scientific concepts and are able to contrast and create their own discussions.



Extract 5.6: Administrator scaffolds learners on Site 1 (see #01S01Sg in Table 5.1)

Here the administrator is offering strong scaffolding for the completion of the workplace assignments and course requirements. There is no visible take-up by group members and we cannot actually quantify how useful this post was to all group members. Facebook introduced a feature, late in 2012, that enables one to view how many users have actually viewed your post, note or discussion topic in your group page, and how effective it is was. During the data collection of this study (see *Section 4.3: Data Generation*) however, was not available so there is no way of knowing who actually viewed the post or if they felt it was useful for their learning. This was one challenge in interpreting the data, one could have gone post by post with every group member in the hall but that would have wasted too much time on course and would have become tedious, embarrassing and too indulgent for the purposes of the study. Offline data was thus generated through focus groups and interviews and I asked broad questions about the Facebook site as a whole instead of about specific posts thus gathering a better view of the scaffolding.

Extract 5.7: Administrator creating strong scaffolding for workplace assignments on Site 2

Facebook | EETDP WESSA WC/DGMT 2010/11 - Windows Internet Explorer

http://www.facebook.com/inbox/?compose&old=179018056277#|group.php?gid=129648630403134

File Edit View Favorites Tools Help

Google Search Share Sidewiki Bookmarks Check Sign In

Favorites RU Rhodes University Suggested Sites Free Hotmail Web Slice Gallery

Facebook | EETDP WESSA WC/DGMT 2010/11

Page Safety Tools

Patrick Dowling Before you write a contextual profile for your issue you need to remember that an issue is a problem statement of sorts. For eg water is not an issue, but sewerage leaking into drinking water is. Then try to focus it even more by adding who, where, how, when details. The profile will be the circumstances around the iss...

See More
July 19 at 5:11pm · Like · Comment

Mzwethu Pastor Kilani likes this.

Mzwethu Pastor Kilani I have changed my issue, it's diff from contact session 1 issue I have chosen. I decided to focus on TOPIC: NUTRITION. ISSUE: IMPACT OF PROCESSED FOOD ON HUMAN HEALTH AT EDEN CAMPUS. I think it will be a easy topic for us to do here on campus. I have already started with my workplace assignments.
July 27 at 1:03pm · Like

Patrick Dowling Sounds interesting Mzwethu. Is a lot of processed food used and are you aware of specific health issues related to it? With this kind of food the issue is often economic and environmental - more packaging waste, more food miles and CO2 impact etc. For health problems to manifest themselves you need quite a long study with careful monitoring of diets.
July 27 at 4:12pm · Like · 1 person

Dipuo Ngcozela Currently I don't have problem regarding my issue, I am still coping as I am doing water savings in homes and gardens
July 28 at 3:22pm · Like

Patrick Dowling Good Dipuo! and which areas of Khayelitsha are you focussing on for this? Have you chatted to local residents, spoken to council, networked with members of the water caucus etc to help with the contextual profile?
July 28 at 3:58pm · Like

Dipuo Ngcozela Yes Patrick I did and I am also doing it just now
July 29 at 2:26am · Like

Chat (10)

Internet 100%

start | Inbox - Microsoft Out... | Facebook | EETDP W... | EETDP Site Data 1. do... | 09:45 PM

In Extract 5.7 above we see the administrator engaging in strong scaffolding helping learners with their workplace assignment. This was the strongest case of scaffolding and apprenticeship for both sites and there is a high quality of interaction. First the administrator provides guiding notes on the tackling of the workplace assignment for the course. A group member responds enquiring if he is on the right track. The administrator responds and provides further guidance; this is followed by another group member enquiring about the development his assignment. This was the most positive scaffolding interaction and what was held in mind when trying to enhance collaborative learning online. Here the mentor is available but proximity is not needed physically for passing on knowledge.

5.2.2 Participation in learning using the social networking site

As in the previous sub-section, I begin with a table of the first layer of data analysis, showing the coded data from Site 1 and 2 in relation to the categories of apprenticeship and meaning making as these are core to participation in learning. However, as shown in this section there is also the aspect of legitimate peripheral participation that emerged, as well as *types* of participation on the site that emerged as important to understanding participation in learning. Again, the data is presented chronologically to show the processes of development and/or change over the life of the course. This is followed by a discussion on the content of the table, and then some examples from the actual site are shown, with further discussion. This is then followed by analysis of *types* of participation, and then a discussion highlighting aspects of participation using some of the analytical categories that helped to shape the analysis in this chapter.

Table 5.3 and Table 5.4 below provide an analysis of mentoring and meaning making for Sites 1 and 2 respectively (online data).

Table 5.3: EETDP #03S01MENT [Data Codex #04 Site 1 Mentoring]

Data Code (chronologic/ numerical)	Description	Emphasis/ Theory	Participants
#03S01MENTa 22 Oct 2009	Group administrator informing participants about the discussion tab and the response to the group members questions	Intent participation	PC
#03S01MENTb 15 May 2010	Group members discussing their experience on the learnership and mentioning how important it is to work with facilitators and people around them.	Intent participation/ Collaborative learning Positive interdependence	ZMN TM GK MM TN DM and others
#03S01MENTc 20 Oct 2010	Group member writes about his new job and encourages other learners to exchange info regarding this.	Intent participation Promotive interaction	ZMN

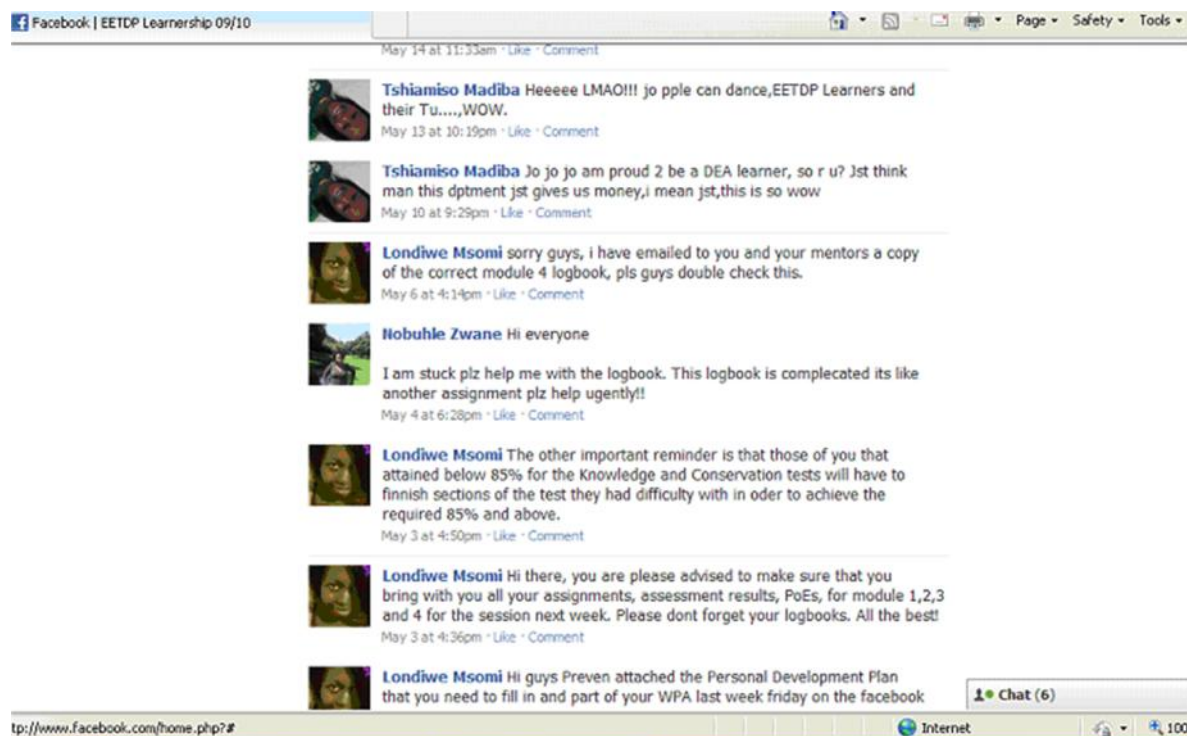
#03S01MENTd 5 Oct 2009	Group administrator advising students how to get reference letters from the training provider. Two group members respond to this post. Three more learners directly email the course administrator requesting the letter.	Intent participation	LM TM TM
#03S01MENTf 7 Oct 2010	Group members talk about administrators' project and ask other members to join it. One member "likes" this.	Direct tutor/learner contact/comment. Mentorship: peer to peer. Facebook has opened up spaces that would not be there otherwise. Promotive interaction	ZMN BM
#03S01MENTc 12-13 Nov 2009	Group administrator (Solly Mosidi) instructing students to complete assignments in time and hand in date and also reminds his tutor group about the learner support day. Group member responds on the wall to this comment by administrator reiterating what has been said.	Mentoring Group processing Collaborative learning	SM LP
#03S01MENTf 16 Nov 2009	Group member directly asks other members for help with the POE activity. Banter occurs of other group members to call them back, member responds saying he is broke and thus send it on Facebook. Member still asks for assistance and others respond saying where the help should be, no one resolves the member's query however.	Peer to peer interaction Collaborative learning Meaning making Weak promotive interaction	ZMM TM TN DDD

<p>#03S01MENTf 11 June 2010</p>	<p>Group member writes about the beginning of the World Cup in SA and how focus must also go to environmental issues as well. Another group member likes this. Administrator responds with encouragement. Another learner wishes the administrator a happy birthday.</p>	<p>Peer to peer mentoring Collaborative learning Positive interdependence</p>	<p>LM PC BM</p>
<p>#03S01MENTg 15-30 June 2010</p>	<p>Group members place their photos from their pilot programmes. This activity catches on in a huge way. A video is also put up on the site about a learning programme designed on course (25 June).</p>	<p>Intent participation/ Representational</p>	<p>TN DRJ</p>

Table 5.4: EETDP DC#04 Site 2 Mentoring and peer to peer interactions

Data Code (chronologic/numerical)	Description	Emphasis/ Theory	Participants
#04S02MENTa 19 July 2010	Group administrator PD gives guidance on workplace assignment. Two learners ask questions and are helped with respect to their assignments.	Apprenticeship Guidance	PD MPK DN
#04S02MENTb	Learner asks about assignment and if they could get a chance to see others' assignments. Group administrator responds that it is a good idea. One learner likes this.	Apprenticeship/ legitimate peripheral participation	PM MKP PD
#04S02MENTc 6 October – 7 November 2010	Group administrator posts various calls for enquiries from group members regarding their assignments, etc. There is no response. A group member then offers to help anyone who needs help regarding assignments and still no response from group members.	Apprenticeship Guidance	PC PM
#04S02MENTd 24 August 2010	Group administrator asks learners to respond to an issue in the field of environmental education about SANBI's streamlining of work. He asks them to respond to an article online. No evidence that any had done this.	Apprenticeship active introduction to the workplace	PD MPK

The tables above show some of the specific interactions that are related to the categories of analysis. However, it is necessary to interpret meaning making and apprenticeship within a much wider understanding of participation in learning as it occurred on the sites. Simovska (2003), discussing aspects of participation and learning, stated that “Meaning is dynamically created and re-created through participation in socially organised activities” (p.31). On the EETDP Facebook sites there were many forms of participation that emerged in and through this particular socially organised activity (i.e. to provide scaffolding and support in between course sessions), and also in relation to other forms of socially organised activities on the course (especially tutorials and assignment work). I was able to identify that learners engage with course material, make fun, question, complain and reminiscence on the site about the site or the course or each other. Such interactions were visible throughout the online data set. Below, are a few extracts from the site, which show these different forms of participation.



Extract 5.8: Extract from site showing engagement with learning materials

Facebook | EETDP WESSA WC/DGMT 2010/11

Information

Category:
Student Groups - Academic Groups

Description:
This is for all the learners on the WESSA Western Cape EETDP learnership program as sponsored by the DG Murray Trust. Also open to participants of the previous learnership, facilitators, researchers and other interested individuals or groups. Primarily this group is used as an aid for support in between contact sessions of the WESSA WC/DGMT 2010 EETDP learnership.


Privacy Type:
Closed: Limited public content. Members can see all content.

Admins

- Londive Msoni
- Patrick Dowling
- Andrea Gordon (Western Cape)
- Ncami Mpangase
- Preven Chetty (creator)

Members

6 of 14 members [See All](#)



Ncami Londive Sibongil

Preven Chetty Remember during your needs analysis try and involve all stakeholders and interested people. This will give you a diverse range and will be helpful when decidin what to put into your learning program.
October 6 at 10:06am · Like · Comment

Thabo Tida Lusithi Molot can someone tell me when is a in between contact session. Thanks.
September 9 at 3:35pm · Like · Comment

Preven Chetty it is the one day support session you were supposed to attend this week at Tokai- please guys these sessions are for you if you strugglin with assignments- its compulsory to attend them.
October 6 at 10:10am · Like

Mzwethu Pastor Kilani
EETDP WESSA WC/DGMT 2010/11 Photos

August 30 at 3:41pm · Like · Comment · Share
Mzwethu Pastor Kilani likes this.

Andrea Gordon

Extract 5.9: Extract from Site 2 showing questioning

Facebook | EETDP Learnership 09/10

Dakalo Nemungadi EETDP is a gud way of preparing ppl 2 the real world. I had fun n enjoyed myself, meeting different ppl 4rom diff places n i learned so much 4rom all of u. Im ready 2 go out there n prove myself. Thank u DEA, WESSA
May 15 at 11:03am · Like · Comment

Thapelo Ngwato i will be competent,, wow that will be a blessing!! thanks to the learnership i nw hv a year experience on ma cv.. *wink*
May 14 at 9:18pm · Like · Comment

Miseria Matabele Dis learnership was de great thing ever! Wow iv came acros so many opportunities in life but dis 1.. Is de best ever. Deat, wessa thanks lot and Preven i were 2 award u, i wud give u a trophy of de best environmental educator ever.
May 14 at 7:44pm · Like · Comment

Gabriel Khambule only by last minutes one realizes how important it is to do your corrections while u still have time and help around..otherwise it was a learning process to be in this kind of a learnership having to meet different ppl and with different mood...al i can say time is geting pregnant so lets not waste it but utilize it..hala back to front
May 14 at 1:06pm · Like · Comment

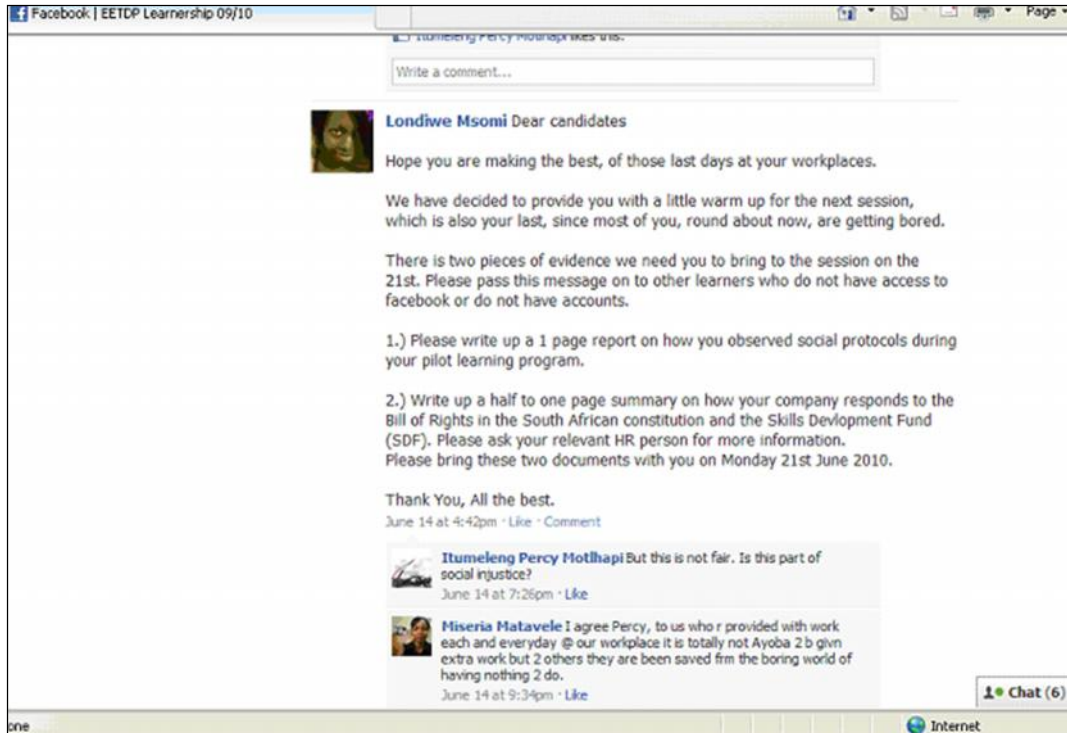
Tsholofelo Maphunye im so grateful for the opportunity given n for the inspirations,motivations and experience shared, i would like to thank DEAT,WESSA,DELTA,BPDM for making this a nice n short journey.....u were an eye opener especially to some of us who needed career guiding n a ticket to gate of success, joy n wealth thanks a lot i rea...
See More
May 14 at 12:48pm · Like · Comment

Zwakele Maybach Ngwenya hey guys, i struggled with my corrections and realised how important it is to work while u still with both ur facilitator and

Page 54

Chat (6)

Extract 5.10: Extract showing various learners reminiscing



Extract 5.11: Extract from Site 1 showing learners complaining about extra work

From the above, it is clear that all of these, while not always directly or visibly related to the content of the course or the anticipated categories of analysis, are importantly related to the *processes of participation in the course, and participation in the practices of the course*; they also show the relational dynamics of participation in learning.

A more detailed analysis of the above (from Site 1) shows the full scope of the different types of posts by group members and administrators in Site 1. With more rigorous analysis of the above tendencies, I was able to identify six broad types of postings that occurred on the site (note: data from Site 2 showed a similar pattern, and is therefore not included here):

1. Reminiscence
2. Complaints
3. Course related (queries and info)
4. Admin related information
5. Environmental
6. Other

These types fit into our main themes and sub-themes as identified in section 1.5. Most of these (1, 2, 5 and 6) falls under the mentorship or peer to peer interactions while 3 and 4 falls under scaffolding. Reminiscence and complaints however do not fall under scaffolding or meaning making but is a form of peer to peer interaction. How valuable or distracting they were will be addressed in this study. However there are overlaps and grey areas as these are not explicitly different categories. In Tables 5.5 and 5.6 below, each post is placed under either a group member or administrator's column. Individuals are not specified in this table and neither are the types of responses (whether it is a like or an actual comment to the post). Each entry on the table will look like this sample: {1>3}. Each post is thus denoted by the number 1. The number is then followed by a > indicating how many responses were given to this particular post. The following number indicates responses (likes and comments) to the post. The table is not strictly chronological, however generally the first entry on the table is the latest on the site and the last entry denotes the earliest on the site. The table progresses from left to right denoting each individual post on Site 1 from December 2010 to August 2009. Underneath each category the total number of member and administrator posts and responses are displayed. Posts are first divided by a forward slash and then the total number of responses is added up and displayed e.g. 2/5 (2 posts/5 responses). Responses are counted even for repeating group member's posts. This analysis was important to see *what the participation in learning pattern was as supported by the site.*

As one can see from Table 5.5 below the most prevalent type of category appear to be *reminisces* with the most number of individual postings. However *course related queries* provides the highest number of responses, exceeding any other category. This shows active participation especially around key components of the course, and shows this to be an important aspect of scaffolding, as well as ongoing participation in the course, essential for supporting other dynamics of learning such as meaning making and/or collaborative learning. From this elementary data set it is possible to see that group members were actively using the site for acquiring help and researching key components of the course. Course related postings also related to group members posting photos of their pilot projects which were a key component of the EETDP course. This links back to what Robottom and Hart (1993) stated about confidence and competence in democratic participation. The more inclusive and participatory an education process, the more democratic it becomes and it also

helps in bringing down the politics of knowledge and thus in turn creates a more dynamic zone of proximal development.

Table 5.5: Types and frequency of types of postings on Site 1

Type of Post	Administrators	Members		
Reminiscence Admin Occurrences: 2/5 Member Occurrences: 31/67	1>1	1>9	1>0	1>0
	1>3	1>1	1>0	1>0
		1>4	1>0	1>0
		1>0	1>0	1>0
		1>0	1>2	1>0
		1>0	1>0	1>0
		1>10	1>0	1>0
		1>1	1>0	1>0
			1>0	1>0
			1>0	1>0
			1>0	1>0
			1>0	1>8
	Complaints Admin Occurrences: 0 Member Occurrences: 3/8		1>5	1>0

Course related queries Admin Occurrences: 15/32 Member Occurrences: 17/56	1>12 1>0 1>0 1>0 1>0 1>0 1>0 1>0	1>0 1>0 1>0 1>2 1>0 1>3 1>0 1>0 1>4	1>0 1>0 1>0 1>2 1>0 1>4 1>4	1>0 1>0 1>0 1>2 1>3 1>0	1>10 1>0 1>14 1>0
Admin Admin Occurrences: 3/11 Member Occurrences: 8/26	1 > 2 1> 8 1>1		1>0 1>0 1>1 1>6		1>7 1>4 1>0 1>0
Environmental Admin Occurrences: 0/0 Member Occurrences: 13/34			1>0 1>1 1>1 1>14 1>0 1>0		1>1 1>0 1>2 1>1 1>0 1>2 1>1
Other Admin Occurrences: 0/0 Member Occurrences: 2/73			1>65	1>8	

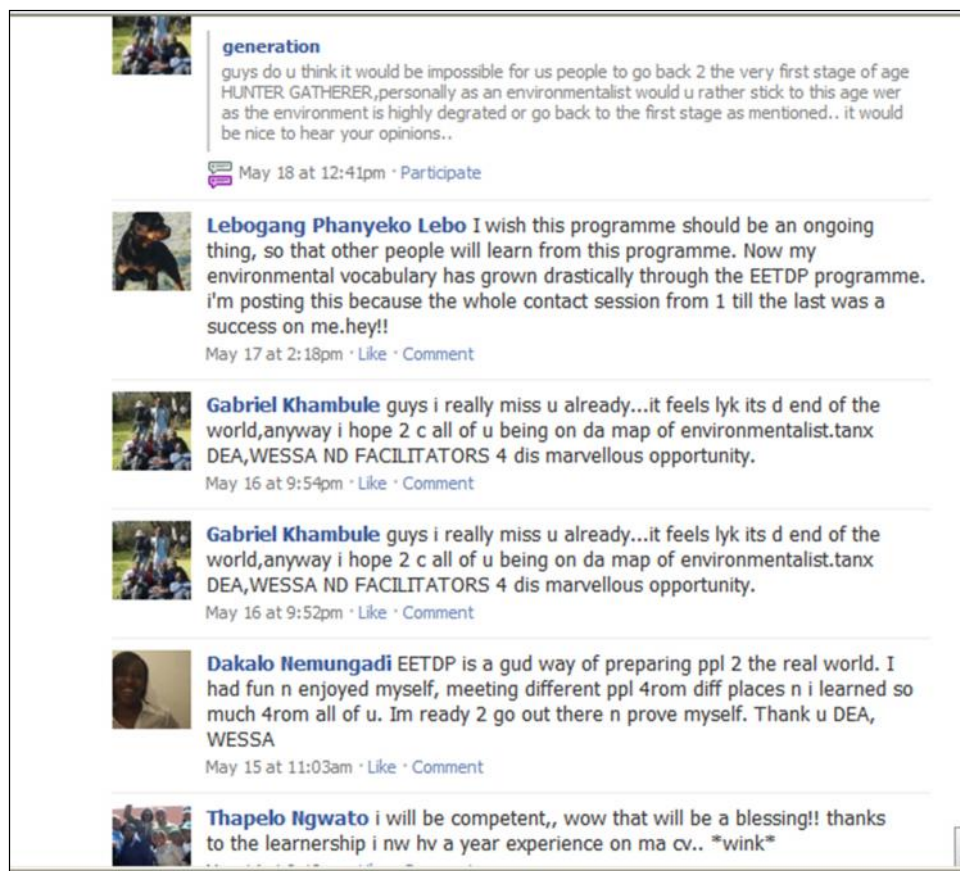
The data table above also shows that collaborative learning and meaning making interactions (an important process in apprenticeship as discussed in Chapter 3) has been occurring repeatedly and consistently throughout the site with more and more group members posting comments as time went on. I also noticed in the analysis, however, that most of the postings are done repeatedly by the same group members. Always at the start of the site set up there would be a few students engaging in the discussion activities. Mostly these students were ones who had previous experience of the Facebook site or were also vocal in class discussions. From interviews with learners it was also found that learners engaged on the site also to chat with their friends. The first discussions on the site were quite frivolous; however, as the course progressed discussions became more focused. The general opening up of the discussions, even those of a frivolous nature, were important as this allowed for spaces of communication and a way of navigating the site.

Table 5.6: Types and frequency of types of postings on Site 2

Type of Post	Administrators	Members
Reminiscence Admin Occurrences: Member Occurrences:	1> 0 (photo uploads)	1>0 (photo uploads)
Complaints Admin Occurrences: 0 Member Occurrences: 3/8	0	0
Course related queries Admin Occurrences: 15/32 Member Occurrences: 17/56	1>4 1>7 1>0 1>0	1>1 1>3

Admin	1>5		1>1
Admin Occurrences: 3/11	1>0		1>1
Member Occurrences: 8/26	1>0		1>0
			1>0
Environmental	1>0	1>0	0
Admin Occurrences: 0/0	1>3	1>0	
Member Occurrences:	1>3		
	1>0		
Other	0		0
Admin Occurrences: 0/0			
Member Occurrences:			

The stark difference between Site 1 and Site 2 can be seen by comparing Tables 5.5 and 5.6. To respond to the observation that a lot of the postings were being made by those most familiar with Facebook (see above), during the last session of the EETDP in Site 1, as group administrator I set aside time during the session in May 2010 for students to upload comments on the site by providing a computer in the hall. As indicated above, I found reminiscences to be a dominant theme of individual entries of those relatively new to entering information on the site. Reminiscences are strong indication of learners' attachment to the course and each other and this is a direct indication of how each learner experienced the course as well as how they interacted with each other. As a measure of learning, however, they are not adequate.



Extract 5.12: Reminiscent entries on the EETDP site (by new users)

Data Extract 5.12 above shows lots of comments by students that otherwise would not have had a chance to post their comments or stories. We can see that Dakalo (learner) for the first time was able to post onto the site and this is true for at least 10 other students that interacted on the site for the first time in May. One may consider this to be a problem of access but it could also relate to time factors and/or a ‘culture’ of using Facebook (which I have already commented on above). Most of the group members who posted on the site during that week, however, were already group members so the issue might not only be one of access, and may point to other factors such as familiarity using Facebook, and familiarity with the social networking tools .

5.2.3 Apprenticeship as a mode of scaffolding formation

As outlined in Tables 5.3 and Table 5.4 above, and as shown in the data extracts in Extract 5.13 (Site 1) and Extract 5.14 (Site 2) below, *group members were able to talk directly to administrators/tutors* using the Facebook site. The general openness of the course enabled

this anyway but with the social networking site learners and facilitators were able to share openly and easily. Extract 5.13 below shows Lebogang (learner) asking for Mr. Mosidi (mentor) who then responds to Lebo four days later. Notice how the learner responds immediately (an hour later) but the facilitator does not respond. This shows another aspect of Facebook which is interesting because it shows the rate of interaction at which the students of a young age access the site and that at which the older generation (facilitator) does. It appears that younger students and those between the ages of 18 and 30 go online several times a day, as reported in a study done by Lenhart, Purcell, Smith, and Zickuhr (2010, p.8). Even though this was a study done in North America it seemed applicable here in South Africa amongst our student participants on the course. When asked how often they went online, answers ranged from once a week to several times a day (see Appendix. 3.2). From this, one can suggest that if the apprenticeship social networking process is to be fully realised, it may be important to consider frequency of access, response and posting.



Extract 5.13: Evidence of apprenticeship on the EETDP Site 1

Motivation seemed to be a recurring factor on Site 1 affecting apprenticeship, as students and administrators alike motivated each other on the wall of the Facebook site. Members tell

each other how they are progressing with the assignments or provide inspirational messages as Extract 5.15 below illustrates. Here we find motivating and instructional messages from the course administrator (Londiwe Msomi) as well as a group member asking whether he will ever finish the assignment because it's interesting and difficult. Miseria (a group member) responds saying “we can do it guys” and the administrator adds “that’s the spirit”.

Facebook | EETDP WESSA WC/DGMT 2010/11

Write a comment...

Patrick Dowling

Some clarifying thoughts on Workplace assignment 1

Think of other examples that suit your topic. Next to each of the instructions I have written some words and examples (IN CAPS) to clarify what it means and what is wanted from you: Contextual profile. THIS MEANS USEFUL INFORMATION AROUND THE TOPIC NOT NECESSARILY ABOUT IT • Identify parameters of the context - PARAMETERS ARE LIMITATIONS - FOR INSTANCE IF YOU ARE TALKING ABOUT WATER SERVICES IN KHAYELITSHA YOU MIGHT INCLUDE THINGS LIKE SIZE OF POPULATION, LANGUAGES SPOKEN, INCOME LEVELS, POLITICAL DYNAMICS AND SO ON - THESE WOULD BE THE PARAMETERS THAT YOU WOULD INCLUDE. YOU MIGHT EXCLUDE THINGS LIKE THE WORLD WATER FORUM AND CLIMATE CHANGE NEGOTIATIONS AND FLOODS IN PAKISTAN. • History – what events and processes have shaped the situation as it is today? - GIVE THIS SOME CAREFUL THOUGHT AND TRY TO TRACK THE HISTORICAL EVENTS, DECISIONS AND STRUGGLES THAT HAVE LED TO THE CURRENT SITUATION. • Quantitative analysis (facts and figures) – the what?, who?, how much?, how many?, where? sort of questions - IF YOUR TOPIC IS BASIC WATER SERVICES FOR EXAMPLE GET INFORMATION ABOUT AMOUNTS OF WATER USED IN THE AREA, NUMBERS OF LEAKS REPORTED, SIZE OF BILLS (MONEY OWED BY PEOPLE) AVERAGE HOUSEHOLD INCOME, NUMBER OF PEOPLE IN A TYPICAL HOUSEHOLD, AVERAGE RAINFALL FOR CAPE TOWN, LENGTH AND CONDITION OF WATER AND SEWERAGE PIPELINES ETC. TRY TO RELATE THESE FACTS AND FIGURES TO EACH OTHER ROUND YOUR CHOSEN TOPIC. • Draw on literature and present, discuss and analyse the topic/subject area related to the proposed course - HERE YOU WOULD REFER TO INFORMATION OFF WEBSITES, IN MAGAZINES, BOOKS AND NEWSPAPERS, FROM CITY/GOVERNMENT POLICY, LEGISLATION AND SO ON. MAKE SURE YOU LIST YOUR REFERENCES. MAKE CONNECTIONS BETWEEN WHAT ELSE IS SAID AND WHAT YOU THINK IS THE PROBLEM AND WHAT YOU THINK CAN BE DONE EDUCATIONALLY TO HELP RESOLVE THE PROBLEM

August 3 at 2:24pm · Participate

RECENT ACTIVITY

- Mzwethu Pastor Klari and Preven Chetty discussed Environmental Justice on the EETDP WESSA WC/DGMT 2010/11 discussion board.
- Patrick Dowling discussed Environmental Justice on the EETDP WESSA WC/DGMT

Chat (10)

Extract 5.14: Evidence of apprenticeship on Site 2

In Site 2 as can be seen from Extract 5.14 there was evidence of strong apprenticeship and guidance by the notes given to the group by Patrick Dowling, the tutor. However, as opposed to Site 1 there were no learner comments on this post and whether any actually saw this post is debatable. Unfortunately when conducting this study the Facebook feature that enables one to assess how many view a post was not yet developed and thus useful information is missing with regard to the effectiveness and scope of the various postings created by both administrators and group members.



Extract 5.15: Motivational talk on Site 1

Engaging with concepts and content on the course was also an important interaction space for the emergence of apprenticeship, as shown by the next example. In Extract 5.16 below, the tutor (Patrick Dowling) posts a detailed instruction on how to approach the workplace assignment for Module 1. He then receives responses from two students and responds to their queries concerning their contextual profile projects. In the EETDP the first module is quite critical and the ability to find a problem and then seek to solve it is often the most difficult part. This is because as seen in one of the Portfolio of Evidence activities, the problem tree, the root of the problem is always far deeper and needs social, economic, political and biophysical remediation. In the example below (Extract 5.16) we can see careful attention to conceptual rigour and detail (e.g. “water is not an issue, but sewerage linking into drinking water is” ... and in response to another participant ... “with this kind of food, the issue is often economic and environmental ...” as the course tutor and administrator (administrators on the Facebook site were all tutors/mentors on the course)

supports the initial assignment work of the course participants. This extract is also a clear example of strong scaffolding using improved and refined conceptual development in a learning process. Through this, learners are able to deepen their own knowledge, and improve the work they are doing, and enhance their participation in the course through better quality engagement with the issues at hand. The incidence of this kind of scaffolding and ‘knowledge apprenticeship’ was, however, not widely engaged with on the site, although it is clear from the example below that it holds enormous potential for enhancing the quality of learning and engagement with the course and workplace-based reflexivity which the course seeks to enhance.



Extract 5.16: An example of the EETDP workplace assignments being discussed on Site 2, with careful attention being given to content and concepts (the quality of these) by the course tutor

As can be seen from the above Extract 5.16 the guidance was more deliberate and systematic on Site 2 than Site 1; however, many learners from Site 2 did not take advantage

of this. Whereas Site 1 grew organically because of the number of members continually logging onto and posting comments on the site, on Site 2 learning stagnated as only four people actively visited the site and of the four, two were administrators. Membership to group sites should preferably be closed and administrated by tutors on the course as there is a risk of a site simply becoming a fan page where anything goes, even spam and derogatory comments. The exchange of posts on the Facebook Site 2 walls showed a stronger conceptual form of mentoring and participation between group administrators and group members than was the case on Site 1, as they navigated the meanings and challenges of the assignments (Extract 5.16 above shows an example of how this was done). In this example and in other cases on Site 2, the group administrator interprets and informs the group member's query of changing the issue of his contextual profile. This discussion is then taken into further consideration by another group member when discussing his contextual profile. This is another main area of learning: problem solution and problem construction, as the aspects and parameters of each group member's contextual profile setting is discussed (as shown in Extract 5.16 above). This is not a sustained discussion on Site 2 but it is the longest and the number of re-posts on the same topic is quite high at 8. Typical Facebook posts on profile walls on a comment vary from 0 to in the high 60s. On a fan wall this number often rockets to the thousands.

From the above discussion and evidence, I was able to identify a number of aspects that seem to be important to apprenticeship approaches to learning on a learnership using social networking sites, namely: ability to link up with and engage with the tutors; motivation (peer and tutor-based); and rigorous and careful conceptual engagement and dialogue that is also situated in workplace assignment and social-ecological contexts. These are related to forms of scaffolding as noted above, as well as to types of participation on the site, and also to familiarity in using the site and its tools. All these clearly influence participation on the course, and also have a role to play in meaning making, which I discuss next.

5.2.4 Meaning making in understanding the ZPD on Facebook

Meaning making was another interesting aspect to probe on the Facebook course sites. An extract from Site 1 (Extract 5.17 below) illustrates some aspects of this:



generation

guys do u think it would be impossible for us people to go back 2 the very first stage of age HUNTER GATHERER, personally as an environmentalist would u rather stick to this age wer as the environment is highly degraded or go back to the first stage as mentioned.. it would be nice to hear your opinions..

May 18 at 12:41pm · Participate



Lebogang Phanyeko Lebo I wish this programme should be an ongoing thing, so that other people will learn from this programme. Now my environmental vocabulary has grown drastically through the EETDP programme. i'm posting this because the whole contact session from 1 till the last was a success on me.hey!!

May 17 at 2:18pm · Like · Comment

Extract 5.17: Extract from Site 1 raising insights into meaning making

Facebook | EETDP WESSA WC/DGMT 2010/11

See More
August 3 at 2:24pm · Participate

RECENT ACTIVITY

- Mzwethu Pastor Klani and Preven Chetty discussed Environmental Justice on the EETDP WESSA WC/DGMT 2010/11 discussion board.
- Patrick Dowling discussed Environmental Justice on the EETDP WESSA WC/DGMT 2010/11 discussion board.


 **Preven Chetty** Hey everyone- Please check out the discussion topic on environmental justice [click on the tab DISCUSSIONS] above and try and make this site the platform to bounce your ideas and questions on each other.

Also good to use this space with help on your POE work and assignments for Module 1 if you stuck. Good luck. C u in ...

See More
August 3 at 11:58am · Like · Comment

Mzwethu Pastor Klani likes this.

Write a comment...

 **Preven Chetty**

Environmental Justice

In preparation for Module 2 contact session which is just around the corner, please consider these questions: It is known that the negative environmental impacts in the world impact most, and most negatively, on the poor and marginalised in society. • Why do you think...

See More
August 3 at 11:04am · Participate

 **Phindile Mangwana** Since we are dealing with different environmental

Chat (10)

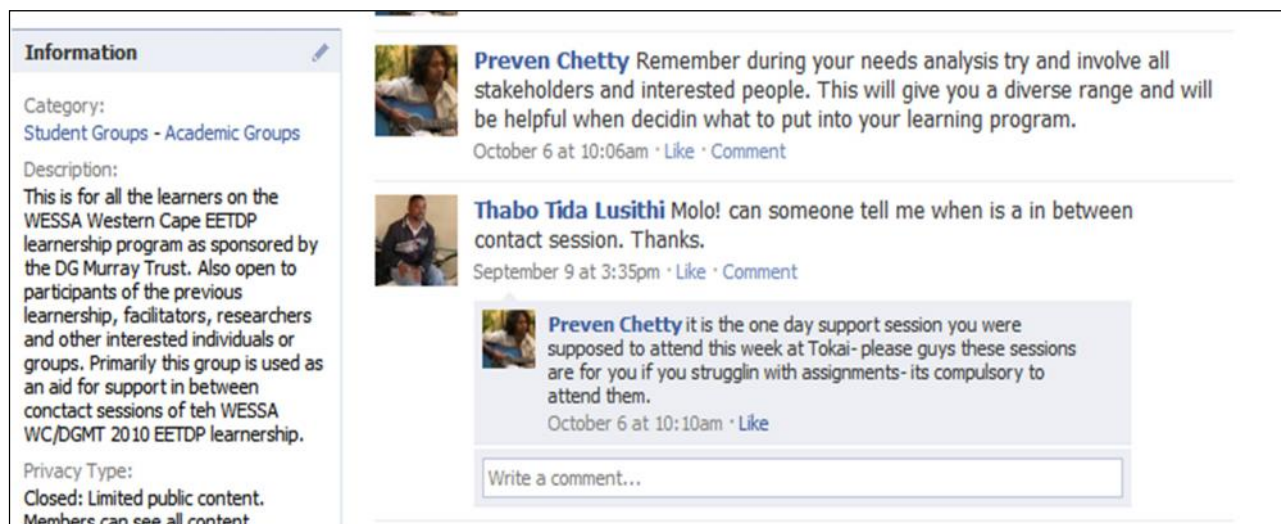
Extract 5.18: Extract from Site 2 showing meaning making

In the extracts above (5.17 and 5.18), there is evidence of group members making meaning of the content of the course as well as understanding of scientific concepts. In order to be able to post onto the site a new discussion topic on people environment-relationships,

Gabriel (learner) had to both understand the concepts as introduced in Module 2 of the course and give his meaning to it as seen in the first part of the extract in Extract 5.17.

Extract 5.18 above from Site 2 shows another example of such meaning making. Here, however, even though there is an attempt by the group administrators to simplify difficult concepts, this is not taken up by any learners or group members. One group member likes the post but whether any learning in terms of meaning making has occurred is debatable.

Another element which shows that learners were able to involve themselves in meaning making interactions is shown by Lebogang's (learner) declaration (in Extract 5.17 above) that his environmental vocabulary had grown "drastically" through the programme. However whether it has been through the social networking site itself or through the contact sessions of the programme or working on his own with a manual, is difficult to ascertain from his single comment. Thus the data has to be triangulated with offline data to determine which factor was the greater influence. These views on meaning making and understanding raise many questions about the role of the social networking sites on the course, as so many of the entries were related to course related queries, or things that were not clearly understood, as shown by way of example in the extract in Extract 5.19 below where a group member [Thabo] asks 'what is an in between contact session?'



The screenshot displays a social networking interface. On the left, an 'Information' sidebar provides details about the group: 'Category: Student Groups - Academic Groups', 'Description: This is for all the learners on the WESSA Western Cape EETDP learnership program as sponsored by the DG Murray Trust. Also open to participants of the previous learnership, facilitators, researchers and other interested individuals or groups. Primarily this group is used as an aid for support in between contact sessions of teh WESSA WC/DGMT 2010 EETDP learnership.', and 'Privacy Type: Closed: Limited public content. Members can see all content.' The main content area shows three posts. The first post by Preven Chetty, dated October 6 at 10:06am, reads: 'Remember during your needs analysis try and involve all stakeholders and interested people. This will give you a diverse range and will be helpful when decidin what to put into your learning program.' The second post by Thabo Tida Lusithi, dated September 9 at 3:35pm, asks: 'Molo! can someone tell me when is a in between contact session. Thanks.' The third post by Preven Chetty, dated October 6 at 10:10am, responds: 'it is the one day support session you were supposed to attend this week at Tokai- please guys these sessions are for you if you strugglin with assignments- its compulsory to attend them.' A 'Write a comment...' input field is visible at the bottom.

Extract 5.19: Group member questioning technical aspect and receiving clarification on Site 2

The social networking sites showed time and time again each of the group members' frustrations, incomprehension and struggles with grasping the materials or learning tasks, mostly in Site 1, however, Site 2 did reveal learners' attempts at trying to close the gap of the ZPD in order to understand the course requirements at the workplace. Thus as a zone where meaning making may occur and where difficult concepts become less ambiguous, these sites might play a very pivotal role not only in educational contexts but also in social and everyday settings.

5.2.5 Social networking sites have helped learners facilitate discussions on workplace learning

Workplace learning was a critical component on the course and the need for mentorship primarily in the first key phases of the EETDP learnership is vital, as already discussed. However, while workplace learning is promoted, and new models of workplace learning are developing, as shown in the setting up of this study, inadequate tools exist to facilitate effective and ongoing dialogue between learning out of the workplace context (i.e. on course), and back in the workplace context, especially in learnerships which require up to 60% of the learning to be located in the workplace. Earlier experiences with the EETDP showed that there was no adequate means of maintaining communications with course participants between contact sessions.

The Facebook site allowed for this, and also allowed course participants to 'stay in touch' in between sessions, and request help, motivate each other, and work through some of the environmental education concepts on course that were challenging (meaning making). This aspect of the social network site supported students to complete their assignments on time, and assessment of the portfolios of evidence shows successful completion of the course and the workplace learning tasks (not all of which can be simply attributed to the presence of the site of course).

5.2.6. Perceived usefulness of Facebook group sites in learning

As Figure 5.1 below shows, most learners in Site 1 were satisfied with their learning via the site, and felt that it benefitted them in the workplace. There were 32 respondents in all as the graph displays with a R1-R32 (R = respondents). The numbers 1 – 5 then represent the degrees of benefits the learners received onsite in terms of learning and coping with

assignments. A 5 means that they are greatly satisfied and 2 means they were happy. 1 and 0 indicates they couldn't access or did not find the site beneficial respectively. These were gathered from the responses to the questionnaire. As can be determined from this graph, even though most learners embraced the notion of learning online and using Facebook, only one third of the group felt that they benefited greatly from it.

Respondent 6, 23 and 30 as seen in Fig 5.1 did not have a Facebook account or just recently logged on and thus their values are represented on the graph as 0, 1 and 0 respectively. Others saw it as a novelty, not as a learning tool, especially in the beginning. It seemed that it took time for it to crystallise in terms of its value as a learning tool, as reporting on the data in Chapter 4 shows progressive focussing in on course content and outcomes as the time progressed. Others felt that the group site only partially benefitted them or that they were basically satisfied with what transpired on site but that it was not very beneficial. This analysis therefore shows that the claim made above in the analytical statement needs to be given a more nuanced interpretation, based on use and value patterns associated with the Facebook site. The graph below is generated from the responses of all participants in the questionnaires. If someone scored a 5 for knowledge gains made under the Respondent number, the graph shows all 5 levels as being used. Knowledge gains are viewed as the highest level on the graph and the usefulness of course increases on the graphs and incorporates all other lesser sentiments (except 0 = not useful). The thinking here is that if the respondent found the course helpful for gaining knowledge then they have also ticked the box for useful as well. Similarly if the respondent scored a 0 or not useful, it is shown as a negative on the graph. This raw data for this graph can be found in Appendix 1.3.

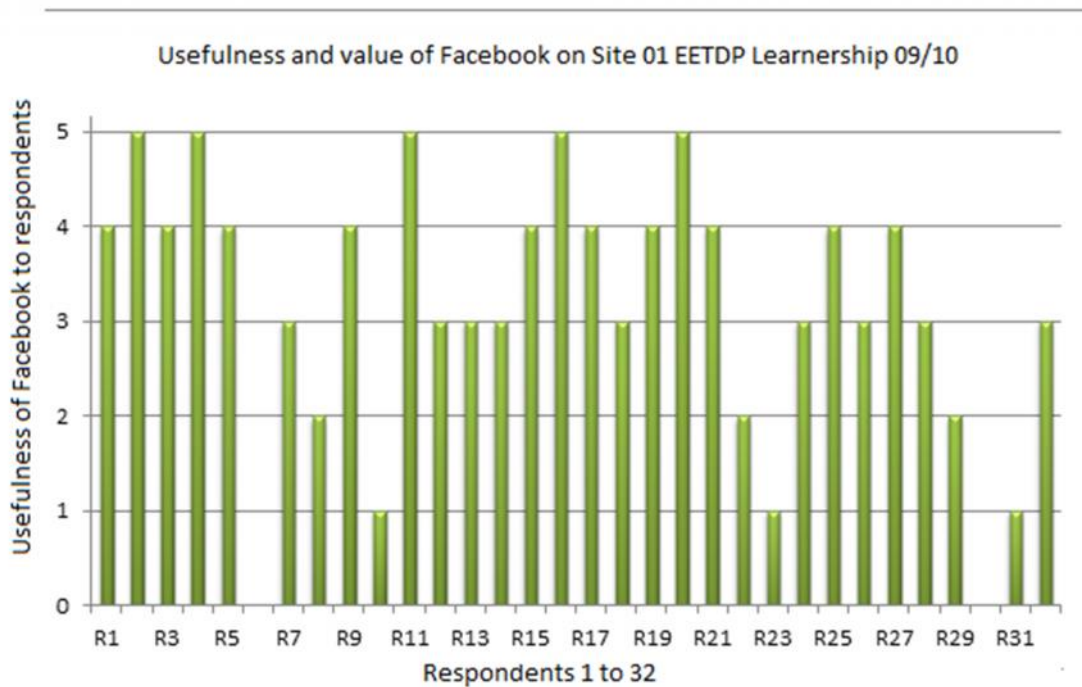


Figure 5.1: Bar graph showing learners’ (group members) from the DEA EETDP Learnership 09/10 attitude towards the Facebook site ranging from negative (0) to positive (5).

According to SAQA learning and assessment procedures, assessment should be ongoing, transparent and fair and should contribute to practical, foundational and reflexive competence of each learner (SAQA, 2004). Thus the idea of helping learners in each aspect of the workplace tasks becomes paramount; however, as seen through the previous learnerships, the workplace was a difficult sphere to enter and help learners in, thus the role of mentorship became crucial. Unfortunately the flaw in the roll-outs was that most mentors were unfamiliar with the programme and its content. In the cases where mentors had previously graduated on the course this arrangement worked well. Most of the candidates in the two study sites were placed in municipalities or NGOs with limited resources and thus the need to include contact tutorial days in between the contact sessions was vital. The presence of the Facebook site helped to keep these processes ‘in motion’ so to speak and herein lies a potential value of using such a tool for environmental education workplace learning programmes.

5.2.7 Social networking sites have allowed for a visual representation of communities of practice

The interesting thing to note on the social networking site is that the communities of practice become an almost visual aspect. They can be tracked and their growth or decline checked simply by observing the postings of various members and the rate and focus of interaction between them. As Grimmelman (2010) states the phenomenon of Facebook is so new that most users are unaware of even the privacy harms to which they expose themselves. How more difficult then would it be for group members trying to coordinate and get help with learning activities? The data presented in and discussed in this chapter shows the nascent forming of such communities of practice and it appears to require a range of different types of participation, which include but are not limited to; an open approach to use of the networking site, and a persistently clear purpose which is to facilitate and support the learners' expressed needs in completing or working towards their workplace learning tasks (this help was provided by a range of different types of communications and interactions). This open ended, exploratory approach where the end point is not seen at the start, can be challenging to establish learning cultures on courses, which have tended to have everything mapped out and carefully structured for scaffolded delivery of courses. The Facebook site showed that it is important to allow space for the unexpected (e.g. the reminiscing, or the calls for help). A more structural functionalist approach to using the site would have emphasised only the cognitive scaffoldings on the course site (e.g. engagement with course concepts), and may have missed out the potential value of the other processes that have shown to be at least partially valuable to the majority of the course participants.

5.2.8 Social networking sites have enabled meaning making interactions

As can be gleaned from the data represented in this chapter especially with regards to tutors/administrators helping students understand workplace assignments and course concepts the Facebook site enabled immediate contact with relevant personnel on the EETDP course all in one place. Before using the Facebook group site learners had to rely on making phone calls, visiting WESSA offices, waiting for mentorship meetings (which only happened once in between sessions) or sending emails (which often got lost in the day to day "busyness" of facilitators working day). Facebook enabled learners to use their mobile phones to connect and ask questions either to specific facilitators but more importantly it

enabled access to the group members at large as for the first time in the history of the EETDP course, group members had instant access to the knowledge or opinions of each other instantly. This aspect was more valuable than having access to facilitators 24/7 because here students could thrash out or help each other understand concepts in simpler, more direct language and if needs be provide translations from English into their own mother tongue, an issue that always beleaguered the EETDP courses run previously as we always had on register students from most of the 11 language groups in South Africa. This can be seen in Extract 5.1 as shown below provided below where Thapelo (learner) provides inspiration in the local language of Pedi and some encouragement to work together as the design of the site was intended. Facebook's simple user face and ease of use allows for a plethora of languages on the social networking site. One of the key features Facebook offers is translation (for the user interface not necessarily translating user's posts) in more than 70 languages. There is no easy method for establishing which user is using a language interface of even if they even are aware of it, however, Facebook does currently offer Afrikaans and IsiZulu as language options. More importantly were group members' free posts and discussions in their vernacular languages, of course this also had the effect of isolating group members who did not understand the language³³.

³³ As I experienced – I had to ask other group administrators like Londiwe Msomi and Ncamisile Mapangase for clarification on what certain students were talking about.

Facebook | EETDP Learnership 09/10

November 30, 2009 at 12:53pm · Like

Write a comment...

Thapelo Ngwato lets go back to our roots: Mabogo dinku a thebana; kgetse ya tsie e kgonwa ke ga tshwaraganelwa; moroto ga nke o elela o le esi; mphe mphe ya lapisa motho o kgonwa ke sa gagwe(not this one). what im trying to say is if we can work together we can finish the tasks but if we work individually,well, it will be a mountain to climb. lets help each other to achieve one common goal (to pass)
October 22, 2009 at 1:33pm · Like · Comment

Zwakele Maybach Ngwenya Is thr any1 who z gt properly done peer assesment 4 PoE 1 & Activity 7 of PoE 1.
October 22, 2009 at 12:26pm · Like · Comment

Thapelo Ngwato we were not suppose to do it
October 22, 2009 at 12:29pm · Like

Zwakele Maybach Ngwenya Oh z it, r u done ka PoE 9? Plz send it 2 me if u hv.
October 22, 2009 at 12:38pm · Like

Thapelo Ngwato ke feditse but dude dont you think its about time re share what we have to finish the ass
October 22, 2009 at 1:48pm · Like

Write a comment...

Preven Chetty Guys & Gals- click onto discussions and see my reply to Millicent on the Contact Tutorial Activity 6. Everyone can reply and join into these discussions so please feel free to sday how you are working on the assignments so far. WE will try and post more info on the workplace assnkmknts as the weeks progress. Good luck!

Extract 5.20: The diversity of languages on Site 1 and promotive interaction between group members

Teaching in English has always been the uneasy truce established with students but many of the concepts or discussions were lost in translation. In this regard Facebook group sites can enable frank, clear and more natural discussions between students that might not have occurred in an engineered classroom format. Unfortunately in this research this was the exception rather than the norm, as can be seen from the extracts from the site. This is also evident in the data online or on the CD where one can find evidence of reminiscences and serious questions frequently being turned into backlash or ribaldry. What was not clear to me, and something that I am still puzzling over, is whether it is the nature of the medium or the cultures of practice that have emerged in Facebook, that do not allow for serious discussion. Or is it the nature of the learners themselves who have already identified their relationship with Facebook and the group itself and therefore respond only in certain ways? Should the administrators have been more of a ‘policing force’ or if they had been over

didactic in their orientation, instead of initiators willing to try out something new with learners, would this have killed all discussion regardless of its nature? Was the true function of the Facebook site to enable comfortableness with fellow learners, thus encouraging more interaction in class with tutors and learners alike? Was it a useful sounding board for helping learners survive the two to three months between sessions whilst working on the Portfolio of Evidence workbooks?

As shown in this chapter which represented the data and discussions, the Facebook site was a useful means for administrators to pass on messages but could not be relied on entirely because some learners had no access at all to the site during the entire course and others only accessed it sporadically. Nevertheless the spaces where it did help learners understand concepts or processes were enough to warrant this as a finding during this study. Further research into identity and how interaction translates from online to offline is needed on Facebook group sites for enabling meaning making and learning.

5.3 Offline Data

The evolving nature of workplaces and social media sites and southern Africa's relatively poor access to technological resources hinder full participation in online communities of practice

Workplaces generally view Facebook and other social networking sites as a drain on company resources (Internet bandwidth downloads) and personnel time. Often Facebook is banned in workplaces. This was gleaned from interviews with students and the questionnaires given out during the study, as is reflected in these quotes:

It has been useful although we did not use the site to its fullest because in our organisations the site was blocked; furthermore the discussion group was not active because it seems people were reluctant in sharing ideas however it was a good platform to exchange ideas.

– anonymous response from questionnaire from Site 1

No issue with Facebook; the only issue I have is with KRC [Kenilworth Race Course] does not allow Facebook.

– quote from Dora Wangalu, learner on Site 2

Some candidates on the course did not even have access to computers at the workplaces during the duration of the study and thus their participation was limited. There is currently a trend worldwide to incorporate Facebook into workplaces; however, because of the heavy usage patterns that the site generates, the reluctance is understandable.

Some group members also experienced problems with accessing the site on their mobile phones and according to an interviewee: “occasionally it would work and sometimes would cut out”. These problems appeared to be experienced more often by older participants on the course. The majority of the Site 1 group was between ages 20-25 and they found ways of working with their mobile phone capabilities as well as their workplace restrictions. Thus problems of access and the ease of use once on the site calls for a more strongly constituted orientation programme that facilitates use of the social networking site for the purposes of the workplace learning component of the course. The mobile platform and benefit of Facebook should be carefully considered as Facebook is currently providing the main means of access amongst South Africans as discussed in section 1.2.

Frequent users of the site felt more empowered and were able to tackle workplace tasks more confidently. As seen from the interview transcripts and questionnaires most of the group members had positive comments about the social networking site: they stated that it aided their work on the assignments as well as helped them to feel a sense of belonging and camaraderie that other members were also engaging on the task. When I interviewed Lindelani Mafu on 2 December 2010, months after the last contact session and just days before the DEA graduation ceremony, he reiterated what learners were saying about the learnership and the course as evidenced in the reminiscence posts as discussed in section 4.2. Lindelani’s comments, however, helped to inform the value of the Facebook site in creating a viable and vibrant community of practice between learners. For example, speaking about the sense of belonging and camaraderie on course both on and offline, he said:

It was great, meeting people from other places and other provinces, that was great and we worked together. The course was great not only for environmental education we also developed EE but on other issues like [sic] personally.

In the same interview discussing Site 1 he shared another example of how effective Facebook was in establishing contact and making new friends when he stated that: “Yes we socialise more, because when u meet a person u say hey remember what u said on the site on the EETDP site and they say yes that was crazy or that was nice.”

The focus group for Site 2 learners was divided on the use of the Facebook site, emphasising what O’Reilly (2005) noted: Web 2.0 is an attitude not a technology (as discussed in section 1.2). Some of the positive comments from Site 2 were from Vuyo:

I think social networking sites are good because one time I was asking for information and Phindile asked me send my email address which I did and then he managed to send me the information which I printed so I think it is very good it that way.

A few members from Site 2 did feel that using the social networking site would detract from their actual day to day working life as shown by these comments:

[You] log in your name and password then it takes you to your profile page not necessarily the EETDP page and then you immediately get all this other nonsense that people have sent to you personally and then when you get into the site you get quite a lot of this social bantering before getting down to the tasks meant to be at hand. I don’t know, its meant to be more relaxed but I think there is a difference between ordinary Facebook banter to “I saw my cherie on the weekend got lekker dronk” and the actual tasks at hand.

– Patrick, Site 2 group administrator

No! I have consistently refused to sign up because I considered it more of social interaction that could impact on my time of work adversely.

– anonymous

Mine is I don't know whether you wanna call it 'Facebook phobia' or 'Facebook what' but I've not been using the facebook EETDP site effectively because I have never even tried after the time when I got some ... but somehow because of my tight schedule I felt that my use of facebook will derail me from other things I have wanted to do.

– Barry Wangalu, Site 2 learner but not group member

However, quite a few of the participants found it useful and even necessary to see themselves as part of a visible community of practice as shown in these extracts from the interview data with Lindelani Mafu:

It's the right thing, because u get to know what others are doing ... the problem is we are friends with those who are on the Facebook site ... sometimes we used to chat with them outside the site and it might seem like we not chatting on the site.

The responses from the questionnaires from Site 1 also revealed this growing community of practice on the Facebook site:

Opens discussion for everyone. It is simple to get answers because some experts they can attend your questions they opened it for discussion.

The site was very useful in terms of my work and assignments because we were sharing ideas helping one another and also correcting one another. Our assignments became really easy because of Facebook site not forgetting I got a lot of friends now because of it.

I have gained a lot in terms of environment and it has also helped me in working on my project for my B.Tech studies. I would also love to network even after the learnership to interact with your guys n find some help as I am still working on our project.

This sense of belonging and the ability to communicate frequently and whenever they wanted to with other classmates and tutors helped create a sense of visible support during the months in between contact session. This helped many candidates complete the workplace tasks as reflected in these data extracts from Site 1 and Site 2:

Ja and on my side I think that it is very helpful in the way that I did participate one time and in a way that I did participate one time and I got my feedback.

– Mzwethu Pastor Kilani, Site 2 member

However the following were also noted:

- Responses were not coming fast enough;
- Module 1 of the learnership would have benefitted from the site but there was an unfortunate delay in establishing it;
- Lack of participation from all tutors and mentors at the workplaces;
- Heavy usage by the most vocal students in class and not all group members;
- Lack of materials on the group sites; and
- Delay in getting assignments together and gathering information from the site was too long.

This showed that despite good intentions, the site and its setup could have been more effectively managed as mentioned by Mzwethu, one of the group members of Site 2.

I would like to say if you could organise or build our interest by getting more involved and putting up information maybe weekly or so I think it will be very helpful for us.

– Mzwethu Kilani

An anonymous comment from the questionnaire given out to the Site 1 group reiterates this sentiment:

The Facebook site on environmental education needs to change and be more attractive so that everyone can access why? There must be a lot of information, on environmental rights, NEMA, environmental education, including author needs to have library [sic].

Some group members felt in the face of these obstacles it was better to email each other or tutors directly rather than be subject to the vagaries and inconsistencies of the social networking site in terms of issues of access. This sentiment was predominant in Site 2, as shown by these comments from Phindile and Dipou:

But you see like with me I don't have any problem but the response you know there's like no response because people are taking long time so if I really have something to ask I will email Patrick or Andrea Thank you

– Dipou

Ya, as Patrick said it is a good idea but the problem with Facebook is that we are not using it effectively as a group and I don't blame people because sometimes it cud be a issue of access to the internet, and when you do find that you get access to internet you find that social networking sites are blocked during certain time and you find that during that certain time you can access anyone so access to internet is an issue

– Phindile

This is reiterated by this anonymous comment from the questionnaire in Site 1:

Facebook was useful to me because I have question then raise it on the site on facebook Londi always answers the questions. But from another learner there were no communication about the work and assignments and always is all about their cannot assisting each other/concerning the work or assignments.

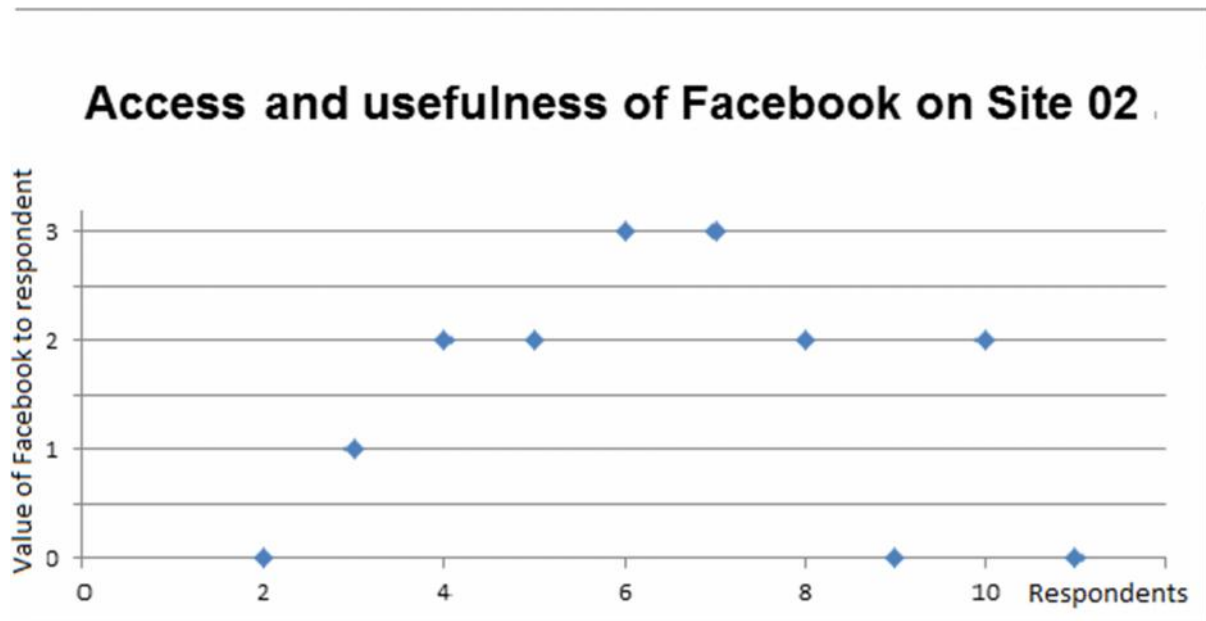


Figure 5.2: Scatter graph showing access and usefulness of Facebook to students in Site 02 EETDP Learnership 10/11

The above figure shows that almost a third of participants (represented on bottom of the graph as numbers 1 to 10) in the Site 2 learnership were unable to access the site through lack of access or because phones were incompatible. It must be kept in mind that Site 2 was a small group in comparison to the larger Site 1 group.

Compare this to the graph of accessibility and usability for Site 1 (Figure 5.3 below). Because this group was more active we were able to incorporate other elements to evaluate the effectiveness of the site. The data is presented on a scatter graph below. The values are arranged from 0 to 3 and reflect the following:

1. Indicates that the learner was not particularly impressed with the Facebook site for learning purposes
2. Indicates that the learners did engage with the site but certain systemic aspects inherent in course or on the actual website impeded their complete involvement. Sometimes in this category they offer solutions or suggestions to improve the experience
3. Indicates that the site was very useful, enhanced their learning and contributed to the completion of the workplace assignments.

0 indicated that the learner had no access to the site or was not keen on joining the Facebook group for various other reasons.

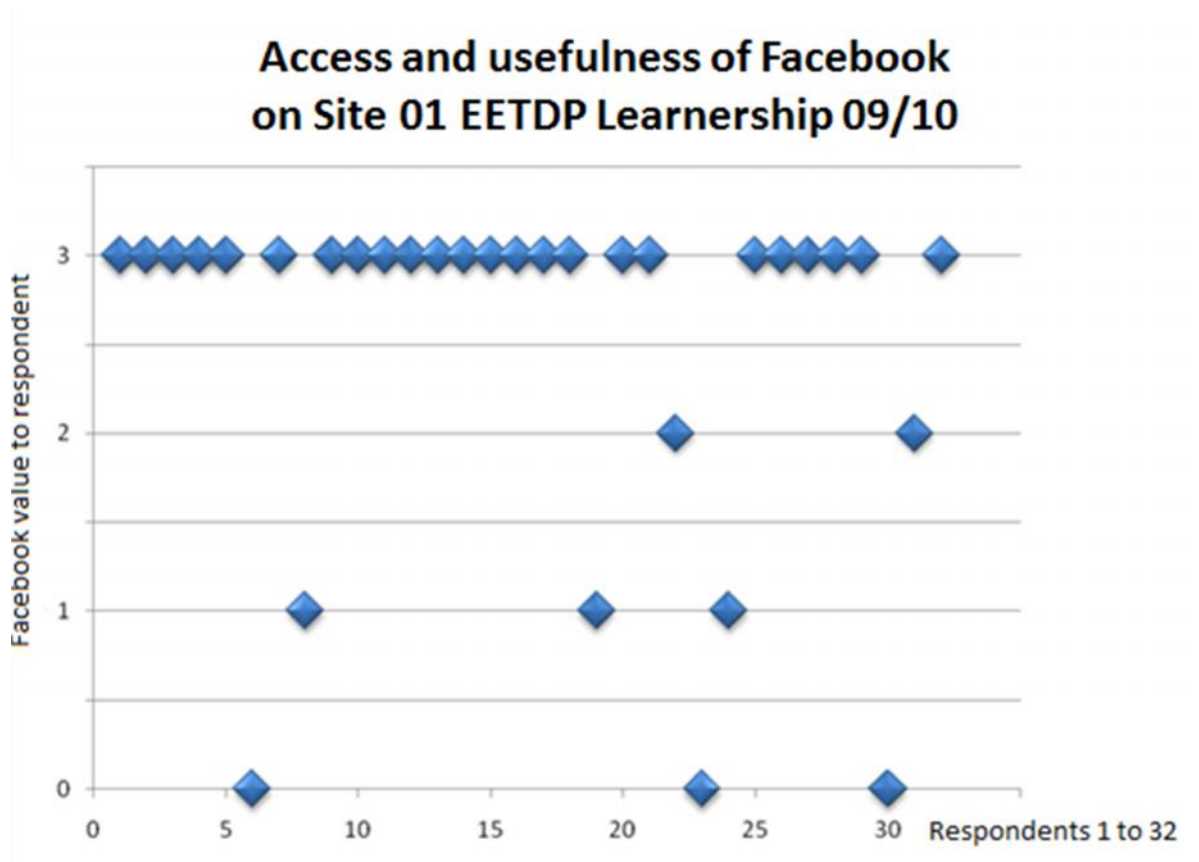


Figure 5.3: Access and usefulness of Facebook on Site 1 to students of the DEA EETDP Learnership 09/10

As the above graph demonstrates, most of the learners from Group 1 were satisfied with the Facebook site and its ability to contribute to their coursework. When dissatisfaction is expressed it is predominately with regard to lack of access or being denied access at their workplaces. The Facebook site is user-friendly and thus more time could be spent discussing course work or difficult concepts. This was a real advantage as it enabled learners to chat, discuss and comment on activities and course work with ease. With other social networking platforms perhaps this might not have so readily happened; however, it is beyond the scope of this study to compare the various social networking sites for the purposes of learning. The site also allowed learners to upload videos and photos of their learning programmes or aspects of the course that interested them, which they did, particularly near the end of the course. This enabled greater sharing and ultimately helped to improve the solidarity of the group, thus making learning a more democratic process, or one where learners felt they were

on a journey together towards attaining their intended outcomes. The value of the site as experienced by Group 1 can be clearly seen here. As noted previously, reasons why Group 2 were less engaged than Group 1 included lack of access and being unused to the culture of the site. Also as a smaller group they had fewer interactions, however, the few interactions that did occur were important with regards to help with their workplace assignments for the few who participated.

5.3.1 Access, value and usage

Access: Problems of access were mainly identified in the offline data sets. These were in the form of the questionnaires and the observation journal. Problems of access are revealed predominantly in the online data sets by conspicuous absence or irregular postings but this too could also be from other factors and it was important to probe the offline data sets to understand exactly the source of problems with access and usage patterns. The extracts below show that many learners reported lack of access. These are taken from the baseline data and interviews provided in full transcripts in Appendix 2. The respondents' numbers are still kept in these extracts. Of the 32 respondents only two stated that they had no access to Facebook or did not use it before. In Site 1 the learner group was younger and was predominantly using mobile phones to get onto Facebook:

R23: Y: I don't have access to Facebook but will be happy to be able to communicate with other people. I hope to have access soon.

R30: Y: I never use Facebook before. I just entered or logged in today. From what I saw I think it is useful to have information needed to the EETDP.

Only two participants in Site 1 did not have access to Facebook during the course, but in addition, not all participated equally on the site, as already mentioned above. This probably relates to perceived value and usage patterns. As already mentioned, those most familiar with Facebook were also most active on the site. For Site 2, there were seven who did not have access to the site.

Value: It was only through the pattern analysis and through some of the detailed interaction analysis reported on above, that I was able to establish value of the site for course participants. However, for Site 1 I also conducted a 'snap survey' at the end of the course to

ascertain participants' views on the value of the site. I was not able to do the same for Site 2 due to course related circumstances and time. I therefore share data from the value perceptions analysis of Site 1 in Figure 5.1 above.

Usage: It was not very easy to understand fully why some found the site useful and others not, beyond questions of access. The following data from Site 2's baseline material, however, sheds some light on the role that current attitudes and perceptions about the platform may play in establishing use value of the social networking site. See Appendix 2.2 for the raw data that informs this table below. The question here was whether the participants have used Facebook before and what their impressions of it were.

		Friendship	Networking	Waste of time	Technophobia	Discussions
YES	7	(5)	(4)			(1)
NO	3			(2)	(1)	

Table 5.7: Coded data from DGMT EETDP Site 02

From Site 01's baseline data, the following extracts mirror some of the perceptions and attitudes shown by the Site 02 data. The questionnaire for Site 1 was very specific. Conducted on 27 January 2010 it was halfway through the course and the site was just getting started. I am presenting the data below in segments sequentially in their order of appearance on the short questionnaire in order to help interpret the data. The numbers next to the responses are the candidates. It was a sample of 44 from the total group of 50 students as some were absent on the day. The question similar to the question given to the DGMT EETDP group is. Have you heard of Facebook before?

		Don't know how to use	1 st time on course
YES	33	4	
NO	11		1

Table 5.8: Coded data from DEA EETDP Site 01

As mentioned in Chapter 4, gathering baseline data was necessary in this study because of the nature of the social networking sites. Even though at the time of the study Facebook was

merely six years old already strong perceptions had been established about it particularly regarding its role in the workplace, as shown by some of the comments above from Site 2. Attempting to establish Facebook as a means of communication and scaffolding of learning on the EETDP course was thus problematic at some workplaces which did not allow access to the site, and amongst those who thought it was simply “cyber nattering”. The offline data is drawn on further in the next chapter when more analysis of the online data is presented in the form of analytical statements. Also learners’ perceptions about Facebook and even towards computers either enabled or hampered their interaction on the group site, as can be seen from comments such as “No – no time to dedicate to arbitrary cyber chatting” and “No, because scared of the internet” from the data set shared above.

5.4 Conclusion

This chapter has worked with the syntheses and analysis of the all data types and sets, and also utilised extracts from the Facebook group sites to highlight critical dimensions of the data. Space does not allow for a full rendition of all the data here (but fortunately with social networking as long as the groups are open, one can access them at any time). The complete data sets are contained on the CD that accompanies this thesis.

Coding the thick descriptive data online as well as creating visual representations from offline data has formed the main body of the thesis. Eight analytical statements have been developed from the online data and using these, I will now present the main findings of the study in Chapter 6 (The Pond: Echoes of learning).

CHAPTER 6

THE POND – ECHOES OF LEARNING

“We have seen that instruction and development do not coincide. They are two different processes with very complex interrelationships. Instruction is only useful when it moves ahead of development. When it does, it impels or awakens a whole series of functions that are in a stage of maturation lying in the zone of proximal development.”

– Vygotsky, 1998, p.212

As in most ponds, the social networking site data might seem superficial at first glance; however, when peered into more closely it reveals both life forms and depths that are not visible immediately. In the same way as a Mini SASS (mini version of the South African Scoring System for river health) identifies the health of a river system from the analysis of the micro invertebrates that live in the water, so too do specific interactions and reflections on learning on social networking sites indicate the level of collaborative learning and whether valuable crossing of distances in the ZPD were occurring.

Through sustained analysis of both sites’ online and offline data sets, the current developments of the Web 2.0 platform, and its potential for the framing of theoretical knowledge of workplace learning and learning on social media sites, several key findings can be extracted. This chapter draws together what has been discussed in Chapters 1, 2 and 3, methodologically structured in Chapter 4, gathered and analysed in Chapter 5. This chapter synthesises the main findings gained from the study in order to address the research question, and to open spaces for further research.

6.1 Summary of Findings

These findings are constructed out of the data predominantly explored in Chapter 5. As explained in Chapter 4, the data was segmented into different themes and sub-themes for analysis. The primary aim of dividing analysis into these themes was to seek out avenues where collaborative learning and spaces where engagement within the zones of proximal development occurred. The following elements in particular were explored:

- Scaffolding
 - Task structuring
 - Feedback, instructing and questioning
- Meaning making interactions
 - Mentoring and apprenticeship
 - Collaborative learning

Together these main thematic areas address the research question, which is:

How can Facebook (a social networking online site) be used to scaffold learning and meaning making on the EETDP learnership?

To this main research question I have worked with three research goals which inform the study. They are:

- In what ways do mentors and peers make use of Facebook to scaffold learning and meaning making on the EETDP learnership?
- What social processes are involved in using Facebook as a strategy to scaffold learning and meaning making?
- Does the use of Facebook contribute to expanding learning within the Zones of Proximal Development framed in and by the EETDP learnership course?

Through a process of sifting through the thick descriptive data found online and offline, with this research question and the research goals above, I have gathered the following key findings. The findings are as follows:

Finding 1: The scaffolding process requires both technical assistance and strong instructional input from tutors or peers

One of the types of the scaffolding processes that emerged from the two study sites was the need to support learners with minor technical assistance for various tasks. It is not easy to ‘pre-structure’ this on social networking sites. Since there were only five contact sessions with four workplace assignments in each one and a time lapse of two months between each

session there was a need to help candidates with their Portfolio of Evidence workbooks and their assignments. The Facebook sites worked by allowing students to keep in touch and communicate with each other and find answers and help with their respective assignments, as was revealed by some of the extracts of data shown in Chapter 5. Since the assignments were contextual (i.e. each assignment is customised and located in the workplace of the participant), actual copying could not take place but guiding questions and answers were always placed on site by administrators and group members. Thus as seen from Extracts 5.3 to 5.19, the candidates were able to get help with everyday technical matters and concepts to scientific concepts concerning their workplace assignments and tasks. The data in Chapter 5 shows instances of strongly engaged conceptual forms of scaffolding support (see Extract 5.7) as well as minor technical assistance (see Extract 5.15).

Fenwick (2008) has stated that “Work life is fully entangled with material practices, technologies, vehicles, architectural spaces, roads and roadblocks, nature and objects of all kinds in ways that are not even acknowledged in the preoccupation with understanding human activity and meaning making” (p.105). Most of the extracts from the Facebook site presented from the online data also illustrate that learners’ contact with each other, their encounter with the training materials of the course and even their personalities help with grasping and making meaning of the course. This was demonstrated by those who participated actively and those who did not participate due to reasons of access or lack of familiarity or others as described in Chapter 5. This combination of technical and scientific forms of scaffolding relates to the process of learning through legitimate peripheral participation (associated with apprenticeship types of learning) as discussed in Chapter 2. Lave and Wenger (1996) stated that legitimate peripheral participation “refers to both the development of skilled identities in practice ... and the transformation of the communities of practice” (p.148). As shown by the use of the Facebook site to scaffold learners in the EETDP courses reported on in Chapter 5, this refers to both the acquiring of skills necessary to accomplish the workplace assignments on the course, as well as the development of the group as a whole community.

Finding 2: The use of Facebook in the EETDP learnership allowed for collaborative learning

As noted in the previous chapter, Simovska (2003), when discussing aspects of participation and learning has stated that “Meaning is dynamically created and re-created through participation in socially organised activities” (p.31). In Chapter 5 I presented evidence of the variety of ways in which such participation occurred through the use of the social networking site. This interest in participation in learning, is similar to Dewey’s ideals of democracy or as he would call it ‘direct democracy’. He noted that collaboration, interactions and communication are vital for a thriving democracy. Dewey (1916) stated that “Communication is the process of sharing experiences till it becomes a social possession” (p.9). As informed by the analysis in Chapter 5 there was some evidence of how this occurred through the social networking sites, particular as it became evident that group members initially engaged more socially, and over time used the site more and more for ensuring success in their learning (either through technical course related questions, motivating each other, or conceptual and outcomes sharing activities).

Lave and Wenger (1991) stated that “Legitimate peripheral participation is intended to be a conceptual bridge – as a claim about the common processes inherent in the production of changing persons or changing communities of practice” (p.154). As shown by the evidence presented in this study, communication as a process of navigating complex problems or reaching mutual agreement as in a democracy or in the conceptual metaphor of legitimate peripheral participation, can be enhanced by the Facebook group site. While the site was frequented by those that were not shy to offer their opinions in class, the site also allowed some of the more reticent individual learners who did not speak aloud in the classroom, either through lack of opportunity or shyness, to post their opinions or questions on all elements of the course. The content was not censored by the administrators thus allowing for greater democratic learning experiences³⁴. Interaction from administrators on site was consistent and as reported on in Chapter 5, there were some elements of steering conversations towards environmental education topics; however, learners were also encouraged to pursue threads without input from administrators on issues that were of

³⁴ This kind of censorship would not have been possible, as Facebook allows one to post almost anything and the only ones who can edit their words are those who said them and those who are tagged.

concern to them, which they did, as evidenced by their emphasis on reminiscence, motivating each other, and their frequent course process queries (reported in Chapter 4). If one were concentrating on ZPD being linked only to the acquisition of concepts, it could be that such interactions could be seen as ‘trivial’ or ‘unnecessary’, but if one considers ZPD to encompass the full learning space where such concepts are acquired, developed and applied into the workplace context through the workplace assignment tasks, then these on site actions of learners were part of the legitimate peripheral participation process.

Finding 3: Social network sites allowed for greater communication between students and mentors

Learning was essentially happening both ways on the site as administrators learnt how to interact with group members on the site, while many group members were fully engaged as soon as the sites were created, but were learning the crafts of environmental education from the course tutors through the scaffolded assignment support. This was not always the case as some group administrators were very familiar with the social networking site and in certain cases used it more than the students themselves.

However, the social network group and site were relatively new so both the administrators and group members had to learn how best to interact to benefit each other on the course, mastering the scientific language and workplace tasks that were needed to support the workplace assignments. This was repeatedly demonstrated by group members enjoining each other to help each other and work together throughout the research process. It was, however, quite interesting to see more requests relating to needing help from each other, rather than actual helping of each other. Throughout the data sets there are more clarion calls and statements of solidarity and memories than real learning content, and at times responses from the administrators and support for such learning were not received (at least not directly on the site). This, however, does not mean that the students were not participating in the learning, and it is important to note here that different to other platforms such as Moodle, course materials and assignment briefs were not included on the site, nor were the actual assignments, and the actual assignments took place in the workplace. If more of the actual course artefacts were included on the site, and participants were actually

required to engage with them online (an example here would be being required to fill in the Portfolio of Evidence tasks on the online platform), then there would probably have been much more engagement with the ‘real learning content’. As such the Facebook site has shown up those forms of learning interaction that are needed to support and extend engagement with the course contents in relation to the workplace environments and the learning of the new tasks as outlined in the workplace assignments.

6.2 Recommendations

Recommendation 1: Scaffolding formation on social networking sites can be achieved by increasing access and active collaborative learning both offline and online.

Problems of access were cited by group members (and non-members) as the key issue to lack of participation (see Chapters 5). Problems of access are especially relevant in South Africa where there are highly disparate socio-economic conditions. Even online, the participation on the discussion board was, as shown in this study, limited to all the group members’ engagement with the course processes, aspects of the material and the workplace tasks. The degree to which participation occurred offline during contact sessions was also shown to have a relationship with the online participation, as it was the more vocal students that were also most vocal on site. However, the study did indicate that the online sites encouraged group participation between the contact sessions which otherwise would not have happened, and this influenced their abilities to complete the course work. Many members who found the “voice” online also started engaging more in the classes, and as shown in the datasets reported on in Chapter 5, participation in the course content areas deepened on the online site as time progressed and as participants developed a better understanding of the purpose and use value of the group site. One of the effects of the site has been to draw members of the learnership groups into legitimate members of the classroom setting as well, and to strengthen their ability to participate here since many of the interactions showed the need for support that helped to strengthen their participation in the course processes and concepts. Through the available scaffolding processes shown in Chapter 5, site group members were able to approach course administrators and tutors more readily. From this study data, it is possible to claim that the Facebook site helped to transform the normal functioning of the EETDP communities of practice by inserting a

technologically supported communications and interaction platform that helped to facilitate the learning and supported learners to complete the course. From this, it would seem important to consider all elements of the changing nature of technology, human relationships and identity construction *together*, and to consider how they become integral to the understanding of the ZPD in online-offline communities of practice such as those in the EETDP learnerships. From this, a key finding of this study would be that one ought to consider Harraway's 'cyborg' notion (discussed in section 1.1), or the interface between technology and human thought and practice in scaffolding formation within the ZPD. This perhaps also adds a new dimension or at least an interesting new mediation tool to Vygotsky's interest in the way in which tools (in this case the Facebook site) mediates meaning making between subject (learners on the course) and object (environmental practice in workplaces).

Recommendation 2: Social networking sites are powerful tools for creating meaning making when combined with course work.

As clearly shown in Chapter 5, the interactive nature of the social media site has provided most of those course participants who actually participated online with opportunities to debate, assist each other, explore aspects of the course and primarily to receive guidance and additional support from both peers and tutors. Meaning making can only occur within the broader gambit of working life and moves from incomprehension to comprehension as seen in the preceding chapters. The platform of the social networking site allows for questions and responses to posts by group members and administrators, and where this was engaged with (sometimes these questions and posts were not responded to as shown in Chapter 5), this opportunity contributed to shared meaning making and individual learning within the learnership. So popular is this type of questioning that Facebook has introduced the idea of 'Questions' as one of the ways in which users can create postings. However, meaning making using social networking sites, and thus learning in this way, does present problems if there is no reference point. The internet is not a very accurate form of reference and is a very opinionated zone. Knowledge posted on the internet needs to be verified and challenged. In the case of Wikipedia (the largest online encyclopedia) this is done by a team of researchers who verify facts and information and even then, because of the vast number of topics and information available, there are still grey areas. On a site like Facebook which

is predominantly used for identity representation and opinions, the actual quality of information gained from the site is dubious. As shown in this study, proactive and carefully and rigorously informed responses from tutors can help to address this issue and therefore to strengthen meaning making, as was shown in the Site 2 case where the tutor challenged the knowledge base of the group members who were deciding on the issues to investigate further (see Extract 5.7).

6.3 Conclusion

This study has shown the potential of using social networking sites for environmental education, even if used for a short period, to unite a small user base around a common goal. The solution to many of humanity's current ecological crises might be found not in science alone, but in collective action and vision which has been enabled on social media platforms. This vision for the social networking site was captured by one of the group members in her reflections on the use of the site:

I think that if we put articles on environment, real issues such as events, struggles, new inventions, either with negative impacts on environment or minimising impact it can be successful. Job related stuff like short time or part-time courses and stuff to help us get employed [will also be useful].

As researcher, group administrator and initiator of the use of Facebook as a means of strengthening mentorship, course learning and support I have learned a considerable amount from conducting this study. Essentially my learning lies at the nexus of the state of the environment and planet both in South Africa and internationally. Indiscriminate use of technology can be divisive and damaging to biospheres and habitats, but there is also hope in technology. Technology can unite human beings and if we are to become responsible stewards of the planet, we should share stories of hope, triumph, despair and freedom. We need to understand ourselves as cyborgs and inspire change towards a new environmental ethic on Earth. The tools for doing this are already in our hands, to use them optimally

educationally and for the future is what is needed now. These tools are not limited to Facebook but can potentially be found on all avatars of Web 2.0. We need to move from being cyborgs to *prosumers* of knowledge and information on responsible planetary practices; maybe then we will finally learn to obey Nature's laws as suggested by Bacon (1878) instead of trying to command or break them.

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APPENDICES

Appendix 1: Templates, Questionnaires and Baseline data

1.1 EETDP DGMT Western Cape Site ethics data

24 June 2010

Permission to use name in research

Name	Yes/No
1. Diphio Ngcozela	Yes
2. Zama Timbela	Yes
3. Vuyo Jonas	Yes
4. Fazlin Cornelius	Yes
5. Thabo Lusithi	Yes
6. Barry B. Wuganaale	Yes
7. Phindile Magnana	Yes
8. Nobuhle Timbela	Yes

9. Andrea Gordon	Yes
10. Mzwethu Kilani	Yes
11. Sibongile Gaiws	Yes
12. Khuluhe Toni	Yes
13. Patrick Dowling	Yes

1.2 Facebook Research Tuning In (Site 2)

25 June 2010

1. Do you currently have a Facebook account? If no please explain why. If yes please explain how you currently use it?
 - No, because scared of the internet
 - Yes, currently with friends
 - Yes, for chatting and networking
 - Yes, via cellphone/via computer (internet)
 - Discuss political issues. Introduce topics for debate
 - Yes, I use it to discuss with my friends but also work related stuff. We update each other about meetings and events
 - Yes- networking and making friends (for fun)
 - No! I have consistently refused to sign up because I considered it more of social interaction that could impact on my time of work adversely
 - Yes to interact with friends especially those who are within the same field of study as me and in same working environment
 - No- no time to dedicate to arb cyber nattering

2. Do you feel that Facebook is a useful networking tool. Please explain why.
 - Yes because you can network with your people that are for

- Yes, it is easy for networking with a lot of people
- Yes, people socialize/share new info that are useful to others
- You can deliver a message through video or picture and let your friends to comment on it you can send invitations, initiate some debates, you can see if someone has got some values before accepting him/her
- Yes it is because you can chat with people you never saw but you both have same interest
- Yes you can get to know new things and you can use it to feature important information, network sites and internet sites. You can get info and share important information with other people
- Depending on how the actual process works out and the kind of information that is thrown into the site
- Yes it effectively you can connect and meet a variety of people who can help you with the problems you encounter (these can be in relation to your studies, job seeking, and international friends
- No- email is better

3. How do you intend using the WESSA WC/DGMT Facebook site. Do you feel it will be useful to your studies?

- Yes
- Create environmental debates on various issues. Posting picture and video showing environmental injustices national and global
- For the knowledge and information
- I intend to use it through my cellphone and internet café. Yes I do think facebook will be useful aid to my studies
- Communicate, like if I find obstacles I will write them on my wall. If maybe I meet people whom are not relevant to my issue and they are interested on passing information about the issue
- It will be useful aid for my studies and access to many new things concerning the course. Get some more details of the course and WESSA as a whole

- I intend to upload all information that I think will be useful for other learners and I am hoping that I will be able to provide support for others learners as much as possible through the site. Yes I think it will be useful
- High level but minimum input

1.3 Site 1 Evaluation Baseline Data

WESSA/DEA EETDP Facebook evaluation data

Date: 14 November 2010

This questionnaire was given to the 2009/10 EETDP group on 14 May 2010, The site has been running with this group of students from August 2009. These are the responses.

Do you give permission to use your name in the research?

Yes: 28	Double: 2	No: 0	Not indicated: 2
Sample: 44		Return: 32	

Please provide some of your thoughts on the usefulness of the facebook site and what you gained from it in terms of your work and assignments on the learnership.

R1: I have gained the knowledge through the facebook site, whereby other fellow learners would share their thoughts and the administrators of the course would post useful materials on the site which makes it easier to access some additional materials. Therefore it is very useful to learners (4)

R2: It helps us on our POE's and assignments because we were sharing ideas (5)

R3: I think the Facebook site is most useful means of communication as it has assisted me to share some of the information on our assignments on EETDP learnership. Through the fb site I have been able to discuss with my tutors and group members. (4)

4: We manage to discuss certain issues related to our learnership. Ppl hardly visit the site which could have helped in terms of working on their assignments. I think that therefore if

we put articles on environment, real issues such as events, struggles, new inventions, either with negative impacts on environment or minimizing impact. Job related stuff like short time or part time courses and stuff to help us get employed (5)

5: In this site I gained from the knowledge of other learners. Sharing of information about assignments the fb site helped me mostly with my needs analysis assignments. We shared information and that I knew who to go with the information to conducting needs. (4)

6: Y: I have not yet used the fb site for the EETDP learnership (0)

7: Y: The site is useful as it makes communications easier and cheaper checking the fact that our peers live at different parts of the country. (3)

8: Y (2)

9: Y. The site is helping a lot in terms of sharing information and helping one another in terms of our assignments and core work activities (4)

10: Y: I must say that my friends say that the fb site is useful and they have gained a lot as for me I am not sure since I don t have the fb account yet am still trying to access (1)

11: Y : It is useful because we are able to communicate with other learners and facilitators about workplace assignment. The only help that I got from the facebook site is personal development plan (5)

12: Y: It has been useful although we did not use the site to its fullest because in our organizations the site was blocked furthermore the discussion group was not active cus it seems ppl were reluctant in sharing ideas however it was a good platform to exchanged ideas. (3)

13: Y. I have gained a lot in terms of environment and it has also helped me in working on my project for my B.tech studies. I would also love to network even after the learnership to interact with your guys n find some help as I am still working on our project (3)

14: Y: Open for discussion for everyone. It is simple to get answers because some experts they can attend your questions they opened it for discussion. To other people. (3)

15: Y: Provides positive interaction that allows for mentors to get necessary info that they need. Able to inform the learners about issues related to the learnership. It tries to keep members in touch with issues they need discussion (4)

16: (NI): The site was very useful in terms of my work and assignments because we were sharing ideas helping one another and also correcting one another. Our assignments became really easy because of fb site not forgetting I got a lot of friends now because of it.(5)

17: Y: The site is nice and interesting it helps with a lot of information and gives us a lot of knowledge of things that we didn't know.(4)

18: (NI): The site is very good and I can't say much about it I have learned a lot more than expected.(3)

19: Y: I never really make use of this site but it was good site for communicating with fellow learners and if one has a problem or challenges other learners can help. (4)

20: Y: I was able to find help about the workplace assignments that I did not understand (5)

21: (Y/N: not indicated): I think that this is very useful. It will help the learners share information and keep in contact with one another. (4)

22: (Y/N: not indicated) The fb site on environmental education needs to change and more attractive so that everyone can access why? There must be a lot of information, on env rights, NEMA, environmental education, including author needs to have library (2 needs improvement)

23: Y: I don't have access to fb but will be happy to be able to communicate with other ppl. I hope to have access soon (1)

24: Y: I have never used the site regularly but whenever I was there if there was something I need clarity on I always get feedback from the facilitators who are on the site. I always see other learners being assists with guidance. I recommend that if you don't have the fb account, open it so that you can be able to join the EETDP. It can also help in the future when you are studying anything environmental related topics. (3)

25: Y: Fb site is important in terms of exchanging ideas about the subject. Fb site makes things easy for you especially when are struggling with something related to your studies. You just place and question the site and the people on site will be able to help you. Since our EETDP is a self studying course and you have contact with your tut ors maybe after 2 months, it will be easier for you to communicate with your peers to get to do your work it is convenient and quick. (4)

26: Y: Facebook was useful to me because I have question then raise it on the site on facebook londi always answers the questions. But from another learner there were no communication about the work and assignments and always is all about their cannot assisting each other/concerning the work or assignments (3)

27: Y: The site of EETDP learnerhsip was useful to my assignments where we ask questions to other people getting their thoughts on the assignment more specifically the ethics were we have showed confirmation on how we can demonstrate them for me this was very useful and also have the opportunity to understand more information about the site. (4)

28:Y: The Facebook is useful because it helps me/us to access information related to the EETDP from learners and facilitators. It is also useful to share information like reading material, presentations from previous session and the learner can then bridge the gap. I have gained a lot in the Facebook especially from module 1 where I was clueless but networking with other learners and facilitators and I manage to cope and cover everything related to POE's and some presentation. (3)

29: Y: In terms of the usefulness of the site. I have gained communication skills. The site creator has done his level best by posting some of the hints of how to do our POE and workplace assignments. At first I was struggling with how to do my workplace but with his help together with his co-workers they showed commitment and tact throughout the programme. I highly support the Facebook to be an ongoing process. To all the site users please let us use this site by positing any environmental programmes around your area so that we as EETDP eco-warriors can tackle (2)

30: Y: I never use Facebook before. I just entered or logged in today. From what I see I think it is useful to have information needed to the EETDP (0)

31: Y (1)

32: Y: Given a chance to always have contact with our friends out of Cape Town. If I don't know something I always can go to the Facebook site and ask my EETDP friends about the environment (3)

Appendix 2: The interviews

2.1 Interview 1

Date: 2 December 2010 interview with Lindelani

Preven: Lindelani are you okay with me recording this and using your name in the transcripts and the thesis?

Lindelani: Yes

P: So how has the course been for you not only the facebook site but the course as a whole?

L: The EETDP course- it great I developed a lot.

Ncami- walks in

P: Lindelani is fully competent on the EETDP learnership

Ncami: I was so worried about you Lindelani because you were the only one from KZN

(Laughter)

P: How does it feel

L; Its great

P: I think throughout the course I think you been very engaging with the learning on the site and even in the class contributing to the course as a whole

L: It was great, meeting people for other places other provinces, that was great and we worked together. The course was great not only for environmental education we also developed EE but on other issues like personally

P: personally was it a good time for you

L: Was a good time

P: Was the course difficult?

L: No, although assessors were so harsh (laughs) sometimes you compare your answers and the answers were marked correct but you had to do it again

P: What are your thoughts on the facebook site

L: It's a good thing- sometimes we used to chat and talk but I think it started late

P: Sorry one second Lindelani this has seemed to have stopped recording.....

P: Okay we back online...So you saying the facebook site should have started earlier because most of your help you needed in Module 1?

L: I don't know about the others but me

P: Once in started did you feel it helped in anyway and wat are your thoughts on the Facebook site because you were one of the members who were there quite often... contributing?

L: No, it's the right thing, because u get to know what others are doing the problem is we are friends with those who are on the fb site sometimes we used to chat with them outside the site and it might seem like we not chatting on the site

P: When talking about the EETDP?

L: Sometimes when some of the information you updated on the site and sometimes we don't check emails often so it helped with the additional things that Londi asked us to do. Because we are always on facebook. Some of us are addicted to it.

P: and between the other participants on the course did u feel that they were helpful as well?

L: Yes they were helpful and I used to ask questions form others and they requested my email

P: Y did they not out it on the site

L: these documents are too much because most of us using cell phones and could not access large documents

P: So did you often use your phone

L: Yes, even now I am checking, because I still remember Zwakele was the kast person who updated his status and I still remember because he updated

P: It was personal not on the site, was on his personal page not the EETDP site

L: No it was on the fb site because he was complaining about the certificates and when we going to get them

P: Oh yes and the graduation rumours that its happening tomorrow

L: Yes (laughs) I dont know who started those rumours

P: So that was useful..was it a fun siite to be on?

L: Yes it was a fun site because we know wat is happening and you always uploading stuff on your projects and what you doing it

P: Yes..and when you came back to class say in Module 3 now because the site really got going in Module 2 did you find that you were more friendlier more easier to discuss with each other

L: Yes we socialise more...because when u meet a person u say hey remember what u said on the site on the eetdp site yes that was crazy or that was nice

P: Mmm..and on the course when the facilitators did the site help in talking to facilitators

L: Not much because we lazy on that site

P: Some facilitators will put up stuff on my personal page did u find it was easier to relate to me after that

L: it still helped...it gets u to understand what u are doing and it creates wat can u say ... more discussions on that thing that u posted

P: So it does help in the socializing...so what abt the photos

L: I dont check photos because it was difficult on my phone

P: So u didn't cuz there were only abt 10 who put up stuff on their pilot programmes how did u feel was it encouraging

L: yes it was encouraging sometimes cuz u can see where ppl where doing their programme because somewhere doing it in the classroom and somewhere doing it outside like me so it was interesting to see

P: and tutors did u find it was easy to talk to tutors on the site?

L: No

P: why do u think that was

P:Maybe it was us who were not communicating or using email more

P: mm and phones

L: I think the problem was we were using cellphones... and we email them... and the main thing is we using others more than tutors directly because someone will say hey I spoke to Preven and he said you must do this and that and then it helped in terms of transferring that information to us who did not then have to speak directly to the tutors.

P: This is great stuff Lindelani thank you so much just one last question? Wat is the one thing that u learnt related to the eetdp on the site

L:mmm just give me 2 seconds...mmm the one thing I said about your project before..u know it made us think about things we can do in our projects in our communities and it helps us as environmental educators to do the same where we are because I remember watching it on TV u know when u told us..the river project..

P: yes..so that's..good to see that's like a platform

P: any last words

L: mmm no except thanking you, DELTA, WESSA , DEA

2.2 Focus Group – DGMT EETDP learnership

29 November 2010

Preven: The date is 29th of Novemeber at 12:48pm and we are having a focus group discussion on the facebook site on the EETDP learnership so far, present with us on this focus group discussion is Fazlin, Dora, Vuyo, Thabo, Patrick, Mzwethu, Sibongile, Phindile, Dipou and Barry who has just left the room but I am sure he will be back now. Is everyone fine with me recording this focus group.

Patrick: its very ethical

Preven: Is it very ethical can I continue.

Thabo: Preven, before you do, you did say Fazlin is here but she did not confirm that she is here

(general laughter)

Preven: Ok very good, thank you for that, so can we start again, okay so who is here now

1 minute

(Participants around the room state their name towards the voice recorder: Vuyo, fazlin, barry, Thabo, Dipou, Dora, Sibongile,)

Patrick- log in name and password then it takes you to your Page not necessarily the EETDP page and then you immediately get all this other nonsense that ppl have sent to you personally and then when you get into the site you get quite a lot of this social bantering before getting down to the tasks meant to be at hand. I don't know, its meant to b more relaxed but I think there is a difference between ordinary facebook banter to "I saw my cherie on the weekend got lekker drunk" and the actual tasks at hand.

P: Mm great anybody else wanna comment to that, or add on or make new comments

Phindile: Ya, as Patrick said it is a good idea but the problem with facebook is that we are not using it effectively as a group and I don't blame ppl bcuz sometimes it cud be a issue of access to the internet, and when you do find that you get access to internet you find that social networking sites are blocked during certain time and you find that during that certain time you can access anyone so access to internet is an issue.

P: MM great, we gonna go around the room and get comments from everyone... Fazlin?

F: I also agree with the site like that that does not access but I believe it I good to research it (almost inaudible)

Dora: No issue with facebook the only issue I have is with KRC does not allow facebook

Barry: Mine is I don't know whether you wanna call it facebook phobia or faceboook what but I've not been using the facebook EETDP site effectively because I have never even tried after the time when I got some, so I tried to perfect my use of facebook (inaudible) ... I said okay and when get back and tried and then helped and tried to get to the use of facebook but some how because of my tight schedule I felt that my use of facebook will derail me from other things I have wanted to do. But I would suggest maybe someone to upload some catchy information, not lengthy, some teaser questions and research and those are the things I would like to see but even as it is I don't think I will be able to go there in the next 2- 3 weeks as soon as I leave here my mind is racing on other things to do.

5 min 39 sec

Dippou: ya Barry all I can say is ya leave your email address on your site so we can contact you and maybe that will help you anyway what I can

Barry looks in askance at Dippou and shakes his head while D continues

But you see like with me I don't have any problem but the response you know theres like no response because ppl are taking long time so if I really have something to ask I will email Patrick or Andrea Thank you

Mzwethu: okay on my side I can see like I can see that uhm that people like kinda not like any ppl ahhh I don't ya but maybe its because they don't know exactly what happened there I think maybe we can have a session where everyone can be on the site and interact with that site . ya and on my side I think that it is very helpful in the way that I did participate one time and in a way that I did participate one time and I got my feedback, now on that point I would like to say if you could organize or build our interest by getting more involved and putting up information maybe weekly or so I think it will be very helpful for us

Vuyo: I think social networking sites are good because one time I was asking for information and Phindile asked me send my email address which I did and then he managed to send me the information which I printed so I think it is very good it that way

Thabo: For me I don't have a problem with Facebook, for me I like it when Patrick for example will put stuff up on Facebook like inform you about the next module and trying to make you find information before you come so for me if you keep it like that its good but I have a complaint maybe it will be better if you put more photos of all of us because now there is only Barry's photo there (*laughter from group*)

Barry: why is my photo there??

Preven: We will put more photos...ya.. Andrea put up photos...

Dipou: Its not funny its cool

Patrick: Looks like Barry is going to start toy-toying

9:03min

Catherine: For me although I am fb illiterate I see that I am registered and I did get registered by going to my service provider which is Vodacom and they tried to set me up and it only worked one day and then it was not there any more

P: Thank you everyone for commenting

END