

**The relevance, importance and applicability of Sustainable Development
in Economic and Management Sciences (EMS) Education**

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DECLARATION

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ABSTRACT

One of the main features of the Economic and Management Sciences (EMS) learning area is that it prepares learners to participate in an economically complex society where social justice and a healthy environment are key concerns. Teachers are faced with an important learning outcome in the EMS curriculum, namely Sustainable Growth and Development, requiring them to equip learners with an understanding of sustainability and to encourage critical reflection on the related processes. This research aims to explore EMS teachers' underlying conceptual understanding of sustainable development and to establish how these understandings relate to their teaching practices.

The meaning of sustainable development has elicited multiple and contested reactions in the literature. Many authors are in agreement that development strategies should be consistent with the planet's resources and linked to a balance between society, economy and the environment. However, increased production and consumption resulting from neoliberal economic policies and intensified global competition invariably disturb the earth's ecosystem. On the one hand, increased economic activity has the advantage of resource development (capital, natural and human resources) that promotes economic growth. On the other hand, this growth occurs at the expense of resource exploitation which in turn leads to environmental degradation, the erosion of cultural identities, health risks and, in many instances, unsustainable lifestyles. There is a growing consensus that knowledge and a changed mindset are required for developing an enhanced focus towards a sustainable future.

Education for Sustainable Development (ESD) provides the knowledge, skills, values and theories for promoting sustainable development.

The research was conducted within a constructivist-interpretivist paradigm. A case study design strategy, as part of a qualitative research approach, was selected to best answer the research question. The data collection was done by means of the literature reviewed, in-depth interviews and subject-object interviews (written explanations). This was followed by the systematic categorisation and coding of the data by means of content analysis.

The main finding of the study was that EMS teachers had a single focus with regard to sustainable development: their understanding predominantly related to the economic pillar of sustainable development. The interrelatedness of the economy, society and the environment to achieve sustainable development objectives was not subjected to much scrutiny. This research showed that there is a need for ESD to be integrated into the EMS discourse.

OPSOMMING

Een van die uitstaande kenmerke van die leerarea: Ekonomiese en Bestuurswetenskappe (EBW) is dat dit leerders voorberei vir deelname binne 'n ekonomies komplekse samelewing waar maatskaplike geregtigheid en 'n gesonde omgewing 'n kern-uitdaging vorm. Onderwysers word gekonfronteer met 'n belangrike leeruitkoms in die EBW-kurrikulum, naamlik Volhoubare Groei en Ontwikkeling, wat van hulle verwag om leerders toe te rus met 'n begrip van volhoubaarheid en om kritiese refleksie oor verwante prosesse te stimuleer. Hierdie navorsing het ten doel om die onderliggende konseptuele begrip van volhoubare ontwikkeling by EBW-onderwysers te verken en vas te stel hoe hierdie begrip betrekking het op hul onderrig praktyke.

Die betekenis van volhoubare ontwikkeling het verskeie en omstreden reaksies in die literatuur ontlok. Baie outeurs stem saam dat die ontwikkeling van strategieë in ooreenstemming moet wees met die planeet se hulpbronne en gekoppel moet word aan 'n balans tussen die samelewing, die ekonomie en die omgewing. Verhoogde produksie en verbruik, as gevolg van die neoliberalistiese beleid, versterk egter wêreldwyse mededinging en versteur sodoende die aarde se ekosisteem. Enersyds het toenemende ekonomiese aktiwiteit die voordeel van hulpbronontwikkeling (kapitaal, natuurlike en menslike hulpbronne) wat ekonomiese groei bevorder. Andersyds vind hierdie groei plaas ten koste van hulpbronbenutting, wat weer lei tot die agteruitgang van die omgewing, die aftakeling van kulturele identiteit, gesondheidsrisiko's, en, in baie gevalle, nie-

volhoubare lewenstyle. Daar is 'n groeiende konsensus dat kennis en 'n verandering in denkwyse nodig is om 'n sterker fokus op 'n volhoubare toekoms te verseker. Opvoeding vir Volhoubare Ontwikkeling (OVO) verskaf die kennis, waardes en teorieë vir die vestiging van volhoubare ontwikkeling.

Hierdie navorsing is onderneem binne 'n konstruktivisties-interpretivistiese paradigma. Om die beste antwoord op die navorsingsvraag te bied, is 'n kwalitatiewe navorsingsbenadering gekies en 'n gevallestudie-ontwerpstrategie gevolg. As deel van die data-insameling is die literatuur voortdurend verken en in-diepte onderhoude is gevoer, gevvolg deur geskrewe verduidelikings. Hierna is die sistematiese kategorisering en kodering van die data deur middel van 'n inhoudsanalise gedoen.

Die belangrikste bevinding van die studie was dat die EBW-onderwysers 'n enkele fokus gehad het ten opsigte van volhoubare ontwikkeling: hul begrip het hoofsaaklik betrekking gehad op die ekonomiese pilaar van volhoubare ontwikkeling. Daar was deurgaans 'n gebrek aan kritiese refleksie oor die interverwantskap tussen die ekonomie, die samelewing, die omgewing en die wyse waarop die doelwitte van volhoubare ontwikkeling bereik kan word. Hierdie navorsing het getoon dat daar 'n behoefte bestaan om OVO binne die EBW-leerarea te integreer.

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LIST OF ACRONYMS/ABBREVIATIONS

CA	-	Curriculum Advisor
CAPS	-	Curriculum and Assessment Policy Statement
CSD	-	Commission for Sustainable Development
C2005	-	Curriculum 2005
DESD	-	Decade of Education for Sustainable Development (2005 – 2014)
DoE	-	Department of Education
EMS	-	Economic and Management Sciences
ESD	-	Education for Sustainable Development
FDI	-	Foreign Direct Investment
FET	-	Further Education and Training
GEAR	-	Growth, Employment and Redistribution
GET	-	General Education and Training
GIE	-	Globally Integrated Enterprises
GRI	-	Global Reporting Initiative
GSSL	-	The Global Survey on Sustainable Lifestyles
IMF	-	International Monetary Fund
LO	-	Learning Outcome
MAI	-	Multinational Agreement on Investment
MNC	-	Multinational Corporation
NCS	-	National Curriculum Statement
RNCS	-	Revised National Curriculum Statement
RDP	-	Reconstruction and Development Programme
TNC	-	Transnational Corporation
UN	-	United Nations
WBCSD	-	World Business Council for Sustainable Development
WCED	-	World Commission on Environment and Development
WSSD	-	World Summit on Sustainable Development
WTO	-	World Trade Organisation

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CHAPTER ONE

ORIENTATION TO THE STUDY

1.1 ORIENTATION TO THE RESEARCH PROBLEM

Education curriculum restructuring in South Africa began soon after the first democratic elections in 1994. Curriculum 2005 (C2005) was launched in 1997 as the foundation of post-apartheid school curricula and provides a framework for Early Childhood Development, General Education and Training (GET), Further Education and Training (FET), and Adult Basic Education and Training (DoE, 2002a:57). In 2000, C2005 was revised and reviewed (up to Grade 9), leading to a more “streamlined” and “strengthened” C2005, called the Revised National Curriculum Statement (RNCS) which became official policy in 2002 (Chisholm, 2005:193; cf. DoE, 2002a:57).

Economic and Management Sciences (EMS) was introduced in the GET-band (Grade R-9) in the new curriculum as the medium through which society could prepare its learners to become mindful of humankind’s many and complex needs and the limited resources to meet those needs. EMS and Technology had its origin in the curriculum rationalisation process of the outgoing apartheid education department in the early 1990s (Chisholm, 2005). However, in 2000 the Review Committee of C2005 cautioned that the curriculum was overloaded and proposed that EMS and Technology could easily be integrated into other learning areas (DoE, 2000; Chisholm 2005:198). This concern brought about

much debate by the vocational lobby and other interest groups. According to the vocational lobby, relinquishing these two learning areas would have been tantamount to regressing from South Africa's aspirations to develop as a "first-world" economy, its technological advancement and its leading position on the continent (Chisholm, 2005).

Finally, in mid-2000, Cabinet challenged the Review Committee's exclusion of EMS and Technology on the grounds that the curriculum should play a role in orienting learners to the world of work and for fostering entrepreneurial knowledge and capabilities. Henceforth, EMS was retained as a learning area in the NCS for General Education. Whilst the retention of EMS was prompted by neoliberal agendas, the developers of the EMS curriculum also acknowledged that its' scope should be broader than just pursuing the principles of the open market and profitability: EMS education could prepare learners to understand and apply economic and management principles responsibly and reflect critically on the process of creating wealth, whilst considering its effect on the environment and society. The curriculum takes the view that a "balanced" economy is desirable (DoE, 2002:5), e.g. taking into account the legacy of inequity in South Africa, respect for the environment, increased competitiveness and profitability.

The EMS curricula in the intermediate (Gr 4–6), senior (Gr 7–9) and FET phases (Gr 10–12) integrate a variety of environmental, societal and economic issues in the pursuit of fostering a conceptual understanding of development and an improved quality of life (DoE, 2002a). The promotion of a healthy environment, human rights, social justice and inclusivity are enshrined in the South African constitution. These have been integrated into the EMS learning area to prepare

learners to participate in a complex economic society where productivity, social justice and a healthy environment are key concerns (DoE, 2002a:2-5). The ultimate intention of EMS education is for learners to acquire the knowledge and skills to understand the various business roles: as consumers, entrepreneurs and managers of operations, capital and other resources. Embedded in this aim is Learning Outcome (LO) 2: Sustainable Growth and Development, which emanated from the South African historical context of apartheid and inequality: it stipulates that learners of all ages have to understand the need for sustainable growth, reconstruction and development in South Africa (DoE, 2002a:33). These curriculum aspects for LO2 include economic development, globalisation, the Reconstruction and Development Programme (RDP), etc., and is discussed in Chapter 3.

On 3 September 2010, the Minister of Basic Education, Angie Motshekga, called for written submissions from the stakeholder bodies and members of the public on the National Curriculum and Assessment Policy Statement (CAPS), for EMS (Government Gazette, 2010). Many teachers and university lecturers participated in this survey and submitted their comments. Motshekga stated that the development of the CAPS was not being seen as a replacement of the current curriculum, but rather as a refined and repackaged NCS. The intention of the EMS CAPS is to streamline the curriculum overload and to refocus curriculum content. The most important distinction between the NCS and CAPS for EMS is the “exclusion” of Sustainable Growth and Development (LO2 in the NCS) as a separate learning outcome/focus. However, upon closer inspection some of the curriculum content of LO2 was integrated in CAPS, e.g. the National Budget, the

global economy, sustainable use of resources (DoE, 2010:19-25). This study therefore also focused on the views of teachers with regard to the CAPS.

South Africa's vision for sustainable development encompasses the interdependence between people, planet and prosperity, stated in the Framework for Sustainable Development as "... economically prosperous and self-reliant nation state that safeguards its democracy by meeting the fundamental human needs of its people, by managing its limited ecological resources responsibly for current and future generations ..." (RSA, 2008:3). This vision encapsulates the society-environment-economy triad which is prominent in mainstream sustainable development literature (discussed in Chapter 2). In recent years there has been a growing recognition that natural resource depletion and climate change are accelerated by the imperatives of increased global competition and profit maximisation. Concerns emerged about the impact which increased production, promotion and distribution of commodities have on society (e.g. employment, health risks) and on the environment (e.g. carbon emissions, severe droughts, disruptive flooding, and other environmental impacts). Bonnett (2000:593) argues that a growing awareness of our environmental conditions calls not only for a re-evaluation of our actions towards our natural world, but also for an investigation and re-appraisal of our orientation towards that world. This re-evaluation underpins learning or gaining knowledge, which is necessary for developing new approaches to a sustainable quality of life for future generations.

The gaining of knowledge, values and theories related to sustainable development, referred to as Education for Sustainable Development (ESD),

involves the following: a) learning to ask critical questions; b) learning to clarify one's own values; c) learning to envision more positive and sustainable futures; d) learning to think systematically; e) learning to respond through applied learning; and f) learning to explore the dialectic between tradition and innovation (UNESCO, 2011:8). The United Nations (UN) therefore declared a global awareness movement referred to as a Decade in Education for Sustainable Development, referred to as DESD, 2005–2014 which envisages transforming education policy, investment and practice. If this initiative is successful, the DESD could change not only education, but also the quality of life for many people worldwide (UNESCO, 2011:7). Seeing the world as a set of related and interdependent systems is vital: learners are encouraged to evaluate how economic activities depend on the wise use of resources (e.g. land, water, etc.), and how economic activity can support the environment and society in a sustainable way (e.g. the reduction and recycling of waste). But how do EMS teachers view this "world"?

In the context of the above discussion, the aim of this study is to gain an understanding of the importance of sustainable development in EMS education. This aim is underscored by exploring EMS teachers' conception of sustainable development and how their conceptions are related to their teaching practices and ESD. The next section describes the motivation for conducting this research.

1.2 RATIONALE FOR THE RESEARCH

After many interactions with EMS (GET- and FET-bands) teachers, and discussions with Curriculum Advisors (CAs) of the Western Cape Education Department (WCED), the researcher became aware that whilst many teachers

have extensive experience in teaching, there are also those whose experience, knowledge and qualifications in EMS (teaching) are limited. Since EMS is a fairly “new” addition to the school curriculum, teachers might not all have the required qualifications, experience and training to teach EMS across the specified bands. The EMS curriculum covers a broad spectrum of topics (cf. Addendum K) and many EMS teachers admitted that their knowledge and skills are inadequate with regard to certain sections of the curriculum. The Review Committee of the NCS reported a shortage of EMS teachers in the Senior Phase and concurred that a number of EMS teachers are teaching outside of their area of specialisation (DoE, 2009:59). Although the DoE has regular generic training sessions, teachers did not receive specialised training for the teaching of the new learning areas. Some teachers are grappling with the varied subject content within EMS; i.e. the six focus areas: Economic Literacy, Financial Literacy, Consumer Literacy, Entrepreneurial knowledge and skills, Managerial knowledge and skills; and Leadership knowledge and skills. Through the many conversations with teachers and CAs, the researcher also became aware that certain areas are given a higher priority than others, based on the teachers’ own preferences. From discussions with a Foundation Phase teaching specialist, it appeared that EMS was not regarded as a priority in the Foundation Phase.¹ As a result of further curriculum reform, EMS was excluded from the Foundation Phase and Intermediate Phase for the GET-band. The Curriculum Review Committee argued that the content of EMS at the Intermediate Phase level is largely repeated at the Senior Phase, and that the concepts introduced in this subject are more appropriate to an older

¹ Personal communication with Mrs Linda Rutgers, lecturer of Foundation Phase student teachers at Stellenbosch University, Faculty of Education. Mrs Rutgers was previously employed as a curriculum advisor at the WCED and has extensive experience in the training of teachers in the Foundation Phase.

group of learners (DoE, 2009:43). In conversations with EMS CAs, it was evident that there are a number of challenges not only regarding the manner in which the EMS curriculum is structured, but also regarding the capabilities of teachers to teach EMS content effectively.

As an EMS-education lecturer at a faculty of Education, the researcher observed that when students were given a choice of topics for micro-teaching lessons, very few of them selected topics which resorted under LO2 (Sustainable growth and development). When probed, their responses normally varied from "it's difficult to teach", or "I prefer Entrepreneurship". The researcher often wondered how teachers perceived this particular section of the EMS curriculum. Another motivation for the study was that the researcher, as part of a business operations assignment, took her EMS student teachers on two excursions: one to a large glass manufacturer and another which manufactures and exports precision tools and parts for the motor-industry. On both occasions, the facilitator of the tour around the factory, showed and informed the group about their waste management operations and shared information about the business' carbon footprint. When the students were asked what that meant, very few of them could articulate it in terms of what it means for business, society and the environment. Also, the South African government's proposed carbon tax puts increasing pressure on businesses to reduce their carbon emissions. Increasingly, demands are placed on corporations to reduce carbon emissions and to be less wasteful. Corporations, who comply, often use it as a competitive strategy by publically declaring themselves as "green". The question which arises is why it is necessary for business to make adjustments to their operations and how does it impact on society in the long-term. Whilst the government acknowledges the

importance of increased global competition to enhance economic development and reconstruction, the responsibility that the business sector has towards society also became more prominent over the years. Creating awareness about e.g. sustainable business processes and how it relates to society, the environment and the economy becomes equally important in EMS education. The business sector places a high premium on the imperatives of profit maximisation and increased competitiveness, resulting in wide-ranging impacts. How do EMS teachers 'make sense' of the role of business and their responsibility towards the sustained development of the country in the long-term? And, what is the understanding of EMS teachers about the scope, meaning and importance of sustainable development in EMS education?

There appears to be a scarcity of research undertaken with the aim of exploring learners' and/or teachers' understanding of sustainability (Rickinson, 2006). Although an increasing number of research projects focused on student teachers' understanding of ESD (cf. Summers, Corney and Childs, 2004; Summers and Childs, 2007; Corney and Reid, 2007; Firth and Winter, 2007; and Walshe, 2008), there is a need for broadening conceptions about sustainable development within the school context. The increase in publications focussing on the role of education for bringing about changes to promote sustainable lifestyles has been predominantly linked to environmental education and science education, as found in the writings of for example Spiropoulou, Antonakaki, Kontaxaki and Bouras (2007), Walshe (2008) and others. Although ongoing research is being undertaken with regard to expanding the learning outcomes for sustainable development in Higher Education (Sheppard, 2007; Svanström, Lozano-Gracia and Rowe, 2008), this sector involves a different set of processes

and operates under slightly different conditions – it therefore falls outside the ambit of this research.

The Learning Outcomes (LOs) for EMS (GET-band) are: 1) Knowledge and understanding of the economic cycle 2) Understanding of Sustainable Growth and Development 3) Managerial, consumer and financial knowledge and skills, and 4) Entrepreneurial knowledge and skills (DoE, 2002). Whilst the rationale for EMS in the curriculum is justified and the vision of a population skilled in business and technology is plausible, the actual execution of a set of LOs needs to be explored, specifically LO2: Sustainable Growth and Development. Based on the review of the NCS there is far greater subject knowledge required for the beginning of Grade 10 than is currently provided at the end of Grade 9 (DBE, 2009:39). Furthermore, the reviewers reported that the transition between the GET and FET bands is rendered difficult for both students and teachers, which raises issues of the breadth and depth of coverage at the two levels. Also, many teachers reported that in the Senior Phase they generally concentrate on the subject that they know best, with the result those learners are unevenly prepared in terms of the content when they reach Grade 10 (DoE, 2009:39).

The ultimate aim of the research is to explore the importance of sustainable development by seeking an understanding of EMS teachers' conception of sustainable development in EMS-education. The intention of this research is for understanding and not to transform curriculum policy. There is a considerable body of literature about the influence of teacher conceptions and its usefulness to create awareness of a particular phenomenon and for further research (cf. Chapter 3). This research could draw the attention of curriculum-advisors,

education practitioners and researchers by focusing on what ESD could mean to EMS teachers and learners. To explain the specific focus of this research on sustainable development and EMS education, a description of the research problem is provided.

1.3 DESCRIPTION OF THE RESEARCH PROBLEM

As discussed in the previous section, the importance of sustainable development in EMS education warrants exploration. The question is: how do EMS teachers' conceptualise sustainable development? And, what is their conception of LO2: sustainable growth and development. Also, how do these understandings relate to their teaching practices and to ESD?

The identification of a research problem or questions allow for a clearer definition and clarification of the scope and focus of the research (Mouton, 2001:4). Demarcating the unit of analysis within a broader domain of the study helps to identify the research problem. For example, in this research the EMS Grade 9 teachers serve as the unit of analysis, because the research is based on their understanding of sustainable development. The research questions are formulated as follows:

Research Question:

Given the background provided above, the main aim of the study is to gain an understanding of the importance of sustainable development in EMS education. This aim was underpinned by the main research question:

- How do EMS grade 9 teachers understand the concept of sustainable development?

Research sub-questions:

The research problem implies that there is a need to explore the underlying conceptual understanding and relevance of sustainable development in EMS education. The research problem can therefore be further clarified by the following sub-questions:

- What is the teachers' understanding of EMS Learning Outcome 2: Sustainable Growth and Development?
- How are the teachers' understanding of sustainable development related to their EMS teaching practice?
- How are these understandings related to ESD?

In order to address the research questions a theoretical foundation is needed.

The following theoretical framework is provided.

1.4 THEORETICAL PERSPECTIVES UNDERLYING THE RESEARCH

Sustainable development and EMS education practices and understandings cannot be seen in isolation from a broader context within which it may be directly or indirectly linked. This research was therefore underpinned by a theoretical framework that looked at globalisation and its impact on sustainable development, and how education is linked to sustainable development.

1.4.1 Globalisation

The emergence of a global marketplace has propelled the integration of economies through the movement of goods and services, capital, technology and labour. This integration, referred to as globalisation, has led to new economic decisions influenced by global conditions (Jenkins in Labonté and Schrecker, 2007:3). The term globalisation has elicited multiple contested definitions and meanings (Cooper, 2001; Cesano and Gustafsson, 2000; Bakker, 2007; Moloi, Gravett and Petersen, 2009; Triegaardt, 2008; Labonté and Schrecker, 2007:3; Emeseh, 2008; Cock and Fig, 2001; Huynen, Martens and Hilderink, 2005, and others). Labonté and Schrecker (2007:3,) warn that globalisation has always involved a complex interplay of economic and political relations; it is "dangerous to think of the global economy as some sort of 'natural system' with a logic of its own". Globalisation resulted in many causal relationships which have both positive and negative influences on the economy, society and the environment. A primary manifestation of globalisation is the ideology of liberalism: the elimination of trade barriers and the free flow of capital. Liberalisation and foreign direct investment can create extensive opportunities for economic growth and employment (Bhagwati, 1996). Embedded in this ideology is the emergence of global players such as multinational or transnational corporations (MNCs or TNCs), increased production and consumption, sophisticated supplier networks and an upsurge in information and technology. Globalisation in Africa is particularly characterised by the "scramble for resources" through foreign direct investments (FDI) by MNCs, especially resources such as petroleum and solid minerals (Emeseh, 2008:561). Host communities often have no protection from the social and environmental impacts caused by the resource extraction of MNCs.

Emeseh further points out that evidence from across the continent in both mining and petroleum operations show that companies have not generally adhered to the techniques conforming to best practice. The operations of the MNCs often cause devastated environments, disrupted social institutions and structures, human rights abuses and sometimes point-blank chaos and conflict (Emeseh, 2008:564). Whilst globalisation has an advantage of resource (capital, natural or human resources) development to promote growth and development in the national economy, the disadvantage is often the commercial exploitation of natural resources with little concern for the environment (Cock and Fig, 2001, Becklake, Bagatin and Neder, 2007), health risks as a result of increased productivity (Becklake et al., 2007:356; Le Grange 2004:20; Hansel, 2008:178; Huynen et al., 2005:2) and the erosion of cultural identities and local or indigenous practices (Lotz-Sisitka, 2006; Lee and Williams, 2006).

Since the end of apartheid South Africa experienced rapid globalisation as a result of the subsequent social, political and economic transformation and the elimination of international sanctions. Whereas most countries in Southern Africa have experienced globalisation as externally imposed, e.g. mediated through the World Bank or International Monetary Fund (IMF), in South Africa globalisation has been largely internally generated by the government and major business (Carmody, 2002:256). As the state embraced neoliberal policies and global competition, the success of the government's development strategy increasingly depended on private sector actions and investment. Post-apartheid economic restructuring was under immense pressure, especially with the abandonment of the social democratic Reconstruction and Development Programme (RDP) in favour of GEAR (Growth, Employment and Redistribution). However,

underpinned by neoliberal thinking of privatisation, deregulation, fiscal discipline and export-led growth, GEAR failed to live up to these ideals, since there was no significant increase in job creation, while poverty and inequality deepened (Cock and Fig, 2001:9; Bond, 2005). Some critics may argue that South Africa's developmental path and its commitment to the "modernisation approach" elevate economic growth above all other considerations, specifically environmental concerns (cf. Fig in HRSC 2007:174). Yet, South Africa's commitment to strengthen global ties *whilst* advancing sustainable development imperatives is evident in its involvement in global initiatives. In addition, South Africa has played a prominent role in the sustainability reporting movement, specifically on social transformation issues and has become entrenched in legislation (e.g. King Code of Governance Principles, King II and III).

1.4.2 Sustainable Development

The quest for sustainability appears to be ubiquitous; almost in every sphere of life, there is an enhanced focus on a sustainable future. Over the past three decades many of the key social, economic and environmental issues which threaten the sustainability of the planet have been identified in various international summits. The original definition of sustainable development was popularised in 1987 with the publication of the Brundtland Report: "The needs of the present without compromising the ability of the future generations to meet their own needs" (WCED, 1987:14). Bonnett's (2007:709-710) critique of this "well-known and highly influential definition" is that this definition is one of extreme ambiguity. He questions, for example "precisely **what** is to be sustained, at what level, and over what timespan? Precisely **whose** needs are to be met, how are they to be prioritised, and according to what criteria?" Bonnett

further argues that, as a result of its vagueness, the concept of sustainable development can be something that almost everyone can pledge to. Sustainability can be interpreted as a set of practices that are reasonably agreeable in almost any social or political context, because it means different things to different people. The distinction between sustainable development and sustainability is discussed in Chapter 2.

The definition of sustainable development was later broadened to include social equity, economic objectives and environmental awareness. However, it is the Brundtland Commission Report that first linked sustainable development to education (Higgs, 2002). Even though environmental education has developed at a rapid pace since 1988, the focus of the “economy-environment-society triad” (cf. Figure 1.1) did not initially refer to education as an important consideration in determining what should constitute “sustainable development”. This “triad” reflects the pursuit of a better quality of life for all and forms the basis of the theoretical framework of sustainable development (Higgs, 2002; Walshe, 2008).

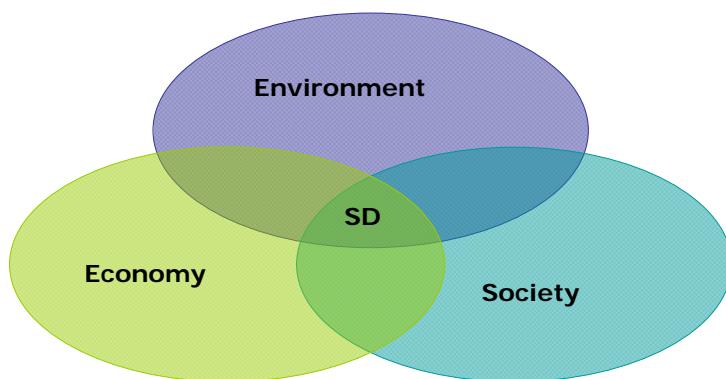


Figure 1.1: The relationship between the three pillars of sustainability [DfES 2006, in Walshe 2008:539]

Economic sustainability arises as a result of economic activity which has social and ecological consequences. Soederbaum (2008) explains it as ecological economics where environmental and ecological variables and issues are integrated in economic activity. Economic sustainability is manifested by means of a variety of approaches, features and terminologies. For example, corporate or business sustainability refers to the link that an increasing number of companies are making between natural assets and low-carbon resource efficiency, and how their bottom lines are reflective of a 21st century green economy (Steiner in UNEP, 2010a). Integrating sustainable consumption and production principles with everyday operations and behaviour patterns is a major policy challenge for governments seeking long-term sustainability (DEFRA, 2003). Most governments acknowledge the need for new innovations and instruments to put sustainable operations into practice by "clean up" polluting production processes and thereby producing "greener products" (OECD, 2002; DEFRA, 2003). At the same time, sustainable consumption is also challenging, since "society needs to find more efficient ways to consume" (Bently, Fien and Neil, 2004) and a "wholesale rethinking of affluent lifestyles and material consumption per se is required" (Douthwaite, 1992 and Schumacher, 1993 in Seyfang, 2006:383).

Another facet of economic sustainability is Sustainable Entrepreneurship, which refers to the resilience of entrepreneurial behaviour in managing the three pillars of sustainability: societal equality, environmental safety and economic effectiveness. The literature offers a range of terms with a variation in meaning, for example, green, environmental, ecological-or sustainable entrepreneurship, eco-entrepreneurship and eco-prenurship; and sustainability-driven

entrepreneurs (Nikolaou, Ierapetritis and Tsagarakis, 2011:2; Hall, Daneke and Lenox, 2010:441; Shepherd and Patzelt, 2011:143). Entrepreneurs can play an important role in looking for new opportunities and innovations where sustainable consumption and production are initiated from the start. Also, the technological approach to sustainable development has contributed much towards minimising the input and output of metabolic flow of resources and waste from daily activities (Cam, 2004:60).

Essentially the economic pillar is a key focus within EMS education and is undeniably interconnected with society and the environment. Sterling (2004:50) argues that sustainable development provides a gateway to diverse perspectives of pedagogy; an idea which is supported across a wide range of ESD literature (cf. UNESCO, 2011:24). Sustainable development requires a shift in mental models which frame our thinking and inform our decisions and actions (UNESCO, 2011); hence the pronouncement of the Decade for Education for Sustainable Development from 2005 to 2014.

1.4.3 Education for sustainable development (ESD)

In recent years there has been an increased concern among developed and developing countries about the degradation of the environment and the concern expressed by some of its leaders regarding the severity of its effects. The term Environmental Education was first coined in the late 1960s. However, the first global framework for Environmental Education was proposed in 1975 when participants of a United Nations Educational, Scientific, and Cultural Organisation (UNESCO) held a workshop in Belgrade, Yugoslavia. This framework was called the Belgrade Charter. Subsequent to the Belgrade Charter was the Tbilisi

Declaration (UNESCO, 1977), recognising that teacher education and preparation are important vehicles to implement the practices and principles inherent in environmental education. In 1983 the North American Association for Environmental Education (NAAEE) and Agenda 21 of the 1992 Rio Earth Summit both expanded on the previous declarations and reinforced the importance of developing, coordinating, and implementing joint environmental education and training activities. During the 1990s there was an increased awareness about the destruction of the environment as a result of pollution, global warming, depletion of natural resources, etc.

Some theorists have argued that environmental education encompasses three broad approaches: i.e. education *about*, *in/through* and *for* the environment (Fien, 1993; Le Grange, 2004). However, it is the latter approach that exemplifies the focal point of this discussion. Central to education for the environment, is the "establishment of social relations in efforts to change socio-ecological conditions" (Le Grange, 2004:391). People engage with the environment on an ongoing basis. The effects can be viewed as indirect (distant or "out-there"), direct or "of one's own making", and its manifestations need to be explored, understood and addressed. In so doing, socially critical education for the environment can be heightened and integrated through a range of issues, e.g. the effect that the exploitation of natural resources has on the supply and demand of certain commodities. Bonnett (2007:710) argues that society, in the pursuance of the satisfaction of needs and wants (i.e. economic motives), views the environment or "nature" as being essentially a resource to be "intellectually possessed and physically manipulated and exploited". Bonnett proposes that current social and/or economic practices need to be investigated critically to

identify and evaluate the motives that propel them, and which to some degree, affect everyone.

Huckle (1983) is of the opinion that only education *for* the environment offers teachers the theory and practice needed to make a genuine contribution to environmental well-being. This requires an admission of the links between environmental, moral and political education. However, enforcing environmental education into all subject areas as a "holistic cross-disciplinary element" would be inadvisable (Bonnett, 2007:717). Instead, Bonnett argues, it should be developed from *within* the existing disciplines, demonstrating how it relates to the core fundamentals of the respective curricula and the increased consciousness of environmental problems and unsustainable practices. South Africa is host to the upcoming global climate change convention in Durban in November 2011; a challenge to the global community is how economic processes have impacted on the earth, its resources and on society. This is where EMS education can play a meaningful role in creating awareness of contemporary issues. The learning area focuses on a wide range of topics which could elicit critical inquiry of e.g. how economic decisions may result in unsustainable practices of business and individuals.

The World Summit on Sustainable Development (WSSD) that took place in Johannesburg in 2002 revealed that the goals laid out in Rio de Janeiro in 1992 were still far from being realised, and a renewed focus on education was proposed (UN, 2002). In agreement with this, the United Nations (2002) declared 2005-2014 the Decade of Education for Sustainable Development – placing education, and specifically teacher education, at the core of the activities,

tools and capabilities required to realise a sustainable world (Cutter-Mackenzie, Smith and McLoughlin, 2005). Over the past fifteen years, concerned businesses globally have addressed sustainability concerns that are relevant to the future of their businesses through the World Business Council for Sustainable Development (WBCSD). This Council is particularly concerned about the business world and the incorporation of ESD in their professions in order to foster sound decision-making skills (Svanström et al., 2008).

All of this has significant implications for teachers who have to explain the meaning and scope of sustainable development to learners. The Brundtland Report (1987) emphasises that the world's teachers have a crucial role to play in helping to bring about wide-ranging social changes which are needed for sustainable development (WCED, 1987). Higgs (2002) argues that educators face a compelling responsibility to serve society by fostering the transformations needed to set us on the path to sustainable development. Deciphering exactly what is meant by "sustainable development" will determine the educational policies and practices that seek to achieve it (UNESCO, 2011:23). The understanding of ESD is sometimes interpreted as the process of gaining knowledge, values and theories of sustainable development. However, it also prioritises the changing of mindsets and an active engagement of the learner in matters relating to a more sustainable future.

1.5 RESEARCH METHODOLOGY

The study was conducted within a constructivist-interpretivist paradigm. A case study design strategy as part of a qualitative research approach was selected to best answer the research question: How do EMS teachers understand the

concept “sustainable development”? The data collection was executed by means of the literature reviewed, in-depth interviews and subject-object interviews (written explanations), followed by the systematic categorisation and coding of the data by means of content analysis.

The interviews were recorded and converted into sound files for storage and retrieval, so that the actual recordings and the transcripts would be available for verification. The necessary institutional ethical procedures and considerations were adhered to in consultation with the research committee of the Division for Research Development at the University. The four research design tests, i.e. Credibility, Transferability, Dependability and Confirmability, were carefully monitored and adhered to by applying guidelines from the literature and by incorporating a case study protocol. Chapter Four describes the research methodology in detail.

1.6 STRUCTURE OF THE DISSERTATION

This dissertation follows the following structure:

Chapter 1 provides a background to the research and describes the motivation for and potential value of the study. The research problem is discussed, the research question and sub-questions outlined and key theoretical perspectives explained. A synopsis of the research methodology and a brief outline of the chapters in this thesis are provided.

In **Chapter 2** the literature on globalisation and neoliberalisation is reviewed and its impact on the South African society and environment discussed. In addition, the understanding of sustainable development, its dimensions, the economy-

environment-society relationship and key indicators are described and elaborated upon.

Chapter 3 reviews the literature on Education for Sustainable Development (ESD) and how it relates to a specific learning area at school level, namely Economic and Management Sciences (EMS). Thereafter the background to the EMS curriculum, followed by the purposes and features of Learning Outcome 2: Sustainable Growth and Development are discussed.

Chapter 4 describes the research paradigm: its epistemological and ontological assumptions are explained before presenting the research design, approach and method.

Chapter 5 provides a systematic analysis of Theme 1: The conceptualisation of sustainable development. This consisted of the categorisation and coding of the data pertaining to the interview questions which were presented, illustrated and its findings discussed.

Chapter 6 deals with the analysis of Theme 2: The EMS curriculum and sustainable development. The focus within the EMS curriculum was Learning Outcome 2: Sustainable Growth and Development, the CAPS, and EMS teaching and learning. Theme 2 was divided into two parts: Part 1 focusing on the EMS curriculum and sustainable development and Part 2 dealing with the teaching and learning aspects of EMS. This chapter also presents the consolidation of the key findings of Part 1 and Part 2 of Theme 2.

Chapter 7 outlines a synthesis of the preceding chapters and offers conclusions and recommendations based on the analysis which emerged from the research.

The next chapter provides a discussion of the literature reviewed on globalisation and its impact on sustainable development.

CHAPTER TWO

LITERATURE REVIEW

GLOBALISATION, NEOLIBERALISM AND SUSTAINABLE DEVELOPMENT

2.1 INTRODUCTION

With the advent of democracy in South Africa in 1994, one of the greatest challenges of the new government was to restructure an unequal, racially segregated and authoritative apartheid education system. The post-apartheid education reforms encompassed different phases that incorporated the democratisation of education and the construction of new policies, including a curriculum policy. As educational reforms progressed to promote personal, social and economic development, internationalised patterns of trade and production also increased and intensified.

Isolated from most international trade opportunities because of economic sanctions imposed during the apartheid years, post-apartheid South Africa became a role player in a competitive and interconnected global economy. The interconnected global economy, referred to as globalisation, represents a reorganisation of industries, finance and trade, which has significantly contributed to the domination of a capitalist development model (Cooper, 2001). Globalisation is characterised as multifaceted linkages and interconnections of trade, structure, culture and agency; akin to the delineation of traditional

boundaries (Cooper, 2001; Marginson, 1999; Moloi et al., 2009; Triegaardt, 2009). The nature of this interconnectedness and global competitiveness elicits debate from various spheres in terms of its socio-economic, political and cultural impact for developing countries. These developments had a significant impact on the South African government after 1994, having to deal with the challenges of nation building and facing the challenges of forces of globalisation.

Whilst there is widespread consensus that the South African economy is "doing not just as well, but better than any time since 1994" (HSRC, 2007: 171), there are concerns about the prospects of sustainable economic growth and development and its dependence on an integrated and deregulated market in world economy. Furthermore, investment in and the use of high technology, and the education of a more productive and skilled workforce are interrogated; a strategy which has "produced short-term profits, but at the expense of pollution, hazardous wastes, dangerous workplaces and human exploitation" (Shea in Tilbury et al., 2002:27). Of particular concern is that sixteen years after the first democratic elections the effects of growing unemployment, inequality and sustained poverty are still prevalent for ordinary citizens (Triegaardt, 2009). These socio-economic issues and the impact of local and global markets on the South African economy are an integral part of EMS education. All of these issues are integrated, multifaceted and very relevant to sustainable growth, reconstruction and development in South Africa.

Chapters Two and Three consist of the literature reviewed, presenting two main focus areas per chapter. In the first section of Chapter Two the impact of globalisation will be explored and in the second, an understanding of the need for

sustainable development in a globalising world is discussed. In Chapter Three the first section will comprise a review of environmental education and its relation to sustainable development. This will be followed by a section elaborating on education for sustainable development (ESD), including its relevance, importance and applicability to the Economic and Management Sciences (EMS) learning area in the school context. The EMS curriculum within the Senior Phase of the General Education and Training (GET) band will form the focus of this study.

2.2 THE IMPACT OF GLOBALISATION

The EMS curriculum focuses on how national (by means of the national budget); regional and international agreements can be used to facilitate sustainable growth and development (DoE, 2002:39). In addition, the influence of apartheid economic policies, the impact of global competition on the national economy as well as the successes and shortcomings of the RDP are an integral part of development imperatives for South Africa. The impact of globalisation and how it relates to sustainable development is discussed in this chapter.

Globalisation refers to a worldwide trend to integrate markets and deregulate trade barriers, changing strategies of local and multinational corporations (MNCs) in respect of competitive factors of production. Faced with increased international competition, developing countries contend for foreign direct investment (FDI), whilst MNCs seek to maximise their economic activities and competitiveness in foreign countries. With globalisation comes a multitude of interrelated changes: development of global communication systems, sophisticated supplier networks, homogenisation of demand for consumer goods

across countries, modern legal and intellectual property rights, etc. (O'Brien and Leichenko, 2000).

The meaning, scope, impact and exact nature of globalisation still do not have common accord and can elicit both positive and negative reactions from diverse individuals and groupings (Cooper, 2001; Cesano and Gustafsson, 2000; Bakker, 2007; Moloi, et al., 2009; Triegaardt, 2008; Emeseh, 2008; Cock and Fig, 2001; Huynen, Martens and Hilderink, 2005). Globalisation in its widest sense refers to all world-wide interrelated processes, affecting all spheres of human society, i.e. economic, social, political, communicative, environmental, etc. Because of these interactions, causal relationships occur which prompt many environmentalists, humanists, scientists, economists and politicians to look at its impact on society and the environment. One of these causal relationships relates to health risks as a result of globalisation; many of these risks are well documented (Becklake, Bagatin and Neder, 2007:356; Le Grange 2004:20; Hansell, 2008:178; Huynen et al., 2005:2). For others, economic growth as a result of globalisation is generally believed to increase development and for example, enhance improvements in health care (Huynen et al., 2005:12).

International institutions such as the World Bank, International Monetary Fund (IMF) and the World Trade Organisation (WTO) started to actively campaign for the benefits of a global economy. Despite the efforts of the WTO, IMF, etc., unemployment, poverty and environmental degradation are rising in many parts of the world. Consequently, worldwide summits on sustainable development have emerged over the past three decades, including the recent Copenhagen summit where world leaders continued to grapple with key issues such as climate

change, the exploitation of resources, the role of education, etc., as well as its impact on creating a sustainable future.

Educational institutions are invariably affected by external knowledge economies and an upsurge in information and technology activities as a result of globalisation. Moloi et al. (2009:279) argue that educational institutions have a crucial role to play to develop competencies and expand the skills base of the population which will contribute to higher productivity and economic growth. The role of knowledge and information as the driver of productivity and growth is increasingly affected by developments in global communications and mobility. Within the context of EMS Education, the critical reflection and inquiry of global competition, international agreements, inequity and its wider manifestations are important, e.g. on the business sector, local communities and the broader South African society and the natural environment. As Moloi et al. (2001:280) argue, higher educational institutions are increasingly affected by global competitiveness and their policies are often "fiscally driven", i.e. shaped by business and commercial concepts and practices with regard to funding and access. In order to be competitive, higher education institutions buy into the neoliberal agenda, specifically in dealing with issues about inclusivity and exclusivity of access, which could exclude a vast majority of the South Africans because of financial constraints.

For opponents or proponents of globalisation alike, the intrinsic ideological framework for globalisation is liberalism – the breaking down of trade barriers and free flow of capital. Its manifestations include a "scramble for resources by MNC" (Emeseh, 2008:251) and "an act of dispossession with negative

distributive consequences”, symbolic of private companies who are answerable to their shareholders and primarily concerned about the bottom line (Bakker, 2007:437). Equally, the tearing down of trade barriers and the liberalisation of direct investment flows can create extensive opportunities for economic prosperity and employment (Bhagwati, 1996).

The benefits associated with globalisation often refer to economic growth and development as measured by gross domestic product (GDP), liberalised investment policies, FDI, increased employment, and so forth. However, critics of globalisation warn against economic hardships as a result of globalisation, decreased employment, increased income inequality, and most of all, its negative consequences for the environment. Critics extend caution about “absurd excesses of Western individualism” (Brown and Lauder, 2001:230), whilst Tilbury et al. (2002:9) ask pertinent questions: “Whose interest does this particular economic development agenda serve? Who benefits and who does not?” Commercial exploitation with little concern for society and the environment has increased over the twentieth century to accommodate globalisation and the demands of the world’s burgeoning cities (Becklake et al., 2007:356; Cock and Fig, 2001). As a result of increased productivity, there is a growing consensus that the release of gases and dust into the atmosphere has contributed to a change in global climate and increased health risks, pointing out that such trends will continue into the future unless dramatic improvement measures are adopted (Huynen et al., 2005; Becklake et al., 2007:356). Moreover, in order to improve the quality of life for all, issues such as productivity, reconstruction and redistribution (of income and resources) should not be treated separately. The destabilising effect on national societies because of environmental degradation

should be taken into account when resources and income are appropriated (Brown and Lauder, 2001). In the wake of the current global economic crisis, the economic welfare of nation states has increasingly come under the spotlight.

2.3 GLOBALISATION AND “NEOLIBERALISM”

When Adam Smith published his famous book *The Wealth of Nations* in 1776, a new school of thought defending economic liberalism came into being. At first, liberalism meant economic, political, or even religious ideas to prevent social conflicts (Cesano and Gustafsson, 2000:214). Economic liberalism, however, refers to the restriction of state intervention as far as possible on economic matters, believing that free trade is the best solution for economic development. Until the early 1900s economic liberalisation prevailed in Europe and the United States. The two World Wars and the Great Depression of the 1930s hampered productivity in many industrialised countries (Cesano and Gustafsson, 2000:214). This was also the period of the early neoclassical welfare economics advocated by Edgeworth, Sidgwick, Marshall and Pigou’s (Suzumura, 2005), which was in turn inspired by debate about ideology, resource allocation efficiency and economic policy for the greater good of the welfare of its citizens. Pigou’s work, *Wealth and Welfare* in 1912 and *Economics of Welfare* in 1920, put welfare maximisation into perspective, suggesting that it is the duty of the government to restore or protect the resource by using income from taxes (Cesano and Gustafsson, 2000). Pigou’s evaluation of the economic implications of alternative resource allocations to maximise economic welfare have been met with criticism by economists such as Hicks, Kaldor and Pareto (Blaug, 2007; Paavola, 2007) who developed a “new welfare economics approach” in the early 1940s (Samuelson in Suzumura, 2005:329; Paavola, 2007). The new welfare

economics proposes that "free trade may help some people, and hurt some other people, but the gainers would be able to compensate the losers", based on the Pareto principle: the reallocation of resources in such a way that some individuals are made better off while no individuals are made worse off (Samuelson in Suzumura, 2005:335).

Over decades, the ideology, scope and impact of welfare economics elicited great interest from a wide spectrum of disciplines, e.g. Economics, Political Science, Social Science, Mathematics, Health, Agriculture, etc., seeking "solutions" to key questions about the extent to which given resource allocation is efficient, and how to enhance welfare policy interventions. One of the evident concerns is the theoretical basis for favouring the use of competition in the allocation of resources (Suzumura, 2005:350). Essentially, welfare economics is concerned with ethical judgements about decision-making processes and income distribution (Pattanaik and Salles, 2005:361; Cooper, 1991:116). Since governments are involved in decisions about macro policies, more attention should be paid to cost-benefit analysis in public investments, as well as in private investments if the government is involved (Pattanaik and Salles, 2005:367).

The Age of Keynes is often referred to as the period of economic boom (1945–1975). However, the capitalist crisis over the last twenty to thirty years and the shrinking profit rate inspired economic corporations to revive economic liberalism, motivating public sector activities to become profitable (De Sely in Cesano and Gustafsson, 2000:215). "New" or "neo-" liberalism" unfolded, with the promise by the World Bank, IMF and WTO of national economic growth,

higher benefits and better wealth for everyone if the neoliberal economy is followed by member states (Cesano and Gustafsson, 2000:215).

Economic globalisation is a manifested shift from a world of distinct national economies to a global economy in which production is internationalised and financial capital flows freely and instantly between countries. The growth of the global economy may not be welfare-improving anymore: indirect costs that increase the social costs are often not fully considered in new global economic frameworks (Cesano and Gustafsson, 2000:223; Kronenberg, 2010:1493). Therefore, post-Keynesians and ecological economists, amongst others, are critical of the neoclassical theory of production, the effect of neoliberal policies and the understanding of how a capitalist economy operates in a natural environment with limits to growth.

South Africa's former President Thabo Mbeki has argued that globalisation, liberalisation, deregulation and the information society serve the purposes of the rich developed countries of the North. However, Mbeki qualified this by stating that under globalisation, development cannot be achieved "under conditions of autarky or self-contained development within our national boundaries or regions"; the South African state is therefore trying to negotiate globalisation (Carmody, 2002:258). Whilst the South African government acknowledges the benefits that economic globalisation can bring to a developing country, e.g. new opportunities in terms of technological advancement and export-led growth, it also recognises the threats of economic globalisation in terms of e.g. cheap imports, loss of biodiversity, climate change as a result of increased competition. As part of the government's medium term strategic objectives, it proposed a

balanced approach to ensure that the country follows a sustainable development trajectory by spending budgetary allocations on the competing needs in welfare, social and economic services (RSA, 2009:12). Post-apartheid economic restructuring is important in EMS education to create an awareness of governments' commitment to reconstruction, restitution and development. At the same time, EMS education is an ideal platform to critically reflect on the successes and weaknesses of economic restructuring initiatives in governments' attempts for sustainable growth and development in the long-term.

South Africa's democratic government has inherited a fragile economy burdened with large debt, slow economic growth, increasing unemployment rates and unacceptable levels of poverty (Padayachee, 2005:22). The legacy of inequity and adjusted internal economic and societal imperatives were addressed by intensified internationalised patterns of trade, increasing global competition and production. Bond argues that even though South Africa has massive state capacity, there is a diminished commitment to meeting basic needs as a result of the shift in priorities towards global competitiveness (Bond 2005:340). The economic policies of the post-apartheid state, e.g. first the RDP had as its vision to increase standards of living for the previously disadvantaged. The intention of the government was restitution and redistribution of an economy which was built on racial division in every sphere of the society. The RDP was followed by the GEAR strategy launched in 1997 which "reflects a textbook case of economic reform according to the World Bank and the International Monetary Fund (IMF)", are embedded in neoliberalism, which again is the ideological core of globalisation (Cock and Fig, 2001:9). The essence of the GEAR strategy encompassed neoliberal principles, i.e. trade liberalisation, privatisation, deficit

reduction and a rationalised state. Adjustments needed to be made to attract FDI to improve growth and development with the promise of a better quality of life for all. Neoliberal thinking espouses macro-economic stability requiring deregulation, privatisation, fiscal discipline and export-led growth (Cock and Fig, 2001:9). However, critics argue that GEAR failed to live up to these ideals; there was no significant job creation, while poverty and inequality are deepening (Cock and Fig, 2001:9; Bond, 2005).

One of the central questions in the globalisation debate is the extent to which globalisation fuels cultural, political and/or economic homogeneity. One facet of this debate relates to global economic convergence and education. Moloi et al. (2009:287) argue that the impact of globalisation on education is immense and elicits a number of critical issues that needs to be addressed. Amongst these issues are good and accountable practices of governance to safeguard the path of economic development (e.g. to ensure the rule of law in order to improve the efficiency); the accountability of the public sector to tackle crime and corruption; and the accountability of the business sector to be responsible towards society and the environment. All of the above aspects are important in EMS education to provide insight into how governments' economic policies are affected by external forces.

The above-mentioned arguments illustrate the dynamic interaction between the biophysical, social, political and economic forces. Its impact on society and the environment can be extensive, and the solution to its sustainability, complex. In the following section the concept of sustainable development is discussed.

2.4 UNDERSTANDING SUSTAINABLE DEVELOPMENT

Sustainable development has progressively become a prominent contemporary issue and is undoubtedly one of the major challenges faced by both developed and developing countries. Over the years, the concept of sustainable development has been scrutinised and redefined (Daly, 1991, 1992; Rana, Platts and Gregory, 2008:3; Briassoulis, 2001:410; and others). Similarly, the usefulness of clear sustainable development indicators to guide policy have been seriously questioned (Briassoulis, 2001:409). The terms "sustainable development" and "sustainability" are often used interchangeably, yet the literature suggests a clear distinction (Scott and Gough, 2004:1; Bond, 2002:31; Daly, 1992:12). The seminal definition of the World Commission on Environment and Development (WCED) (1987), also referred to as the Brundtland Commission, views **sustainable development** as "...development which meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987:43). While this definition is generally understood as "development that will last" (Atkinson et al. in Briassoulis, 2001:411), the meaning of "development" is vague and has become associated with sustainable growth, economic growth and/or market policy (Daly, 1991:6; Elliot, 1998). For Bonnett (1999:319) sustainable development suggests an emphasis on the "right relationship with nature" and "human flourishing", while for Summers and Childs (2007:309) knowing what is to be sustained would clarify sustainable development to a large extent. Scott and Gough (2004:1) view sustainable development as "inherently a learning process through which we can, if we choose, learn to build capacity to live more sustainably".

Sustainability, on the other hand refers to the "...capacity of human beings to continuously adapt to their non-human environments by means of social organisation (Hamm and Muttagi in Scott and Gough, 2004:1). Deng (1996:12) claims that environmentalists place more emphasis on the "sustainable" part as "putting the Earth first", "limit material growth" and "return to community values". In contrast, some business leaders were "drawn to the concept as they realised that not only was it not anti-growth, but it also called for serious economic growth to meet the needs of the current population" (Holliday, 2001:15). From the perspective of EMS-education the concept of 'sustainability' is more in line with the view of Holliday, since the scale and context of sustainability is multifaceted: it can be explored and dealt with over many levels and in diverse contexts of economic, environmental and social activity. Even though the meaning of sustainable development remains complex, varied and contested, there is wide consensus that humanity is living unsustainably and that the ultimate concern is the human impact on the environment (Summers and Childs, 2007:308; Cam, 2004:59; Bond, 2005; Scott and Gough, 2004).

The background to the growing commitment to sustainable development can be traced back to key international and national milestones. The United Nations (UN) Conference (1972) on the Human Environment in Stockholm where the environment was recognised as a development concern, and the 1987 Our Common Future Report of the WCED (also referred to as the Brundtland Commission) gave prominence to the key pronouncement of sustainable development. This led to the Earth Summit in Rio de Janeiro in 1992, and to the formulation of Agenda 21 as a blueprint for sustainable development, reflecting global consensus and political commitment to integrating environmental concerns

with social and economic decision-making processes. The conference served as an “international wake-up call” about people’s increasingly unsustainable ways of life, especially in the Western developed countries (Gray and Milne, 2002:1). This was followed by a decade of UN summits and conferences between 1992 and 2002, two of which were the United Nations Millennium Summit (2000) where the Millennium Development Goals were adopted, and The World Summit on Sustainable Development (2002) in Johannesburg, South Africa. More recently, The Copenhagen Summit in 2010 drew leaders from all over the world to reaffirm their commitment to sustainable development, placing poverty eradication at the centre once again, together with development that would benefit future generations.

Bond (2002:19) views sustainable development, neoliberalism and environmental justice as the three main discourses to address the challenges of ecological processes. He acknowledges that the idea of sustainable development is an improvement over a purely economic approach to environmental management. While conventional economics deals with the efficient allocation of resources with a view to ensuring continuous growth, the distinguishing characteristic of ecological economics is “...that it sees the economy as a subsystem of a larger ecosystem that is finite, non-growing, and materially closed, while being open to flow-through (through-put) of solar energy that is also finite and non-growing” (Daly, 1999:xii). Compared to the neoliberal control of the 1990s, current sustainable development concerns at least allow for a deeper consideration of costs and benefits underpinned by ecological values (Bond, 2002:161). In the latter half of the 20th century human population, economic growth and environmental indicators suggested that the world population increased

exponentially, while the overall economic activity multiplied (National Research Council, 1999). This led to higher consumption which translates into huge impacts, as the production of commodities that are most damaging to the earth are metals, energy, chemicals and paper (Durning, 1992:52), leaving behind pollution, land degradation, forest destruction, etc. Durning illustrates how "ecological wakes" span the globe:

A strawberry in a Chicago supermarket in February is likely to have come from Mexico, where it might have been grown with the help of pesticides made in Germany's Rhine Valley and a tractor made in Japan. The tractor, perhaps constructed with a Korean steel cast from iron ingots dug from the territory of tribal peoples in Papua New Guinea, was likely to be fueled with diesel pumped from the earth in Southern Mexico. At harvest time, the strawberry may have been packed in a box made of cardboard from Canadian softwood pulp, wrapped in plastic manufactured in New Jersey, and loaded on a truck made in Italy with German, Japanese and American parts (Durning, 1992:55).

Is our future safe in the hands of business, and should business' operate "as usual", using the same familiar technologies to serve vested interests? This is also the question which Gray and Milne (2002:2) ask. Attempts have been made by business to include benchmarks and reports to measure the sustainability over the various scales and contexts, e.g. the Dow Jones Sustainability Indexes, the Global Reporting Initiative (GRI), the Triple bottom line report, etc. to reflect accountability towards people and the environment (Holliday, 2001). The acceleration of globalisation cannot be disputed, but with it comes free trade with countries with lower labour and environmental standards, worsening income distribution and loss of autonomy to external forces beyond the control of nation states (Bhagwati, 1996:17).

Strategies towards sustainable development have evolved and expanded over the years with new interest groupings and stakeholders joining the pursuit for a sustainable quality of life in future. According to Hagan (in Cam 2004:60), there are two main approaches to sustainable development, namely "the rational and the arcadian". The arcadian approach refers to the pre-industrial period where people "lived in harmony with nature", as opposed to the rational approach where the economics of modern society and technological innovation can be the solution to environmental degradation and a deteriorating quality of life (Cam, 2004:60). To suggest that we go back to old ways of living would be foolish, because of the pervasive consequences of the globalisation of markets, technological advancement, rapid transportation systems, interdependence of urban cities, etc. (Guattari, 2007:42). In both approaches there is a significant relationship between lifestyle and the physical environment; however, the rational approach dominates the practice of sustainable development and requires a reconstruction of the objectives and methods under today's conditions.

2.4.1 Sustainable growth and sustainable development

For many "sustainable growth" is an alluring, yet vague concept. Daly (1991:6) argues that "sustainable growth" is a contradiction in terms and should be rejected, since it alludes to "quantitative increase in physical size", signifying that the term development is more apt since it refers to "qualitative improvement or unfolding of potentialities". He concedes that economists will disapprove of this notion, since growth in gross national product (GNP) is not strictly subject to physical laws, and represents quantitative and qualitative increments. Daly explains it as follows: "When something grows, it gets bigger. When something develops, it gets different. The Earth's ecosystem develops (evolves), but it does

not grow. Its subsystem, the economy, must eventually stop growing, but it can continue to develop and change indefinitely" (Daly, 1992:1). On the other hand, other researchers, for example Mac Neil (in Goldin and Winters, 1995:51), Holliday (2001) and Chichilnisky, Beltratti and Heal (1993) argue that growth is necessary for further development and to prevent environmental ruin. Chichilnisky et al. (1993:4) name two factors which may impose on economic growth patterns. One is the need to follow development strategies consistent with the planet's resources. The second places the emphasis on equity, both within and between generations. Both factors relate to the definition of the Brundtland Report, referred to earlier.

Charles Holliday, former chairperson of the WBCSD, holds the view that business should not be apologetic for pursuing sustainable growth and should continue to promote and develop markets to "sustain economic prosperity, social equity and environmental integrity" (Holliday, 2001:130). For business to embark on sustainable growth, Holliday advocates a three-pronged strategy for sustainable growth: productivity improvement, integrated science and knowledge intensity. The "stepped-up environmental performance" such as reducing waste, managing complex hazardous processes, using less material or energy, etc. is part of the comprehensive way of doing business, and not necessarily viewed as a goal for sustainable growth (Holliday, 2001:134). Goldin and Winters (1995:108) argue that nothing guarantees sustained growth and that finite stocks (natural resources, the atmosphere) may be the reason for stagnation. Soil depletion in some parts of Africa is a concern for economic decline, whereas Goldin and Winters claim bad politics and institutions coupled with population growth as the culprits. Goerner, Lietaer and Ulanowicz (2009:81) argue that a blind obsession

with GDP growth sets neoliberal economics at odds with workers, consumers, small business and the environment. This obsession only ensures maximising profit for owners, regardless of the costs to anyone and anything. Furthermore, Goerner et al. argue that a new understanding of why "it is not how big you grow, but how you grow big" needs to be instilled to ensure durable economic vitality where balance is the key.

South Africa's current growth strategy, i.e. the New Growth Path, indicates that growth through employment is a pre-condition for sustainable prosperity in South Africa (RSA, 2010). This will mean that the rate of growth in employment is relative to the rate of growth in GDP. Growth is therefore focused on employment creation through increased production and a more inclusive and greener economy over the medium to long run.

2.4.2 Dimensions of sustainable development

Transparency about organisational activities, whether it is locally, nationally or internationally, is of interest to stakeholders, government organisations, business, labour, investors, etc. The manufacturing sector in particular is faced with a wide range of challenges, for example health and safety risks, labour practices, etc. Rana et al. (2008:7) reviewed two sustainability frameworks which could provide a foundation for sustainability reporting and make indicators accessible, namely the United Nations Commission for Sustainable Development (CSD) (Fig. 2.1) and the Global Reporting Initiative (GRI). The GRI is multi-party initiative involving organisations from NGOs to large companies with the objective to derive, disseminate and encourage the use of voluntary guidelines on sustainability reporting (GRI Guidelines, 2007:3; Gray and Milne, 2002:6).

The GRI Report represents the organisation's overall performance within its particular context and aims to reflect an organisation's contribution to current and future improvement or deterioration of economic (e.g. indirect economic impacts), environmental (e.g. compliance, emissions, effluents and waste) and social conditions (e.g. product responsibility).

Figure 2.1 shows the sustainability framework developed by CSD in response to the Earth Summit, where a need for clear indicators was established and which could assist in decision-making with regard to sustainable development (Rana et al., 2008:6). This framework has an additional dimension to sustainable development, i.e. institutional, whereas the most common portrayal of sustainable development focuses on three dimensions or pillars, i.e. social, environmental and economic, where the role of the institution is implicit in the three integrated pillars (cf. Chapter 1, Figure 1.1).

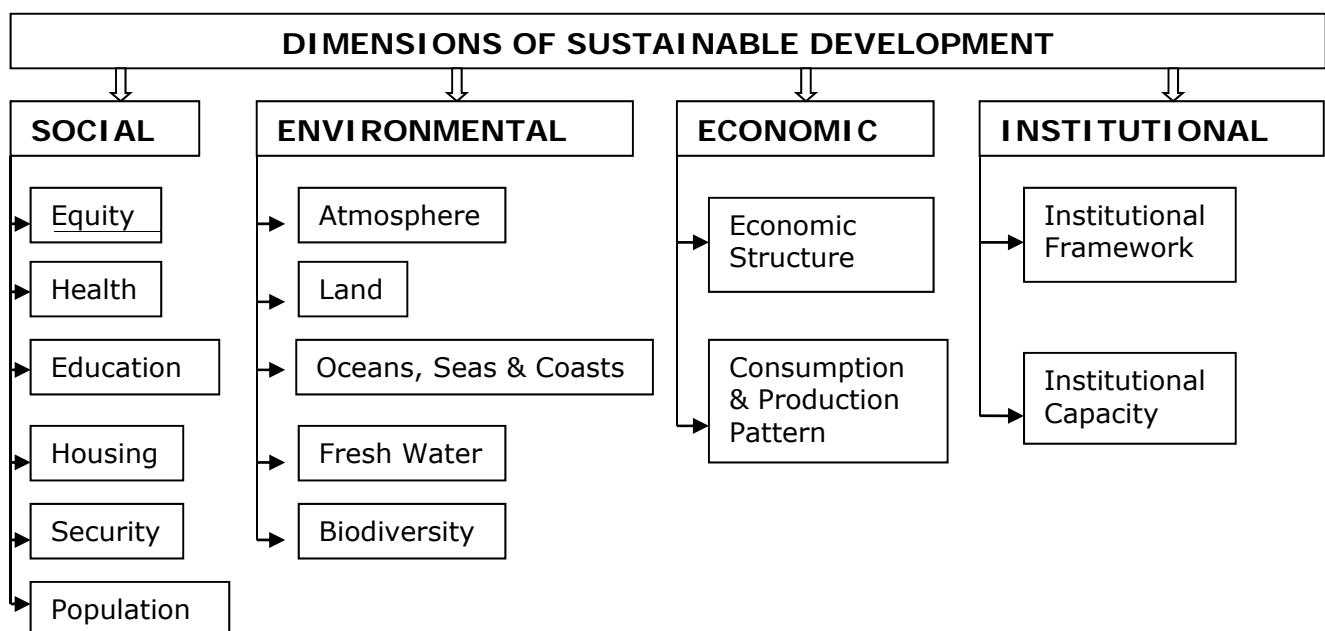


Figure 2.1: CSD Framework [Adapted from Rana et al., 2008:6]

Issues such as environmental assessments, global emission of greenhouse gases, ecological footprints, renewable energy, wastes and waste management, sustainable agriculture, global warming, pollution, etc. have become synonymous with **environmental sustainability**. Guattari (2007:16) is of the opinion that the major capitalist countries are also the major polluters of the Earth, continuing to insist that “emissions trading” occurs under free-market principles, with improbable political will to address these issues speedily. Ecological sustainability refers to the inherent interdependence of humankind on nature. Essentially nature should be respected, all creatures treated equally, and biodiversity to be upheld, e.g. the preservation of complex ecosystems (Tilbury et al., 2002:5). Closely linked to this is **social sustainability**, generally referred to as follows: “the needs of all individuals and societies should be met, within the constraints imposed by the biosphere...”, by taking social justice into consideration. Basic human needs are met, while there is intergenerational equity, human rights and sustainable livelihoods, and where people are able to participate in the decisions that most affect them (Tilbury et al., 2002:5).

Over the years, alternative terminologies and approaches to various facets of **economic sustainability** have emerged, all of which offer valuable means to promote sustainable development. One such facet is corporate or business sustainability, referring to the link which an increasing number of companies are making between natural assets and low-carbon resource efficiency, and how their bottom lines are reflective of a 21st century green economy (Steiner in UNEP, 2010a). The green economy initiative resulted, with the aim of focusing on improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. In a green economy, the pathway

to sustainable development is viewed as a journey rather than a destination within which the environment is an “enabler” of economic growth and human well-being (UNEP, 2010d). When “going green”, a business leader will adopt eco-sustainability practices to stay ahead of regulation, finding opportunities for eco-efficiency, reducing risk, leading proactive stakeholder engagement, and maintaining a good corporate image (Sekerka and Stimel, 2011:117). Corporations can capture emerging “green markets” and gain first-mover advantage in their industries, which could ensure long-term profitability, improving their image and establishing better community relations by reducing costs through ecological efficiencies (Shrivastava, 1995:397). Shrivastava further points out that since corporations are the primary agents of economic development, they can play a considerable role in ecological sustainable development since they have the financial muscle, are technologically informed and have the institutional capacity to implement ecological solutions.

Most economic activity requires resources such as energy, materials and land, because it occurs in the natural, physical world. Since the Earth is a finite planet and has a limited capacity, these economic activities invariably influence the use of natural resources and generation of pollution (UNEP, 2010c). As explained earlier, the economy must continue to develop and change, but not be solely dependent on growth (Daly, 1992:1). Economic sustainability arises as a result of the social and ecological consequences of economic activity. Soederbaum (2008) defines it as ecological economics where environmental and ecological variables and issues are integrated with economic activity. The primary driving forces of the degradation of the environment are population, consumption and technology, all of which have reached proportions that require immediate

attention (UNEP, 2010b:8). On the one hand, poverty remains rampant in large parts of the world, whilst on the other hand consumers are aspiring to a high consumption of Western lifestyles. Consumption by some people in some parts of the world is increasing at the expense of others, due to disproportionate distribution (UNEP, 2010b:8). Ruffing (2007) cautions that the challenge for sustainability is to manage and curb Western consumption without exploiting natural resources, whilst raising the standard of living of the developing world. Daly (1996) takes the WCED's definition of sustainable development further, stating that the objective should be sufficient per capita wealth.

Another facet of the economic pillar is sustainable consumption and production (SCP), which refers to the cost and value of sustainability central to the underlying theme of economic growth, i.e. accountability beyond corporate annual reports and bottom lines. Along these lines, UNEP (2011a:5) adopted a holistic approach to SCP as "the use of services and related products, which respond to basic needs and bring a better quality of life, while minimising the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardise the needs of future generations". The framework for SCP is a global one, specifically within the business arena, underpinned by principles on sustainable development, green economy and green growth (UNEP, 2011a). Essentially the need to promote patterns of consumption and production which reduce environmental impact and resource intensity is also one of the priorities of Agenda 21 and the WBCSD. The emphasis is on eco-efficiency in producing competitively priced goods, i.e. the efficiency with which ecological resources are used to meet human needs (OECD, 2002). Whilst an appropriate definition for

sustainable consumption has been challenging academics and policy makers for a number of years, conceptions varied from “society needs to find more efficient ways to consume” (Bently et al., 2004) and “clean up’ polluting production processes and thereby produce ‘greener products’” (OECD, 2002; DEFRA, 2003). For others sustainable consumption means that a “wholesale rethinking of affluent lifestyles and material consumption per se is required” (Douthwaite, 1992 and Schumacher, 1993 in Seyfang, 2006:383).

UNEP conducted a survey called The Global Survey on Sustainable Lifestyles (GSSL) to gain an understanding of young people’s perspective on lifestyles and their consumption patterns (UNEP, 2011b). The survey indicated that many young adults are willing to participate and improve the world they live in through more sustainable lifestyles, but they need to know how and be given opportunities to take concrete actions. Also, the shift towards sustainable lifestyles and consumption patterns is a prerequisite for the achievement of sustainable development. Ultimately, the results of the GSSL highlight the importance of promoting research and education for sustainable lifestyles at all levels. For this shift to happen, the key is to generate, synthesise and share knowledge for a better understanding of lifestyles and consumption patterns with regard to sustainability issues (UNEP, 2011a).

On a smaller scale, Bently et al. (2004) conducted a study to establish whether the consumption patterns of young Australians are consistent with the trends of contemporary consumer societies; whether they establish their own identities through what they buy; and whether they seek social inclusion for their purchases. One of the aims of the survey was to identify the students’ views

about sustainable consumption, the links between consumption, social issues and sustainability, and also whether the youth can be change agents for non-materialist lifestyles. Based on a study by Bently et al. (2004), Table 2.1 provides the key and successful messages to promote sustainable consumption as expressed by Australian youths. Essentially, the study illustrated how young people can be encouraged and empowered to make changes in their own consumption patterns. In addition, the youth can be the catalysts for change in the wider community, thereby helping to lead society towards making more sustainable lifestyle choices.

Table 2.1: Key and Successful Messages to promote Sustainable Consumption by Young People (Adapted from Bently, Fien and Neil, 2004:57)		
Slogans	Messages	Principles / Ideas
Use enough efficiently	Consume only <u>what you need</u> – others have nothing	The “real” costs of goods (e.g. cost on environment, sweatshop workers)
Desire and need are not the same thing	Sustainable consumption is not a negative thing! It benefits you and everyone else	We compared to others with less. Consider scaring people with future comparisons if things don’t change
Think before you purchase	Think of what the future will be like if changes aren’t made now. Do you want that on your conscience?	Young people should be shown that not everyone has access to the same resources as us and an equilibrium must be reached for a sustainable future
The Five “R’s: Refuse, Reduce, Reuse, Recycle, Rethink!	There are other ways to consume, other lifestyles that bring <u>happiness</u>	Stop promoting slim people, junk food, etc. and start promoting sustainable living
It’s not far, you don’t need a car	Think about ways to make changes that help the environment and other people	Car issues – carpooling, ways to save money
It’s not hard / It has real consequences for the future	Some people overconsume while others can’t even consume the necessities	Letting people know they weren’t born to consume
That we can make a change	The lifestyles we take for granted are eating the future. Sustainable living will <u>improve</u> life for everyone	Make up your own mind and don’t just go with what’s cool
More need, less want	Don’t believe everything you see and hear. Have your own opinion. Don’t be influenced by trashy magazines	Tell them why it is important for our society, the human race and personally
Sustainability is “cool”	We don’t need everything to be cool and perfect and popular, besides sustainability can be cool	Info about the production of products
Start small, achieve small goals to bring about the bigger picture	Living sustainably will not remove the fun from a youthful lifestyle, but not living sustainably will soon remove the fun from all lifestyles	Media and role models, e.g. footballers etc. so that it becomes “cool”
Cars and makeup aren’t your identity	It is an empowering act that enables them to help have a greater say about their future	How to make a difference, e.g. turn off light when not in room
It is achievable	One person can make a huge difference	Moderation
You and your community can be healthier	Get outside and get involved	Education through daily life, e.g. label packaging, media, schools
	Be happy with yourself; you don’t need to be more than that	

Sustainable or Green Entrepreneurship is another facet of the economic pillar which suggests that entrepreneurship is no longer about economic success only; instead, sustainable entrepreneurs “manage to meet the triple bottom line by balancing economic health, social equity and environmental resilience through entrepreneurial behaviour” (Kuchertz and Wagner, 2010:524). While several scholars have agreed that green or sustainable entrepreneurship can be an important driving force for a modern economy, many have not agreed on the meanings and terms of the concept (Nikolaou et al., 2011:2). The literature offers a range of terms with different meanings, e.g. green, environmental, ecological, sustainable entrepreneurship, eco-entrepreneurship and ecopreneurship, sustainability-driven entrepreneurs (Nikolaou et al., 2011:2; Hall et al., 2010:441; Shepherd and Patzelt, 2011:143). Kuchertz and Wagner pose the question whether sustainability orientation adds to our understanding of entrepreneurial intentions, and if so, what the consequences for entrepreneurship policy and entrepreneurial education would be. Sustainable entrepreneurship ultimately seizes opportunities to bring into existence “future” goods and services which may be discovered, created and exploited by economic, psychological, social and environmental consequences (Cohen and Winn in Kuchertz and Wagner, 2010:526). However, as Hall et al. (2010:439) argue, despite the undertaking by entrepreneurs to foster sustainable development, there remains considerable uncertainty regarding the nature of entrepreneurship’s role in the area of sustainability.

The classic Brundtland definition of sustainable development initiated a variety of interpretations that emphasise the following issues: satisfaction of needs; limits on development; futurity’ inter- and intragenerational equity and the

simultaneous satisfaction of economic efficiency, environmental protection and social justice goals (Briassoulis, 2001:410; Bond, 2002; Bhagwati, 1996 and Daly, 1999). For Briassoulis (2001:410) trade-offs between these goals are inevitable, while sustainable development is about how to make progress towards them. On a continuous basis, governments, the business sector and individuals make trade-offs when economic decisions are made that could affect production and consumption. Sustainable development can therefore also be conceptualised as a state of dynamic equilibrium between the demands made by society for a development path and the supply of environmental and economic goods and services to meet this demand (Briassoulis, 2001:410). An area will therefore develop sustainably when its well-being does not decline over time. Because of the multifaceted nature of sustainable development trade-offs are inevitable. To achieve 'development that will last' will encompass careful mediation between all these variables.

The reality today is that the economy dominates environment and society. Many MNCs dominate decision making, including that of many governments (Daly, 1992: Giddings, Hopwood and O'Brien, 2002:190; Bond, 2002). Even tough business and governments have embraced sustainable development; its main concern is economic growth. Giddings et al. (2002:192) argue that the production and exchange of goods is a "social relationship, dependent on many non-monetary activities", suggesting that the economy cannot be seen as a separate area of activity since "[w]ithout society there can be no economy". For Giddings et al., a "nested" model for sustainable development is more appropriate, arguing that most humans live integrated lives with no sharp distinctions in conceptualisation and practice. In addition, each dimension is

multilayered and multifaceted, e.g. the environment is diverse; there is no single economy, just as there is no single dominant society. A further assumption is that sustainable development can be “compartmentalised” and that one dimension will not be given higher priority than the other (Giddings et al., 2002:189). The “nested” approach is also adopted by the South African government, by placing government as a legitimate regulatory body for the dynamic interaction between the economic system, socio-political system and ecosystem (RSA, 2008:15). Given the multilayered and multifaceted complexities of sustainable development, one can understand why the concept of sustainable development is contested. As a result, it is not possible to expect a generally acceptable pathway to a sustainable future.

Briassoulis (2001:411) argues that the exact details of how and what would ensure a sustainable development path is almost impossible to carry out. However, conceptual frameworks allow for and can assist in understanding that institutional, social and environmental responsibility and accountability are not separate from economic performance and the way businesses operate. The interrelatedness of the economy-society-environment where the role of government is implied in each of the “pillars”, form an integral part of this study.

2.4.3 Sustainable development and the South African context

South Africa, which has moved from apartheid policies to neoliberalism policies, encounters complex societal and environmental problems, as highlighted in Bond's (2002) work titled *Unsustainable South Africa*. Sustainable development is essentially the responsibility of individual countries; the role of national policies and development strategies are crucial (WCED, 1987:358). The South African

government declared sustainable development a priority and as a key focus for the integration of economic development, social justice and environmental sustainability of its environmental policy (RSA, 1997:16).

Despite this declaration during the first period of democracy until the Johannesburg Summit in 2002, Bond (2002) argues that the South African government's attempts to improve the environment and development have failed dismally. The formal systems based on apartheid policies of "racial, class, gender and ecological exploitation" were transformed into informal systems based on neoliberal policies (Bond, 2002:18). Furthermore, the key problems associated with ecological processes and its relation to corporate power, government control and social action are rooted in the underlying "neoliberalism", misguided by sustainable development rhetoric" (Bond, 2002:20). Bond further argues that the Coega² project is a prime example of what is wrong with globalization. At the cost of massive state subsidies and the vast opportunity costs of water, air and energy resources are involved, coupled with severe environmental destruction. Moreover, Daly (1996) argues that South Africa "overexploits" its mineral resource capital, e.g. coal is a non-renewable resource and a historically important economic entity. However, environmental damage was not factored into the national accounts. Currently, South Africa is still considered a carbon-intensive economy. Whilst South Africa experience challenges with regard to resource efficiency, the government has made great strides to improve infrastructure and increase expenditure for social services, education and health. Also, in 2007 the Minister of Finance recognised

² Coega is a deep-water port and container terminal in South Africa.

that moving towards a “Green Budget” to address the pertinent issues which could lead the country towards a sustainable future (RSA, 2008:75). A National Framework for Sustainable Development in South Africa was established to strengthen the existing activities of government to achieve sustainable development goals which would benefit the economy, society and the environment.

As a developing country ravaged by the ills of apartheid, the implementation of a sustainable development agenda is complex and multi-dimensional. The various dimensions of sustainable development were discussed in the previous section (cf. Section 2.4.2). Persistent poverty, inequality, economic marginalisation and environmental degradation will continue to obstruct South African development goals. To address some of these challenges, sustainable development must be an integral consideration in all economic activity, in every sector and for the entire society. EMS education can be used as a vehicle to create an awareness of sustainable development dimensions and how it relates to society, the economy and the environment.

2.5 CONCLUSION

This chapter explained globalisation and its impact on sustainable development. The concepts of sustainable development and sustainable growth have been explored, the economy-environment-society relationship described and key indicators elaborated on. What is evident is that the quest for a sustainable future will be a challenging one; aptly recognised by WCED (1987:9):

Yet in the end, sustainable development is not a fixed state of harmony, but rather a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are made consistent with future as well as present needs Painful choices have to be made. Thus in the final analysis, sustainable development must rest on political will.

One way of achieving a "just and ecological society" as described by Shumacher in 1973, (in Tilbury et al., 2002:7) is education, the "greatest resource". Since then, a wide range of international reports followed, highlighting the crucial role that education can play in the search for sustainable living.

The next chapter discusses the role of education for sustainable development (ESD) and how it relates to a specific learning area at school level, namely in Economic and Management Sciences.

CHAPTER THREE

LITERATURE REVIEW

EDUCATION FOR SUSTAINABLE DEVELOPMENT AND ECONOMIC AND MANAGEMENT SCIENCES EDUCATION

3.1 INTRODUCTION

This chapter explores the emergence of Education of Sustainable Development (ESD), its conceptualisation, pedagogy and how it relates to a specific learning area at school level, namely EMS.

Chapter Three is divided into six sections: Firstly, the role of education in achieving sustainability is reviewed. Secondly, ESD is discussed, followed by a section on the inclusion of EMS in the South African school curriculum. The fourth section presents a discussion of the EMS learning area, followed by the penultimate section which deals with a proposed ESD curriculum. The final section provides a synthesis to an ESD-EMS conceptualisation.

3.2 SUSTAINABLE DEVELOPMENT AND THE ROLE OF EDUCATION

There has been growing recognition that education, in various forms, can play a vital role in the attainment of sustainable development. The economic, social and political issues identified in Chapter 1 as a result of globalisation and neo-liberalism has far-reaching impact on education. Education allows individuals to 'make sense' of the world around them and the challenges which are presented.

The Brundtland Report, *Our Common Future* (WCED, 1987:xiv), suggests that teachers can play a prominent role to bring about wide-ranging social changes which are vital for sustainable development. This sentiment was echoed on various international and local platforms, calling for the promotion of a new approach to educational practice to ensure that "people learn, accept and live by the principle of sustainable living" (Tilbury et al., 2002:7). *Caring for the Earth*, a strategic plan for a sustainable future prepared by a consortium of the world's leading environmental organisations, IUCN (International Union for Conservation of Nature and Natural Resources), UNEP (United Nations Environmental Programme) and WWF (World Wide Fund for Nature), proposes that:

Sustainable living must be the new pattern for all levels: individuals, communities, nations and the world. To adopt the new pattern will require a significant change in the attitudes and practices of many people. We will need to ensure that educational programmes reflect the importance of an ethic for living sustainably (IUCN, UNEP & WWF, 1991:5).

Equally significant is Chapter 36 of the *Earth Summit, Agenda 21*, which is an internationally agreed report with a commitment to "Promoting education, public awareness and training" (UNESCO-UNEP, 1996). In the follow-up session of the Earth Summit, the Commission on Sustainable Development (CSD) notes:

In order to change unsustainable production and consumption patterns and lifestyles, it (is) essential to give great emphasis to the role of education for sustainable development, including environmental economics as well as environmental awareness (UNESCO-UNEP, 1996:2-3).

In 1995 the South African Department of Education introduced the White Paper for Education and Training, which suggests that:

Environmental education, involving an interdisciplinary, integrated and active approach to learning, must be a vital element of all levels and programmes of the education and training system, in order to create environmentally literate and active citizens and to ensure that all South Africans, present and future, enjoy a decent quality of life through the sustainable use of resources (DoE, 2000).

This view was reiterated in 1998 in the Discussion Paper for the Thessaloniki Conference on Environment and Society: Education and Public Awareness for Sustainability, which stated that:

It is widely agreed that education is the most effective means that society possesses for confronting the challenges of the future. Education, to be certain, is not the whole answer to every problem. But education, in its broadest sense, must be a vital part of all efforts to imagine and create new relations among people and to foster greater respect for the needs of the environment (UNESCO, 1998:15 in Tilbury et al 2002:7).

Education can be regarded as a tool supporting other equally important issues such as health, trade, good governance and the environment. These issues, together with education, collectively underpin what sustainable development is about and were espoused as the outcome to the Johannesburg Summit (Scott and Gough, 2004:252). Furthermore, seven priority areas of the UN Commission on Sustainable Development (UNCSD) with the focus on learning were confirmed for implementation. The need for education reinforces the following priorities:

- Clarifying and communicating sustainable development concepts and key messages;
- Reviewing national education policies and reorienting practices, including teacher education and Higher Education teaching and research;
- Incorporating education with national sustainable development strategies and planning processes;
- Promoting sustainable consumption and production through education;
- Promoting investment in education;

- Identifying and sharing innovative practices; and
- Raising public awareness (CSD, 1998 in Hopkins and McKeown, 2002:16).

ESD, also referred to as Education for Sustainability (EfS), or Sustainability Education (SE), is not only restricted to formal education (Hopkins and McKeown, 2002:13). The British Government Panel on Sustainable Development (1995:6) argues that environmental education and training "involves society as a whole" and should be integrated in "... business, commercial and professional communities and the voluntary sector...". Both formal and informal education are crucial for building a society that is receptive to lifelong learning, with the ultimate focus on changing people's perception of environmental impacts and how it relates to economic and social activity.

The next section provides a discussion on ESD.

3.3 EDUCATION FOR SUSTAINABLE DEVELOPMENT (ESD)

Education is a key to an improved quality of life; it advances the economic and social well-being of individuals and future generations. Education and sustainability are inextricably linked, but the definition and characteristics of ESD have elicited much discussion and scrutiny. Also, the extent to which sustainable development differs from environmental education has been widely published (Tilbury et al., 2002:8; Sterling, 2004; Fien, 2004). The National Council for Environmental Education, (1998), defined ESD as follows:

Education for sustainable development enables people to develop the knowledge, values and skills to participate in decisions about the way we do things individually and collectively, both globally and locally, that will improve the quality of life now and without damaging the planet for the future (in Summers and Childs, 2007:310).

The risk associated with modernisation and globalisation affect both the developed and "developing world", with regard to *inter alia* poverty, hunger, disease, HIV/AIDS, as well as other "sources of danger" such as toxins emanating from e.g. fertilisers and generic technology, and the harmful substances generated by everyday produce, such as tea, wine, etc. (Beck, 1992 in Le Grange, 2004a:20). Countless African children living in informal settlements are exposed to the risks of overcrowding, industrial and air pollutants, diseases, etc. (Le Grange, 2004a:20). Societal, environmental and economic forces present insidious challenges which affect many indigenous and local cultures that are exposed to these risks. Education can therefore be shaped "by sensing the rhythms of long established ways of living, yet ensuring health, freedom of choice and opportunities to be adaptive for wealth creation in the modern world ... to link the traditional with the innovative ... into new economic options" (O'Riordon, 2004:33). Education for sustainability is a process of societal transformation, which should prepare learners to "share and adjust" (O'Riordon, 2004:33) and where "action towards improving risk positions will be essential" (Le Grange, 2004a:20). O'Riordon holds the view that current education practice is not preparing us for this orientation, which renders education for sustainability vague and doubtful.

In contrast, Fien (2004:94-95) provides the depth and breadth of key sample and concepts to assist in a multisectoral approach to ESD. Many of the key social, economic and environmental issues have also been identified in Agenda 21 (Table 3.1) at the Earth Summit in Rio de Janeiro. The issues identified in Table 3.1, which should be understood and addressed in terms that are locally relevant: e.g. in EMS education the social and economic dimensions

will be relevant, particularly those aspects which affect business and industry directly. Moreover the role of government and the business sector to make decisions for sustainable development.

Table 3.1: Critical issues identified by Agenda 21 (McKeown, 2002:18)

AGENDA 21: Chapters, Statement, and Conventions
Section 1 – Social and Economic Dimensions
International cooperation, Combating poverty, Changing consumption patterns, Population and sustainability, Protecting and promoting human health, Sustainable human settlements, Making decisions for sustainable development.
Section 2 – Conservation and Management of Resources
Protecting the atmosphere, Managing land sustainably, Combating deforestation, Combating desertification and drought, Sustainable mountain development, Sustainable agriculture and rural development, Conservation of biological diversity, Management of biotechnology, Protecting and managing the oceans, Protecting and managing fresh water, Safer use of toxic chemicals, Managing hazardous wastes, Managing solid waste and sewerage, Managing radioactive wastes.
Section 3 – Strengthening the Role of Major Groups
Women in sustainable development, Children and youth, Indigenous people, Partnerships with NGOs, local authorities, workers and trade unions, Business and industry, Scientists and technologists, Strengthening the role of farmers.
Section 4 – Means of implementation
Financing sustainable development, Technology transfer, Science for sustainable development, education, awareness and training, Creating capacity for sustainable development, Organizing for sustainable development, International law, and Information for decision making.

Resource use and population increase are two of the major issues in the international debate about sustainability (McKeown, 2002:10). A nation can make progress towards sustainability by implementing educational programmes to reduce fertility rates, the risk of overpopulation, resource exploitation and environmental degradation. People with higher income levels are generally more

highly educated and consume more resources than lower income groups. McKeown (2002:10) sees this as a paradox about education and resource use; the most educated nations have the highest per capita rates of consumption, signifying "the deepest ecological footprints". This consumption drives manufacturing and resource extraction around the world. South Africa is gearing up to host the global climate change negotiations, i.e. COP17 (17th Conference of the Parties) soon, which will place renewed emphasis on balancing economic progress and resource efficiency. One would imagine that COP17 would have a holistic, long-term approach to the way the business world thinks about and does business.

Mc Keown (2002:11) argues that the challenge can be met by changing the curriculum "to address the need for more sustainable production and consumption patterns". Some of the issues identified by McKeown, Fien (2004) and Agenda 21 could be addressed in EMS education, e.g. governments' decisions for sustainable development; business operations and its impact on climate change; etc. This does not mean that EMS teachers should teach environmental education. Bonnett (2007:717) agrees; to infuse environmental education into all subject areas is inadvisable. Rather, it expands the opportunity for EMS teachers to focus on aspects in the curriculum in which teachers can incorporate economic and business principles and how it impacts on the society in the long-term. Inevitably, communities bear the brunt of many environmental problems, some of which are created by the business sector in the first place.

3.4 ESD CONSTRUCTS FROM PREVIOUS RESEARCH

Research undertaken about the (mis)conceptions of environmental issues or the conceptualisation of the terms “sustainability”, “sustainable development” or “what is to be sustained” resulted in a varying degree of complexity in the student teachers and in-service teachers’ reflections (cf. Spiropoulou et al., 2007:444; Jonsson, 2004:184; Summers and Childs, 2007; Walshe, 2008; Summers, Corney and Childs, 2004). Jonsson (2004:185) puts forward the question: Are there qualitatively different ways of understanding sustainable development? If so, how can these different ways be described? Most of the studies conducted in ESD have been in Environmental Education, Geography and Science Education; particularly the research examining student teachers’ understanding of sustainable development (cf. Table 3.2).

Fien (2004:94-95) provides a framework which is useful to extract sample concepts relevant to economic production; distribution and redistribution; power and decision making; social organisation; and culture and ideology. Many of the aspects discussed in Chapter 2 resonate with what Fien illustrates in his conceptual framework for ecological sustainability, e.g. natural resource, economic power, capitalism, profit, world economy, ecologically sustainable production, waste, social welfare, government, social responsibility, consumer culture, etc. The concepts in Agenda 21 and Fien’s framework help to put the pertinent issues into perspective and also provide guidelines for implementation of ESD. In addition, Table 3.2 illustrates examples of the key constructs of selected research undertaken on ESD.

Table 3.2: ESD constructs

KEY CONSTRUCTS/THEMES		IDENTIFICATION/INTERPRETATION OF SUB-CONSTRUCTS
Meaning of sustainable development		<ul style="list-style-type: none"> • Features of sustainable development • Responses to key features: i.e. environmental, economic and social factors • Responses of pre-specified framework of CEE (council for Environmental Education)
Responses to the economic-environment-social relationship		Examine the extent to which the frequencies of environment, economic and social factors are important for SD.
Using the CEE-Report framework		Seven CEE dimensions introduced by National Curriculum
Difference between EE and ESD		E.g. Question: Do you think education for sustainable development is any different to environmental education?
Research from: Summers and Childs: 2007:307-327		
Participants: Student science teachers following the PGCE course. Research Method: quantitative and qualitative – questionnaire		
Features of sustainable development		<ul style="list-style-type: none"> • 23 categories used to code key elements in the responses. Also frequencies of environmental, economic and social factors (categories 9, 10 and 11); • Coding of 7 items according to the Panel for Education for Sustainable Development (PESD)
Environmental-economic-social relationship		Individual responses
Research from: Spiropoulou, Antonakaki, Kontaxaki, Bouras, 2007:443-450		
Participants: In-service primary education teachers. Research Method: qualitative – multi-choice and open-ended questionnaires		
Environmental literacy		<p>Interpretation of:</p> <ul style="list-style-type: none"> • Sustainable development • Renewable and non-renewable sources of energy • Classification of global environmental problems
Attitudes towards the environment		<ul style="list-style-type: none"> • Teachers' attitudes towards environmental protection • Teachers' attitudes towards contribution to recycling • Teachers' beliefs of the interrelationship between mankind and the environment: Man is responsible for • Individual efforts are insufficient for the protection of the environment • Environmental damage can be overturned with the use of technology • Teachers' involvement in environmental programmes
Teachers' experience and motivation regarding the design and realisation of environmental programmes		<ul style="list-style-type: none"> • Environmental damage can be overturned with the use of technology • Teachers' involvement in environmental programmes • Teachers' reasons for not implementing environmental programmes in their schools with their pupils.

Research from: Walshe, 2008:537-558 Participants: PGCE students. Research Method: qualitative – concept maps, interviews and written definitions	
Concept of sustainability within a particular context, e.g. sustainable tourism (p.542)	Concept mapping: relations between things, ideas or people
What do you think the word "sustainability" means?	Interview questions: individual and semi-structured Interviews were held following the concept mapping
What do you think the different aspects of sustainable tourism (specific context were given) are?	
What would an unsustainable community look like?	
Do you think that it is important that sustainability is taught in school? Why? Why not?	
In what sense do you think that you live a sustainable lifestyle?	
Formal definition of sustainable development	Written definitions
Research from: Jonsson 2004: Participants: student teachers. Research Method: quantitative and qualitative – surveys, interviews and video documentation	
Understanding of sustainable development Survey and interview question: "What is to be sustained?"	Eight different constructs: <ul style="list-style-type: none"> • Nature • Natural Resources • Environmental problems • Society • Future generations • Actions • Ethics • Economy

The concept sustainable development was included (cf. Table 3.1) in the National Curriculum in England and Wales in 2000, promoting ESD in eight subjects, even though it appears most prominently in Geography, Science and Citizenship (Summers et al., 2004:167). A government-established Panel for Education for Sustainable Development (PESD) played an influential role in curriculum innovation as well as in the research of Summers, Corney and Childs (2004). PESD defined ESD as follows:

Education for sustainable development enables people to develop the knowledge, values and skills to participate in decisions about the way we do things, individually and collectively, both locally and globally, that will improve the quality of life now without damaging the planet for the future (in Summers et al., 2004:167).

Summers et al. followed a grounded theory approach to establish the responses to the meaning of sustainable development, by asking participants to write "what is meant by sustainable development". The development of the categories and codes to capture the features of sustainable development emanated from their responses. "Each response was read and the elements within it were added to a summary sheet to build up a list of all the elements in all the responses" (Summers et al., 2004:168). The data presentation and analysis of this study are based on these categories (cf. Chapter 5).

There appears to be a scarcity of research undertaken with the aim of exploring students' or teachers' understanding of sustainability in EMS education. Most of the former studies had been executed in the fields of Environmental Education, Geography and Science education; and most notably there was a growing body of research examining student teachers' understanding of ESD, as reported for

example by Summers et al. (2004); Summers and Childs (2007); Firth and Winter (2007) and Walshe (2008). Some of these studies contain more specific research into student teachers' conceptions of sustainability as a concept, rather than a more general overview of environmental education (Walshe, 2008:540). Although the context in the respective studies undertaken is different, Firth and Winter (2007) argue that student teachers' understanding of sustainable development is potentially of great significance for developing teachers' capabilities and confidence in mainstreaming ESD within schools. For this reason, the work of Summers and Childs (2007) was instrumental in guiding the development of categories and codes for this research.

The following section deals with teacher conception and teaching practice.

3.5 TEACHER UNDERSTANDING AND TEACHING PRACTICE

This research is based on the interpretive research paradigm to explore teachers' thinking with regard to the meaning and scope of sustainable development. Bolden, Harris and Newton (2010:146) are of the opinion that teachers' conceptions are valuable and knowledge of them has the potential to be useful to teacher educators and educational practitioners. Walshe (2008:537) argues that teacher understandings are likely to affect how and what they teach. The knowledge of teacher conceptions can raise consciousness about a particular phenomenon which in turn could elicit further research. Teachers' epistemologies, in conjunction with their contexts, account to a great extent how they mediate their teaching practice.

The notion of teacher understanding, teacher conceptions or teachers' "sense-making" of curriculum content, curriculum policy and/or teaching practice has had wide-ranging responses in the literature (cf. Blignaut, 2008; Walshe, 2008; Summers and Childs, 2007; Shulman, 1986; Morrow, 2007; Boulden et al, 2010; DoE, 2009; and others). In the constructivist model of teacher education, teacher conceptions are increasingly seen as a key part of their professional "equipment" (Zuljan, 2007:29). How do EMS teachers make sense of the varied knowledge(s) they have and how are these conceptions related to their teaching practice? Blignaut (2008:104) argues that the teacher as "sense-maker" highlights the idea that the teachers' ways of knowing and thinking are vital dimensions of their practice.

Teaching practice, understood as the practice of organizing systematic learning, requires a special kind of knowledge of the content, one which Morrow, (2007:82) describes as the "grammer or syntax of what is to be taught". This special kind of content knowledge is an important theoretical dimension of the practice of teaching. Shulman (1986:8) refers to it as an:

Intellectual biography – that set of understandings, conceptions, and orientations that constitutes their source of their comprehension of the subjects they teach.

For example, do EMS teachers recognize the interrelationships within the domain of the discipline, such as the impact of governments' economic policies on society, the environment and economy? Which EMS education content can be filtered out to construct ESD successfully?

Fisher argues (2004:5) that in economics pedagogy, it is important to detect basic skills and categorical content – teachers should have consolidated structural knowledge to enable learners to transfer their knowledge to unknown situations. At the same time, economics (this holds the same for EMS-education) pedagogy “attempts to assist teachers with founded, policing realization and analyzing reflection”. New directions such as ESD in EMS education can be seen as constructivist, allowing teachers to (apart from socio-economic and environmental) also make sense of political and historical issues and how it impact on future-orientated consciousness of life. Fisher also purports that in the case of economic education the premise is that knowledge is taken from the neo-classical and economic discourse, insinuating that what the learner thinks and their own ideas are valueless. Furthermore, learners have to anticipate what the teacher offers, which means that meeting learning objectives become the teachers’ ‘prerogative’. This could imply that how the teacher understands the subject matter will impact on the kind of knowledge that is transferred to the learners.

Morrow (2007:138) argues that practices are sustained or corrupted to a considerable degree by the ways in which participants and stakeholders interpret, discuss and think about them. But those interpretations, thoughts and discussions are not isolated from a context or “reality”. Knowledge of context is particularly important in a transforming society like South Africa where principles such as human rights, inclusivity, environmental and social justice became part of a post-apartheid society. Teaching practice is therefore part of a context or reality, which can allow the practice to flourish or to be undermined. Many learners and teachers are still faced with unequal educational contexts as a result

of apartheid. Also, the EMS learning area and the challenges which EMS teachers encounter (discussed in Chapter 1), shape their context and will have an impact on their teaching practice. Teaching practice should therefore be seen against the backdrop of the school and the community in which teachers work. Teachers can create a receptive learning environment where what learners think and come to understand the world also matter, by providing a knowledge-centred classroom environment, where attention is given to what is taught (subject matter) and why it is taught (understanding).

As an EMS teacher educator one finds a continuous interplay between the varied disciplines of EMS; and between theory and curriculum policy. To focus on subject matter content knowledge alone can be just as detrimental to teacher education as the sole focus on pedagogies. The pedagogical content knowledge, coined to by Shulman (2005), includes the understanding of the subject matter in its depth and breadth; as well as an understanding of the principles of learning, development, motivation and instruction. A proper blend of content aspects and elements of the teaching process are imperative.

After many years of teaching in commerce education, the researcher can attest to the value of teaching support material to create a dynamic and interactive teaching and learning experience. There is dearth of research in EMS education and literature on teaching strategies in this area. The EMS policy documents suggest a variety of resources which include textbooks, internet, newspapers articles, case studies, budget speeches, national treasury website, and the television. Web-based technologies, the newspaper and case studies can be used

successfully in the EMS classroom to elicit discussion on several contemporary issues.

Based on the researchers' own experience, educational excursions can add value to the teaching and learning experience: e.g. educational excursion to a factory can expose learners to manufacturing processes, business operations and relate it to their own theoretical understandings. For many schools access to resources have funding implications and would therefore be a real challenge. Whilst teaching resources and activities can be valuable to support the learning process; it cannot replace the teacher who possesses a repertoire of knowledge and experience.

The relationship between EMS pedagogy, EMS, and education is a complex one. The complexity of one of the EMS areas, i.e. economics pedagogy is acknowledged by Fisher (2004:13) who proposes critical inquiry of teachers and learners about the world around them:

The different views and forms, which exist in reality, should be sighted and ordered in the sense of a function of expression and inquiry. ... At the same time it is the task of economics didactics to draw attention to "blind spots" Another economic didactical field of task emerges here: teachers and learners have to be supported to develop their own imaginations and language, to use their eyes and ears, that means to sharpen their observant eye.

Teacher experiences, as well as new understandings of the world, could guide their actions in new directions in the classroom. This is particularly relevant if teachers are encouraged to think critically about a construct such as sustainable development. As a result of the ill-defined and ambiguous nature of the concept

of sustainable development and the fact that its interpretation is largely dependent on who the interpreter is, it creates an "... unwieldy didactic problem for the teachers with regard to content, it is difficult to know what their teaching should be about..." (Jonsson, 2004:184). Jonsson refers to certain qualities, such as "holistic views", "complex thinking" or "pluralistic attitudes" that teachers should have in order to teach content of sustainable development. Stables (2004) asks a pertinent question: "How should educators, who tend to share the general aspirations towards a better, cleaner, less depleted world but who approach ESD from widely differing perspectives and with differing preconceptions, work with their students within this contested field? He suggests that generic teaching and learning processes, which would appeal to any field or subject, concern three areas:

- the importance of knowledge (practical and theoretical): the basics of ecological literacy;
- the importance of cultural sensitivity: knowing about ecology does not ensure ecologically responsible behaviour where such knowledge forms part of traditions and values; and
- the importance of enterprise or empowerment: feel empowered to act for the environment in ways that seem appropriate; and become better able to evaluate the effects of our and others' actions with respect to the environment (Stables, 2004:43).

Stables argues that each discipline has the scope for an increased focus on how human and non-human activities are mutually implicated. In terms of EMS teaching the focus is not on the environment alone, but rather a conceptualisation of society-economy-environment interrelatedness which emanated from a cross-disciplinary to a within-disciplinary concern.

The following section deals with EMS-education for the Senior Phase (Grades 7 to 9) with the specific focus on Learning Outcomes 2: Sustainable Growth and Development.

3.6 EMS EDUCATION FOR THE SENIOR PHASE

The aftermath of political transition and its impact on education were of interest to many, because of serious concerns about the issues of quality and performance in education. In addition, economists became interested in the view of education's perceived importance for growth and redistribution (Van der Berg, 2004). Education is regarded as one of the most fundamental pillars of social and economic development – the investment in quality education almost guarantees an output in increased quality human capital (Hill, 2003:105; Bellamy, 1999:85). Van der Berg holds the view that school education, from an economic perspective, can be equated to the manufacturing function approach, i.e. socio-economic background and how inputs of education's resources impact on educational output. In the same mode, the NCS (DoE, 2002:4) outlines the purpose of the EMS learning area as the "aims to equip learners with the knowledge, skills, values and attitudes that will enable them to adapt, participate and survive in an economically complex society".

The features and scope of EMS education (cf. Table 3.3) are varied, but ultimately deals with "efficient and effective use of different types of private, public or collective resources in satisfying people's needs and wants, while reflecting critically on the impact of resource exploitation on the environment and on people" (DoE, 2002:4).

The unique features and scope of the EMS learning Area is illustrated in Table 3.3

Table: 3.3 Unique features and scope of EMS Learning Area (Grade R-9)	
The economic problem	Deals with the distribution of resources in a society. Focuses on the unlimited needs and wants in the face of limited resources.
The economic cycle	Deals with the flow of money, goods and services between households, business and government, and the foreign sector.
Reconstruction, sustainable growth and development	The focus is on a "balanced" economy which aims to achieve sustainable growth, equal distribution of wealth, poverty reduction while pursuing the principles of a free market system. It encourages respect for the environment, human rights and responsibilities
The economic environment	Examining the physical, social, technological, political and legal environments.
Leadership and management	<ul style="list-style-type: none"> • Basic aspects of leadership, such as planning and directing • Negotiation, motivation, delegation and conflict management • Basic aspects of management, such as administration, finance and production • Marketing, purchasing, public relations and human resource development; and • Rights and responsibilities of management and workers
Entrepreneurship:	<ul style="list-style-type: none"> • development of skills related to taking initiative • calculated risks in conceptualising, financing, starting and running a business • responsible entrepreneurship within communities

(Adapted from DoE, 2002:4-5)

The above features can be related to the multi-dimensional nature of sustainable development as discussed in Chapter 2, e.g. South Africa's economic development frameworks and globalisation, economic sustainability and its varied dimensions. The specific curriculum aspects which are considered unique to EMS-education and sustainable growth and development are:

- exploring the challenges of distributing scarce resources in relation to society's unlimited wants. These challenges are considered in the context of the legacy of inequity in South Africa and the consequences for both the economy, citizens of the country and the environment;
- the economic cycle deals with the flow of resources and goods and services amongst the different sectors in the economy, including households, business, government and the foreign sector. The responsibility of each of these sectors in the economy is considered;

- reconstruction, sustainable growth and development in South Africa are crucial to redress. This feature supports learners in understanding and exploring some of the national economic objectives, such as sustainable growth, poverty reduction and wealth distribution in the context of an open and free market economy; and
- the economic environment encourages learners to explore the world, society and the economy as a set of related and interdependent systems (DoE, 2006).

The conceptual and content areas are not separately specified, but implied in the Learning Outcomes and the Assessment Standards (cf. Addendum K). The time allocation for EMS is 8% of the weekly teaching time of 27 and half hours. This means 4 periods of 30 minutes per week (2 hours) of teaching time, excluding homework tasks and after-hour activities. The weighting of the Learning Outcomes is:

Learning Outcome 1:	Economic Cycle	20%
Learning Outcome 2:	Sustainable Growth and Development	15%
Learning Outcome 3:	Managerial, Consumer and Financial Knowledge and Skills	30%
Learning Outcome 4:	Entrepreneurial Knowledge and Skills	35%

The prescribed weighting given to the Learning Outcomes is an important consideration when determining the emphasis to be placed on teaching and learning. Of equal importance is the time allocation for addressing the respective Learning Outcomes and associated Assessment Standards. It is evident that Learning Outcome 2: Sustainable Growth and Development, has the lowest weighting, which could be interpreted as being of lesser importance compared to the other learning outcomes. In some schools only one hour per week is set aside for the teaching of EMS (Vinjevold and Roberts, 1999), or it is not being

taught at all, because the particular schools do not have competent teachers, equipment or textbooks to provide for these learning areas (University of Pretoria, Venter and Ortstep submissions in DoE, 2000).

The curriculum content for Grade 9, more specifically LO2 (Addendum K) and its relationship to ESD is of importance to this study. McKeown (2002:16) argues that ESD is more than a knowledge base related to economy, society and the environment. ESD also addresses learning skills, perspectives and values to guide and motivate people to seek sustainable livelihoods and be responsible citizens.

According to the NCS orientation programme for EMS Grades 8 and 9, the teaching approaches for EMS are broadly stated as the following:

- teach towards the Assessment Standards of Learning Outcomes;
- respond to learners' diverse learning styles;
- overcome barriers to learning;
- be inclusive; and
- encourage learners' participation and active learning (DoE, 2006:44).

The above approaches relate to teaching practice which was discussed in the previous section. The next section deals with the connection of ESD and EMS education.

3.7 LINKING ESD TO EMS EDUCATION

An ESD toolkit was developed in 2002 by Rosalyn McKeown to assist communities and educational systems within communities to develop sustainability goals or action plans on which to base educational change. McKeown uses "sustainability strips" to illustrate how the principles of

sustainability can be used to envision a sustainable future. The purpose of the exercise is to have participants thinking about ways to make their community more sustainable. Under "Economic" the following appear:

- resource distribution MUST be fair and efficient WHILE meeting human needs.
- money should be circulated as long as possible within the community;
- a living wage should be paid to all employees;
- business should give back to the community in proportion to its footprint on the community; and
- markets should maximise efficiency, discourage the use of disposables, and greatly reduce waste (McKeown, 2002:76).

The term "economic" refers to the "use and exchange of money and/or materials; the development, production, and management of material wealth, as a country, household, or business enterprise; the necessities of life" (McKeown, 2002:123). Economics in its simplest sense entails the problem of scarcity of resources to satisfy unlimited needs and wants. Worldwide, ministries of education and commerce are grappling with the question: "What changes will prepare a workforce that will make my country economically viable in the changing economy of the new millennium?" (McKeown, 2002:29). Dobson (2004:223) argues that the present generation should "pass on the broadest 'bequest package'; given that we cannot predict the needs and wants of future generations, we need to provide them, in terms of the natural environment, the diversity to make their own choices". Similarly, McKeown (2002:29) is of the opinion that answers to economic and technological forecasting is elusive, since it is "art based on imprecise science", which makes the alignment of education with future economic conditions even more challenging.

Within the framework of the South African school curriculum, economic literacy falls within the ambit of EMS. The question whether ESD exists within this framework and to what extent, is central to this research.

South Africa's position as a "modern" economy, leading the continent technologically, provided the justification for the retention of Economic and Management Sciences in the curriculum (Chisholm, 2005:198). The changing natures of the world of work as a result of globalisation, neoliberalism policies and continued technological innovations have a wide-ranging impact on the South African society and the distribution of resources, whether it is capital, human or natural resources. For proponents of globalisation these changes can be viewed as economic growth and prosperity, whilst opponents warn of resource depletion at the expense of "growth". In the ESD toolkit, McKeown (2002:59) addresses the concepts "drain" or "sustain" as an introduction to understanding sustainable development by illustrating, by means of simple exercises, the notion of "sustained" vs "greedy" usage.

The conceptual framework of ESD as described by Fien (2004:94-95) and the ESD toolkit of McKeown (2002) provide guidelines to apply ESD action plans to existing curricula in order to develop awareness and reinforce sustainable development goals. To this end, the conceptualisation of Learning Outcomes 2: Sustainable development and growth will be paralleled to common ESD concepts. McKeown holds the view that in creating ESD curricula, not all the issues of Agenda 21 can be taught, since the volume of the study material would be overwhelming. In most cases only pertinent issues in the economy-society-environment triad which are locally relevant and culturally appropriate will be

selected. Some topics will have relevance to every country, such as combating poverty or women in sustainable development (McKeown, 2002:19). Many topics inherent in ESD are already part of the EMS curriculum, but are not identified or recognised as a component of sustainable development, e.g. "Discuss productivity and its effect on economic prosperity, growth and global competition" – Grade 9: Learning Outcomes 2. Furthermore, McKeown suggests that educators can identify potential areas of their existing curriculum to "illustrate sustainability or additional knowledge, issues, perspectives, skills and values related to sustainability".

The ESD toolkit as proposed by McKeown (2002) identifies the following five broad questions which could be channelled into pertinent issues to be addressed in a typical ESD "curriculum".

- What are the most pressing environmental, societal and economic issues facing your community?
- What basic knowledge is necessary to live sustainably in your community?
- What skills are necessary to live sustainably in your community?
- What perspectives are necessary to live sustainably in your community?
- What values are necessary to live sustainably in your community?

McKeown proposes the following issues to be addressed in an ESD framework:

- setting of sustainability goals;
- be sensitive to the natural and human world;
- value the diversity of people's cultures and ecosystems;
- make wise choices for a sustainable future;
- what information is necessary to know how to manage a resource sustainably (e.g. community size, resource renewal rate, environmental carrying capacity, resource damage/depletion, etc.);

- what is needed to put information into practice (e.g. legislation, leadership, trust, communication, understanding of consequences, etc.);
- current state of common resources, the atmosphere, e.g. automobile and factory carbon dioxide emissions are heating up the atmosphere, causing the “greenhouse effect” and changing the ecology of the planet;
- sustained usage vs “greedy” usage;
- “real life” examples of shared resources issues;
- how can the atmosphere be managed?;
- health risks vs economic growth (e.g. use of chemicals, pollutants, etc.);
- resource distribution must be fair and efficient while meeting human needs;
- money should be circulated as long as possible within the community;
- a living wage should be paid to all;
- business should give back to the community in proportion to its footprint on the community; and
- markets should maximise efficiency, discourage the use of disposables, and greatly reduce waste (Adapted from McKeown, 2002).

Many of the above issues are very appropriate to the EMS learning area and could be seen in conjunction to Fien’s framework (2004) and Agenda 21. Of the issues listed above, e.g. “... make wise choices for a sustainable future” can elicit discussion in the EMS classroom about why businesses have to make these choices, what the choices are, what a sustainable future means, etc. Also the issue: “... business should give back to the community in proportion to its footprint on the community” can be related to the responsibility of the business sector towards society, what “its footprint” means, why it is important, what impact does it have on the environment, etc. In order to establish a wider application of the constructs within an EMS education context, key ESD issues can be linked to indicators which can be commonly referred to as “economic” issues, for example consumption and production patterns in terms of basic needs versus wants, relative scarcity of resources, contemporary socio-economic issues, etc.

Given the conceptualisation of ESD and EMS as identified in the literature reviewed, there are definite linkages, e.g. the scarcity of resources in relation to needs and wants; overuse of resources; as well as underlying subtleties in the EMS curriculum, e.g. poverty eradication and RDP, which parallel some of the constructs in ESD.

The following illustration identifies the linkages between the key issues discussed in the preceding sections.

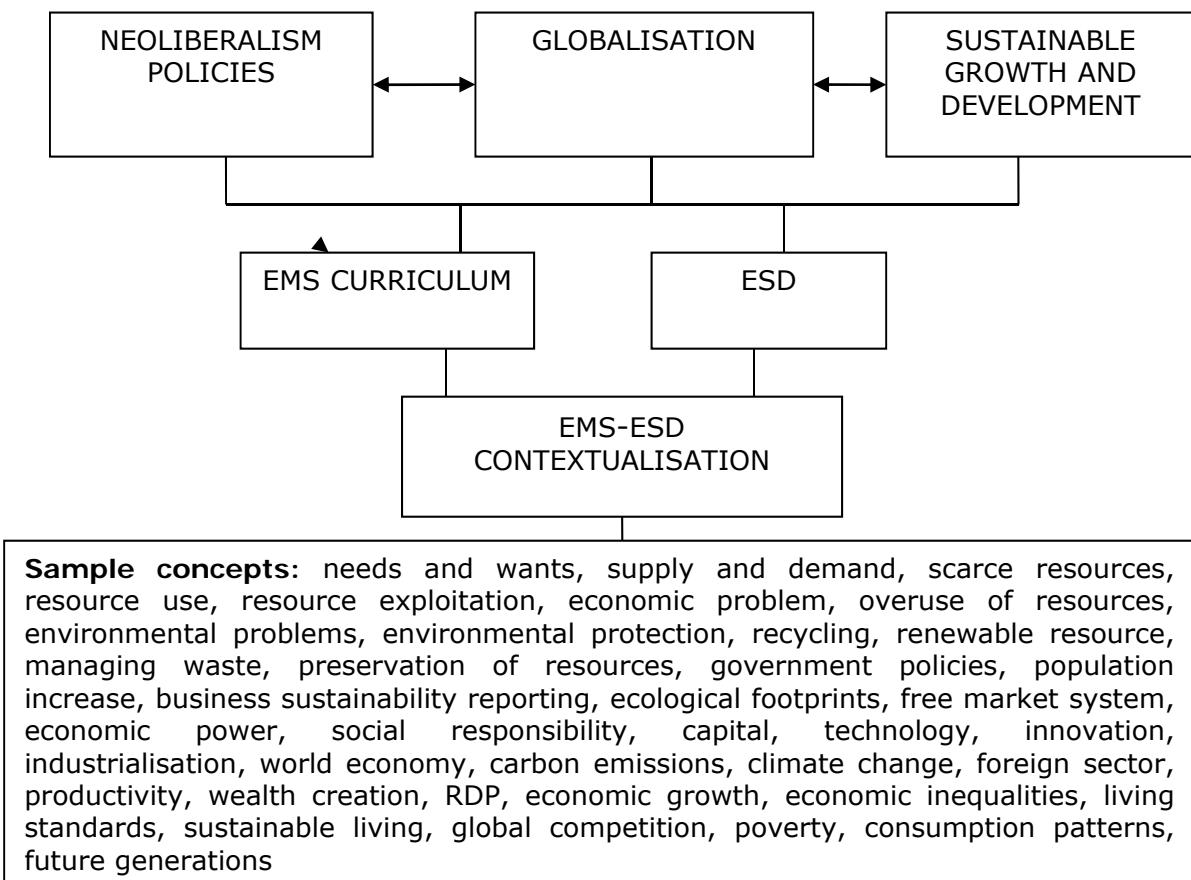


Figure 3.1: EMS-ESD contextualisation

Based on the literature reviewed in Chapters 2 and 3, a list of questions related to sustainable development and EMS education, was established. The following

questions will form the basis of an EMS-ESD contextualisation and will therefore be used as part of this research:

1. What is your understanding of Learning Outcome 2: Sustainable growth and Development in the EMS curriculum?
2. Could you identify the specific aspects related to this learning outcome?
3. What are your teaching and learning approaches for this learning outcome?
4. What are the teaching resources that you use for this learning outcome?
5. What is your understanding of sustainable growth?
6. What does sustainable development mean to you?
7. How would you describe unsustainable business practices?
8. Do you think it is important that we teach sustainable business practices in EMS? Why/ Why not?
9. In which ways do you think you have a sustainable lifestyle?
10. What is your understanding of economic growth?
11. What is your understanding of globalisation?
12. Could you give your comments about the weighting of the learning outcomes according to the EMS curriculum?
13. What is it that needs to be sustained?

The concepts and questions in the above sections could provide a synthesis to an EMS-ESD paradigm for broadening the scope of current EMS contextualisation and for supporting the teaching practice in EMS education.

3.8 CONCLUSION

This chapter explored the role of ESD and how it relates to a specific learning area at school level, namely EMS. The first section elaborated on the importance of environmental education in relation to sustainable development. It is evident that environmental education is firmly rooted in sustainable development and that education can play a crucial role to achieve a sustainable future. The emergence of ESD, its conceptualisation, pedagogy and interdisciplinary nature were explored. One such discipline, EMS, was reviewed, conceptualised and related to ESD and the key linkages explored. In the next chapter the research method will be discussed.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 INTRODUCTION

Critical reflection and debate over competing research paradigms and methodological approaches have been prevalent in the literature over many decades. From these debates, purists have emerged, i.e. researchers who restrict themselves exclusively to a particular way of thinking about research questions and how they are addressed (Onwuegbuzie and Leech, 2005:376). However, Denzin and Lincoln (2000:157) and Maree (2010:57) point out that over recent years the boundary lines which separate these paradigms have become blurred. Creswell (2007:19) adds that the paradigms used by qualitative researchers have evolved, as the set of beliefs that they bring to research have been seen to change over time.

Denzin and Lincoln (1994:112) argue that a paradigm is more than just philosophical assumptions or methodological procedure: it is a means to seize reality, give it meaning and offer some predictability. A paradigm embodies a worldview that guides the researcher to take action (Guba in Denzin and Lincoln, 1994:13). Patton (2002:69) defined a paradigm in the following terms:

A paradigm is a world view – a way of thinking about and making sense of the complexities of the real world. As such, paradigms are deeply embedded in the socialisation of adherents and practitioners. Paradigms tell us what is important, legitimate, what is reasonable. Paradigms are also normative, telling the practitioner what to do without the necessity of

long existential or epistemological consideration. But it is this aspect of a paradigm that constitutes both its strength and weakness – a strength in that it makes action relatively easy, a weakness in that the very reason for action is hidden in the unquestioned assumptions of the paradigm.

Patton (2002:71) and Cresswell (2007:15-16) explain that allegiance to a particular paradigm sets the foundation for the manner in which the research is conducted and how findings are interpreted. An understanding of alternative paradigms is therefore important to justify how research questions are addressed. For example, in this study the research question is: How do EMS teachers understand the concept of sustainable development? The importance of teacher conceptions was discussed in the previous Chapter.

Any paradigm of inquiry occurs within a framework of its ontology (or nature of reality that the paradigm proposes), epistemology (the nature of the relationship between the knower and the known) and its methodology (the method of investigation to be followed) (Tacconi, 1998:93; Creswell, 2007:17). The choices made by researchers are therefore determined by their subjective values, beliefs and worldview which ultimately relate to their epistemological, ontological and methodological positions.

Patton (2002:134) asks a rather philosophical question to support paradigm inquiry: "What is worth knowing?" What was worth knowing for the researcher in this instance is the relevance, importance and applicability of sustainable development in EMS education. More specifically, it amounts to inquire how EMS teachers view sustainability issues. Given that EMS is a relatively "new" learning area in the South African school system and that there are a number of complex issues within both ESD and EMS (discussed in Chapters 2 and 3), the

conceptualisation of one of the learning outcomes in the EMS curriculum, i.e. sustainable growth and development, warranted an in-depth inquiry. For example, how relevant, important and applicable are sustainable growth and development in EMS-education according to EMS teachers? This “quest” for an understanding of the conceptualisation of sustainable development in EMS guided the researcher in a particular direction: to find an approach which would allow for informed and sophisticated (re)constructions (Denzin and Lincoln, 1994:112). By reviewing the literature and taking cognisance of the challenges within the teaching and learning of EMS in schools, the construct “sustainable development” was explored. Furthermore, the inquiry included an investigation of how ESD is articulated and communicated from the perspectives of teachers in the GET-band, specifically for EMS Grade 9.

The domain of educational research is not disconnected from a socially situated context; teachers work within a specific context which shapes their reality. Krauss (2005:760) explains that the phenomenon of “multiple realities” exists, and to conduct research without taking these realities into account would infringe on the basic belief of the participating teacher. The research was conducted in schools operating in diverse contexts, e.g. advantaged/disadvantaged backgrounds, and Afrikaans/English medium schools. The manner in which EMS in general were perceived by teachers, not only EMS teachers, were also contextually bound. The interpretive research paradigm aimed to uncover how participants’ understanding and interpretation of their reality had shaped their intentions and actions (Maree, 2010:59). In the same way, Patton (2002:96) proposes a constructivist paradigm if the the inquiry specifically aims to consider “the multiple realities constructed by people and the implications of those

constructions for their lives and interactions with others". In this study, a constructivist-interpretive paradigm with a qualitative approach afforded the best opportunity for an immersion into the realities of teachers within the context of EMS teaching and learning. The motivation for conducting this research within a constructivist-interpretive paradigm will be explained in further detail in Section 4.3.

This chapter is organised into the following sections: firstly, an elaboration of key comparative epistemologies and ontological assumptions, and secondly, a discussion of how a constructivist-interpretive approach, both of which proved to be relevant to this study. This distinction is followed by a discussion of the research design. The conclusion offers a brief perspective of the key issues discussed in this chapter.

4.2 EPISTEMOLOGICAL AND ONTOLOGICAL ASSUMPTIONS

4.2.1 Epistemological assumption

The term epistemology refers to the "knowledge traditions" (Grbich, 2007:3), which could be summed up as the philosophy of knowledge, or how we know the world. The questions that underpin the basic understanding of epistemology are: What is the relationship between the inquirer and what is known? How do we know what we know? (Patton, 2002:134); what counts as knowledge? (Krauss, 2005:759); or, how can we as researchers gain knowledge about the external world? (Prowse, 2010:212).

The naturalist or constructivist believes that knowledge is gained through the meanings attached to the phenomena studied, which means that the researcher

interacts with the subjects of study to obtain data. Denzin and Lincoln (1994:119) explain that constructivism has its origin in the interpretivist thinking of "hermeneutics" (interpreting texts), a "Verstehen" (understanding) and phenomenology (study of lived experiences). For the constructivists the aim of the inquiry is "understanding and reconstruction of the constructions that people (including the inquirer) initially hold, aiming toward consensus, but still open to new interpretations as information and sophistication improve" (Denzin & Loncoln, 1994:113). This inquiry impacts on both the researcher and the subject, and the knowledge is dependent on context and time (Krauss, 2005:759; Denzin and Lincoln, 1994:111). The constructivist researcher assumes a subjectivist epistemology, i.e. the knower and respondent co-create understandings (Denzin and Lincoln, 2000:21). Denzin and Lincoln (2000:167) firmly suggest that a large body of social phenomena consists of the "meaning-making activities of groups and individuals around those phenomena". These meaning-making activities can shape action or inaction and they are therefore central to constructivism. Furthermore, the meaning-making activities themselves can be changed if found to be faulty or incomplete (e.g. discriminatory, oppressive or nonliberatory), or malformed (created from data that is false). This notion of finding meaning and understanding is particularly important for this study and will be discussed in more detail in Section 4.3.2 of this chapter.

EMS teachers find themselves within a specific reality (context) which has an impact on how they perceive the world and how they understand the subject matter content of knowledge. The construction of meaning attached to particular phenomena, in this instance sustainable development and EMS education,

remained the key objective; therefore the inclination to pursue a constructivist study started to make more and more sense. Both constructivists and critical realists agree that our knowledge of reality is a result of social conditioning, and can therefore not be understood independently of the social factors involved in the knowledge creation process (Krauss, 2005:762). For the constructivist, this context is important to "delve deeper" into what Krauss calls the "knowledge derivation process". The allegiance to a specific paradigm does not necessarily exclude the integration of a more pragmatic approach, i.e. a mixed-methods approach where the strengths of both qualitative and quantitative methodologies can be incorporated (Johnson and Onwuegbuzie, 2004:22; Brannen, 2005). Garrick (1999:154) suggests that the researcher should be clear about what they are researching; its purposes and what can "legitimately" be made of the data.

The review of globalisation, neoliberalism and related imperatives which impact on sustainable development as discussed in Chapter 2 may give the impression of a critical theory orientation. Whilst there are elements of critical theory which is appropriate to this study, the objective of this research is not to transform, empower or emancipate. Neither is it positivist in the sense that it is aimed at explanation or at making predictions (such as in positivism) of a single event or process, but rather it is designed to find an understanding of the wider conceptualisation of sustainable development in EMS education. In this study the research question is formulated to underscore the relevance of sustainable development in EMS education according to the conceptions of the teachers. This research is therefore aligned to interpretivism, because the aim is to gain some understanding of the teacher's views on specific issues related to sustainable development. For the critical theorist the engagement in

confrontation and even conflict are necessary, with the ultimate pronouncement that there should be transformation in respect of those whose lives are most affected by the change, i.e. the subjects of inquiry (Denzin and Lincoln, 1994:113; Clark, 2002). The fact that this study does not have transformation of some kind as its objective does not imply that it has no practical use or application value. The results of this research can be applied to support and/or guide theory and practice within the context of EMS education.

According to Clark (2002:1) constructivist and critical theory qualitative methodologies are sometimes assumed to be at odds with one another. Whilst constructivist inquiry values the meanings that participants ascribe to their own actions, "critical theory researchers seek analytically to place such actions in a wider context that is limited by economic, political, and ideological factors" (Clark, 2002:2). Critics of critical theory argue that critical theorists tend to assume that they are more capable than most others to analyse a situation and are better equipped to offer resolution to a prescriptive plan of action (Clark, 2002:4). Also, with regard to environmental education, critical theory does not enable practitioners to resolve complex and diverse problems in schools (Scott and Oulton, 1999:92).

4.2.2 Ontological assumptions

The epistemological assumption is interconnected with the ontological assumptions about the world; i.e. ontology refers to "What do we believe about the nature of reality?" (Patton, 2002:134) or "what is the nature and constitution of objects in the external world?" (Prowse, 2010:212). Prowse further explains that our belief about the nature of the external world influences how researchers

can or cannot gain knowledge about it. Researchers working within a positivist framework, viewing reality as independent of and external to the observer, therefore hold a naïve realist ontology. In contrast, a researcher working from a constructivist (interpretive) framework holds relativist ontology and a subjectivist epistemology (Guba and Lincoln, 1994:109; Perlesz and Lindsay, 2001:28). Guba and Lincoln (1994:111) argue that there is no independent reality, but that local and specified constructed realities and findings are "literally created" through the research process.

In this study the research is conducted within a local context, being the school context within a specified geographical area. The understanding of the knowledge which EMS teachers have is the specified constructed realities referred to by Guba and Lincoln (1994). This has been famously identified by Shulman (1986:9) as: 1) Subject matter content knowledge, which refers to the amount and organisation of knowledge per se in the mind of the teacher; 2) Pedagogical content knowledge, which refers to aspects of content most germane to its teachability; and 3) Curricular knowledge, which refers to characteristics that serve both the indications and contraindications for the use of a particular curriculum or programme materials in particular circumstances. The ontological imperatives are embedded in the complex demands placed on teachers; what they need to know and how they develop their expertise. The content knowledge is twofold and includes the understanding of the subject matter in its depth and breadth, as well as understanding of the principles of learning, development, motivation and instruction. These forms of knowledge are foundational, but need to be transferred into knowledge-in-use, which forms the pedagogical content knowledge (Shulman, 2005). Shulman (1986:8) further refers to an "intellectual

biography – that set of understandings, conceptions, and orientations that constitutes their source of their comprehension of the subjects they teach". An EMS teacher should be able to recognise the interrelationships within the domain of the discipline, for example, when content knowledge such as the business functions and how they operate in various business contexts, sectors and environments are illustrated and transferred to learners in a contextually relevant manner. More importantly, no two businesses are the same, for their operations, strategies, etc. occur within a specific context. Therefore, as Patton (2002:96) explains, the notion of an objective "fact" has no meaning, "except within some value framework". The relativist ontological assumption is the acknowledgement by the researcher that participants have a context within which their knowledge, conceptions and actions are based.

In order to comprehend the notion of ontological relativity, e.g. to answer the question "What do we believe about the nature of reality?", it is important to understand that all plausible statements about existence depend on a worldview, and no worldview is uniquely determined by empirical data about the world (Patton, 2002:134). Researchers working within a post-positivist paradigm have critical realist ontology, believing that reality does exist, but can never be perfectly captured. In this instance, research is conducted with a modified objectivist epistemology and with a greater awareness of subjectivity (Perlesz and Lindsay, 2001:29). Perlesz and Lindsay argue that post-positivism and critical theories are both ontologically closer to positivism than the "unambiguously" relativist ontology of constructivism. The constructivist researcher assumes a relativist ontology, i.e. accepting that there are multiple realities (Denzin and Lincoln, 2000:21).

Tacconi (1998:94) acknowledges that there are multiple, individually constructed realities, rather than one objective reality, but rejects the notion presented by Guba (1990) that essentially denies "biophysical constraints on social life". Instead, as Tacconi suggests, a reformulation of the relativist ontology is presented:

There exists a physical reality subject to differing interpretations by human beings. Thus, there exist multiple socially constructed realities.

Whilst acknowledging that multiple realities do exist, however, from the perspective of ecological economists, the planet does not have limitless resources to offer, and therefore there are constraints to the physical world on social life. The question: "What do we believe about the nature of reality?" is therefore dependent on how the physical reality is perceived. As argued by Tacconi, in terms of environmental studies, the reformulation will acknowledge that there may be biophysical limits to social life, which is interpreted differently by participants and therefore presents certain problems in defining and measuring sustainability. Nevertheless, Hart and Nolan (1999:9) found a definite tendency of qualitative (i.e. interpretive and critical) forms of inquiry amongst environmental education literature for the period 1992–1999.

It is important to recognise that teachers bring with them prior knowledge and experiences to learning situations which are socially and contextually specific. The researcher needs to make sense of how previous and existing knowledge is linked to new understandings. The epistemological and ontological underpinning of a constructivist paradigm enabled the researcher to establish how a specific part of the EMS discourse is constructed according to the understanding of EMS

teachers. This raises the question of how the teacher's specific conception of sustainable development informs the learning opportunities for learners, and in which ways it will then be enhanced or constrained by the purported knowledge. In this study the path of subjectivist epistemology and relativist ontology was pursued, as explained above. Ultimately, an interpretive stance was taken to obtain some understanding of how participants perceive a particular phenomenon, which in this case refers to sustainable development. It would have been difficult to acquire legitimacy as a researcher working within a positivist or an alternate paradigm, not only because of the relative "newness" of EMS as a learning area, but also because the researcher wanted to interpret the data against her own understanding of sustainable development within the EMS discourse. However, this chosen inquiry facilitated the immersion into the data and allowed for intersubjectivity (Babbie and Mouton, 2001:273).

Intersubjectivity allows the researcher to adopt a key role as observer or interpreter of the data against his/her own understanding of the topic, whilst keeping a distanced stance by not being involved as a participant in the process. Furthermore, the researcher has inherent assumptions and conceptual knowledge of what sustainable development within an EMS learning area should entail. Moreover, the researcher saw the value of an interpretive stance, being casted in a role of observer and interpreter (Babbie and Mouton, 2001:273), and also as a facilitator and participant (Denzin and Lincoln, 2000:171). This "intersubjective" position has been criticised on the grounds that it "expands the inquirer's role beyond reasonable expectations of expertise and competence" (Carr and Kemmis in Denzin and Lincoln, 1994:113). It was therefore important for the researcher to retain a distanced position as a "passionate participant"

(Denzin and Lincoln, 2000:171), without becoming involved as an “active” participant in the research itself.

Given the above discussion of the key epistemologies and ontological assumptions, this study followed a constructivist-interpretive paradigm. The justification for this particular paradigm will be explained in more detail in the following sections.

4.3 CONSTRUCTIVIST-INTERPRETIVE RESEARCH

Interpretive research in social sciences has its roots in the nineteenth century, but it was only until the last third of the twentieth century that research in education started to move away from the predominant positivist methods, as its shortcomings became increasingly apparent (Borko, Whitcomb and Byrnes, 2008:1025). The role of the teacher and what happens in the classroom became the focus of research on teaching as it progressed in the mid-20th century (Florio-Ruane, 2002:208). Scholars challenged the dominance of experimental and correlational methods in educational research (Guba and Lincoln, 1994). In so doing they elevated the image of teaching as a complex intellectual endeavour emergent in an equally complex sociocultural context (Borko et al., 2008:1025).

As Borko et al. further explain, an increased diversity in the student population and the way it impacted on learning and development in the classroom encouraged inquiry about the manner in which teachers dealt with differences in students lived experiences. Along these lines, Cresswell (2010:20) concurs with Borko et al. (2008) in arguing that lived experiences also impact on the contexts of individuals and teachers who seek understanding of the world in which they

live and work. Moreover, the importance of context called for a redefined purpose of inquiry in teacher education and became a central feature of interpretive research (Borko et al., 2008:1025). Furthermore, interpretive research focuses on capturing participants' views in their natural settings, and in this instance, where teaching takes place. Interpretive research has also provided important insights for understanding the role of context with regard to diversity issues and for teaching in culturally responsive ways. This differs largely from the conventional positivist approach, because constructivists argue that realities cannot be understood in isolation or removed from their context, and that knowledge of the specific context is determinant in deciding whether or not the findings may be extended to other situations.

The interpretive approach has gained preference with teacher educators who strive to answer questions about the complexities of teaching and learning (Borko et al., 2008:1028). The consistent and distinguishing feature of this approach includes the benefit of "insider" perspectives. Grbish (2007:8) argues that subjectivity, which refers to the researcher's own views and how they have been constructed, is one of the main characteristics of constructivism/interpretivism. Grbish further refers to "inter-subjectivity" as another important factor, i.e. the reconstruction of views through interaction and communication with others and written texts.

Interpretivism, constructivism, social constructivism and qualitative research are often used interchangeably (Creswell, 2007:20-21; Maree, 2010:56), with the ultimate goal of "understanding the complex world of lived experience from the point of view of those who live it" (Schwandt, 1994:118). Denzin and Lincoln

(2000:21) demand criteria for determining quality in constructivist research which are different from criteria inherited in traditional social science. The opposing criteria include: credibility instead of internal validity; transferability instead of external validity; dependability instead of reliability, and confirmability instead of objectivity (discussed in 4.8 in this chapter). Interpretivist researchers are concerned with understanding the meanings that participants attach to their external world, actions and practices. Mir and Watson (2000:941) argue that constructivism does not question the existence of phenomena, but rather our ability to understand them without a specific theory of knowledge.

Social construction and constructivism pose some foundational questions, such as the following: "How have the people in this setting constructed reality?"; "What are their reported perceptions, 'truths', explanations, beliefs, and worldview?" What are the consequences of their constructions for their behaviours and for those with whom they interact?" (Patton, 2002:96). Crotty (in Patton, 2002:97) makes an important distinction, namely that constructivism refers to the epistemological considerations focusing exclusively on the "meaning-making activity of the individual mind", whilst constructionism focuses on "the collective generation [and transmission] of meaning". Constructivism in this sense suggests that "each one's way of making sense of the world is as valid and worthy of respect as any other". On the other hand, social constructionism refers to the hold our culture has on us: "it shapes the way in which we see things (even in the way we feel things!) and gives us a quite definite view of the world" (Crotty in Patton, 2002:97).

Mir and Watson (2000:942-943) describes six primary assumptions of constructivism:

- Knowledge is theory-driven. The researcher has a preconceived notion of the nature of the problem as a result of tacit knowledge and knowledge of the discourse. Constructivism claims that people continually (re)construct their knowledge to enable them to make sense of their experiences (Schwandt, 1994; Howitt and Venville, 2009:213). The objective of the research is to better understand the complexities of how EMS teachers interpret sustainable development and their teaching practice;
- The separation of the researcher (subject) and the phenomena (object) under investigation is not feasible. The interaction between the researcher and participant is depicted in the dialectical (seeing things inter-subjectively) and hermeneutical (interpreting stories and text) techniques for data collection and interpretation (Lincoln and Guba, 2000; Patton, 2002:114, 574);
- Theory and practice are fundamentally interlinked. In everyday constructivist thinking, constructivism means that "human beings do not find or discover knowledge, so much as construct or make it. We invent concepts, models and schemes to make sense of experience and, further, we continually test and modify these constructions in the light of new experience" (Schwandt, 1994:125). The assumption is that teachers have some idea, for example, of what sustainable lifestyles/operations for individuals/businesses/governments represent. The challenge is to relate it to the EMS curriculum and ultimately to their teaching;
- Researchers are not "objective" or value-neutral. The ontological perspective is underpinned by multiple socially constructed realities, the form and content of which are dependent on the individual participant or groups holding the constructions (Lincoln and Guba, 2000). Furthermore, from an epistemological perspective, the assumption is that people socially construct reality as they interact in a social environment. From a methodological perspective, the assumption is that knowledge construction is varied and in nature highly personal;
- The construction of scientific facts is a process of generating texts, the fate of which depends on its interpretation. Sustainable development is not a new concept in EMS and the concept itself is broad and ambiguous (cf. Chapter 1). This inquiry intends to find out exactly how varied the conceptions of EMS

teachers are. To achieve this, the research subscribes to a constructivist-interpretive ontology, epistemology and methodology; and

- Constructivism is conceptualised as a methodology. This refers to a paradigm, namely an "intricate set of ontological and epistemological assumptions that a researcher brings to his or her work" (Prasad in Mir and Watson, 2000:944). According to Eisner (in Denzin and Lincoln, 1994:129), the methodology of constructivism from an educational perspective is concerned with how the inquirer develops an enhanced capacity to perceive the qualities that comprise the educational experience. Furthermore, it examines how researchers develop the skills to render those perceptions in representational forms that portray, interpret and appraise educational phenomena. It also holds that perception is framework or theory dependent and that knowledge is a constructed (versus discovered) form of experience (Eisner in Denzin and Lincoln, 1994:129).

4.3.1 "Making sense" and giving meaning

Human beings have a natural inclination to make sense of their lives, experiences and the world around them. At the heart of constructivist-interpretive research is a search for local meanings, a search which seeks to "perceive, describe, analyse, and interpret features of a specific situation or context, preserving its complexity and communicating the perspectives of the actual participants" (Borko et al., 2008:1025). The question is: How do teachers make sense of the knowledge they have? This "making sense" is what is often referred to as giving meaning to an individual's view of reality (cf. Patton, 2003:97) and by means of which actions are defined (Krauss, 2005:762). Garrick (1999:147) argues that interpretive research practices increasingly apply experience-based methods within formal education institutions and workplaces to assess, give credence and "validate" learning. This research is about the in-depth understanding of individual teachers and the ways that teachers think about and do their work in respect of a specific part of the EMS subject matter.

Both the worlds of lived reality and situation-specific meaning are constructed by the participants. According to Schwandt (1994:118) the constructivist-interpretive view is that in order to understand the world of meaning, one must interpret it. In other words, the researcher must explain the process of meaning construction and clarify what and how meanings are embodied in the words and actions of the participants. Therefore, when teachers have made sense of their world, what then? This is what Shulman (2005) refers to as knowledge-in-use and it cannot happen if it doesn't form part of the learning process. Krauss (2005:763) is of the opinion that learning can inform or challenge existing conceptions of meaning and, in the process, provide an opportunity for acquiring new meaning or confirming currently held views. Krauss further explains that "Learning is defined as the social process of construing and appropriating a new or revised interpretation of the meaning of one's experience as a guide or action". This research is precisely about that: teachers' interpretations and the way knowledge-in-use is applied in the classroom.

Borko et al. (2008) further argue that the focus is predominantly to capture local variation through fine-grained descriptions of settings and actions, and through interpretation of how participants make sense of their sociocultural contexts and activities. Diverse inquiries within social sciences and humanities included complex conceptualisations of subject matter, language, learning, identity and culture which became the focus of theory development (Borko et al., 2008:1026). A conceptual framework was developed from the work of Maree (2010:61) to guide inquiry into the thought processes of this particular paradigm. Fig. 4.1 graphically summarises the constructivist-interpretive paradigm applied in this research.

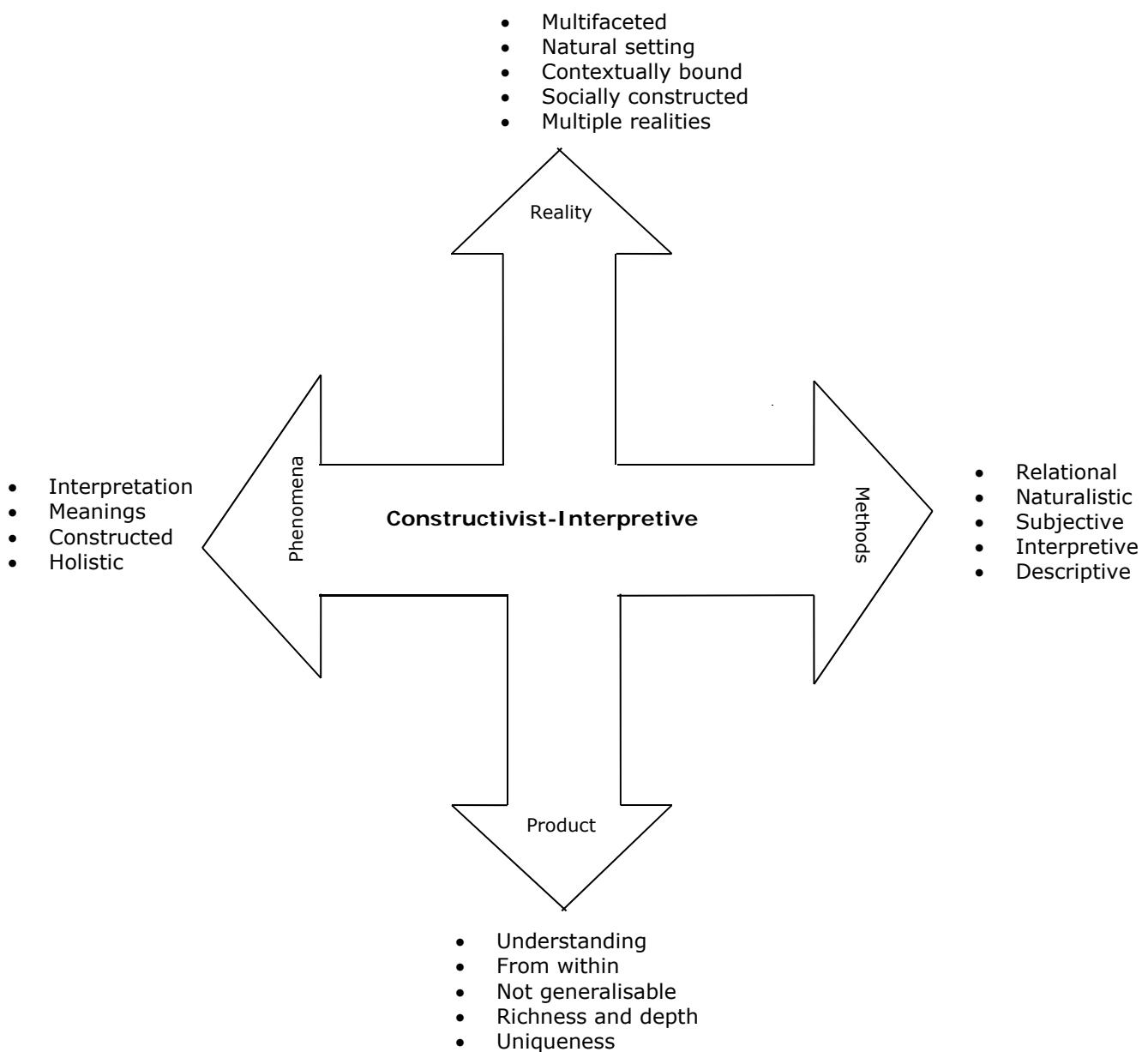


Fig. 4.1: Representation of constructivist-interpretive paradigm
(Adapted from Maree, 2010:61)

One of the key motivations for opting for a constructivist-interpretive approach was that the researcher found it important to obtain a nuanced understanding of

how teachers perceive sustainable development and EMS education, as summarised in the next section.

4.3.2 Arguments for a constructivist-interpretive inquiry

The following reasons further ground the key arguments for adopting a constructivist-interpretive research paradigm:

- a) Teachers have "stories" to tell. In order to facilitate the "story-telling", participants were given the opportunity to justify what was being said, e.g. through elaboration and by recording a personal experience in symbolic (told or written) form. Garrick (1999:149) argues that an interpretive approach seeks a mediated description. How "deep" the participants may want to go, depends on their own understanding of the phenomena and context. The researcher is allowed to probe without leading the questions. Even though the interpretation of the spoken or written word is the task of the researcher, this information can be verified by the participant at any time during the process;
- b) This approach offered the added advantage of introducing the concept of "organisation", which often reflects the participants' "realities" in terms of the way they think, say or do something (Garrick, 1999:150). E.g., the concept of sustainable development appears to be ubiquitous (cf. Chapters 2 and 3) and its nature and interrelatedness may elicit varied interpretations of how participants view the concept within EMS. These nuanced understandings might well have been lost within a different paradigm; and
- c) This approach sought to explain how teachers make meaning of their circumstances in the way they perceive the rules that "govern" their behaviour. For example, in some schools teachers do not teach EMS voluntarily, but because it is often forced upon them due to institutional imperatives or operational requirements. Some teachers are also critical about the EMS learning area in its current form. The constructivist-interpretive approach allowed the researcher to understand the context within which the research was conducted.

From the above discussion, the main arguments for a constructivist-interpretive inquiry to this research were outlined. The following section deals with the research design and method.

4.4 RESEARCH DESIGN AND METHOD

Patton's (2002:134) question: "How should we study the world?" puts into perspective methodological debates about data and design to emphasise the purposes and consequences of the particular research or study. Patton distinguishes between five types of research: basic research, applied research, summative evaluation research, formative evaluation and action research. This research could be described as basic, since the purpose of basic research is knowledge as an end in itself, with the intention to understand and explain (Patton, 2002:215). In this instance the intention was to ask fundamental questions about how teachers conceptualise sustainable development in EMS. The research objective was not to transform policy, find a solution to a problem or justify an occurrence. As Patton explains, basic research is designed to investigate a phenomenon (e.g. sustainable development) and to get to the nature of the reality with regard to that phenomenon. Clarity about the purpose of the research was pivotal, because it assisted with the organisation and coherency of the data. Denzin and Lincoln (2000:210) argue that all research is interpretive, and that researchers are actually faced with a multiplicity of methods which are suitable for different kinds of understandings.

Creswell (2007:2) distinguishes between the five different approaches to qualitative inquiry: 1) narrative, 2) phenomenology, 3) grounded theory, 4) ethnography and 5) case study. The case study approach was selected as

appropriate to shape the design and procedures of the study and is discussed in the following section.

4.4.1 Case Study design

The case study approach was followed as a research strategy to explore how a particular group of Grade 9 EMS teachers understand the concept of sustainability. Case study literature contains a varied terminology to describe case studies. Walshe (2008:540) explains, for example, that Yin (2003:3) refers to exploratory, descriptive and explanatory case studies. Bassey (1999) defines theory-seeking, story-telling and evaluative case studies, while Stake (1994) describes intrinsic, instrumental and collective case studies.

Stake (2000:236) points to the epistemological question which underpins the case study approach as "What can be learned from the single case?" Stake (in Patton, 2002:297) defines a case study as:

A case study is expected to catch the complexity of a single case. The single leaf, even a single toothpick, has unique complexities – but rarely will we care enough to submit it to case study. We study a case when it itself is of very special interest. We look for the detail of interaction with its context. Case study is the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances.

This research applied Yin's definition (2003:13) of a case study as an empirical inquiry that investigates a "contemporary phenomenon within its real-life context". This allowed the researcher to conduct the research in a particular "real-life" environment and to address the "how" and "why" questions. Stake (1994:236-247) notes the influence of constructivist-interpretivist thinking in

shaping certain notions about case study strategies: the purpose of a case study is not to represent the world, but to represent the case; the researcher has an intrinsic interest in the case, its uniqueness, particular context, issues and story.

Case studies employ both qualitative and quantitative methods. Yin (2003:14) warns that the case study strategy should not be confused with "qualitative research" (e.g. Denzin and Lincoln, 1994). Yin continues that some qualitative research follows ethnographic methods which are broadly based on close-up, detailed observation of the natural word by the inquirer, which does not always produce case studies. Case studies can combine data collection methods such as interviews, questionnaires and observation. This evidence may be qualitative (e.g. words), quantitative (e.g. numbers) or combined, which is also referred to as a pragmatic or multi-method approach (Eisenhardt, 1989:535; Walshe, 2008:540; MacPerson, Brooker and Ainsworth, 2000:53). Eisenhardt further suggests that case studies can be used to accommodate the following aims: a) to provide description b) to test theory, and c) to generate theory.

4.4.1.1 Comparing Case Studies with other research strategies in the Social Sciences

There are three conditions that characterise a research design strategy: a) the type of research question posed, b) the extent of control an investigator has over actual behavioural events, and c) the degree of focus on contemporary as opposed to historical events (Yin, 2003:5).

In terms of the first condition, the research question posed in this research was: How do EMS teachers in selected schools in the Western Cape Province

understand sustainable development? The case study approach lends itself to best answer the research question since the “how” and “why” questioning suggested by Yin (2003:6) is more explanatory than the survey type “what”, “who” and “where” questioning. Yin’s proposition allows for operational links needing to be traced over time, instead of mere frequencies or incidence. For example, the teaching and learning of EMS curriculum aspects (e.g. the importance of natural resources as a factor of production) are integrated in depth and breadth over time (Grades 7, 8 and 9).

As suggested by the second condition, the case study approach does not require control over behavioural events; as Yin (2003) explains, experiments are done when an investigator can manipulate behaviour directly, systematically and precisely, e.g. in a laboratory setting. In this study respondents participated voluntarily and could terminate their participation at any time during the research process. They were informed about the objective of the research and given an estimated time for the interview, but were not restricted by it. All the interviews took place at the different schools after the normal school programme. However, there were some restrictions, such as the stipulations of the DoE not to conduct any fieldwork at the schools during the fourth school term. Also, during the 3rd term (July–September) a country-wide teachers’ strike occurred, which put a considerable amount of pressure on the researcher in terms of the interview schedule. The teachers of the previously disadvantaged schools were mostly affected by the strike which was called off before the end of the term. Fortunately, all the interviews took place during the third school term (July–September) at the teachers’ respective schools and a timeframe of an hour was arranged in advance.

The third condition is applicable to case studies, but only when the relevant behaviours cannot be manipulated. Contemporary issues in EMS, such as globalisation, poverty, sustainability issues, etc. and its economic impact in the country are integral to the broader issues in EMS-education. The contextual conditions to sustainable development, and specifically how it is portrayed in the EMS curriculum, e.g. two of the key indicators for Learning Outcome 2: Sustainable Growth and Development (in the current curriculum for EMS Grade 9 curriculum), are RDP and GEAR, which may not always be distinguishable in terms of its implementation. The manner in which teachers choose to delve deeper into their own understanding of these issues may also be influenced largely by the context of the teacher.

Based on the three conditions discussed above, the case study option was therefore an appropriate approach to follow. Moreover, extensive research has been done and reported concerning the benefits and issues around the use of case studies (e.g. Yin, 2003; Stake, 1994, 2000; Bassey, 1999; and others). Stake (1994:244) and Vissak (2010:379) identify some of the unique strengths of the case study research:

- a) Case study is part of scientific method, but its purpose is not limited to the advancement of science. The purpose of the study can also be gaining knowledge for the sake of knowledge itself;
- b) The purpose of a case study is not to represent the world, but to represent the case;
- c) Its ability to deal with a full variety of evidence: in-depth interviews, DoE policy documents, and subject-object interviews were used; and
- d) Case studies are of value in refining theory and suggesting complexities for further investigation, as well as helping to establish the limits of generalisability.

The most common concern about case study design is the fact that it lacks rigour. The criticism is mostly due to sloppy work by investigators, unsystematic procedures and biased views that influence the direction of the findings and conclusions (Vissak, 2010:479). To circumvent this concern, I followed the key elements applicable to this research according to a case study protocol as suggested by Yin (2003:68) and Vissak, (2010:383). The case study protocol consisted of sections which detailed the following: a) an overview of the case study project, i.e. objectives of this research, a literature review and issues peculiar to this case; b) field procedures, i.e. access to the schools, general sources of data collection, procedural reminders; c) case study questions, i.e. research question and sub-questions; and d) a guide for the case study report, i.e. biographical information, data presentation, analysis, conclusions and suggestions.

Another concern is that case studies provide little basis for scientific generalisation, as it is frequently asked: "How can you generalise from a case?" (Yin, 2003:10, Maree, 2010:76). The purpose of this research, as it is with the inherent intent of case study research in any event, was not to generalise, but rather to enhance the understanding of the "why" and "how" explanations of particular teachers, and in so doing, to gain more insight into the dynamics of their specific conceptions.

4.4.1.2 Case study Reporting

The case study approach was followed to gain an in-depth understanding and "seeing the situation through the eyes of the participants" (Cohen et al., 2007:257). The reporting of this case study abides by the double notion of

"fitness for purpose" and "fitness for audience" (Cohen et al., 2007:262), implying that the manner in which the reporting is done is appropriate for the study as well as its readers. In considering Robson's (2002:512-513) six suggestions to organise the writing up of the case study, the most appropriate form for this research was a narrative report: a "prose account is provided, interspersed with relevant figures, tables, emergent issues, analysis and conclusion" (in Cohen et al., 2007:263). As suggested by Cohen et al., this case study reporting was divided into two main parts: the data reporting and thereafter the analysis/interpretation/explanation (cf. Chapters 5 and 6).

Merriam (in Henning, van Rensburg and Smit, 2010:41) notes that in case studies "the interest is in process rather than outcomes, in context rather than a specific variable, in discovery rather than confirmation". Henning et al. (2010:41) clarifies why process is more important than outcomes: a description of *how, where, when* and *why* things happen in a specific case was noted and formed an essential part of this study.

4.4.2 A qualitative approach

There appears to be some "blurred boundaries" between the terms methodology and method in many qualitative research studies (Hart and Nolan, 1999:12). Johnson and Onwuegbuzie (2004:15) and Mir and Watson (2000:944) concur that there is a tendency to treat epistemology and method as synonymous; with the confused notion that "the logic of justification" (which is an important part of epistemology) refers to the specific data collection and the analysis of the data methods used in the particular research. Epistemology is linked to methodology, rather than to methods. In this study, as explained by Mir and Watson

(2000:944), the term “methodology” represents the principle of systematic forms of thought, whilst “method” is the technique or tool employed in the data collection process. A case study design was used within a constructivist-interpretivist paradigm, while the data and data analysis process in this study is qualitative in nature.

Creswell (2007:248) states that the interpretive research has become interwoven with the core characteristics of qualitative research. Creswell further adds that qualitative research is an inquiry process “based on distinct methodological tradition of inquiry that explores a social or human problem”. The qualitative inquiry assists the researcher in building a “complex, holistic picture, analyse words, reports detailed views of informants and conducts the study in a natural setting” (Creswell, 2007:249). The interpretive researcher recognises the role of the researcher as an interpreter of data and the person who represents the information.

Creswell (2007:36) alludes to the evolving nature of qualitative research from social construction to interpretive practice and social justice, as exemplified in Denzin and Lincoln’s (2005:3) definition of qualitative research:

Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. These practices transform the world. They turn the world into a series of representations, including fieldnotes, interviews, conversations, photographs, recordings, and memos to the self. At this level qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them.

This definition of qualitative research as a “situated activity”, “interpretive, naturalistic approach” and “meanings” encompasses a constructivism-interpretive underpinning. However, Creswell (2007:37) argues that in qualitative research the emphasis is on the process of the research which flows from the philosophical assumptions to the procedures involved in studying the social or human problem. This research adopted a constructivist-interpretive paradigm (Cohen, Manion and Morrison, 2000) with a qualitative approach.

The strengths and weaknesses of both qualitative and quantitative methods have been well documented in the literature and are usually distinguished by separate concepts (Denzin and Lincoln, 1994; Grbich, 2007:196; Johnson and Onwuegbuzie, 2004:19-20). As (Grbich, 2007:196) explains, “qualitative” is generally perceived as primarily an inductive approach, while questions tend to be exploratory and open-ended, with responses that are often presented in a narrative form. Subjectivity and context (reality) are usually viewed as important. Analysis is generally interpretive through thematic approaches and deals with meanings, descriptions, values and characteristics of people and things. Grbich (2007:176) further explains that the general outcome is the development of explanatory concepts and models. Widespread generalisations are avoided and uniqueness is favoured.

In contrast, “quantitative” tends to be seen as deductive and usually rule-based. Conclusions are usually drawn logically from certain premises and viewed as proven, valid or “true”. A prescribed hypothesis will dictate the questions and the approach. Furthermore, as Grbich (2007:176) continues, researcher control is pivotal, while precision and predictability are important features. There is a

strong reliance on statistical approaches to identify numbers, clarify variables and describe relationships. The desired outcomes consist of generalisations and predictions. Theory testing by means of surveys and experimental research constitutes the main design option. Patton (2002:68) argues that it is not necessary to be a qualitative method purist, since the subtle variations of human experiences cannot be fully understood by applying one single method. Qualitative researchers can therefore employ multiple methods (participant observation, in-depth interviewing, document analysis, etc.) or mixed-methods, i.e. qualitative and quantitative data, to better understand the "objects" under study.

In this study a qualitative approach was followed, because:

- a) A qualitative method provided the opportunity to explore a phenomena such as sustainable development which in itself is ambiguous and complex. A detailed understanding was needed to fully comprehend the contentious issues around sustainability and EMS. The qualitative approach offered the researcher the best prospect to obtain useful answers, since the detail and the richness of the data could only be established through in-depth interviews with open-ended questions.
- b) It allowed the researcher into the contexts of the participants and to capture the participants' point of view. In this way a holistic picture could be formed by including possible mitigating factors for particular views of teachers, which would not have been possible with e.g. a questionnaire.
- c) Securing rich description would be more valuable for this study, compared to the quantitative method, since there is no guarantee that the items selected for the e.g. a questionnaire really represent what is meant by the participant. It also gives participants the opportunity to provide elaborations to clarify their responses, if necessary.
- d) The subject-object interview, where teachers had to write responses to the draft National Curriculum and Assessment Policy Statement (CAPS) document (discussed in Section 4.5.5 – Participant D) provided an opportunity to

analyse, critique and interrogate. This process could create a sense of "ownership" of an instructional document which in some instances is perceived as prescriptive.

4.4.3 Limitations to qualitative methods

Whilst the limitations of qualitative methods have been discussed extensively in the literature (Denzin and Lincoln, 1994, 2005; Patton, 2002), in this research, as suggested by Patton (2002:5), the quality of the data depended to a large extent on the methodological skills, sensitivity and integrity of the researcher.

4.4.4 Unit of analysis

Verschuren (2003:125) and Patton (2002:229) refer to the unit of analysis as the units on which the research material is based, once it is collected, analysed and transformed into conclusions. In this research this predetermined boundary or unit of analysis comprises the EMS teachers, because the research is based on what they have contributed to the inquiry. Patton (2002:228) argues that different units of analysis are not mutually exclusive. However, each unit of analysis implies a different kind of data collection and analysis of data, and a different level at which statements about findings and conclusions are made. In this instance, the subject advisors were regarded as an embedded case (Yin, 2003:42) layered within the primary case, with the intention to obtain a more holistic understanding of EMS teaching and learning.

4.4.5 Target population and sampling

The "case" in this study refers to EMS teachers in the senior phase within a specific geographical area, located at different sites (schools). The target population represents all the EMS teachers in the Western Cape in the Senior

Phase, particularly the Grade 9 teachers. From this population, a purposefully selected (also referred to as purposive) sample of 7 Grade 9 EMS teachers was obtained. These teachers were purposefully selected because of the value they could add to the research; for example, the selected teachers had varying levels of teaching experience in EMS education and worked in different contexts (advantaged and disadvantaged schools). The profiles of the teachers are discussed later in this section. Grade 9 was specifically chosen, instead of Grade 7 or 8, because Grade 9 constitutes the upper limit of the Senior Phase and lays the foundation for the FET phase. EMS is not offered in its current structure (as in the Senior Phase) in the FET phase, but as individual subjects, namely Business Studies, Economics and Accounting.

Denzin and Lincoln (1994:508) state that a good constructivist interpretation (text) is based on purposive sampling. The purposive sample of EMS teachers was selected from schools that exhibit varying characteristics and cultures (advantaged and disadvantaged schools). Since EMS is a fairly "new" curriculum, teachers from varied contexts, and those who have certain (unique) experiences, opinions and ideas about EMS teaching, can provide an in-depth understanding of the imperatives of sustainability. Patton (2002:244) argues that there are no rules for sample size in qualitative inquiry. It depends on the purpose of inquiry, what the researcher wants to know, its usefulness, credibility and the time and resources available. Furthermore, if the purpose is to maximise information, the sampling can be terminated if no new information is forthcoming from the new sampled units, in which instance redundancy is the primary motivation. However, Eisenhardt (1989:545) suggests that whilst there is no ideal number of cases, a number of between 4 and 10 cases works well, but

fewer than 4 cases could be problematic since its empirical grounding may be unconvincing.

The purpose of this research is not to generalise (by applying this sample to the population of which it is part), but rather to study information-rich cases for in-depth understanding and insights. The question of generalisability is a common critique expressed with regard to interpretive research. Fact is that interpretive research aims for particularisability, not generalisability, aptly explained as follows:

The task of the analyst is to uncover the different layers of universality and particularity that are confronted in the specific case at hand – what is broadly universal, what generalises to other situations, what is unique to the given instance. This can only be done, interpretive researchers maintain, by attending to the detail of the concrete case at hand. Thus the primary concern of interpretive research is particularisability, rather than generalisability (Erickson in Borko et al., 2008:130).

The purposive sample consisted of 7 respondents, 2 of whom were selected as part of the pilot study. The selection was made on the grounds of their expertise and the value they could add to the research. All the participants were professionally qualified EMS teachers with varying levels of experience. The seven teachers were purposefully selected from five schools which exhibited varying characteristics: two schools were “previously disadvantaged” schools, one of which was a pilot school, while three were “ex-model C” schools. The DoE’s attempts at redress after 1994 were to “upgrade” selected disadvantaged schools by improvements to infrastructure and resources; these schools were called pilot schools. Generally the ex-model C schools were perceived as academically “good” schools, because they had benefited from the apartheid

system and were generally well-resourced and equipped with adequate staff and qualified teachers. In contrast, the previously disadvantaged schools are still confronted with the legacy of the apartheid past, having to contend with a lack of resources and infrastructure, social problems in their communities and, in many instances, under-qualified teachers and inadequate supporting and teaching staff. In this study these schools were selected because of the each school's particular context and its significance to the study. The sample was drawn from public schools only. In order to protect the participants' identities, they will be referred to as Participant/Teacher: A–G. At the time of the data collection, the profiles of the participants were as follows:

PARTICIPANT A

Teaching experience: Teacher A was a fairly inexperienced teacher with 1 year and 6 months' teaching experience at the time of the data collection.

Position at the school: Temporary teacher

Qualifications: A 4-year BEd (General) degree, with specialisation in Business Studies.

Teaching subjects: EMS — Grades 8 and 9; Business Studies — Grade 10.

Profile of the school: The school was a previously disadvantaged school and selected as a pilot school. The medium of instruction was dual medium, i.e. Afrikaans and English. The school had a strong entrepreneurship focus.

Achievements or additional information about the teacher: The teacher was a member of the Junior Achievers of the South African Entrepreneurship Institution.

PARTICIPANT B

Teaching experience: Teacher B had 13 years and 5 months of teaching experience.

Position at the school: Subject head for Business Studies (FET phase).

Qualifications: BComm (General) with majors in Business Economics and Industrial Psychology; BCommHons in Industrial Psychology and a Higher Diploma in Education.

Teaching subjects: EMS — Grades 8 and 9; and Business Studies — Grades 10, 11 and 12.

Profile of the School: The medium of instruction at the school was English. The school was an ex-model C school with learners coming from middle to upper middle-class households. Most parents had a tertiary qualification and many were entrepreneurs or established business people. Due to the high school fees, parents placed demands on the school to deliver good results. The ethos of the school was goal-driven and orientated towards excellence.

Achievements or additional information about the teacher: Participant B was one of two teachers responsible for Business Studies at the school. The learners achieved a 100% pass rate, 29 subject distinctions and the highest Grade 12 results for Business Studies in the Western Cape for 2008 and 2009.

PARTICIPANT C

Teaching experience: This teacher had 18 years and 6 months of teaching experience.

Position at the school: Subject head: EMS.

Qualifications: Teacher C had a BComm (General) and BCommHons in Economics, a Higher Diploma in Education and an Advanced Diploma in Education (Accounting).

Teaching subjects: EMS — Grade 9, Economics — Grade 11 and Accounting — Grades 10 and 12.

Profile of the school: The school was a previously disadvantaged school and selected as a pilot school. The medium of instruction was dual medium, i.e. Afrikaans and English. The school had a strong entrepreneurship focus and the teacher was a member of the South African Entrepreneurship Institution.

Achievements or additional information about the teacher: The teacher organised two successful tours (to Argentina and to Thailand) for the entrepreneurship club at the school. At the time of the data collection the teacher was making final arrangements for an excursion with a group of learners to an international entrepreneurship exhibition.

PARTICIPANT D

Teaching experience: 22 years and 4 months of teaching experience in commerce subjects ranging from Business Studies and Accounting to Economics.

Position at the school: This teacher was a subject head of EMS and Business Studies.

Qualifications: A 4-year Secondary Teachers' Diploma

Teaching subjects: The teaching subjects at the time of the study were EMS — Grades 8 and 9 and Business Studies — Grades 10, 11 and 12.

Profile of the school: The school was an ex-model C school and the medium of instruction was Afrikaans. The learners came from average to below-average income households.

Achievements or additional information about the teacher: The teacher was extensively involved with Business Studies in terms of assisting the DoE with teacher training of and offering additional classes during school holidays and over weekends. Teacher D was also chosen as a member of a task team by the Suid-Afrikaanse Onderwysersunie (SAOU — South African Teachers' Union) to assist with training of the National Curriculum and Assessment Policy Statement (CAPS) for Business Studies to be implemented in 2012.

PARTICIPANT E

Teaching Experience: This teacher had 29 years and 11 months of experience.

Position at the school: Head of Department of Economics.

Qualifications: BComm (General); Teachers' Diploma in Commerce; Further Diploma in Education.

Teaching subjects: EMS — Grades 8 and 9; Accounting — Grades 10 and 12; Economics — Grades 10, 11 and 12.

Profile of the school: The school was an ex-model C school and English was the medium of instruction. The school has maintained a 100% pass rate at Grade 12 level since 2000. The ethos of the school was to provide a balanced curriculum where academic performance, sport, culture and pastoral interests were of equal importance. Most of the learners came from a middle-income household.

Achievements or additional information about the teacher: No additional information was provided.

PARTICIPANT F

Teaching experience: 30 years of teaching experience.

Position at the school: Subject head: EMS.

Qualifications: Higher Diploma in Education.

Teaching subjects: Business Studies — Grades 10 to 12; EMS — Grade 9

Profile of the school: The school was an ex-model C school with learners coming from middle-class to upper middle-class households, and the medium of instruction was English. Most parents had a tertiary qualification and many held professional jobs. Due to the high school fees, parents placed demands on the school to deliver good results. The ethos of the school was goal-driven and orientated towards excellence.

Achievements or other information about the teacher: Participant F was one of two teachers responsible for teaching Business Studies at the school and the learners achieved the highest Grade 12 results in that subject for 2008 and 2009. They obtained a 100% pass rate for both 2008 and 2009 and 29 distinctions in 2009. Participant F had also worked as a subject advisor for Business Economics in another province prior to the introduction of Curriculum 2005.

PARTICIPANT G

Teaching experience: This teacher had 21 years and 6 months of teaching experience.

Position at the school: Teacher.

Qualifications: BCom (General) and Higher Education Diploma.

Teaching subjects: Teacher G's teaching subjects were EMS — Grades 8 and 9; and Accounting — Grades 10, 11 and 12. Teacher G had also taught Economics for 6 years.

Profile of the school: The school was Afrikaans medium and a previously disadvantaged school. The learners come from middle- to lower-income level households and the majority of the parents had no tertiary qualifications.

Achievements or other information about the teacher: No additional information was provided.

Participants A and B were part of the pilot study. The questions for the interview were adapted from the literature and were first tested during the pilot phase. The selection of the two respondents for the pilot study was also purposively done: Respondent A was a qualified teacher with 12 years' experience, Head of Department with a BComm Hons degree and a Higher Teacher Education qualification. Respondent A and Respondent C were from the same school that had the best Grade 12 final examination pass rate for Business Studies in the Western Cape for 2009. Respondent B was a newly qualified teacher with 6 months' teaching experience and had obtained a BEd qualification at a University of Technology. The main reason why both an experienced and inexperienced teacher were selected was to establish in which ways their understanding of sustainable development in EMS-education differed. Also, apart from the interview itself, the researcher was particularly interested in their general feedback after the interview. This would determine which questions should be retained, rephrased or omitted. After the pilot phase, the questions were revised where appropriate.

Two EMS curriculum advisors from the Western Cape Education Department (WCED) were also approached to provide additional information regarding the EMS curriculum and the enactment of ESD in the classroom. Both curriculum

advisors agreed to participate and signed the necessary ethical clearance forms, but only one of them was available for an interview during the stipulated "access" period. Numerous attempts via phone calls, e-mails and sms's were made to the curriculum advisor to finalise a date and time for the interview to take place. Unfortunately the curriculum advisor did not respond and the researcher decided to approach an EMS lecturer at a HEI in the Western Cape. This lecturer had been an EMS curriculum advisor for twelve years and resigned from the WCED two years previously. The rationale to include curriculum advisors in this process was to gain an understanding of their experiences with EMS education in general, and of the challenges, if any, which they experienced in advising teachers. These insights created an enhanced awareness and value to the research. The structure of the interview questions presented to the teachers (Addendum A) differed from that of the curriculum advisors (see Addendum B), because their "enactment" of the discourse was on a different level.

4.5 METHODS OF GENERATING DATA

Two main data collection strategies were followed: semi-structured in-depth interviews and subject-object interviews, i.e. written explanations. The literature was reviewed throughout the research process to ensure that relevant issues were integrated and considered critically, or for arguments to be put forward if certain issues were not deemed appropriate for this study. Apart from the literature reviewed, DoE policy documents such as the NCS and the CAPS documents were incorporated and specifically referred to during the data collection process.

4.5.1 In-depth interviews

The interview questions were adapted and derived from the literature. The questions were open-ended in order to glean as much detail as possible from subjects, and to ensure that provision was made for "information-rich cases" (Patton, 2002:231). The teachers were to respond from their own frame of reference, i.e. not merely reflecting the stance of the EMS Head of Department (HOD), school or WCED. This was important, since my own observation and communication with EMS teachers at some schools confirmed that the HOD structured the content and recourse material and did the planning of what and how the material would be taught.

Interviews were recorded and converted into sound files for storage and retrieval so that the actual recordings and the transcripts would be available for verification. A pilot study was conducted to test the interview questions (Addendum A) on two teachers (apart from the sample group). "The pilot case study helps investigators to refine their data collection plans with respect to both the content of the data and the procedures to be followed" (Yin, 1984:74). Questions 1 to 12 were asked in the pilot phase. From discussions with the teachers after the pilot interviews and a further review of the literature it emerged that an additional question relating to what it actually is that needs to be sustained was important for this study. The following question was therefore added after the pilot phase: Question 13: We were talking about sustainable development. Can you tell me what it is that needs to be sustained?

The two pilot interviews were included in the final analysis, because it provided useful insights into the understanding of an inexperienced (new) and more

experienced teacher. The researcher wanted to understand, by means of in-depth discussion and semi-structured questions, "what" sustainable development in EMS education entailed and "how" it manifested in the classroom, but more importantly "why" teachers were experiencing challenges (if any) in EMS education. Furthermore, questions were structured and specifically related to the conceptualisation of sustainable development, and the way in which it is outlined in the curriculum document. In this research the in-depth interviews proved advantageous, because:

- a) Compared to a questionnaire, the researcher had more control over who answered the question. There would be no such guarantee with a questionnaire: it might be passed on from one person to another;
- b) Open-ended questions allowed the participants to speak freely and without interruption;
- c) It was necessary to establish the understanding of teachers and the interviews offered an opportunity to probe without leading the questions; and
- d) The focus was not only on textual output, but also referred to the context (e.g. the dynamics specific to a school), so that meaning would not be derived from a too narrow interpretation.

When participants were interviewed, it allowed the researcher to probe. This ensured that the interviewers' descriptions and experiences were more likely to provide a holistic picture of the teachers' understanding, practices and their actions than in a conventional survey analysis.

4.5.2 Subject-object interviews

In an attempt to reach a further understanding of the teachers' conception of sustainable development as portrayed in curriculum policy, the researcher applied the subject-object interview method, which illustrates another creative

form of interviewing (Patton, 2002:396). Another substitute for straight questions in interviewing is to ask for explanations or interpretations of critical issues in writing. This is a creative way of conducting interviews, enabling the interviewer to obtain the interviewee's perspective on what the critical issues mean and how they relate to the research topic.

The decision to include the subject-object interviews stemmed from the newly circulated draft CAPS document for EMS (DoE, 2010). The DoE is currently revising curricula for different subjects (Primary and Secondary Schools) in an effort to contribute to the enhancement of the quality of teaching and learning at school level. The review of the curriculum is the Final Draft (EMS) of the amendment to the NCS, i.e. CAPS for implementation in 2012 (DoE, 2010). An important curriculum amendment is the "exclusion" of the current Learning Outcome: Sustainable Growth and Development in EMS (GET-band) in the CAPS document. Teachers were requested to write down their comments of the DoE's revised curriculum with special reference to Learning Outcome 2. This process also made provision for written reflection about EMS in general, as well as for specific comments about their participation in the research.

The written interpretation provided an ideal opportunity to consolidate what was discussed in the interview and how it related to EMS policy. This was initially not included in the study, since the CAPS document only became available towards the end of the 3rd school term. It was an important development and the researcher deemed it necessary for the teachers to express their views with regard to the amendments in CAPS. The respondents were given a section of the CAPS document that related directly to Learning Outcome 2 (Sustainable Growth

and Development) of the current curriculum. It was the first time that most of the participating EMS teachers had seen the actual document. Three of the seven respondents had not been aware of the document before it was presented to them as part of the research process.

4.6 ANALYSIS OF DATA

The analysis of the data was done by applying qualitative methods. Qualitative analysis transforms data into findings; however, Patton (2002:432) purports that there is no blueprint or formula for such transformation. Extensive literature on qualitative studies provides guidelines and procedural suggestions, but as each qualitative study is unique, the analytical approach used will also be unique (Patton, 2002:433). This presents certain challenges for analysing and making sense of the massive amounts of qualitative data. Furthermore, qualitative inquiry depends largely on the skills, expertise, insights and capabilities of the inquirer. Patton admits that the human factor is both the fundamental weakness and greatest strength of qualitative inquiry.

In this research the researcher was guided by the guidelines for data analysis found in various sources in the literature. The researcher opted for a constructivist-interpretivist paradigm, approach (qualitative) and strategy (case study) within which the analysis was couched, taking into account the strengths and limitations of each. These were discussed in the preceding sections.

Content analysis was applied for the analysis of the interviews with teachers and curriculum advisors. Content analysis is the systematic coding and categorising aimed to explore large amounts of text information in order to establish the

trends and patterns of words/constructs used, their frequency, their relationships and the structures and discourses of communication (Grbich, 2007:112). This method of coding frames highlights certain aspects of the text, providing the researcher with a particular view or theme. The method also allows for depth and breadth analysis by means of an arrangement of key issues for establishing a corroboration with the ESD and EMS literature. However, a concern expressed by Grbich (2007:112) is that different researchers who analyse the same text could arrive at different interpretations. This means that the results depend on different protocols developed and imposed, but it was not applicable to this study since the researcher was the sole interpreter of the data.

The subject-object interview was also analysed by using the content analysis method, since the written explanations (subject-object interviews) were related to the same constructs as in the interview transcripts. A detailed discussion about the analysis is provided in Chapter 5.

4.7 VERIFICATION OF THE RESULTS

The language used by traditional scientific inquiry is adopted in most qualitative research to establish the validity and reliability of the findings (Patton, 2002:545). There is a trend to report on concepts such as "variables" and "hypothesis testing" and a striving for causal explanation and generalisability in qualitative studies, particularly in combination with quantitative data. Science has traditionally emphasised objectivity, whilst qualitative inquiry within this tradition emphasises procedures to minimise investigator bias. Qualitative approaches that show some of these characteristics include grounded theory and

qualitative comparative analysis, as well as realist and analytical induction approaches (Patton, 2002:545).

Shank and Villella (2004:47) conducted a meta-analysis during the period 1992-2001 which represented a wide range of qualitative approaches. From this analysis it was evident that during 1992-1998 there was a tendency to use techniques like ratings and interrater reliability which were more aligned to traditional quantitative practices. Shank and Villella further explain that it was therefore not surprising to find that these studies mostly applied mixed method approaches or methods that seem conceptually more akin to quantitative research traditions. Other than traditional experimental testing which is focused on controlling cause and effect, constructivist-interpretive research should employ a different terminology to distinguish quality (Patton (2002:584). Lincoln and Guba (1985:300,508) agree with Patton, demanding criteria that differ from those inherited from traditional social science. They propose the following four components for trustworthiness:

- Credibility instead of internal validity
- Transferability instead of external validity
- Dependability instead of reliability, and
- Confirmability instead of objectivity

Many of the same issues have been raised regarding criteria for determining quality or assessing rigour in qualitative research, most notably by Sandelowski, (in Lapadat, 2000:211) who took the above components of Lincoln and Guba (1985) and arrived at four factors to describe rigour in qualitative analysis:

- Credibility (rather than internal validity)
- Fittingness and the avoidance of specific threats to validity (rather than external validity)
- Auditability (rather than reliability)
- Confirmability (rather than objectivity).

Whilst the above components of trustworthiness are an attempt to resolve the issue of quality when applying the constructivist-interpretive approach, critics are still questioning the criteria which are appropriate for judging the quality of inquiry (Denzin and Lincoln, 1994:114). There is a need for a shared set of conventions along with specific rules for researchers working in different areas to handle issues around trustworthiness and transparency (Denzin and Lincoln, 1994:440).

Based on the discussion above, the verification of the quality of this research inquiry will be discussed as follows:

4.7.1 Credibility and transferability of the findings

Patton (2002:14) emphasises that in qualitative research the researcher is the instrument; therefore, for this study to be considered credible, it is necessary to ensure that the instrument indeed measures what it is supposed to measure. Patton further explains that the credibility of qualitative methods depends to a large extent on the skill, competence, rigour and focus of the person doing the fieldwork. Denzin and Lincoln (1994) concur that qualitative research is only as good as the researcher. It is therefore important that the researcher would interpret the findings in a correct way. In this study the researcher ensured that the interview questions were appropriate for the purposes of the study, and, where possible, adapted from previous studies in the literature. Moreover, the

pilot study ensured that the questions were tested and relevant. The researcher realised that the risk of analysing open-ended questions would rely mostly on her own interpretation. In addition, the responses might be varied and the coding, categorising and actual analysis could compromise the objectivity of the researcher. Whilst the premise of constructivism is inherently subjective, it was nonetheless important to uphold certain procedures to minimise bias. Therefore, as suggested by Spiro et al. (in Denzin and Lincoln, 1994:242), throughout the data analysis process the researcher ensured that the data was repeatedly interpreted, tabulated for classification, and patterns recognised for "crisscrossed" reflection. During and after the interviews, strategic and focused notes were taken so that ideas and insights which emerged during this process could be reviewed later. Furthermore, an "audit trail" (Patton, 2002:93) was established to facilitate the verification of data with regard to transcripts of recordings as well as the actual sound files of the interviews.

A variation of the interview method, i.e. subject-object interviews where written explanations of the CAPS document were provided, offered the opportunity to gain a holistic understanding of the research inquiry. As this constituted an embedded case, the curriculum advisors also provided deeper understanding to the research question.

Transferability refers to the degree of similarity between the two contexts, which can also be described as "fittingness" (Patton, 2002:584). "Thick" description provided for transferability (Denzin and Lincoln, 2000:513); therefore there could be congruence between other EMS education contexts. As explained

before, the objective of this case study was to obtain an understanding rather than to generalise the findings to the broader population.

4.7.2 Dependability of the findings

A quantitative study uses the term “reliability”, meaning that the study is considered reliable when the operations of the study, such as collection procedures, can be repeated with the same results (Yin, 2003). In qualitative studies, dependability can be enhanced through the use of overlapping methods, step-wise replications and inquiry audits (Denzin and Lincoln, 1994:513). Whilst a case study mainly concerns a process of learning about the case and the distinctiveness of each case, there are set procedures to follow to ensure reliability, i.e. to minimise errors and biases in the study. If a later investigator followed the same procedure as described by the researcher, and conducted the same case again, the later investigator should arrive at similar findings and conclusions.

In this study, the researcher was particularly cautious about the following procedures:

- the sampling process — the participants were purposefully selected for the variety of qualities which they could bring to the study (cf. section 4.5.4);
- the formulation of the interview questions — the inclusion of questions applied in other studies in the literature;
- the interview process — the researcher did not allow personal feelings or attitudes to affect the interpretation of the data, and was also very conscientious about the selection of the data; and
- The pilot study also ensured dependability, since the relevance of the questions was tested beforehand.

4.7.3 Confirmability

Confirmability refers to the extent to which the analysis is free of bias. Within the constructivist-interpretive paradigm, the premise is epistemologically subjective and ontologically relativist (discussed in 4.2). The qualitative approach is by nature inter-subjective; still, the researcher was continuously aware of potential researcher bias. The confirmability judgement is underpinned by the paradigm and approach adopted.

4.8 ETHICAL ASPECTS OF THE RESEARCH

Ethical conduct becomes important when we interact with other people and other beings, especially for the purposes of research. Denzin and Lincoln (1994:115) argue that within a constructivist paradigm, ethics is intrinsic because of the inclusion of participant values in the inquiry. In other words, from the onset the respondent and the inquiry enter this research process with existing constructions; there is an incentive to work towards increased information and sophistication in their constructions. However, Denzin and Lincoln (1994:115) warn that "the close personal interactions required by this methodology may produce special and often sticky problems of confidentiality and anonymity".

In this study the necessary institutional ethical procedures and considerations were adhered to. Participants were informed beforehand about the nature of the research and its objectives. Their participation was voluntary and their rights to confidentiality were respected. The names of the teachers, subject advisors and their affiliations were not revealed. Permission was granted from the Directorate of Research Services at the Western Cape Education Department to conduct the research at the selected schools. Ethical clearance was also obtained from the

Ethics Research Committee (Human Research) at Stellenbosch University. In addition, since ethics also impacts on the credibility and transferability of the research (cf. section 4.7.1), it was important to pay careful attention to possible researcher bias.

4.9 ASSUMPTIONS AND LIMITATIONS

Gay, Mills and Airasian (2007:595) view an assumption as "any important fact presumed to be true, but not actually verified". The basic assumption in this study was that EMS Grade 9 teachers are qualified and familiar with EMS policy documents.

All the selected participants also taught Business Studies, Accounting and/ or Economics at the FET level, and admitted that they paid more attention to these learners, especially when teaching Grade 12. Because of the perception that EMS is not taken seriously (cf. challenges in Chapter 1) in the Senior Phase, it might have been more meaningful if the sample selected consisted of teachers who taught EMS only. However, the researcher was aware that this would have time and funding implications, since very few teachers teach only EMS to Grade 9 learners.

4.10 SUMMARY

In Chapter 4 the research methodology, design and method were discussed. As an introduction, the term "paradigm" was defined within the context of this study to best answer the research question. Thereafter, the epistemological and ontological assumptions were presented. This was followed by a discussion about the constructivist-interpretive paradigm and the qualitative approach

particular to this study. The last section dealt with the research design, with specific reference to the case study as a research strategy. The analysis of the data will be discussed in Chapters 5 and 6.

CHAPTER FIVE

DATA PRESENTATION AND ANALYSIS

THEME 1: CONCEPTUALISATION OF SUSTAINABLE DEVELOPMENT

5.1 INTRODUCTION

In this chapter Theme 1: Conceptualisation of sustainable development will be analysed and discussed. Seven questions which are related to the construct "sustainable development" will be categorised and coded, followed by a presentation of the data pertaining to each question. Thereafter, a consolidated analysis and discussion of the major findings will follow.

The aim of this research was to establish how a purposive sample of EMS teachers understands the meaning and scope of sustainable development. The teachers were interviewed about issues related to sustainability and requested to give written explanations of the current amendments to the new EMS curriculum. In addition, the views of two EMS subject advisors were taken into account in order to provide a more holistic understanding of EMS teaching and learning in the senior phase. The study was conducted in the Western Cape Province where the participating teachers worked within diverse contexts in terms of socio-economic levels and the academic abilities of learners. The profiles of the participants were discussed in Chapter 4.

As already mentioned, mainly qualitative data were produced in this study. Qualitative data is multilayered and open to a variety of interpretations (Cohen, et al., 2007:459); therefore the researcher's presence in the text became an important consideration in the analysis. Inter-subjectivity is an inherent characteristic in a constructivist-interpretive paradigm and it was therefore important that the researcher would maintain a "distanced" presence in the data analysis process. The researcher recognised that the teaching of EMS as well as the enactment of the curriculum is challenging in some cases, and that what really happens in practice differs from school to school. The analysis process attempted to understand the hidden meaning of sustainable development and how these meanings are related within an EMS-education context. The definitions of constructs, its manifestations and how it was connected to specific themes and categories were elicited during the process of analysis.

Data analysis was achieved through the manual coding of interview transcripts. The interpretation of each theme was based on certain indicators or categories which dealt with a theme in its totality. For example, the interviews were conducted over a three-month period (July–September, 2010) and a total of 13 questions were carefully constructed to represent two themes. Theme 1: Conceptualisation of sustainable development consisted of 7 questions related to the meaning and scope of sustainable development, and the concept and questions are discussed in this chapter. Theme 2 comprised of 6 questions specific to the EMS curriculum, teaching practice, and sustainable development. The word participant/respondent/teacher was used interchangeably throughout this chapter, referring to the teachers who were interviewed.

The distinction between the definitions of “sustainability” and “sustainable development” was discussed in Chapter 2, and will be used accordingly for the purpose of this analysis.

5.1.1 Theme 1: Conceptualisation of Sustainable Development

For Theme 1 a set of *a priori* coding was used, based on the categories identified by Summers et al. (2004), and later refined in Summers and Childs (2007). Their coding “template” was also used in a study by Walshe (2008:537). These studies examined student teachers’ and high school students’ conceptions of sustainable development in Science and Geography. As referred to earlier, most of the previous research about ESD had been undertaken within the fields of Science or Environmental Science. Walshe adapted the coding of Summers et al., to focus on the impacts of tourism (which is part of a Geography course), which included considering what sustainable (or unsustainable) tourism is, and why it is important. It was therefore appropriate to adapt the categories and codes of proven studies from the literature to the context of EMS education.

The formulation of the categories to capture the features of sustainable development started with the question: “Do teachers possess the knowledge and understanding to teach effectively in the new domain of Education for Sustainable Development?” This was the question that Summers et al. (2004:164) asked when confronted with the teaching of ESD in a Geography course. The subject-matter knowledge of ESD was controversial, not only in teacher training, but also for practising teachers. The ubiquitous nature of the term “sustainable development” was discussed in Chapter 2, referring also to the most widely used definition proposed by the WCED (1987): “Sustainable

development is development which meets the needs of the present without compromising the ability of future generations to meet their own needs". The literature showed a growing consensus that sustainable development must be conceptualised in at least three dimensions: environmental, economic and social. These dimensions would therefore be part of the key categories used to capture the features of sustainable development.

The list of 7 categories of Summers et al. (2004:169) can be related, in varying degrees to the literature reviewed in Chapters 2 and 3. The categories comprised of:

- Purpose — the reasons why sustainable development is necessary;
- Nature of the development, i.e. economic, social or environmental;
- Human focus — referring who the development is for;
- Timescale — over which timespan the development is envisaged;
- Geography scale/level — area and/or scale, i.e. local, global, etc.;
- Controversy — conflicting issues with regard to sustainability; and
- Aesthetic — maintaining beauty.

The above categories emanated from the responses of student teachers and represented a wide range of sub-categories which are listed in Table 5.1. A follow-up study was done in 2005-2006 by Summers and Childs (2007:313) where the Aesthetic category was included under the "Purpose" category heading, suggesting the maintaining of beauty as a purpose of sustainable development. Coding rules were included in this follow-up study. These categories and sub-categories were also applied by Walshe (2008) in a study of a class of 12-13-year old Geography students. Walshe suggested that their research might have implications for how teachers would approach the concept

of sustainability with their students in the future. Given this, the categories and sub-categories were applied to this study — and in the context of EMS education; a detailed explanation of the coding structure is illustrated in Table 5.1. Even though the work of Summers and Childs and that of Walshe was based on students/student teachers' understandings within Science and Geography, it was appropriate to be applied in this study; it allowed for a very broad definition of sustainability and therefore ought not to have restricted the interpretation of the data.

Questions related to the following were grouped together for structuring Theme 1:

- Understanding of sustainable growth (Question 5);
- Understanding of sustainable development (Question 6);
- Description of unsustainable business practices (Question 7);
- Description of sustainable lifestyles (Question 8);
- Understanding of economic growth (Question 10);
- Understanding of globalisation (Question 11); and
- Understanding of what it is that needs to be sustained (Question 13).

5.1.2 Theme 2: The EMS curriculum and Learning Outcome 2: Sustainable Growth and Development

Theme 2 was divided into two parts and will be discussed in detail in Chapter 6.

5.1.2.1 Part 1: The EMS curriculum and sustainable development

The questions specific to the EMS curriculum were developed and based on the NCS and the challenges that teachers encounter in teaching EMS (discussed in Chapter 3). As in theme 1, *a priori codes* were developed before examining the

data. Questions were coded according to the key aspects in the EMS curriculum, specific to Learning Outcome 2: Sustainable Growth and Development. A similar coding process was used by Catling (2001) who based his coding template on the main elements of the English primary Geography national curriculum when analysing Primary School learners' definitions of Geography. Catling's approach was suitable to be followed in this study, because an understanding of the nature and purpose of sustainable development according to the EMS curriculum was the key focus. The main elements in the interview questions of Part 1 were:

- Understanding of Learning Outcomes 2 (LO2): Sustainable Growth and Development (Question 1); and
- Curriculum aspects of LO2 (Question 2).

5.1.2.2 Part 2: EMS teaching practice

In order to gain a holistic understanding of the meaning and scope of LO2, Part 2 dealt with issues about teaching practice. The analysis was done systematically by summarising the most common responses of the participants, the detail of which will be explained in the next chapter.

Given the importance of the EMS policy documents and the recent amendment to the curriculum, it seemed important to obtain teachers' views by means of written explanations of specific content in the new CAPS document. Curriculum issues were then synthesised within key categories in Theme 1. In this way, any possible discrepancies between what is advocated by the Department of Education (DoE) and the views of teachers with regard to sustainable development in general were further explored.

The main elements in the interview questions of Part 2 were:

- teaching practice (Question 3; Question 4);
- the weighting of learning outcomes proposed by the EMS curriculum (Question 12);
- the new EMS curriculum: CAPS (subject-object interviews); and
- responses from Curriculum Advisors (CAs) (interviews with CAs).

An account of the analysis of Theme 2 is presented in Chapter 6. Chapter 7 gives a summary of the analysis of Theme 1 (sustainable development) and Theme 2 (EMS curriculum and sustainable development). The same chapter will provide a synthesis to an EMS-ESD paradigm to broaden the scope of current EMS contextualisation and teaching practice.

5.2 THE ANALYSIS PROCESS

Content analysis provided the most appropriate manner in which to analyse and interpret the amount of data collected for this study. The reduction of data was systematically done: through the process of content analysis the data was rigorously analysed, examined and verified.

The participants' way of thinking, and their use of certain words, constructs and phrases became evident as the researcher read through the transcripts. As Henning et al. (2010:105) suggest, the researcher's "knowledge of the theory that has framed the inquiry will seep into the process here". It was therefore important that the method of coding and categorising allowed for depth and breadth analysis and that the data was interrogated and interconnections established. Henning et al. (2010:103) argue that the analysis process is the "heartbeat" of the research; here the analyst's quality of thinking will be evident.

Differences or similarities in the text were explored that would corroborate or disconfirm previous understandings in other contexts, such as Science Education or Environmental Education. For example, teachers were asked questions specific to the EMS curriculum and how they dealt with the teaching of content relevant to sustainable growth and development.

The analysis process started with the transcribed interviews and the coding process. The teachers' names were omitted in the transcripts to ensure anonymity, and they will henceforth be referred to as Participant A, B, C, etc. First, the entire text of all seven interviews was read through to get a comprehensive overview of as much contextual data as possible. It related to e.g. the specific profile of the school (discussed in Chapter 5), whether more attention is given to LO2 than e.g. LO3 (which is Accounting) or vice versa; or the availability of a variety of teaching resources at a school. This involved listening to the entire recording and reading the transcript several times in order to provide a context for the emergence of categories and codes later on. In this way, broad categories were first observed before the codes from the coding "template" were assigned. The interviews of two teachers were conducted in Afrikaans, but translated into English for the purposes of the analysis. The process unfolded as follows:

- the interview text was presented verbatim; question by question (Addendum A and D);
- all seven interview transcripts were read through to get a holistic picture. The two pilot interviews were included in the final analysis, because it provided useful insights into the understandings of an inexperienced (new) and experienced teacher;

- questions were analysed one by one according to *a priori* codes presented in Table 5.1. The question-by-question analysis ensured that the text was read through repeatedly to identify the categories and establish how it related to the two themes;
- line numbers were inserted chronologically in the left margin of the text that appeared in the transcript (Addendum A). When a verbatim quote or a particular response from a participant was presented, the line number was used as a reference; e.g. (Q5D46) refers to Question 5, participant D, line 46 as in Addendum A;
- the next step was the selection of units/fragments of meaning from “the corpus of raw data to act as evidence for the argument of the written study” (Holliday, 2002:117). Units of meaning referred to the importance attached to the selected data, because it contained key elements related to the topic under study. The data was therefore “...broken up to be used as evidence in different parts of the data analysis ...” (Holliday, 2002:118);
- the units of meaning were highlighted in yellow; the specific code was entered adjacent to the text as a superscript, e.g. **creating jobs^{ECO}**. This code was then inserted in the right margin (cf. Table 5.2); and
- the coding was done in two different colours (yellow and green) to assist with the conceptualisation of constructs (in yellow) and the teaching and learning aspects (in green). In this way the responses about teaching and learning in the entire interview (irrespective of the question), as well as the connections and interconnections, could be identified.

Figure 5.1 illustrates how the coding process unfolded.

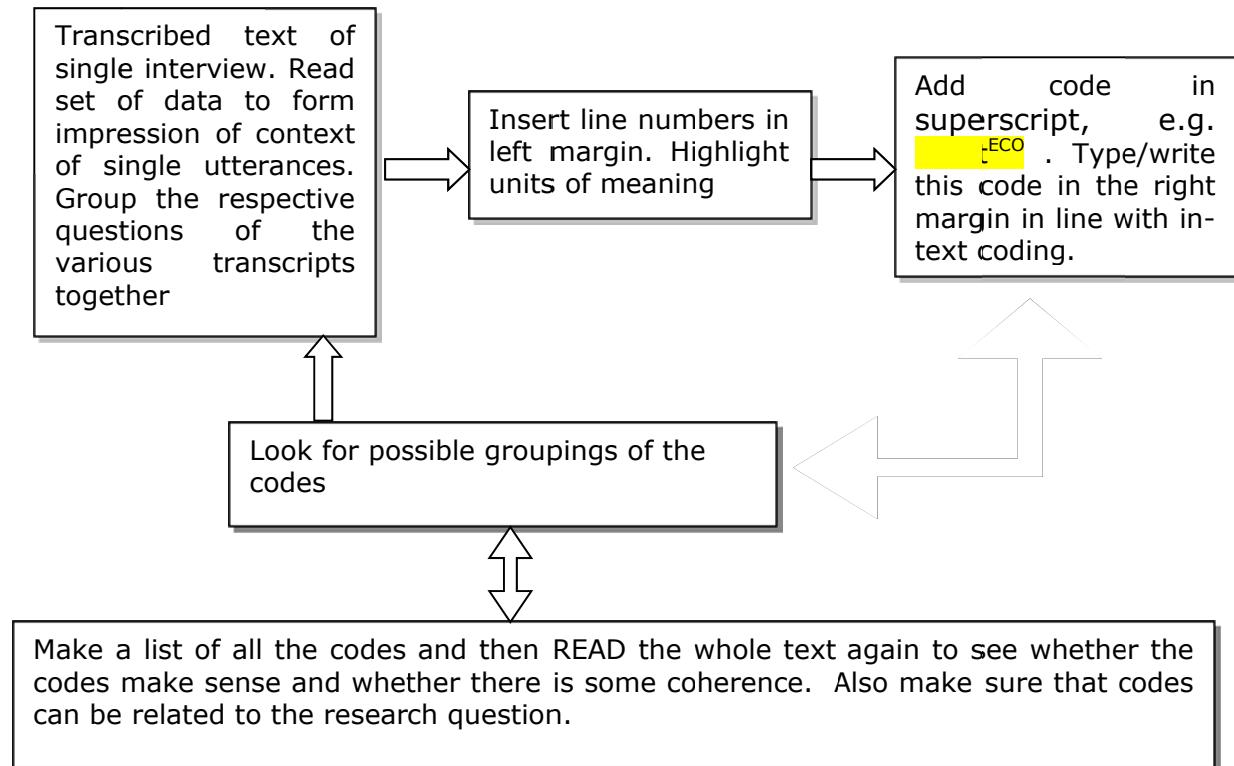


Figure 5.1: Coding from text (Adapted from Henning et al., 2010:104)

When all the sets of data had been coded and categorised, the researcher was left with the all important task of seeing the whole (Henning et al., 2010:106). Holliday (2002:118) pointed to the "untouched" text of raw data which was transformed into a new formulation, and which was in fact richer and of a thicker description, because it was placed, interconnected and given meaning within the argument of the thesis. Interconnections between questions became evident, since in some cases responses to a particular question related to issues in other questions. The literature suggests a growing consensus that sustainable development involves the interconnectedness of environmental, economic and

social factors (cf. Chapter 2). It was therefore important to establish to what extent these connections were recognised by the participants.

5.3 DATA PRESENTATION: THEME 1 – SUSTAINABLE DEVELOPMENT

As discussed earlier in Chapter 2, there are different interpretations regarding the words “development”, “growth” and “sustainability”, and whether development equates to economic growth, or how sustainability can be defined and constituted (Summers and Childs, 2007:309; Gough, 2002). Bonnett (1999) and Jonsson (2004) unpack the surface understanding of what sustainable development is in their respective research studies, with the emphasis on the question “what it is that is to be sustained”. Rauch (in Summers and Childs, 2007:309) indicates how the sustainability debate has been criticised for “its strong orientation toward an economic market philosophy and economic growth”. This orientation is often embedded in neoliberal policies and global competitiveness, which may impede working towards a ‘greater good’ and where the future of local communities and future generations are safeguarded.

Even though the definition of sustainable development is diverse, there is consensus from various sources that it must be conceptualised in terms of at least three dimensions: social, economic and environmental. This view is supported by the Brundtland Commision (WCED, 1987); Tilbury et al. (2002); GRI Guidelines (2007); Gray and Milne (2002); Giddings et al. (2002) and others. It was therefore important that a specific set of questions were considered to establish the underlying understandings of sustainable development. The bringing together of the social, environmental and economic

factors is central to the ways in which the conception of sustainable development is explored.

The first theme was the conceptualisation of sustainable development, which might well have included only Question 6: "What is your understanding of sustainable development?" However, in order to obtain a holistic picture of teachers' understanding of sustainable development, it was important to probe into their understanding of key concepts related to sustainability, such as "sustainable growth", "economic growth", "globalisation", etc. Theme 1 was therefore compiled of several questions which will be presented and discussed in the following section. The intention was not to look for the "right answers"; it was more a matter of exploring consistencies (or inconsistencies) in current thinking of the participating teachers. The value of teacher conceptions was discussed in Chapter 3. In addition, Jonsson (2004) describes the complexity of understanding as either vertical or horizontal. Vertical complex understanding refers to profound, extensive or insightful understanding of one or several aspects, for example a nuanced understanding of the impact on the economy caused by increased production and profit maximisation at the expense of resource exploitation. The ability to express the connections among society, economy, pollution and resource needs refers to horizontal complexity. The latter is characterised by many shifts of perspective and different aspects frequently being connected and related to one another.

To examine the teachers' conceptions of sustainable development, six main categories were identified (Table 5.1), namely purpose, nature, focuses (for whom), timescale, geographic scale and challenges, while sub-categories of

these were adapted. The origin of the categories was discussed earlier in Section 5.1.1. The occurrence of a factor/element within a particular category was counted only once per response. This relates to frequency of mention which is equated with importance, based on the emphases given to these factors during the interviews (Walshe, 2008:552). Where more than one response was coded within a specific subcategory, e.g. ECO, the responses were carefully scrutinised so that each element was only counted once. For example Participant G had 11 responses for the category ECO, while there were repetitions of some elements in the 11 responses. Therefore each element within the 11 responses was only counted once; no repeats were taken into account, e.g.:

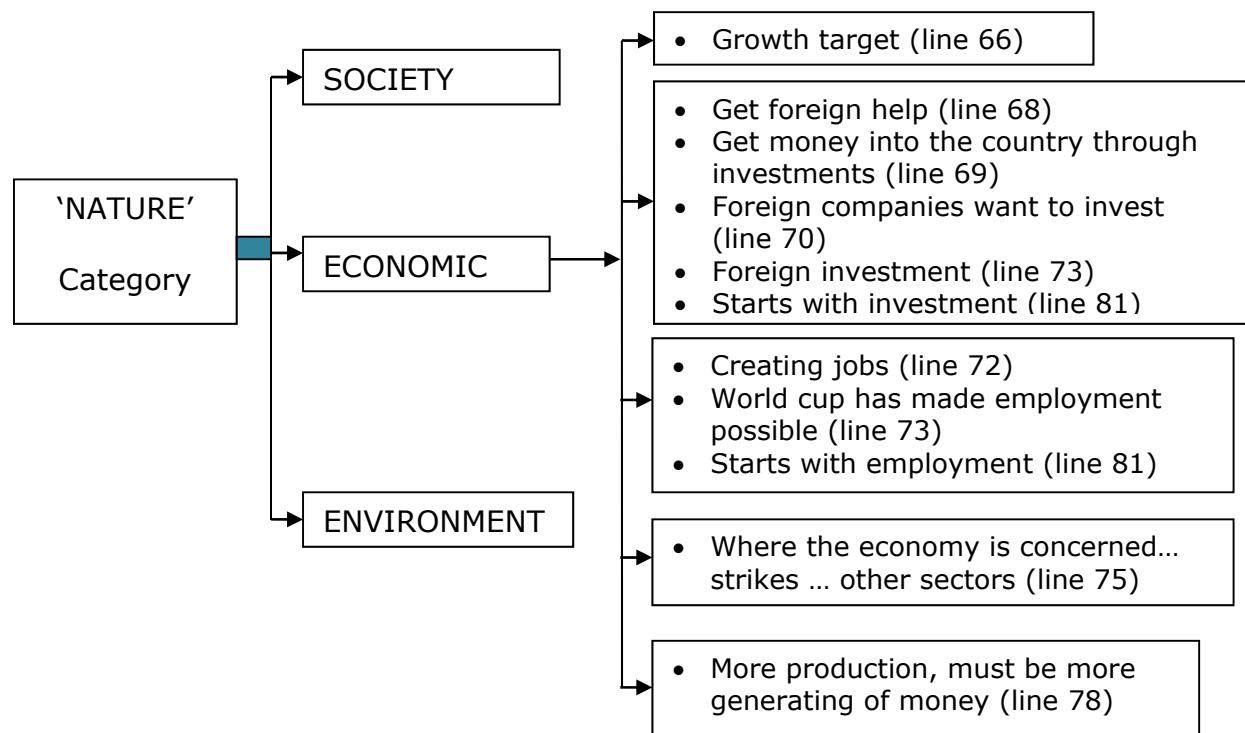


Figure 5.2: Economic Sub-category: Responses from participant G for Question 5: "What is your understanding of sustainable development?"

Figure 5.2 can also be explained as:

Participant G: 1st round of coding for ECO	2nd round of coding
1. growth target (line 66)	✓
2. get foreign help (line 68)	✓
3. get money into the country through investments (line 69)	refer to 2
4. foreign companies want to invest (line 70)	refer to 2
5. creating jobs (line 72)	✓
6. foreign investment (line 73)	refer to 2
7. world cup has made employment possible (line 73)	refer to 5
8. where economy is concerned (line 75)	✓
9. more production, must be more generating of money (line 78)	✓
10. starts with employment and investment (line 81)	refer to 7 and 6

The final number of responses for participant G in the Economy category is therefore 5. This differs from the coding process in Summers and Childs (2007:313), where once a given category had appeared in a response, further occurrences of the same category in the response were not coded. This means that in their study each category could only be counted once, even though its presence may have been supported by different elements (factors). In this study it was important to count not only the categories present, but also the elements within the category, so that the extents to which individual responses recognise the categories are taken into account. This relates to the vertical complex understanding alluded to earlier.

A detailed coding template is presented in Table 5.1, adapted from the category headings and coding used by Summers and Childs (2007:314). The dimensions

are elaborated in the heading “dimension/descriptor” and were coded if it was considered to be present in a response, and if it contained a clearly recognisable element (according to the researcher) of this full interpretation. Instead of merely counting words or synonyms of certain words, the meanings were taken into account, as suggested by Cohen et al. (2007:485), saying that “...it is sometimes dangerous to go for words rather than meanings, as people say the same things in different ways”. All the questions in this theme were analysed in the same manner as explained in the preceding sections. The following categories and codes were applied to the responses in the interviews:

Table 5.1: The 23 categories used to code elements in the responses. (Adapted from Summers and Childs, 2007:314)

CATEGORY	SUB-CATEGORY	CODE	DESCRIPTOR/DIMENSION	Examples
PURPOSE	Improvement	IMPR	Reference to the progress or benefit of any kind (social, economic or environmental)	'new opportunities, avenues and expansion'
	Preservation	PRES	The protection of the environment, including avoiding damage not detrimental, protection, minimum negative impact	'don't destroy the environment for new places'
	Conservation	CONS	The specific reference to the use of renewable resources, recycling or replanting	'if there are cars, run on chip fat or hydrogen cars'
	Balance	BAL	Ensuring that the natural balance of the environment is kept through recycling, replanting, or replacing resources	'use recycled materials'
	Meeting needs	NEED	Reference to unlimited needs and limited resources, implications for people's lifestyles	'needs must be identified in order to produce more'
	Self-sufficiency	SSUF	Reference to independence as sustainability	'you can't let the government be responsible for us'
	Aesthetic	AEST	Reference to the appearance of a particular area and how it may be affected	'if there are too many buildings, it will destroy the views'
	Other purpose	OTH	Any other significant purpose not mentioned above	
NATURE	Environmental	ENV	Focus on the environment and its resources	'Cars and planes cause air pollution'
	Economic	ECO	Focus on the economy with emphasis on: how money is earned or spent, inequalities, standard of living, profit maximisation: increased production/ increased employment/ increased foreign investment	'more money can be brought into the country'

	Social (preservation of cultures, quality of life, inequalities, political, education, ethical behaviour)	SOC	Focus on the social aspects of sustainability, such as the preservation of culture, education, crime and health)	'replace traditional culture with modern things'
FOCUS [WHO FOR]	Current generations only/human population/people	CGEN	Reference to the human population (either current or future generations) and how they either affect or are effected by sustainability	'I want my grandchildren and great-grandchildren to experience all the animals, birds and species'
	Future generations only	FGEN		
	Future and current generations	CFGEND		
TIMESCALE	Long-term (long-term strategies, over time, permanently, indefinitely)	LT	Reference to the future or long-term strategies or development	'it's going to take years'
	The future	FUT		
GEO SCALE/ LEVEL	Global/ international	GLO	Reference to any geographical scale, whether it be local, global or place-specific	'our country needs to grow'
	National	NAT		
	Local	LOC		
	Area/scale - undefined	SCA		
	Focus on less economically developed countries (LEDCs) (exemplified)	LEDC+		
	LEDCs only (misconception)	LEDC-		
CHALLENGES	Controversy	CONT	Reference to any conflicting issues, complexity, uncertainty	'the gap between rich and poor is still too big'

The coding rules which applied will be stipulated in the discussion of each question. Colour-coding was used to assist with the analysis: For example the coding for Participant C's (transcript lines 26–27) to the question: "What is your understanding of sustainable growth?" were done as follows:

Table 5.2: Example of transcript coding

Line	PARTICIPANT C	Code
26	Sjoe, this is now difficult you know ^{CONT} . You know when I explain sustainable growth	CONT
27	I also probably look at my economics background. So I would go, for me for	
28	example I understand it say listen here, we need to have a sustainable growth in	
29	South Africa ^{NAT} , in Kraaifontein ^{LOC} , in our community ^{LOC} We know this is the facets;	NAT LOC LOC
30	this is the stuff that is causing problems in our community ^{CONT} . Where do we go	CONT
31	from here? Ok, so I would go and to my understanding is first teaching my children	
32	little about the history of certain things and then bring it back to them and then	
33	they need to tell me from there onwards. So I just see it as one of those learning	
34	outcomes where it is something that affects them here and now ^{CGEN} and that is also	CGEN
35	how I approach it. Not according to the curriculum of the education department, but	
36	according to how I know or what I know what they need to know for next years	
37	specifically about that topic. Because we are a focus school for scholars so we focus	
38	on things that our learners need to know for Gr. 10 and not always following what	
39	the education department said, we did it in the past, because of those CTAs that	
40	they gave us, but then when you looked at that topic it was not really widely	
41	touched in the CTAs. Just through experience we just, it's just been put there, we're	
42	done with it, let's continue. So it is just info that they need.	

Yellow — understanding of concepts; codes in text are superscripted and allocated according to Table 6.1

Green — teaching and learning aspects. This will be discussed in Chapter 6.

As suggested by Cohen et al. (2007:480), the data was scrutinised systematically, line by line, and ascribed a descriptive code next to each piece of data as illustrated in Table 6.2. The descriptive codes were assigned as abbreviations, enabling the researcher to understand the issue that they denote immediately, rather than ascribing a number as a code.

The responses to the respective questions are presented in the following sections, with evidence supporting the categorisation in brackets, e.g. (D46) refers to participant D, line 46 in the interview transcript in Addendum A. Each question has a set of coding rules which were adapted from Summers and Childs (2007). At the end of this chapter this theme is consolidated in Section 5.15 and the common aspects are discussed.

5.3.1 Understanding of sustainable growth (Question 5)

The main reason why this question was asked was to establish whether there is a difference between the understanding of "growth" and "development". According to Daly (1991:6) the term "sustainable growth" should be rejected, in contrast to many economists who use "growth" as an indicator of economic prosperity (cf. Chapter 2). In the category "Nature of Development", the word "development" was replaced with "growth". The purpose of Question 5 and Question 6 respectively: "What is "sustainable growth?"" and "What is sustainable development?" was to establish whether parallels can be drawn between the interpretation of growth and development. The wording used in the responses was first coded under the particular sub-category and thereafter under a particular heading, e.g. the "national" (NAT) sub-category will first be coded, and

thereafter the GEO SCALE/LEVEL category. Questions 5 and 6 were adapted from the interview questions 1 and 2 in the study by Walshe (2008:542):

- "What do you think the different aspects of sustainable tourism are?" was rephrased to "What is your understanding of sustainable growth?" (Question 5 in this study);
- "What do you think the word sustainability means?" was rephrased to "What is your understanding of sustainable development?" (Question 6 in this study).

The following rules for coding applied:

- do not code "growth";
- do not code "sustainable" or "to be sustained";
- resources mentioned non-specifically always coded as environment;
- development — retain under economic, i.e. coded as ECO;
- "using natural resources" and "use of resources" both coded as ENV and ECO;
- education knowledge coded as Social (SOC);
- use conservation, not preservation when there is an implication of management towards change; do not code both as same response (CONS included PRES);
- coding for current generation (CGEN) and future generations (FGEN) means future and current generations (FCGEN), therefore just use FCGEN; and
- count a response referring to a particular element only once. See detailed example in previous section.

The grouped data as presented in Table 5.3 were reanalysed and represented according to the five main headings: purpose, nature of the "growth", who for, timescale and challenges (cf. Addendum B). Cohen et al. (2007:486) suggest that this process was important to avoid category overlap. However, it may sometimes happen that certain comments may fall into more than one category. In such cases, the researcher carefully (re)interpreted the context and assigned a category where it was most appropriate (according to the researcher).

Table 5.3: Responses to Question 5: "What is your understanding of sustainable growth?"

QUESTION 5	A	B	C	D	E	F	G	TOTAL
PURPOSE: IMPR				1	1			2
PURPOSE: NEED				1				1
NATURE: ECO	2	2			1	1	5	11
WHO FOR: CGEN			1					1
GEO/SCALE: NAT		1	1	1	1	1	1	6
GEO/SCALE: LOC	2		2	1	1			6
CHALLENGES		1	2			1	4	8

The graphical presentation of the responses to questions 5 is as follows:

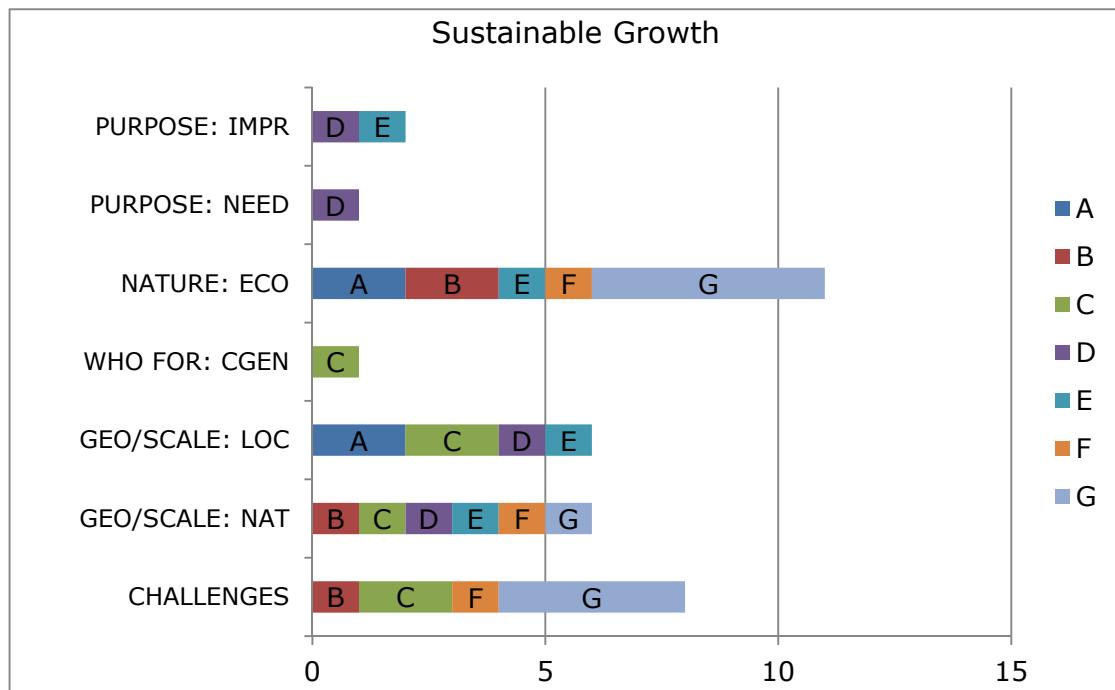


Figure 5.3: Responses to Question 5: Frequencies (number of mentions)

The common responses of the participants within the specific categories are discussed as follows:

5.3.1.1 Purpose

Only two participants expressed the essence of sustainable growth; either in terms of meeting one's needs (D46), or as an improvement: having enough resources to continue (D46) and whether it is as a result of new opportunities and expansion (E53).

5.3.1.2 Nature of the "growth"

Five out of seven participants referred to the nature of the sustained growth by referring to how it may impact on the economy. The responses varied from increased production, leading to more job opportunities, which will then sustain economic prosperity. Within the economic category the following factors were mentioned:

- ... demand and (A6);
- ... supply (A7);
- ... linked with economic growth (B22);
- ... linked with economic development (B24);
- ... profits (E54);
- ... resources (electricity) (F61);
- ... growth target (G67);
- ... get foreign help (G68);
- ... creating jobs (G73);
- ... where economy is concerned (G76); and
- ... more production, must be more generating of money (G79).

5.3.1.3 Focus (Who for)

Only one participant sees sustainable growth as affecting the current generation, by referring to "...it is something that affects them here and now" (C34).

5.3.1.4 Geographical scale/level

Most teachers referred to the geographical scale as applicable to the country (national) or the community (local). This is important because of the socio-economic factors which impact on sustained growth for the country; also, because of the nature of some of the communities where the schools are situated and the way they experience "growth" or the absence of it "... in their daily living" (A5).

5.3.1.5 Challenges

Two teachers referred to the topic as vague or difficult:

- ... very vague topic (B11); and
- ... difficult topic (C26).

Other responses referred to the problems in the country which impede sustained growth, e.g.

- ... lack of planning is causing the electricity problems (F61);
- ... causing problems in community (C30);
- ... weaknesses in system (F63);
- ... strikes (G76);
- ... more salaries not solution to growth (G77);
- ... employment and investing (G82); and
- ... gap between rich and poor (G83).

5.3.2 Understanding of sustainable development (Question 6)

This question was adapted from the study by Walshe (2008:542): "What do you think the word sustainability means?" was rephrased to "What is your

understanding of sustainable development?" The following rules for coding applied:

- do not code "development";
- do not code "sustainable" or "to be sustained";
- resources mentioned non-specifically always coded as environment;
- development — retain with economic, i.e. coded as ECO;
- "using natural resources" and "use of resources" both coded as ENV and ECO;
- education knowledge coded as Social (SOC);
- use conservation, not preservation when there is an implication of management towards change: do not code both as same response (CONS included PRES);
- coding for current generation (CGEN) and future generations (FGEN) means future and current generations (FCGEN), therefore just use FCGEN; and
- count a response referring to a particular element only once. See detailed example in previous section.

The responses to sustainable development were varied. The categorisation was as follows:

Table 5.4: Responses to Question 6: Understanding of sustainable development

QUESTION 6	A	B	C	D	E	F	G	TOTAL
PURPOSE: IMPR	1			1				2
NATURE: ENV						1	2	3
NATURE: ECO	4				2		5	11
NATURE: SOC						4		4
TIMESCALE: LT			2					2
CHALLENGES			1		1			2

5.3.2.1 Purpose

Two participants referred to the sustainable development as "going forward" (A5) and "grow continuously" (D35).

5.3.2.2 Nature of sustainable development

Three teachers (A, E and G) viewed the economic factors as central to sustainable development. Teacher F had strong views about the impact on the society and what the government was putting in place to address issues such as "education, health, poverty..." (F53-59). The impact on the environment was not prominent in the responses, except for respondent G who expressed concern about the "running out of natural resources" (G63-64), but did not exactly know why this is so. He also cautioned that it a challenge to develop the resources (natural and human resources) (G65), since there are too many unskilled workers, whilst skilled workers are leaving the country (G71-73). A lack of skills presents challenges for growth and development (G73-74) and has an inevitable impact on the performance and prosperity of government, the corporate sector and society in general.

Figure 5.4 illustrates the key aspects of the economy, society and environmental triad which emerged from the data.

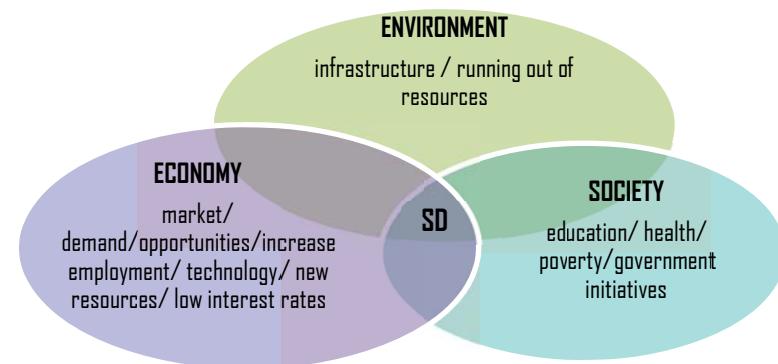


Figure 5.4: Nature of sustainable development

5.3.2.3 Timescale

Participant C sees sustainable development as an overwhelming task "...it's going to take years..." (C26). Furthermore, sustainable development is seen as a precursor to sustainable growth "... we do to get to that growth finally..." (C29).

5.3.2.4 Challenges

Participant E views sustainable growth and sustainable development as "very much interchanged very easily" (E43). The challenge for South Africa to achieve sustainable development is "still very far" (C31).

5.3.3 Description of unsustainable business practices (Question 7)

The question "What would an unsustainable community look like?" was adopted from Walshe (2008:542) and rephrased as "How would you describe unsustainable business practices?" The way the question was restructured (unsustainable vs sustainable) was a good way to "compel" the teachers to reflect on the impediments of growth and development. The same coding rules as in Question 5 and 6 applied, except for:

- do not code "business" or "practices"; and
- do not code "sustainable" or "to be sustained" or "unsustainable".

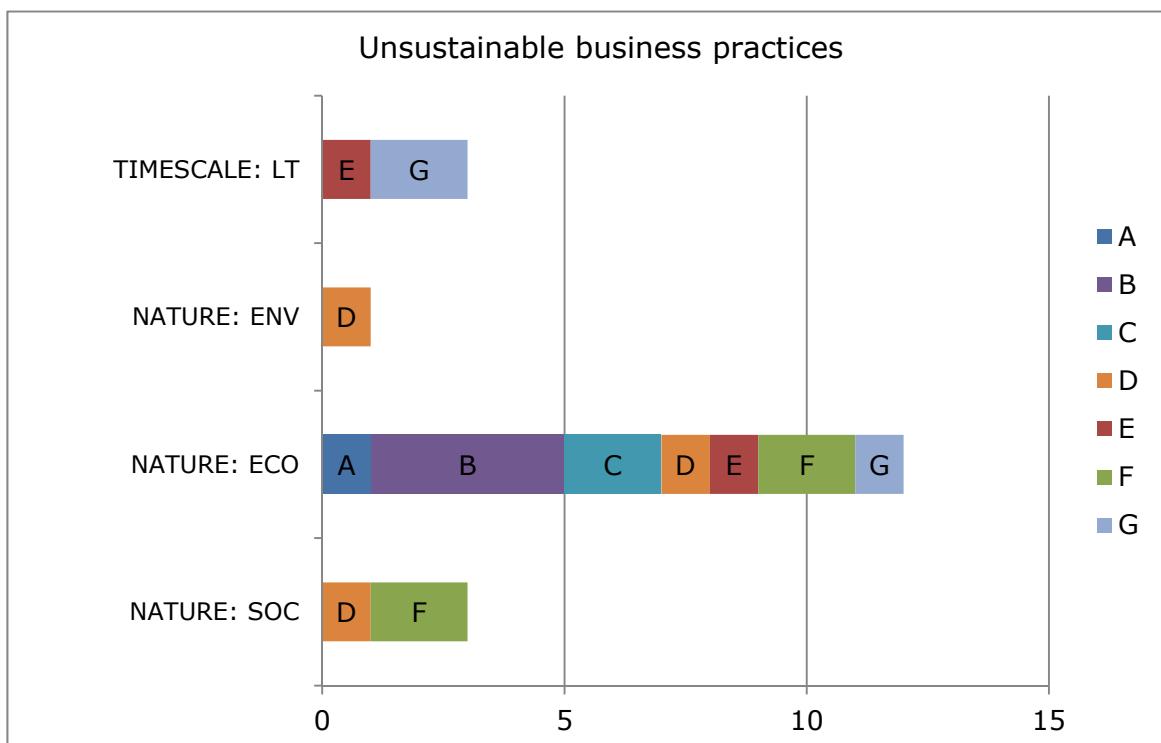


Figure 5.5: Responses to Question 7: Frequencies (number of mentions)

The responses mainly centered on the economic impact and the business goals of an unsustainable business.

5.3.3.1 Nature of the unsustainable business practices

All the teachers could identify at least one aspect in the economic category which does not belong in an “unsustainable business”. The responses varied as follows:

- ... no profit, no development (A6);
- ... profitability negatively affected (B15);
- ... no production/manufacturing (B16);
- ... retrenchment (B18) and bankruptcy (B19);
- ... not working with finances properly (C27);
- ... don't follow normal business ethics (C29);
- ... unethical (D36);
- ... losing market share (E45);
- ... unethical business (F47); and
- ... evading taxation (F48).

Two teachers (D and F) mentioned the societal impact of unsustainable businesses when workers are exploited (D40) and Teacher F referred to government's responsibility towards its citizens that cannot be realised if businesses are not socially responsible (F49; F56). Teacher F's views are consistent with the two previous questions referring to government's role in sustainable growth and development. Only one teacher referred to the environmental impact: "exploit environment" (D40).

5.3.3.2 Timescale

Two teachers view a business as unsustainable if there is a stronger focus on the short-term goals as opposed to the long-term goals:

- ... no long-term future (E43)
- ... no long-term goals (F68); and
- ... only thinks of the present (F69).

5.3.4 Sustainable business practices in EMS education (Question 8)

The question "Do you think that it is important that sustainability is taught in school. Why? Why not?" was also adapted from Walshe (2008:542) and rephrased to "Do you think it is important that we teach sustainable business practices in EMS? Why? Why not?" The same coding rules as in Question 5 and 6 applied, except for:

- do not code "business" or "practices";
- do not code "sustainable" or "to be sustained" or "unsustainable".

Table 5.5: Responses to Question 8: Importance of sustainable business practices in EMS

QUESTION 8	A	B	C	D	E	F	G	TOTAL
Answer: Yes/No	Yes	Yes	No	Yes	Yes	Yes	Yes	
PURPOSE: OTH	2					1		3
PURPOSE: CONS				1				1
NATURE: ENV				2				2
NATURE: ECO		1		2	1	1	1	6
NATURE: SOC		2		2		1	2	7
TIMESCALE: FUT					1		1	2
CHALLENGES						1		1

5.3.4.1 Purpose

Six out of the seven teachers regarded it as important to teach sustainable business practices at school. Some of the comments were:

- ... it's all over us (A3);
- ... need to know what's going on (A4);
- ... to change mindset (F66); and
- ... if the government didn't make sure of the regulations, it maybe wouldn't be there anymore (D55).

In addition, participant F viewed EMS as an ideal subject for teaching these concepts:

We have to teach them this because who is going to teach them this otherwise and that's life. EMS is one of the most fantastic subjects because if you get out of the classroom it is business, if you enter a shop it is business (F70-73).

5.3.4.2 Nature of the "sustainable business practices"

Four out of seven teachers reflected on the societal impacts that would result from teaching sustainable business practices at school, mentioning *inter alia*: to improve lifestyle (B10); to improve living standards (G82); to gain better

understanding (B14); so that workers are not exploited (D44); ethical governance (F67); etc. The economic factors include ethical business practices (D42; F66). Only one teacher referred to the exploitation of natural resources (D46) and that there should be a responsibility towards the planet (D53).

5.3.4.3 Timescale

Participant E said that in terms of the business's profitability, future sustainability is time-dependent, referring to "... in ten to twenty years' time" (E60); whilst for participant G the type of business will depend on whether the business is sustainable in the long term (G80).

5.3.4.4 Challenges

One teacher commented that: "It's a wide concept" (F61), implying that it could be widely interpreted.

5.3.5 Description of "sustainable lifestyle" (Question 9)

The question "In which ways do you think you live a sustainable lifestyle?" was borrowed from Walshe (2008:542). The same coding rules as in Question 5 and 6 applied, except for:

- do not code "lifestyles";
- do not code "sustainable" or "to be sustained" or "unsustainable".

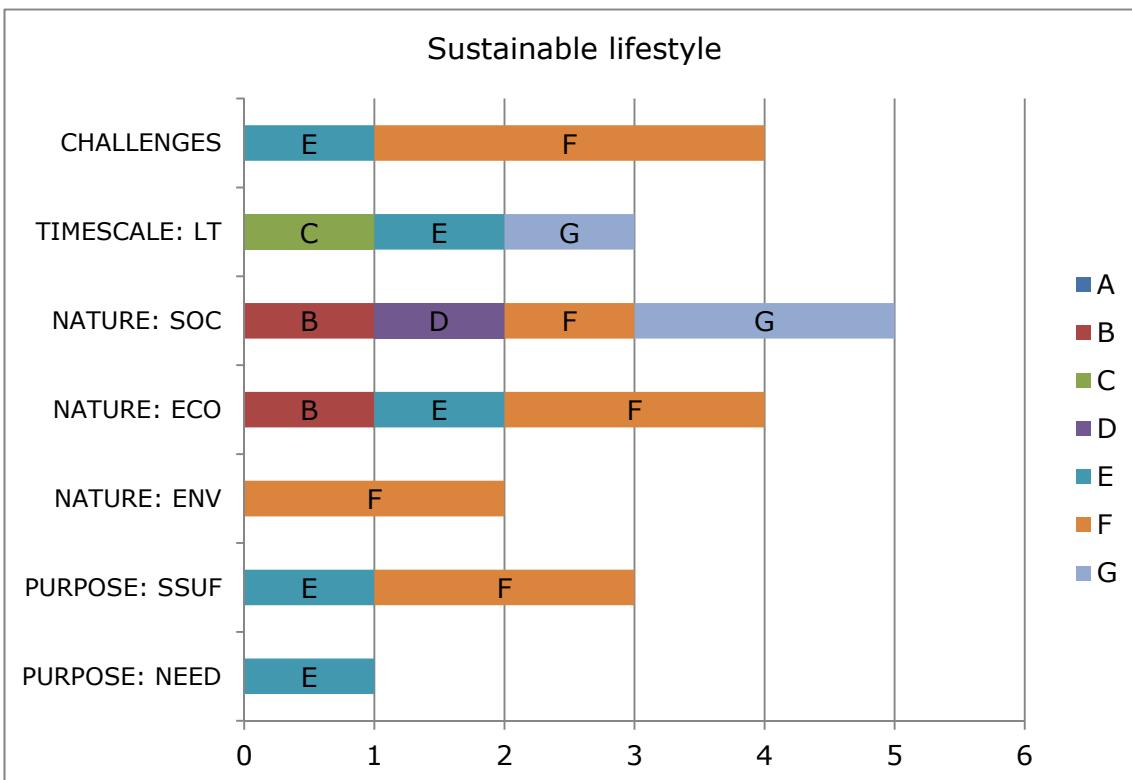


Figure 5.6: Responses to Question 9: Frequencies (number of mentions)

5.3.5.1 Purpose

Participants E and F considered “meet your needs” (E52) and self-sufficiency as important aspects of sustainable living, by saying; “you don’t have to depend on others” (E58); “We can’t let the government be responsible for us when we are 80 years old” (F66) and “I don’t look into anybody’s eyes for money, I work hard and I budget” (F83).

5.3.5.2 Nature of a sustainable lifestyle

Four participants view societal issues as important for a sustainable lifestyle, responding as follows:

- ... by simply living a disciplined life in all spheres (B17);
- ... healthy, balanced living (D33);
- ... in South Africa we have to change our mindsets (F75);

... living standards cannot be sustained with a salary that doesn't pay enough (G92); and
... quality-based (G96).

Only participant F viewed the impact on the environment as detrimental to sustainable living, saying that:

... taking our human resources and taking responsibility for land that was supposed to be reserved (F86); and
... development, but at what price (F88).

The economic issues were mostly related to a financial point of view, and the comments were as follows:

... from a savings point of view (B13);
... financial independence and also financial security (E51);
... saving and investment (F62); and
... productivity (F72).

5.3.5.3 Timescale

Sustainable lifestyles were seen as a long-term issue, as reflected in the responses of three teachers: "...is that enough/is it going to last" (C24); "...over a period of time" (E53); and "...is long-term" (G96).

5.3.5.4 Challenges

The ambiguous nature of the concept was stated by teachers E and F: "can mean a lot of things" (E47); "It is such a broad concept" (F81). Teacher F also felt that a sustainable lifestyle depends on ethical principles (F79) and that the issues in the country (government) need to be addressed (F89).

5.3.6 Understanding of economic growth (Question 10)

In the literature economic growth and the impact of globalisation have been identified as variables for sustainability (see Cesano and Gustaffen, 2000; Bhagwati, 1996; Bond, 2002). This question and the next one dealing with globalisation were included to establish how teachers conceptualise the scope of sustainable development. The same coding rules as in Question 5 and 6 applied, except for:

- do not code "economic";
- do not code "growth".

The outcome of the analysis was as follows:

Table 5.6: Responses to Question 10 – Economic growth

QUESTION 10	A	B	C	D	E	F	G	TOT
PURPOSE: IMPR						1	1	2
PURPOSE: NEED							1	1
NATURE: ECO	1	4	3	3	2	2	4	19
NATURE: ENV						4		4
NATURE: SOC			1					1
FOR WHOM: CFGEN							1	1
GEO SCALE: NAT				1			1	2
CHALLENGES				1	1	1	3	6

5.3.6.1 Purpose

Two participants stated the purpose of economic growth as: "Needs must be identified to be able to produce more, because economic growth is measured by this" (G75) and "building for something better that is safer" (F43).

5.3.6.2 Nature of economic growth

Economic factors: Most of the responses were given in terms of what growth means to the economy. The most common factor was job creation. Four participants viewed job creation as crucial for economic growth by referring to: "...more employment..." (A2); "...job creation..." (B6); "...get more jobs..." (C20); "...giving people capacity to contribute" (E33); and "...work opportunities..." (D24).

The second most common factor was an increase in production/Gross Domestic Product (GDP). Four participants viewed economic growth as an increase in production by referring to:

- ... good GDP (B12);
- ... develop or have new products (C20);
- ... produce more than what they produced the year before (D23); and
- ... about the GDP, the more you produce the better for your country (G72).

Other factors included skills development: "...provide them with skills..." (E35); "...develop your labour, raw materials and entrepreneurship" (G68). Some respondents remarked that exports should be viewed as important for economic growth: "...we sell it externally, export it..." (C21); "...produce more for exports so that we can generate an income (G79). The importance of low inflation and interest rates (B7, B10); more consumption (D25); looking at technology (F40) and infrastructure (F42) were also mentioned.

Social factors: Participant B stated that a good political climate is a prerequisite for economic growth: "...political climate, sound healthy political climate and good policies..." (Q10B13).

Environmental factors: It is worth noting that only **one** teacher referred to the depletion of natural resources as a concern for economic growth. Teacher F repeatedly referred to the importance of the preservation of the environment by stating that:

- ... lot of your fynbos, that is destroyed forever (F51);
- ... the ecosystem is disturbed and for me that is at what cost and price (F52);
- ... there must be more responsibility, there is no responsibility(F55-56);
- ... things are being demolished and systems are being removed that we can't see (F54);
- ... and not to let greed destroy that (F63).

5.3.6.3 Focus [Who for]

Teacher F pointed out the preservation of resources for our current and future generation: "I want my grandchildren and great-grandchildren to experience all the animals, birds and species" (F61-62) and "...but nature decisions... What are we leaving behind for our children?" (F58).

5.3.6.4 Geoscale/level

Two teachers specifically referred to the country's growth, whilst another referred to an individual's contribution to the economy.

5.3.6.5 Challenges

Regarding the challenges identified, two teachers felt that economic growth is a complex concept, by stating that "... there is a lot of different views on economic

growth" (E31) and "try to explain the difference between economic growth and economic development to the children, but I am not 100% sure myself" (G64-65).

5.3.7 Understanding of globalisation (Question 11)

The same coding rules as in Question 5 and 6 applied, except for:

- do not code "globalisation", "global" or "global business"

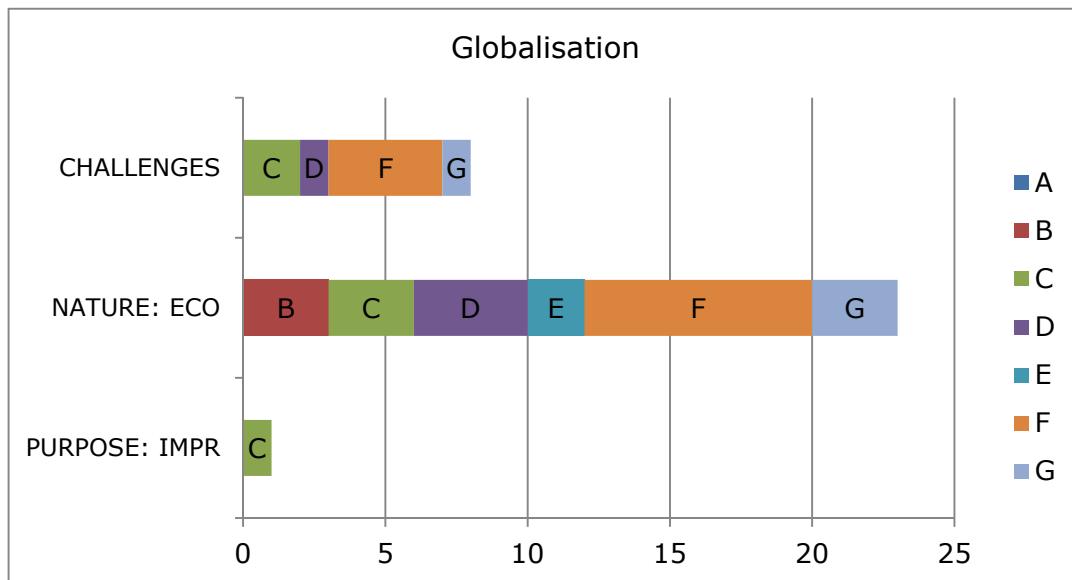


Figure 5.7: Responses to Question 11 – Frequencies (number of mentions)

5.3.7.1 Nature of globalisation: Economic

With regard to the understanding of globalisation, the most common responses related to the economic impacts and benefits of globalisation, e.g. in terms of transfer of competencies, greater competition which can ensure greater quality, etc. When asked about the advantages and disadvantages of globalisation, the following responses followed:

Most definitely, because one can draw from the experience, the competencies, the recourses from other countries as well, which can make you more marketable and companies can then become more profitable" (B:8-11); and

Sometimes yes, sometimes not looking at South Africa, looking at a capitalist perspective no. Just thinking of our country, having a black government but still a white economy, no I don't see globalisation as a good thing. Just from that, because with globalisation our poor people are still in the same position or they are just getting poorer and the rich people still getting richer (C33-38).

Two teachers expressed rather strong views about South Africa's trade agreements with other countries and its impact on local businesses:

I think local companies are struggling, these small companies want to start certain skills and want to do something but suddenly they have to compete with the world (D45-48);

The thing with globalisation the unfortunate thing is we battle to compete with China (F59-60);

Because of the world trade organisation we are also member and they try to basically have no restrictions or barriers for import and export. We can't really compete always... our textile industries are all messed up (F68-69);

The main problem is we can't compete. The proudly South African campaign, all the little toys and things were outsourced to China. Why would the government or whoever was responsible for that take that work away from us? Globalisation is causing problems because we don't have consistent structures in place (F77-81); and

That is a problem, but the positive of that is that other countries are investing in South Africa and starting businesses here (F89-91).

Teacher G had never really thought about the advantages or disadvantages of globalisation, stating that:

This is a good question, I haven't really thought about it. The first thing that comes to mind is that it is a good thing. You learn other countries' cultures, you see how they do things and they can see how you operate. They can get hold of your products, so in that context it is a good thing. I haven't really thought about it in a negative way, so I will say that it is advantageous for our country (G116-121).

5.3.8 Understanding of what needs to be sustained (Question 13)

This question was taken from research undertaken by Jonsson (2004): "What is to be sustained" and from Bonnett's (1999) analysis, both of which suggest that any surface agreement on sustainable development soon breaks down when one asks what it is that needs to be sustained. The two pilot school participants, Teacher A and B, were approached subsequent to the pilot interviews and asked to respond to Questions 13, which had been added to the question list (discussed in Chapter 4). The researcher tried to contact Teacher A to respond to the last question, first telephonically and then via email, but unfortunately the teacher was not available. Teacher A was appointed on contract at the school. The responses of the other six participants are reflected in Table 5.7.

The same coding rules as in Question 5 and 6 applied, except for:

- do not code "sustainable", "to be sustained" or "unsustainable".

Table 5.7: Responses to Question 13 – What needs to be sustained

QUESTION 13	A	B	C	D	E	F	G	TOT
NATURE: ECO		2		2	2	1	1	8
NATURE: ENV				3				3
NATURE: SOC		1	2	2		1	1	7
CHALLENGES							1	1

This question was mainly focused on the three pillars of sustainable development: social, economic and environment. The responses focused on:

5.3.8.1 Nature of what is to be sustained: Economic

All the participants responded to the economic factors in terms of what needs to be sustained. Responses varied, mentioning: "entrepreneurs" (D7) and "...profitability" (B2); "the manufacturing sector" (E15); "which will ensure that almost everything else will fall in place, new jobs, etc." (E18-19); "infrastructure" (F22) and "natural resources" (G34). Participant B also felt that a better GDP (B1), a healthy climate for foreign investment (B2) and increased productivity (B2) should be sustained.

5.3.8.2 Nature of what is to be sustained: Society

Three teachers stated that people (D13) or human resources (B3, G35) should be sustained and that social responsibility was important (D11). Teacher C felt that government should take responsibility for what it is that needs to be sustained, e.g. community development (C5-6).

5.3.8.3 Nature of what is to be sustained: Environment

Participant D pointed out that the planet (D10) should be preserved so that "there must be something for descendants" (D12), using the example: "If we cut off trees, we need to put it back in nature" (D12).

5.4 SUMMARY OF THEME 1: SUSTAINABLE GROWTH AND DEVELOPMENT

5.4.1 Discussion of findings

The main focus of the interviews was to establish the importance that teachers attached to the three pillars of sustainable development: environmental, economic and social sustainability. These three pillars resorted under the category: "nature" of sustainable development. To provide a holistic framework of the "nature" of sustainable development, the following categories are also presented: Purpose, Focus, Timescale, Geo Scale and Challenges. Figure 5.8 presents a summary of the respective categories and will be discussed by focusing on the frequencies of mentions (cf. Addendum C). The responses were analysed in three ways: i) the identification of categories to capture features of sustainable development; ii) the scrutiny of individual responses for the presence or absence of key features where the frequencies of mentions were equated with importance, and based on the emphasis placed on these factors in the interview3q process, and iii) in contrast to these approaches, an examination of the responses in the light of the EMS curriculum (LO2) prescribed by the DoE. The latter will be discussed in Chapter 6.

The total number of responses for all the categories was 208 (cf. Addendum C), and the percentage of mentions per category is presented in Figure 5.8. The specific elements within the categories were important, since they offered the depth and breadth of the conceptualisation and were presented in the preceding sections. The evidence for supporting the categorisation is indicated in brackets, e.g. (Q5D46) refers to Question 5, participant D line 46, as in Addendum B.

The questions which made up this theme focused on the following core concepts:

- Q5: Sustainable growth;
- Q6: Sustainable development;
- Q7: Unsustainable business practices;
- Q8: Importance of sustainable business practices;
- Q9: Sustainable lifestyles;
- Q10: Economic growth;
- Q11: Globalisation; and
- Q13: What is to be sustained?

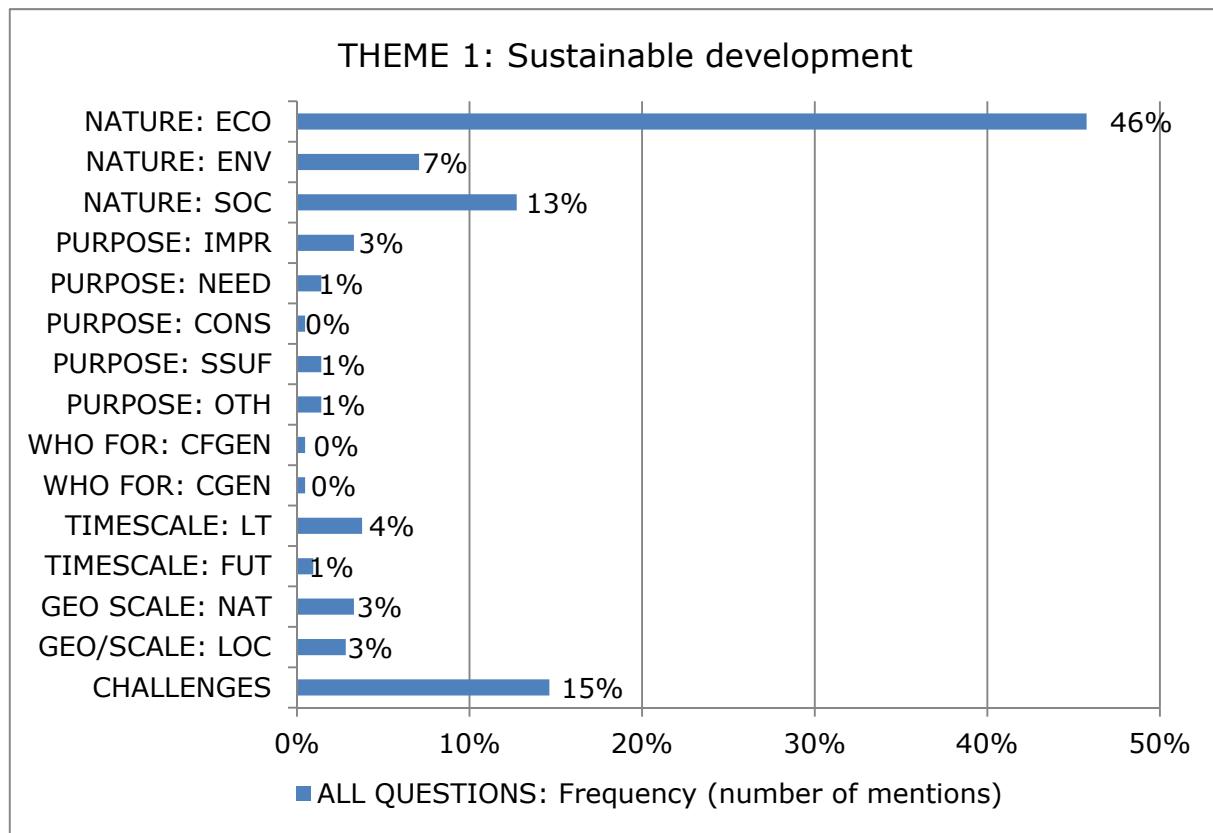


Figure 5.8: Theme 1 – Total frequencies (number of mentions)

5.4.1.1 Purpose

The rationale for sustainable development was not given much consideration in the responses, other than in a few comments for improvement, which were expressed as: "going forward" (Q6A5), or for "new opportunities, avenues and expansion" (Q5E52). Another rationale is meeting basic needs (Q9E52), so that one doesn't have to depend on others (Q9E58). The statement "... it maybe wouldn't be there anymore" (Q8D55) referred to the importance of government regulation with regard to conservation to prevent depletion of natural resources. There was also an inference about the appearance of a particular area if its development is not sustained. The aspect which was largely absent in this category consisted of the elements dealing with the preservation of the natural balance of the environment through recycling, replanting or replacing resources.

The ubiquitous nature of sustainable development is widely debated in the literature. It was also evident in this study, and expressed as "...it's all over us" (Q8A3), showing that there is enough reason to delve deeper into what sustainable business practices entail, as this teacher puts it ".....need to know what's going on" (Q8A4). Another teacher stated that the mindset of the business people needed to change to ensure ethical business practices (Q8F66), and to assist government in combating corruption.

Even though the general response in this category was low, it is worth noting that some responses implied that business and civil society cannot depend on the government for sustaining one's future. One such response was: "We can't let the government be responsible for us when we are 80 years old" (Q9F66). This could imply that sustainable development has become everybody's "business"

and that the emphasis on its wide-ranging purposes should therefore be given substantial consideration by the teachers.

5.4.1.2 Nature

This category made up most of the responses (a total of 66%), consisting of economic, societal or environmental factors. The responses referring to economic factors (46%) were considerably higher than those centering on social (13%) and environmental factors (7%) (cf. Fig. 5.2).

Economy: The economy as a focus for sustainable development was the most dominant focus in the “nature” category. This is not surprising, since the participants were all EMS teachers; most probably the impact on the economy would be uppermost on their minds, in contrast to the inclination of participants working in the disciplines of e.g. Science or Geography. Moreover, the sustainability debate has been criticised for its strong orientation towards economic advancement (Rauch, 2002). However, the interview process and open-ended nature of the questions allowed for deeper introspection and broader critical reflection about the conceptualisation of sustainability in general *and* with regard to the EMS discourse. Ultimately, a few respondents could make the connection between the environment, society, and sustainable development, and even then, the answers were sparsely articulated by one or two teachers.

The economic factors which impact on sustainable development were mostly expressed in terms of profit maximisation (Q5E53, Q7A7, Q7B15, Q8D48, Q8E59, Q11B8-11, Q13D7); foreign investment (Q9F62, Q5G68); increased productivity (Q9F72, Q5B16, Q10G67, Q11F101-103); job creation (Q5G72,

Q8G81, Q10A2, Q10B6, Q10C20, Q13E20), etc. Most of the responses in the economic category were fairly explicit and in many ways expressed in the apparent terminology for an EMS teacher. However, not all could make the connection to the interdependence of sustainability.

When asked about their views on sustainable growth (Question 5) and sustainable development (Question 6), most teachers equated development with economic growth by interchanging impact factors such as "skills development", "job creation", "looking at technology", "increased productivity", etc. In terms of economic growth (Question 10), more emphasis was placed on increasing production and improving the factors of production. There was an obvious connection made between sustainable growth, sustainable development and economic growth, although there was no indication or any inference to production levels within the limits of the ecosystem.

With regard to unsustainable business practices, the responses were varied. Instead of asking "How would you describe sustainable business practices?" the question was "How would you describe unsustainable business practices?" The inversion of the question was a good way to gauge whether there were any inconsistencies in the responses, and it also obliged teachers to reflect on the impediments of growth and development. Also, by including the word "practices", the emphasis was shifted to what businesses are likely to *do* that would render them unsustainable, as opposed to what *kind* of businesses are likely to be unsustainable. This question was not clearly understood by two teachers, even though in the pilot study there was no problem with its interpretation. After some clarification, but without leading the question, all the

teachers could identify at least one aspect which they regarded as an unsustainable business practice. Again, the responses were mostly given in terms of the economic impact, e.g. when a business is financially not viable, corruption, unethical business practices and low productivity. The respondents' thinking on this matter was fairly consistent with their responses to sustainable growth and sustainable development.

All the teachers felt that it was important that sustainable business practices should be part of the EMS curriculum and taught at school. Only one teacher felt that it should not be taught in Grade 9, specifically because of time constraints and the curriculum overload imposed by the Accounting component. Again, their comments mostly emanated from a business point of view: to teach sustainability in terms of profitability, to be ethical and to create work opportunities. An interesting comment was that sustainable business practices should be taught because "Any business face problems ... government is most probably going to implement policies that companies would most probably not be too happy with" (Q8B21-22). The teacher argued that learners should therefore be aware of these kinds of problems and know how to deal with it. The teacher then explained some of the creative techniques that businesses (at enterprise level) could apply in order to cope with challenges. These techniques are typical of the prescribed content in Business Studies in the FET-phase. The teacher could see the importance of teaching sustainable development in EMS, because it could assist with the progression from EMS to Business Studies, albeit purely from an economic/business point of view.

The aspects relating to sustainable lifestyles mostly referred to the social aspects. However, the few responses that related to the economic category were mostly linked to personal finance, e.g. financial independence and savings.

Globalisation was mostly seen as a precursor to economic growth, with the ultimate objectives being job creation, foreign investment, skills development and international trade. The teachers' views of the benefits of globalisation were consistent with the predominance of economic impacts in most of the preceding questions. Some of the responses included: higher quality as a result of greater competition, increased imports and exports, no barriers of trade, better technological innovation to increase productivity, access to competencies of other countries. Criticism of the Proudly South African Campaign and the fact that local manufacturing cannot compete with the global world were stated as some of the main disadvantages of globalisation (cf. Section 5.3.7.1). However, Teacher C sees globalisation as only benefiting the rich, whilst the poor are further impoverished by it (Q11C33-38). This is also the teacher who drives entrepreneurship at her school; she teaches at a pilot school located in a disadvantaged community and use entrepreneurship to address some of the challenges of an impoverished community. As discussed in Chapter 3, teaching practice is part of a school context or reality, particularly within a post-apartheid society. This may have also shaped how this teacher perceives growth and development as "... it's going to take years" suggesting that "... here in South Africa we are still very far" (Q6C25-31). Only one teacher (F) referred to the environment and how it is degraded as a result of economic growth (discussed in next category). There were no opinions on the impact of globalisation on the environment.

With regard to what it is that needs to be sustained (Q13), the responses were varied. They ranged from pointing out a particular sector (manufacturing) that needs to be sustained, to factors of production, e.g. entrepreneurs, infrastructure, human and natural resources. In some instances "natural resources" were implied within the environment category, whereas in other contexts it was implied as a factor of production, thereby pointing towards the "economy" category.

Environment: The responses relating to this category were very low, which in essence comprised the views of 3 respondents (D, F and G). There were no references to the impact on the environment with regard to sustainable growth. When asked *directly* to explain sustainable development (Q6), only two responses related to the environment. These comments could also be connected to social factors, e.g. Teacher F viewed development as changes in the living conditions, first linking it to the physical environment: "the focus more on infrastructure" (Q6F58), and then to "what the government sets in place" (Q6F59). It is quite interesting that teacher G, an experienced commerce teacher, knew that the environment is being compromised, saying that "We are running out of resources" (Q6G63), although the respondent, even after some probing by the researcher, did not know exactly why: "I wouldn't be able to tell you why we are running out" (Q6G70). Three out of the seven teachers offered no response related to the environment in any of the questions (Addendum C). Two of the teachers had 12 and 18 years' teaching experience respectively, whilst the other teacher had only six months' experience. It would appear that teaching experience does not really make a difference; however, further studies

are needed to establish if teaching experience does indeed play a role in the conceptualisation of sustainable development and EMS education.

Only one teacher referred to unsustainable business practices as the "misuse of our natural resources" (Q7D37) and regarded such practices as unethical (Q7D36). In the same way Teacher D saw sustainable business as being "responsible towards the planet" (Q8D53). This was also the only teacher who had brought together the triumvirate society, economy and environment by *directly* referring to the 3 P's: planet, people and profit (Q13D13) when answering the question: "What is it that needs to be sustained?" The same teacher also acknowledged that "There must be something for our descendants" (Q13D11), implying that the conservation of the environment is an important focus for sustainability. These were fairly consistent remarks, albeit to some extent a shallow understanding of sustainability. Concern for society and the environment was also evident in the responses of Teacher F with regard to sustainable lifestyles and economic growth. Teacher F asked critical questions about the disturbance of the ecosystem and at what cost (Q10F52); "development, at what cost" (Q9F88) and "not to let greed destroy that" (Q10F63). Teachers D and F were the only two teachers who could make connections to, and are concerned about the environment. Both teachers had more than 20 years' teaching experience and both had also been working with the Department of Education. Teacher D is currently involved in teacher training for orientation with regard to the CAPS document, while teacher F had been working as a subject advisor in another province prior to the introduction of Curriculum 2005. Their previous experience might have contributed to their better grasp of the depth and breadth of curriculum content.

With the exception of teachers D and F referred to above, the general impression is that the teachers have not really conceptualised sustainable development. Ultimately, the nature of business operations and how it relates to e.g. the behaviour of ecosystems, global climate change, displacement of communities, etc, were some of the issues which were omitted in their responses. The contrasting of issues such as "living within our means" or valuing local development as opposed to profit maximisation, consumerism and at what cost, were largely missing in the discussions, specifically with regard to the impact of globalisation. Most of the respondents viewed globalisation as advantageous for economic growth, but they did not see the link to the environment.

Society: References to the impact on society comprised 13% of the total responses. In identifying the various features of sustainable growth (Q5), there was no reference to the impact of sustained economic growth on the environment or its direct impact on society. This is important in the light of socio-economic factors such as poverty, quality of life, injustice, etc. which obviously impede the country's sustained growth. If one considers some of the communities where the schools are situated, one would expect an indication of how the teachers experience "growth" or the absence thereof, as teacher A puts it "... in their daily living" (Q5A5) and "... something that affects them here and now" (Q5C34). Teacher A and C are both at a disadvantaged school and the fact that both teachers are involved in driving entrepreneurship at their school could imply that they focus on the skills learners could use to address the direct challenges of poverty.

The impact on the society was expressed in the questions that followed, e.g. Q6. Teacher F, who focused on the weaknesses of the system (government) in question 5, (Q5F60) was the only respondent (one out of seven) who related sustainable development to societal impacts: "... education, health, poverty ...what the government sets in place" (Q6F53-59). The same applies to "infrastructure" (Q6F58), which in this context was interpreted as an environmental imperative to alleviate the societal problems alluded to earlier. This response came from the same teacher who had asked the critical questions discussed in the previous section, mentioning the disturbance of the ecosystem as a result of "greed" and "at what cost".

The impacts on society with regard to sustainable business practices mostly referred to the impact on the community when workers are exploited by businesses (Q8D44-50), as well as to ethical practices for both business and government (Q8F67) and the impact on people's living standards (Q8G82).

The socio-political aspects and emphasis on the role of the government were evident, which was not surprising, since South Africa is a highly politicised country, and economic growth and development issues inevitably filter down to socio-political issues. References to the societal factors and good governance were less explicit and often interpreted through inference, e.g.

- ... what the government sets in place (Q6F59);
- ... they would respond with answers like opening a liquor store or selling drugs (Q8G77); or
- ... in South Africa we have to change our mindsets (Q9F75), etc.

Whilst the connection between economic issues and social issues was evident, the environmental impacts generally remained elusive. Apart from the teachers' limited knowledge about sustainable development, this also has relevance for education in general, as well as for the learners' understanding of why certain things are happening the way they do, e.g. matters concerning climate change, emissions, effluents, waste management, etc. Learners may be directly or indirectly familiar with some of the contemporary issues such as poverty, unemployment, health risks in the workplace, etc., they do not necessarily understand its deeper manifestations.

5.4.1.3 Focus (Who for)

The idea of the "future" has been identified as an important aspect in the sustainability literature (Walshe, 2007:538; WCED, 1987:43), but it elicited a fairly insignificant response in this study. Only two responses reflected the importance of who should explicitly benefit from sustainable development, by referring to: "affects them here and now" (Q5C34) and "what are we leaving behind for our children".

5.4.1.4 Timescale

There was little direct reference to a timespan, but the main line of thought appeared to be that sustainable development is in essence a long-term endeavour, and that the pursuance of short-term gains at the expense of a long-term strategy for sustainability should be avoided. Teacher G explained: "... goal is to make money and he only thinks of the present" (G7G69).

5.4.1.5 Geo scale

This category refers to any geographical scale, whether it is local, global or place-specific. Sustainability was mostly expressed as something affecting the country or the community. Some teachers found it easier to explain issues of sustainable development by personalising the matter and linking it to the communities where they work. Often the direct focus was on South Africa as a country, thereby illustrating that sustainable development is a national issue.

5.4.1.6 Challenges

The complexity of the concept sustainable development is consistent with findings in the literature (cf. Daly, 1991; Bonnett, 1999; Scott and Gough, 2004; WCED, 1987 and others). In this study, one of the common challenges was the complexity of some of the concepts such as sustainable development or sustainable growth. Comments included: "very vague topic" (Q5B11) and "difficult topic" (Q5C26). The interchangeable nature of concepts such as sustainable growth and sustainable development was expressed as follows: "very much interchanged very easily" (Q6E43); "difference between economic growth and economic development ... I am not 100% sure myself" (Q10G64-65); and "a lot of different views on economic growth" (Q10E30). This has implications for teaching and learning in EMS and the manner in which the content is transferred, as one teacher stated that "this is difficult for me to explain" (Q11G105) when referring to teaching globalisation to the learners. The vagueness of concepts was evident in the manner in which some teachers articulated their responses. In most cases the articulations of economic concepts were explicit and references to society was evident, but environmental issues related to the economy remained blurred.

Other challenges were mostly expressed in terms of economic challenges and government's role to ensure good governance. Respondents, referred to "weaknesses in the system" (Q5C30); the "gap between rich and poor" Q5G82); "here in SA still very far" (Q6C31); "having a black government, but still a white economy" (Q11C34-36); etc. None of the challenges directly related to the environmental category.

5.4.2 Discussion of questions specific to sustainability

In the light of the coding list adopted from the literature, it was deemed necessary to focus on the questions which corresponded with those asked in the study by Walshe (2008). Whilst it was interesting to hear the teachers' understanding of economic growth and globalisation, the inclusion of these questions may have slanted the responses towards economic factors. It was therefore appropriate to analyse questions 5, 6, 7, 8 and 9 separately, and specifically the "nature" category. The following core concepts dealt explicitly with sustainable development:

- Q5: Sustainable growth;
- Q6: Sustainable development;
- Q7: Unsustainable business practices;
- Q9: Sustainable lifestyles; and
- Q8 : Importance of sustainable business practices.

The total number of responses for these questions was 123; the percentage of mentions per category is presented in Figure 5.9.

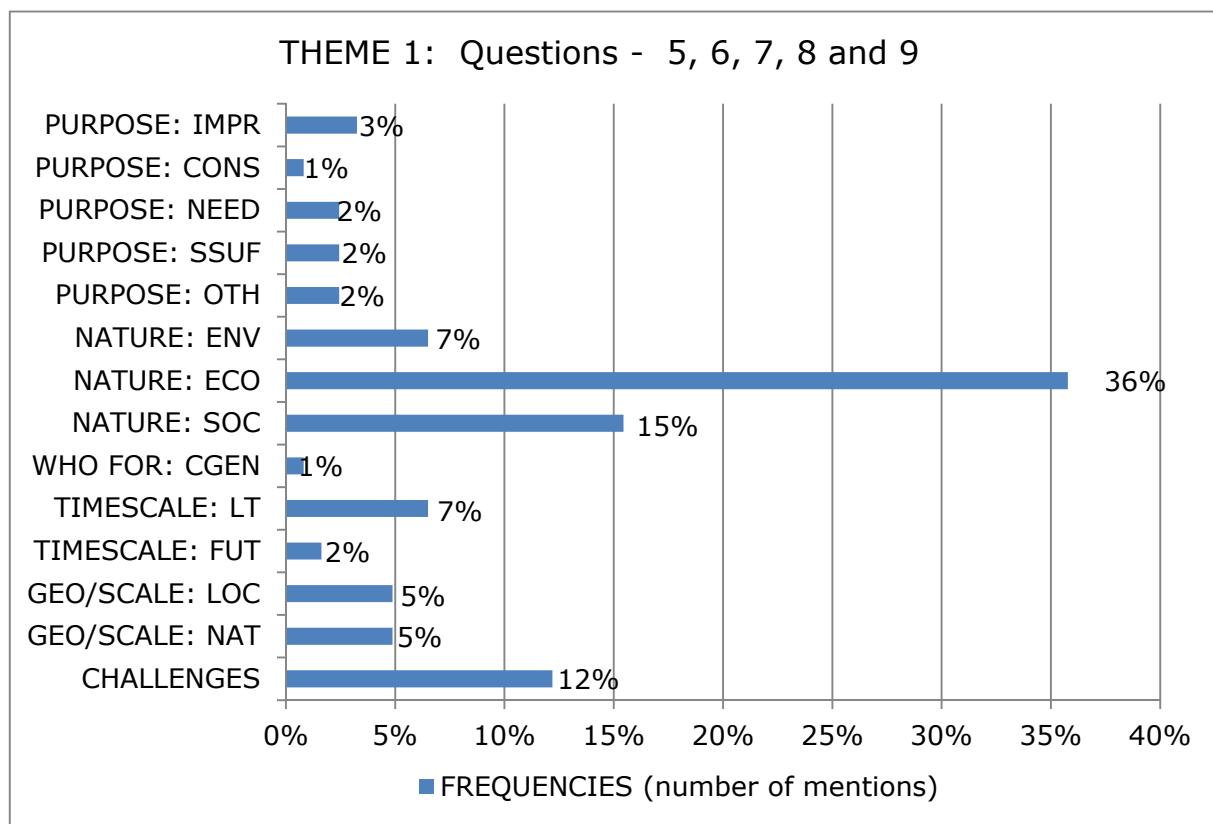


Figure 5.9: Theme 1 – Questions specific to sustainability. Total frequencies (number of mentions)

5.4.2.1 Nature

The predominance of the economic category (36%) was also evident when only questions 5, 6, 7, 8 and 9 were analysed. The society category was the second highest and the responses relating to the environment amounted to only 7% of all the responses.

Figure 5.8 presents a holistic illustration of the responses of the “nature” category pertaining to all of the questions. Even though responses to economic growth and globalisation are indeed higher for the economic factors, this pattern is also evident in the other questions.

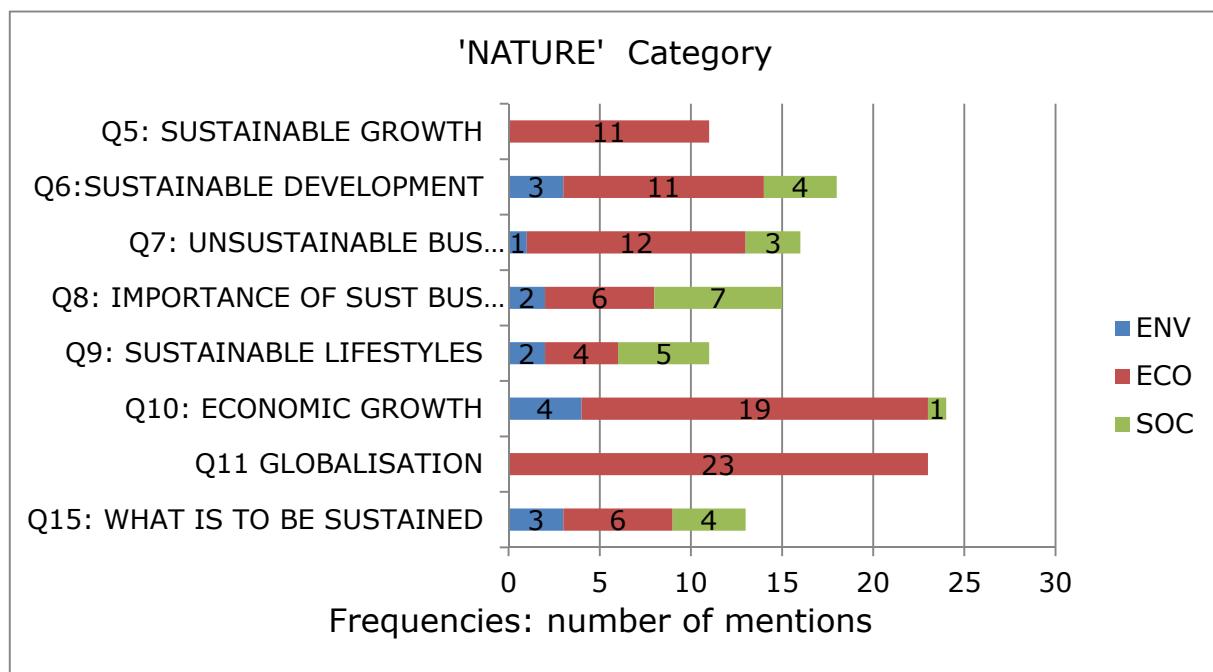


Figure 5.10: Theme 1 – “Nature” category”. Total frequencies (number of mentions)

This is consistent with the previous analysis where questions about sustainable growth, economic growth, globalisation and what it is that needs to be sustained were included. However, this analysis does not corroborate with the studies of Walshe (2007), where the highest frequency of mentions had a bearing on the environment, followed by the economy and then society. In the case studies of Summers and Childs (2007) and Summers et al. (2004) the results also showed the environment category as dominant. One must take into account, though, that their analyses were based on a questionnaire (cf. Summers et al., 2004; Summers and Childs, 2007), interviews and concept maps (cf. Walshe, 2008), and that the context was different (the studies were conducted amongst student teachers of Science and Geography). Also, in their analyses, the frequency of occurrence within a specific category was only counted once, irrespective of the variation in the elements within that category. In this study, the elements within the category were also taken into account, as explained in Section 5.4 of this

chapter. Even though there are differences as to how this study was conducted compared to the abovementioned, the broad categorisation that was ultimately applied, was the same.

5.5 CONCLUDING REMARKS

This chapter dealt with the analysis of Theme 1: Conceptualisation of sustainable development. First an overview of the analysis process was presented. Thereafter, the categorisation data of the eight interview questions were individually presented and illustrated. The last section of this chapter comprised the consolidation of Theme 1 where the findings of the interview questions were analysed and discussed.

An important finding of this analysis is that EMS teachers' understanding of sustainable development is mostly in terms of the economic factors of sustainable development. This could imply that the full scope and meaning of sustainable development remains limited. Furthermore, there is no evidence to suggest that experienced EMS teachers are more likely to have a deeper understanding of sustainable development than inexperienced teachers. There might therefore be a need to broaden conceptions of sustainable development in EMS education.

Theme 2, consisting of the analysis of another set of interview questions and written explanations pertaining specifically to the EMS curriculum and sustainable development, will be presented in the next chapter (Chapter 6). To consolidate the analysis and provide a synthesis to an EMS-ESD paradigm, a detailed discussion of Themes 1 and 2 is provided in Chapter 7.

CHAPTER SIX

DATA PRESENTATION AND ANALYSIS

THEME 2: THE EMS CURRICULUM AND SUSTAINABLE DEVELOPMENT

6.1 INTRODUCTION

In the previous chapter, Theme 1: Conceptualisation of sustainable development was analysed and discussed. Seven questions related to the construct sustainable development were categorised according to the purpose, nature, focus, timescale, geographical level and challenges of sustainable development. A step-by-step account was given of how the coding process unfolded, followed by the presentation of the data of each question. Thereafter, a consolidated analysis and discussion of the major findings were presented. The “nature” category formed the basis of the analysis, consisting of a discussion of how certain imperatives related to sustainable development impacted on the economy, society and environment. In Theme 1 the majority of the responses were related to the economy, and thereafter to the society and environmental categories respectively.

In this chapter, Theme 2 is approached with the aim of gaining some understanding of the following: What is the teachers’ understanding of Learning Outcome 2 (LO2): Sustainable Growth and Development in EMS? Also, which other issues related to these understanding(s) are important in EMS-education?

The EMS curriculum orientation programme (cf. Chapter 1) stipulates how teachers can be acquainted with LO2. The objective of the EMS learning area is to prepare learners to participate in an economically complex society where productivity, social justice and a healthy environment are key considerations.

The aim of this theme was therefore to establish how teachers:

- understand Learning Outcome 2: Sustainable Growth and Development in the EMS curriculum (Question 1);
- consider the specific aspects related to this learning outcome (Question 2);
- consider the teaching approaches in order to best support learning about sustainable development (Question 3 and 4);
- clarify their ideas about the weighting of the learning outcomes according to the EMS curriculum (Question 12); and
- interpret the new EMS curriculum, i.e. the National Curriculum and Assessment Policy Statement (hereafter referred to as CAPS) for implementation in 2012.

In order to respond to these issues, it was important to do the analysis systematically. Theme 2 was therefore divided into two parts: in **Part 1**: the focus was on the EMS curriculum and sustainable development and therefore dealt with questions directly related to the conceptualisation of LO2, which are the following:

- the understanding of Learning Outcomes 2 (LO2): Sustainable Growth and Development (Question 1); and
- curriculum aspects of LO2 (Question 2).

For Questions 1 and 2, content analysis was applied. In this instance, "defining" LO2 and extracting core concepts (Questions 1 and 2) will be analysed by using the EMS curriculum.

Understanding the nature and purpose of sustainable development according to the EMS curriculum was the main focus of this theme. However, in order to obtain a holistic understanding of the meaning and scope of this LO, issues about teaching practice and the views of two subject advisors were also taken into account. Therefore, **Part 2** dealt with the following issues:

- teaching approaches (Question 3);
- teaching resources (Question 4);
- the weighting of LOs in the current EMS curriculum (Question 12);
- the new EMS curriculum: CAPS (subject-object interviews); and
- responses from Curriculum Advisors (CAs) (interviews with CAs).

Since EMS is a relatively “new” area, there was no coding template from the literature which could be applied for Part 2. The analysis of Part 2 was done question by question, summarising the participants’ most common responses in search of meaning which seeks to “perceive, describe, analyse, and interpret features of a specific situation or context, preserving its complexity and communicating the perspectives of the actual participants” (Borko et al, 2008:1025). In order to make this analysis process manageable, three steps were followed, as suggested by Ary et al. (2002:465):

- firstly, organising the data involved the reduction of data. In this step certain aspects of the text were highlighted, providing the researcher with a particular view of the text;
- secondly, the trends and patterns of the words or constructs were summarised to ascertain the connections or relationships which could form; and
- thirdly, the interpretation was done by extracting meaning from the data. In this way the importance of the extracted meaning was indicated: what was important, why it was important and how and why the interconnections could be established.

The data collected for the subject-object interviews consisted of written comments by the teachers about the CAPS document (cf. Addendum J). The written comments were also interpreted by following the three steps explained above. The use of a variety of methods (a minimum of two) is promoted by Henning et al. (2010), since it would ensure that the phenomenon is studied from various angles. The objective was to use these understandings to underscore the relevance, importance and applicability of the findings which emerged from Theme 1: Sustainable Development in general, and Theme 2: the EMS Curriculum in particular.

6.2 PART 1: DATA PRESENTATION – THE EMS CURRICULUM AND SUSTAINABLE DEVELOPMENT

The rationale for the EMS curriculum in the GET-band and the scope and significance of LO2: Sustainable Growth and Development were discussed in Chapter 3. In an attempt to create an awareness of the past, the EMS curriculum has a strong “reconstruction” undertone, and its unique feature is stated as:

This feature develops a critical approach to redress. It takes the view that a “balanced” economy is desirable. Here a “balanced” economy means one which aims to achieve sustainable growth, reduce poverty and distribute wealth fairly, while still pursuing the principles of an open market and profitability. It promotes respect for the environment, human rights and responsibilities (DoE, 2002a:5).

The key EMS policy documents and literature reviewed for this theme were curriculum documentation, e.g. the NCS, Assessment Guidelines, NCS: Orientation Programme and the Review committee’s comments. In order to

establish the teachers' understanding of LO2, and more specifically for Grade 9, the above extracts from the curriculum formed the basis of the categories applied in this theme. Also, there appears to be no previous studies which dealt with this specific EMS content and where a coding template could be applied or adapted to this study. For this reason, the approach of Catling (2001:366) was used as a guideline to establish the categories applicable to EMS education. Even though the context of the study of Catling was different, since it dealt with the main elements of the English Primary Geography curriculum, it is appropriate for this study, because the coding was developed based on the curriculum of a subject/learning area.

The curriculum aspects which EMS teachers need to concentrate on in order for learners to demonstrate an understanding of sustainable growth, reconstruction and development, are:

- the National budget; regional and international agreements that can be used to facilitate sustainable growth and development;
- the successes and shortcomings of the RDP;
- the role of savings and investments in economic prosperity and growth; and
- productivity and its effects on economic prosperity, growth and global competition (DoE, 2002a:39)

The EMS curriculum content specific to LO2 was extracted from curriculum documents and certain codes were assigned. Some of the codes and categories could be aligned to those in Theme 1 (Chapter 5), except for code "REDR", which was created because it refers to "critical approach to redress", a key focus within this LO. In Theme 1 (Chapter 5) the categories used had been developed in previous studies based on the respondents' understanding of the various features

or units of meaning of sustainable development. With regard to the allocation of codes according to the EMS curriculum (Theme 2), the process unfolded as follows:

- the unique features and nature of Learning Outcome 2 (LO2) were listed according to the EMS curriculum;
- the specific units of meaning were listed and coded: units of meaning refer to the importance attached to a construct (cf. Table 6.1); and
- all the codes could be aligned to specific codes in Theme 1, except one code, "REDR", which refers to "redress", and more specifically, the Reconstruction and Development (RDP) policy which was part of post-apartheid economic restructuring discussed in Chapter 2. The socio-economic inequalities of the past *and* present as a result of the South African apartheid system, is a key focus of sustainable growth and development in the EMS curriculum and it was therefore important to code it separately;

Table 6.1: EMS Learning Outcome 2 – Grade 9

The core aspects of EMS: LO2 – Sustainable Growth and Development	Units of meaning of EMS: LO2 – sustainable growth and development	Code
Unique feature of this learning outcome – [what it is/definition] (DoE, 2002:5)	<ul style="list-style-type: none"> • critical approach to redress • successes and shortcomings of the RDP • balanced economy is desirable, reduce poverty • distribute wealth fairly • pursuing the principles of an open market and profitability • it promotes respect for the environment • human rights and responsibilities 	REDR REDR ECO REDR ECO ENV SOC
LO2 Context/Nature of sustainable growth and development (DoEa, p33)	<ul style="list-style-type: none"> • inequalities of the past and present • extremes of poverty and wealth • conventional socio-economic policies alone inadequate • other innovations can also be explored • development of small, medium and micro enterprises (SMMEs) in production • workable alternatives in education, health and other social services • values and attitudes within civil society and government • actions, processes and structures that advance sustainable reconstruction • development in the national economy 	REDR SOC IMPR IMPR ECO SOC SOC IMPR GEO SCALE

After a close inspection of the codes that transpired from Table 6.1, three broad categories emerged which could be aligned to the categories in Theme 1 (Chapter 5), i.e. Purpose, Nature and Geo scale. In this instance the "Purpose" of LO2 is for redress (REDR) and improvement of the economy (IMPR). The "Nature" of sustainable growth and development could be established as the economic (ECO); societal (SOC) and environmental (ENV) factors. The "Geo scale" refers to any geographical scale to which Sustainable Growth and Development applies, e.g. the national (South African) economy (NAT). It was decided to use a code for local environments (LOC), even though the curriculum for the Senior Phase does not explicitly refer to development in communities or

local environments. Local environments were a focus in the intermediate phase in an attempt to help learners identify "the local community's efforts in fighting poverty, e.g. RDP, urban renewal and rural development projects" (DoE, 2002a:24). Even though EMS in the Intermediate Phase will be excluded from the curriculum in 2012, the emphasis on local environments is still important and is inferred in the Senior Phase where RDP forms a key focus. Table 6.2 illustrates the codes with the emergent categories;

Table 6. 2 Codes with emergent categories

SUMMARY: WHAT SUSTAINABLE GROWTH AND DEVELOPMENT IS ABOUT ACCORDING TO THE EMS CURRICULUM	
REDR	PURPOSE
<ul style="list-style-type: none"> • critical approach to redress • successes and shortcomings of the RDP • distribute wealth fairly • inequalities of the past and present 	
IMPR	
<ul style="list-style-type: none"> • conventional socio-economic policies alone inadequate, • other innovations can also be explored • actions, processes and structures that advance sustainable reconstruction 	
ENV	NATURE
<ul style="list-style-type: none"> • it promotes respect for the environment 	
ECO	
<ul style="list-style-type: none"> • balanced economy is desirable • pursuing the principles of an open market and profitability • market and profitability • development of SMME in production, 	
SOC	
<ul style="list-style-type: none"> • reduce poverty • respect for human rights and responsibilities • workable alternatives in education, health and other social services • values and attitudes within civil society and government 	
NAT	GEO SCALE
<ul style="list-style-type: none"> • development in the national economy 	
LOC	
<ul style="list-style-type: none"> • development in communities 	

Once the codes and categories of the EMS curriculum were established, the interview transcripts of the questions applicable to Theme 2 were carefully and repeatedly read, and thereafter the appropriate codes assigned (cf. Addendum D).

The first step in the coding process was to establish the aspects and components of the curriculum which are pertinent to LO2. Once the curriculum components were identified and codes were assigned, it became evident that some of the codes in Theme 1 applied here as well, e.g. IMPR, ENV, ECO SOC, NAT and LOC. (cf. Table 6.2).

In the next section, a step-by-step presentation of the data referring to the applicable interview questions is provided. The data of Part 1 and Part 2 will first be presented, followed by a consolidated summary at the end of this chapter.

6.2.1 Understanding of Learning Outcome 2: Sustainable Growth and Development (Question 1)

This question was asked to establish how teachers would “define” sustainable growth and development. This was similar to what Catling (2001:365) did when students were asked to explain to a stranger what Geography was about. Catling’s motivation for using written definitions instead of interviews was because of practical reasons; a large set of data could be acquired within a short space of time. In this study, all the questions formed part of the interview process.

The codes are based on the various aspects of what LO2 is all about in order to assist with the analysis (cf. Table 6.2). The following coding rules applied:

- do not code “growth”;
- do not code “development”; and
- do not code “sustainable” or “to be sustained”.

The following is a graphical representation (Figure 6.1) of the frequencies of responses from the participants with regard to Question 1:

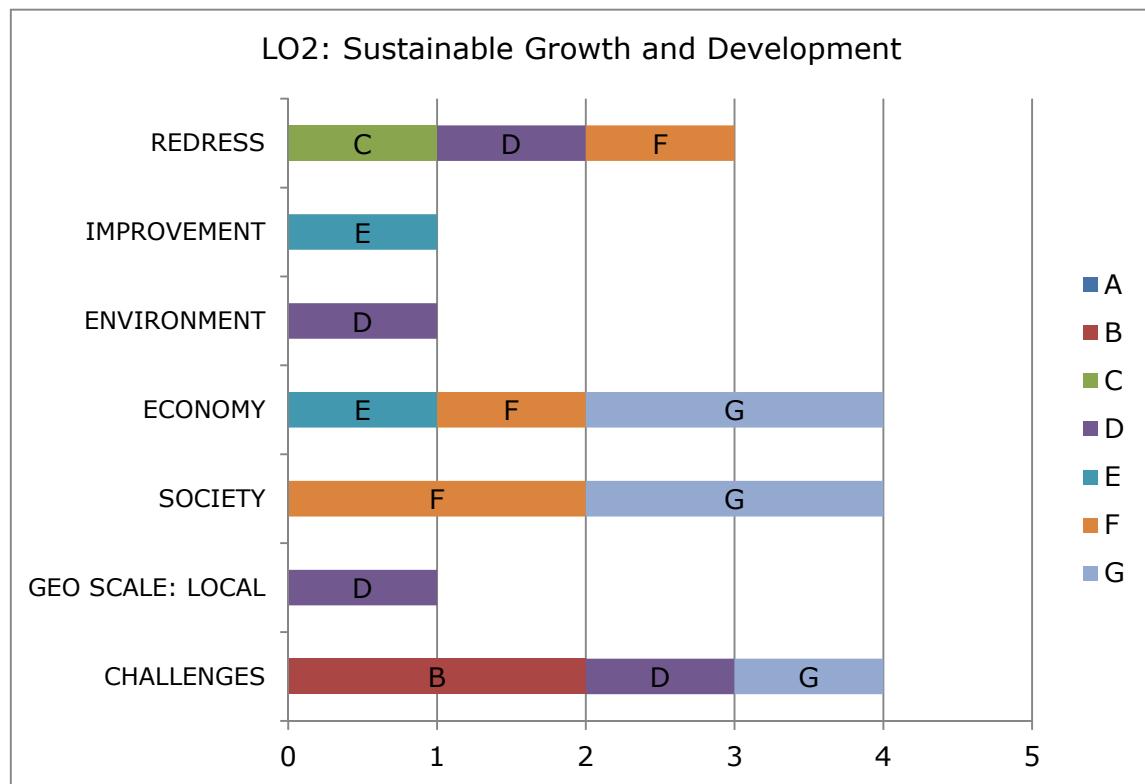


Figure 6.1: Responses to Question 1 – Frequencies (number of mentions)

The responses to the understanding of LO2 were varied:

6.2.1.1 Redress

The aspect of redress was important in this LO, given South Africa's history of apartheid and inequality. Three teachers implied redress by mentioning:

- ... about the RDP and how that started after 1994 (C15);
- ... RDP, which means that the government really tried to fix what was wrong in the past (D35); and
- ... uplifting them because of the apartheid where people lost a lot of their dignity, self-respect (F51-52).

6.2.1.2 Improvement

One teacher referred to the purpose of sustainable growth and development as bringing to the fore "entrepreneurs, bigger businesses and more businesses, more opportunities" (E42).

6.2.1.3 Economy

In defining what sustainable growth and development is, three teachers expressed it as creating employment, increased productivity and development in terms of infrastructure:

- ... to grow in the economy.... making it workable for people to sustain themselves (E38-40);
- ... infrastructure, railways, and nuclear power stations (F50);
- ... create work opportunities (G57); and
- ... the more you produce (G60).

6.2.1.4 Society

The impact on society plays a role according to three teachers:

- ... poverty and health and education and all those things and how it's affecting them (C13);

- ... the living standards of the people, looking at socio-economic issues like poverty, HIV, people who lost their dignity, don't have electricity and uplifting that (F47-48);
- ... training for a sustainable income because lacking where they are coming from (F53-54); and
- ... to reduce poverty (G64).

6.2.1.5 Environment

Only one teacher referred to the environment by stating that raw materials should not be wasted (D34).

6.2.1.6 Geo scale: Local

Two teachers felt that sustainable growth and development must be seen from the community's point of view:

- ... we are looking at that from our community's perspective (C12);
- ... in the community or for other people (G58)

6.2.1.7 Challenges

The most common challenge was the complexity of this LO and how to explain it to the learners. These were the comments:

- ... it's a very difficult and challenging outcome to explain to learners (B4)
- ... for me, even as a teacher it's a challenging concept (B8);
- ... it is something that should get more time and attention (D37); and
- ... for me it is quite a difficult concept to explain to the learners (G55).

6.2.2 Curriculum concepts specific to LO2 (Question 2)

LO2 contains specific concepts which shape the curriculum content (DoE, 2002a:39; DoE, page 62). These are listed in Table 6.3.

Table 6.3: Specific concepts of EMS – Learning Outcome 2: Grade 9

Sustainable Growth and Development concepts (DoE, 2002a:39; DoE, p.62)
<ul style="list-style-type: none"> • concept of productivity, globalisation, economic growth • productivity and its effects on economic growth and global competition • effects of globalisation on SA economy • concept of RDP • reasons for RDP • role of RDP in the economy • differentiating shortcomings from strengths of RDP • regional and international agreements • economic growth and development policy of South Africa • SA National Budget • concepts of savings • concept of investment • concept of economic growth • concept of prosperity • relationships of savings and economic growth • effects of savings and investment on economic growth

The responses to this question are illustrated in Figure 6.2.

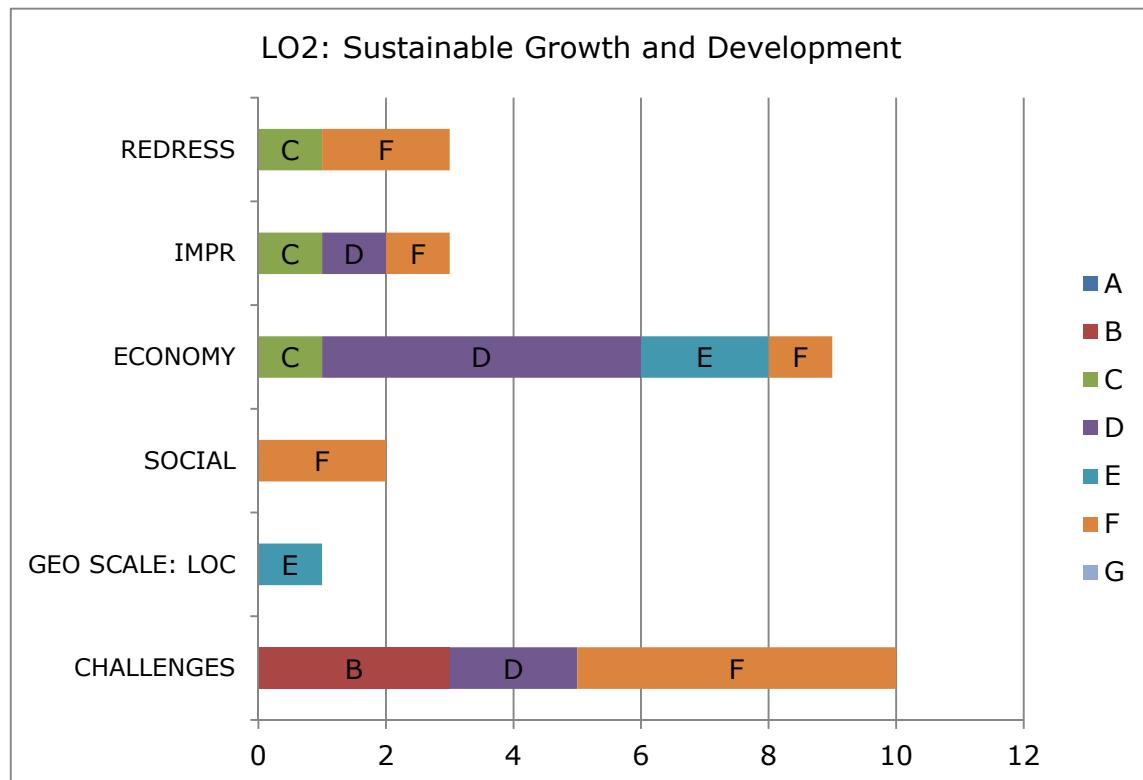


Figure 6.2: Responses to Question 2: Frequencies (number of mentions)

6.2.2.1 Redress

Reference to RDP was the most common concept (C21, F87, F152), together with the fact that learners must know what happened during apartheid (F101).

6.2.2.2 Improvement

The National budget (C18, D35 and F148) was seen as a means to spread the income more equitably so that the quality of life of more people can be improved.

6.2.2.3 Economic

The following key concepts for economic sustainability were expressed:

- ... globalisation, foreign marketing, international marketing (C24);
- ... business functions ...saving and demand en supply (D29);
- ... history of banks and managing, then planning and organizing (D30);
- ... entrepreneurship (C31, E64);
- ... we look at micro businesses (E68);
- ... personal budgets (D33);
- ... different sectors and business functions (D54); and
- ... infrastructure (F97).

6.2.2.4 Society

Only one teacher focused on the society by referring to "social grounds ... poverty, I look at electricity ... basic needs that are not met, sanitation..." (F107) and "what the government is granting social grants on" (F112).

6.2.2.5 Geo scale: Local

Only one teacher made reference to the community (E69).

6.2.2.6 Challenges

Two teachers could not state what the specific concepts within this learning outcome were: "I cannot remember the specific aspects of LO2"; "I'm not able to answer that question" (G159-160) and "Because I concentrate so much on the seniors I have no idea" (D27). Teacher D was also very critical about what is being taught within this learning outcome and sees the single focus of entrepreneurship as misplaced within EMS (D32).

Three teachers referred to the complexity of the concept sustainable growth and development. This presented a number of challenges in identifying the important concepts:

- ... it's not clearly stipulated; it's not clearly outlined in terms of what you need to do in the classroom (B6-7);
- ... it means it's such a vague topic: growth and development in terms of what's going on in the world of business or in the world of the economy (B7-9); and
- ... I don't think that even the outcomes and even the guidelines indicates as to how far you need to go with this particular outcome (B13-15).

The failures of RDP and the business sector were referred to as:

- ... it (RDP) is not happening because of mismanagement (F88-89);
- ... ignorance on the part of the government (F119-123);
- ... businesses are still ignorant (F126); and
- ... social responsibility of the business sector (F125).

Irrespective of the failures of RDP, development was still considered very necessary, specifically with regard to addressing socio-economic issues (F123).

The particular school context/profile can also present certain challenges which complicate the teachers' intentions to create an awareness of sustainability amongst the learners: "because the children in our school have money and they have no idea of how other people live" (F155-156). This could imply that these learners are spendthrift or wasteful, which could relate to a lack of consciousness of sustainable lifestyles discussed in Theme 1.

6.3 PART 2: DATA PRESENTATION – EMS TEACHING PRACTICE

The analysis of EMS teaching practice comprises Question 3: Teaching approaches, and Question 4: Teaching resources. The main aim of Part 2 was to consider the teaching approaches which best supported the teachers' objectives about sustainable development. As discussed earlier, the data will be presented as a summary of the most common responses:

6.3.1 Teaching approaches (Question 3)

6.3.1.1 Encourage learners' participation

EMS is viewed as a practical subject and using practical examples are particularly relevant in the EMS classroom (A1, B17, C36, D66, E92, and F122). Teachers referred to the active participation of learners (C34, D64, E90, and F126) and to bringing "real-life" situations into the classroom. This was stated as:

- ... I bring it back to them, to the reality (A8);
- ... learners had to write to the minister of housing (C38);
- ... bring some comedy and laughter into the classroom (C47); and
- ... it is like they learn better, it allows them to make associations and they learn more efficiently (D84).

6.3.1.2 Teaching towards Assessment Standards

Only teacher F indicated that it is important to "...cover all the LOs and assessment standards" (F132), and added "I look at the theory and then I check my assessment standards" (F107).

6.3.2 Teaching resources (Question 4)

Only one teacher indicated that he used a prescribed textbook. Where a textbook was prescribed, some of the teachers found it restrictive:

... we have a prescribed textbook, which I haven't really used this year because it doesn't provide the learner with enough information about certain topics (G136); and
... I use very little of the textbooks (F106).

The rest of the teachers relied on notes which they compiled themselves from a variety of sources. Two teachers have direct access to the internet as well as to an interactive whiteboard in the classroom. These two teachers come from a disadvantaged school which had become a pilot school (the profiles of the schools were discussed in Chapter 5.) They regarded the internet as the biggest resource for this LO:

... specific topic the internet is basically the biggest resource that we use (C62); and
... notes, projector, internet, most of the time the internet (A8-9).

6.3.3 Weighting of LO2 (Question 12)

Here the teachers were requested to give their views about the ratio of content that should be covered for the various learning outcomes, i.e. LO1=20%;

LO2=15%; LO3=30%; LO4=35%. As stated earlier, this question was analysed by summarising the most common responses:

6.3.3.1 Allocation of LO2 in terms of content, time and assessment

Most of the teachers felt that the allocation of 15% or more was justified; however, none of them adhered to it. Three participants (A, D and F) felt that the 15% allocated to LO2 was not enough. Even though LO2 currently takes up less than 15% in terms of curriculum delivery, they felt that knowledge about sustainability is important and should be given more emphasis. This is reflected as follows:

- ... I would say it's a bit little I would say, but in a way it's also giving only a drop of what is important... (A2-3);
- ... So no, I wouldn't just make it 15 %, I would have made the Accounting less especially if you go further in Business Studies, sustainability is important (D53); and
- ... Your whole Business Studies subject is based on socio-economic, so why would that just be 15%? (F101-102).

Only one participant (B) felt that the allocation was sufficient, even though only 5% or less is spent on it, and more time is spent on Accounting:

... I think that its 15% provision is sufficient, but again I must be honest in saying that I don't even think we can do the 15 % in explaining LO2 we most probably only give 5%, if it's not less, for this particular learning outcome it is simply because of the fact that we need to spend more time in explaining the accounting part of EMS (B11-17).

While all of the schools in this study spent more time on Accounting (LO3) in Grade 9, only three participants felt that it was justified, and that Accounting should enjoy more attention, expressing their views as follows:

... we would for example spend very little time on things we view as not so important as other things that we feel are very important. For example in LO3 we spend maybe 70% of our time and only 30% on all the other three LOs because we feel the Accounting part is extremely needed ... I do however feel that we need to spend more time on LO3 and on LO4, entrepreneurship. There is a need for that, but not at the expense of Accounting and that is what happens now (E82-91).

6.3.3.2 Progression of LO2 from Grade 9 to Grade 10

Based on Question 3 regarding the allocation of the different learning outcomes, all the teachers viewed progression as important, specifically for LO3, i.e. the Accounting component, but they had different views about the progression of the LO2 content from Grade 9 to Grade 10.

In informal conversations many teachers admitted that they had never really looked at the weighting of the LO. Teacher D viewed the content of LO2 as important for progression to the FET-level and stated the following:

... This content has really been neglected and it is so important, because so much of this LO that I do in Gr. 10, 11 and 12 must have started in Gr. 8 and 9. I am really ashamed as I sit here, I only realise this now (D69-71).

Participant C strongly felt that LO2 should be excluded altogether in Grade 9:

... I would take that 15% and put it with LO3 and I would take that away. I don't see why the learners should be taught that. I would take it more down to Gr. 7 and 8, but in Gr. 9 when the learners need to make choices for Gr. 10, for their subject choice that is an unnecessary LO there (C33-37);

... For me as a Business Studies and Economics specialist, I've got no problem in terms of when pupils come to me from Gr. 9 to Gr. 10, in explaining it to them (B29-30).

6.3.4 The new EMS curriculum – CAPS document

The background to the CAPS was given in Chapter 1. It seemed appropriate to include participants' comments in this study, since it affected them directly; seeing that the envisaged date of implementation of CAPS is 2012. An e-mail was sent to all the participants (Addendum F), with the CAPS document as an attachment, requesting their comments specifically with regard to the "exclusion" of Sustainable Growth and Development as a separate topic in CAPS.

Table 6.4 shows the broad topics of the NCS and CAPS for EMS education.

Table 6.4: Broad topics of NCS and CAPS

NCS	CAPS
Four Learning Outcomes:	Three topics:
1. The economic cycle (20%)	1. The economy (30%)
2. Sustainable Growth and Development (15%)	2. Financial literacy (43%)
3. Financial skills (30%)	3. Entrepreneurship (27%)
4. Entrepreneurship (35%)	

Many of the curriculum content of LO2 of the NCS was however, integrated in the CAPS document. Each main topic has various sub-topics which are outlined in Table 6.5:

Table 6.5: Economic and Management Sciences Topics (DoE, 2010:6)

Topic	Sub-topics/Concepts
The economy	1. History of money 2. Needs and wants 3. Goods and services 4. Poverty 5. The production process 6. Government 7. The National Budget 8. Standard of living 9. Markets 10. Economic systems 11. The circular flow 12. Price theory 13. Trade unions
Financial literacy	1. Savings 2. Budgets 3. Income and expenditure 4. Accounting concepts 5. Accounting cycle 6. Source documents 7. Financial management and keeping records
Entrepreneurship	1. Entrepreneurship skills and knowledge 2. Businesses 3. Factors of production 4. Forms of ownership 5. Sectors of economy 6. Levels and functions of management 7. Functions of a business 8. Business plan

Even though Sustainable Growth and Development is not stated explicitly as topic in the CAPS, it is mentioned in the overview of what learners can expect to study in EMS (DoE, 2010:7). This refers to:

- how to achieve sustainable growth, reduce poverty and distribute wealth fairly;
- while profitability is still being pursued;
- the role of savings in sustainable economic growth and development; and
- the importance of using resources sustainably, effectively and efficiently.

6.3.4.1 Participants' perspectives of the CAPS document

The question with regard to the CAPS document was directed at teachers' views about the "exclusion" of Sustainable Growth and Development as a specified

topic. Participant A did not respond to the e-mail. The following is a summary of the responses (cf. Addendum J):

Participant B felt that the part on trade unions should be replaced with real South African-related socio-economic issues. Social responsibility and the link with sustainable use of resources should be a focus of the curriculum.

Participant C did not have a problem with Sustainable Growth and Development being excluded, since she starts with Grade 9 EMS concepts in grade 10 Economics anyway. She was, however, concerned about the increase in workload for the Accounting part.

Participant D was concerned about the “sequencing” of the content; economic concepts should be introduced first, before introducing entrepreneurship. South Africa’s past is important and the post-apartheid government’s attempts at redress should be included in the curriculum. Furthermore, savings and investment should be seen as part of sustainability, specifically the New Credit Act (NCA). However, the latter now resorts under Accounting in the CAPS. Teacher D felt that the detail and theoretical background of the NCA is just as crucial, since learners must know the importance of saving.

Participant E welcomed the increase in the weighting of the financial literacy part, in contrast to Participant C, who suggested that the part on trade unions should be replaced with Sustainable Growth and Development. He argues that “there are more skills to be transferred under the topic of Sustainable Growth and

Development than under trade unions”, e.g. the eradication of poverty, the management of waste, etc.

Participant F felt that the economics component is “watered-down” because more emphasis is placed on Accounting. “Sustainable Growth and Development and the socio-economic issues such as unemployment, crime, corruption, piracy, etc. form the basis of SA’s economic problems, because it hinders sustainable growth and development; this seems to be neglected in the curriculum.” In addition, the section on trade unions is misplaced in the CAPS.

Participant G wanted the content of Sustainable Growth and Development to remain in CAPS. He admitted, however, that the importance of this learning outcome was often neglected and it was only since this study that he started to “look critically at these very important issues” (cf. Addendum H). This statement is of particular significance, since it highlights the impact that research can have on the pedagogical process. In this instance the research process added value by eliciting awareness to issues which would otherwise have been overlooked or even disregarded.

6.3.5 Perspectives of EMS Curriculum Advisors (CA)

The interviews with the CAs were undertaken with the aim of acquiring an enhanced understanding of information given by the teachers. As discussed in Chapter 1 there are various challenges with regard to EMS teaching and learning and to LO2 specifically. For this reason it was appropriate to obtain the views of two EMS Curriculum Advisors (CAs) about their experiences of dealing with EMS teachers, specifically regarding the curriculum aspects of LO2. The CAs will be

referred to as CA1 and CA2 in this discussion; their profiles were discussed in Chapter 5. As an indication of specific texts in the transcripts, they are referenced as e.g. CA1:297 (Curriculum Advisor 1, page 297). Part of the role of the CA is to provide support to teachers, facilitate training and develop material to assist with the conceptualisation of the content. Semi-structured interviews were conducted with the two CAs (cf. Addendum I); the interview of CA2 was conducted and transcribed in Afrikaans and translated for the purposes of this discussion. The following is a summary of their responses regarding the common issues:

6.3.5.1 Learning Outcome 2: Sustainable Growth is complex to teach
CA1 is of the opinion that teachers are struggling to teach the concepts, because they do not understand and interrogate the learning material sufficiently. Also, even if the content of many of the textbooks is limited, this LO cannot be taught exclusively from of a textbook (CA1:297). Furthermore, teachers do not share ideas which could allow them to find common ground and help them make the links between the concepts (CA1:298). One of these links is the real-life context of the learners, expressed as:

Especially when you think in terms of the context and realities that you have in front of you, with regard to the type of child you have in your classroom and the facilities that your school has. You are looking at a township school versus a school that has all the facilities (CA1:298).

On the other hand, CA1 admits that “little training, if any, was done for LO2”. Instead, the focus was on Entrepreneurship (LO4) and Accounting (LO3). CA1 and CA2 felt that generic training (administrative requirements, work schedules,

lesson plans, etc.) is of no real value to EMS teachers who are struggling with content issues, e.g. concepts related to the economic cycle:

... the brief of generic training or orientation as I prefer to call it, there is little we can do other than classroom support. I am hoping that they could look more in detail into teaching concepts and so that when we have to do orientation that we rather focus on conceptual understanding and give teachers the resources and possible teaching strategies as opposed to generic training, because that will make more sense (CA1:299).

The orientation sessions facilitated by CAs for the teachers are inadequate and do not make provision for content (CA1:300; CA2:304). Most EMS teachers are not competent to teach the concepts mentioned in LO2, such as productivity, savings, economic growth, sustainable development, etc., because they do not have the appropriate qualifications or proper training in these topics (CA2:304).

In contrast to teacher C who felt that LO2 should not be covered in Grade 9, but rather in detail in Grade 8, CA1 felt that LO2 should have been covered in more detail in Grade 9 and less in Grade 8, "... because I think the learners are a bit too young in Grade 8 to really understand that we were looking at economic growth and what that is actually" (CA1:297). Whilst CA1 felt that LO2 is completely relevant in Grade 9, the remark was made that the content, however, left little room for flexibility and should not have an almost single focus such as the RDP. On the other hand, CA2 holds the view that redress was pivotal for the curriculum, because the majority of the population was deprived of a quality of life, while redress is in accordance with the Constitution (CA2:303).

Another challenge is that teachers appeared to be uncertain about the amount of detail that learners should be handling (CA1:302). This was indicated by various

teachers who admitted that the coverage of this topic is brief, mainly because of Accounting. Also, "it is a very new area" (CA1:298), and coupled with the limited coverage, it resulted in an inability to establish the necessary linkages and deeper understanding of LO2. As stated, teachers are struggling to "interrogate the material" (CA1:297). Even teachers with extensive teaching experience find it difficult to teach LO2, because they were used to facilitating rote learning by the learners; in this instance the teacher was the central focus and merely conveyed the information (CA2:303). With Curriculum 2005, the change was drastic and the learner became the focus. Part of the problem was that DoE did not facilitate the transition properly, e.g. the introduction of pilot schools was done randomly. There were instances where teachers were better qualified and more competent than the CAs assigned to the pilot schools (CA2:304).

The connection between the economy and society was made by both CAs, specifically with regard to the prominence of redress in the curriculum. Whilst it was important that economic strategies such as the RDP and GEAR should be included in the curriculum, one must recognise that the authors of the curriculum also included some propaganda for the government (CA2:303), since both of these strategies failed in its objectives. CA2 also referred to the preservation of the environment and effective use of resources so that it can benefit all the people (CA2:302). However, this is not emphasised in the curriculum. CA2 pointed to the impact of pollutants and suggested that learners should see the link regarding the different type of resources, e.g. human, physical and financial resources.

What the CAs are essentially being mandated to do on behalf of the DoE, is to enforce the enactment of the curriculum in the classroom. However, the “focus on generic training actually means nothing” (CA1:299), and the mandate should be orientation which focuses on conceptual understanding in more detail (CA1:299). The limitations of the current state of the EMS curriculum, and specifically LO2, give some indication of how important, relevant and applicable Sustainable Development is in EMS-education. Also, this LO was not prioritised as a need: “I don’t recall ever that we even discussed or considered that learning outcome to need training” (CA1:298).

The link between LO2 and what learners experience in their communities is an important one which is neglected in EMS teaching and learning (CA1:301). CA1 believes that if teachers related the curriculum to everyday real-life experiences instead of providing them with textbook knowledge only, the understanding of learners would be far better (CA1:297).

6.3.5.2 The progression from EMS to the FET phase: Business Studies, Accounting and Economics

Both CAs felt that some grounding needed to be given in EMS to before progressing to the FET phase: “They need that understanding because they can’t go in there totally clueless” (CA1:300); and concepts like globalisation and poverty learnt in Grade 9 would be advantageous (CA2:305). However, EMS in its current form does not provide the progression for Business studies and Economics in the FET phase. More time is spent on Accounting so that learners starting the FET phase will have a solid foundation in the basics of Accounting. This happens at the expense of a solid foundation in Business Studies and

Economics in the FET phase, because "They cram the economic cycle and that idea of Sustainable Growth and Development and that little bit of management in LO3 ... they cram that into the first term and for the rest of the year they just do Accounting" (CA1:300). Teacher E does not regard EMS as the foundation for subjects like Economics and Business Studies (Q13E53).

CA1 felt that learners should be given a general understanding of the curriculum concepts and that it must be taught properly. However, this problem is created by school principals; at some schools the perception is that any teacher can teach EMS, because it is "a loose subject" (CA1:300; CA2:304). History or Geography teachers are then confronted with teaching Economics or Accounting concepts. CA1 argued that if principals are more selective in choosing who teaches EMS, and if teachers talk to one another, the problem could be solved. CA1 is of the opinion that teachers work in silos and do not ask for help (CA1:301). In addition, principals tend to "steal time from us" (CA1:301), since at some schools the allotted times are two-thirds for Accounting and one-third for the Business Studies component. In this instance it is not seen as EMS, but as two specialist areas taught by two different teachers, which compromises the fluency of EMS (CA1:302). This presents particular problems for teaching concepts such as globalisation, economic growth, etc., which can take days to cover (CA1:302).

The ultimate challenge for EMS is to establish which content is more important. The DoE has not provided guidance in this regard: many of the model C schools decided to focus almost exclusively on Accounting in the GET-band, while many of the disadvantaged schools focus on Economics and Business Studies

(CA2:306). These factors do not only present problems with the progression to the FET phase, but also make it problematic for learners who want to move from one school to another.

6.3.5.3 What is it that needs to be sustained?

CA1 felt that this was a good question to reflect on; indicating that the curriculum does not state explicitly what it is that needs to be sustained. CA1 responded that the labour force and small business enterprises should be sustained, but admitted that she had not "really considered it" (CA1:297).

Both advisors regarded the country's labour force (CA1:297) and "human development" (CA2:303) as something that needed to be sustained. CA2 felt that the housing crisis can be addressed if people in communities are trained to uplift themselves. With the government's assistance shack dwellers can learn skills such as brick-laying, capacitating them to build their own houses.

6.3.5.4 The 'exclusion' of Sustainable Growth and Development as a topic in CAPS

Although growth and development are integrated in the new CAPS, CA1 responded: "I don't think that it has been integrated; I think they have just taken it out, because it has been a prickly pear" (CA1:298). In contrast, CA2 felt that it is integrated in Topic 1 (the Economy) and Topic 3 (Entrepreneurship). However, CA2 felt that the issue of redress should enjoy even more emphasis in the CAPS, because learners need to be made aware that the inequities of the past have not been eradicated. Furthermore, ex-model C schools are skirting this issue, even though schools are becoming more diverse (CA2:306). CA2

further states that a considerable amount of planning went into the curriculum content for LO2, which cannot be disregarded.

Accounting is weighted more heavily than in the previous curriculum, which appears to be a contentious issue. CA1 felt that Accounting should not form part of EMS if it is allocated a higher weighting than the other focus areas, e.g. the Economic Cycle and Entrepreneurship (CA1:299). Furthermore, Sustainable Development has been taken out of the curriculum because of its complexity: not only in terms of its understanding by the teachers, but also in terms of time constraints as a result of the priority given to Accounting in Grade 9.

In general, there is a perception that education officials, specifically CAs, do not have a good standing with the teachers, because teachers feel that CAs have "sold them out" and that they are being "told" what to do (CA1:299). This view was shared by CA2, stating that teachers feel that many CAs may have a professional teaching qualification, but do not necessarily know what it means to be in the classroom (CA2:306). Teachers therefore questioned the support given by CAs.

6.4 SUMMARY OF THEME 2: EMS CURRICULUM AND LEARNING OUTCOME 2 – SUSTAINABLE GROWTH AND DEVELOPMENT

6.4.1 Part 1 – The EMS curriculum and LO2

6.4.1.1 The purpose and nature of LO2

Redress is an important focus of LO2. The reasons for and the role of RDP in the South African economy, and its subsequent inclusion in the curriculum, were

referred to by four out of the seven teachers. Generally, teachers felt that learners should be made aware of the inequalities of the past, and they were pleased that RDP and the National budget are included in the curriculum. One teacher, however, was critical about government's attempts at reconstruction and the subsequent failure of the RDP, "because of mismanagement" (Q2F123) and "ignorance on the part of government" (Q2F123). Even though most teachers regarded the RDP as important, none of them referred to any successful RDP projects that had made a difference to the quality of life of individuals or specific communities.

Curriculum aspects according to NCS (DoE, 2002a:39) for LO2 include: National budget, regional and international agreements, RDP, savings and investments, productivity, global competition. The teachers' interpretation of the content is varied. Description varies from "creating work opportunities"; "RDP"; "reduce poverty" and "infrastructure of country" to "development is living standards, socio-economic issues, HIV, electricity, people's dignity and upliftment". This is consistent with the literature about the ambiguous nature of concepts like "growth" and "development". Teachers frequently mentioned or inferred economic factors influencing sustainable growth and development, whilst placing emphasis on economic prosperity: "...more entrepreneurs/bigger businesses/more businesses/ opportunities...". Only one teacher (D) cautioned about the waste of raw material; however, no mention was made of the role which businesses can play in the conservation of the environment for future generations. Three teachers did not refer to specific curriculum aspects; their responses were vague and did not relate to any of the sample concepts listed.

The other three teachers specifically identified the National budget and RDP as key concepts.

The weighting of the learning outcomes is prescribed in the EMS curriculum in terms of the time spent on teaching content and on assessment (cf. Section 6.3.3). However, very few teachers adhered to this directive (cf. Chapter 1). It was evident that all of the schools in this study spent more time on Accounting than on the Economics or the Entrepreneurship section of EMS. It also appeared that there were conflicting views about the importance of LO2 with regard to its weighting in relation to the other learning outcomes. Teacher A does not have a problem with the appropriation of the LOs in terms of content coverage. In contrast, Teacher C felt that LO2 should be excluded from the curriculum for Grade 9. Teacher B. was of the opinion that "This whole EMS in Gr. 9 should definitely be revisited"; even after the CAPS document had become available, this respondent felt that the sustainable use of resources should be a key focus in the new curriculum. In an earlier question, Teacher B referred to LO2 as "challenging" for the learners as well as for the teachers, which could be understood in the context of not much time being spent on this LO. It is implied that its wider application, i.e. the depth and breadth of curriculum concepts for LO2, is also not fully understood by teachers.

The responses to the nature of Sustainable Growth and Development with regard to the economic, societal and environmental relationship were consistent with Theme 1. Predominantly, the economic concepts were expressed as important to this learning outcome, followed by the societal factors. Only one teacher referred to the environment. While it is justified to use the curriculum to elicit

responsiveness about transformation and reconstruction, other trends and current issues in the economy are equally important, e.g. ecological footprints of businesses, conservation and management of resources, changing consumption patterns, etc.

6.4.1.2 Challenges

The complexity of Sustainable Growth and Development was identified as a major challenge in terms of its conceptualisation by the teachers, as well as how it should be taught. Their description of key concepts was sketchy. Teachers are supposed to be familiar with the key terminology according to the NCS, i.e. RDP, savings and investments, etc. for Grade 9. Teacher A, who only had 6 months' teaching experience at the time, could not give an account of the concepts, but admitted that this LO is challenging. His comment, "cover it from various areas", could imply that he was aware that this LO has a wide impact. Teacher D and G were also unable to identify the specific concepts related to this LO. A major challenge is that LO2 is a neglected area in the EMS curriculum (D20 – 25).

It appeared that some teachers will teach what the curriculum prescribes without critically reflecting on it. For example, in one teacher's reflection (cf. Chapter 6, Section 6.3.4.1) the respondent regretted not looking at LO2 more critically:

I must be honest; it wasn't since our interview that I started looking critically at the learning outcomes. We just accept and do the work prescribed to us. We moan about big classes, discipline problems, loads of admin work, literacy problems, yet we are faced with learning outcomes we hardly look at, do not care whether goals or outcomes are reached or just totally ignore the outcomes and focus on others we are more familiar with (Addendum D).

Whilst the above sentiment may be related to the particular context the teacher finds him/herself in (excessive workload, time constraints, school ethos, learner profile, etc), it holds particular importance for the research process. As stated earlier, the research process allowed the participant to reflect on teaching practice and in turn elicited awareness about the issues which teachers would otherwise not have thought about (cf. 6.3.4.1). The contexts therefore, within which the teachers find themselves are critical. Sentiments like the above have implications for EMS teaching practice, not only in terms of limited subject matter content knowledge, but also in terms of what Shulman (1986) refers to as Pedagogical Content Knowledge, i.e. the teachers' competence in the learning process: knowing what the learning should be about while at the same time possessing knowledge of how this can be presented and made available to the learners.

6.4.2 Part 2: Teaching practice

Based on the responses of the participants EMS is perceived as a practical and dynamic subject and active learning regarded as an important teaching approach in the EMS classroom (cf. Section 6.3.1.1). The EMS curriculum also specifies the use of a variety of teaching resources, e.g. practical examples, PowerPoint slides, the interactive whiteboard and the internet, to support an interactive teaching environment. Only one teacher had a prescribed textbook, while the others compiled their own notes because they found the content in textbooks limiting. One teacher reported that she taught strictly according to the assessment standards. Teaching resources did not appear to be a problem, since teachers generally do not spend much time on this LO. The Accounting component is a priority in this curriculum, which was also expressed in Theme 1

(e.g. Q8C34). However, two teachers indicated that if they were to spend the required time on this LO, resources would be a problem when certain issues are addressed; e.g. topics on international agreements would be difficult to research where learners do not have access to the internet, TV, etc. For the section on the national budget teachers normally have access to newspapers as a teaching resource.

The overall impression was that a lack of resources is not an issue for teaching this learning outcome. The real challenge relates to the fact that even if there were more resources, teachers would have experienced time constraints because of the key focus on the Accounting component in Grade 9. Also, very little effort is made to teach this learning outcome optimally (Q4B26, Q3D89).

6.4.2.1 The new CAPS curriculum

Generally, the 'exclusion' of Sustainable Growth and Development as a separate topic was met with apprehension by the teachers. Only one teacher did not have a problem if Sustainable Growth and Development were to be omitted from the curriculum. Four teachers were in favour of the section on trade unions being replaced with sustainable development; whilst another teacher felt that savings and investment should be seen as part of sustainability. It is interesting that even though the majority of the teachers would prefer to see sustainable development in the CAPS curriculum, they did not suggest any changes to the current curriculum concepts for Sustainable Growth and Development, such as more detail about how environmental factors impact on sustainability. Only one teacher referred to social responsibility, mentioning that the link to sustainable use of resources should be a key focus of the curriculum.

All the teachers, except participant C, wanted either the current structure of Sustainable Growth and Development, or part of it, retained in CAPS.

6.4.2.2 The responses from the Curriculum Advisors (CAs)

The initial resistance from teachers in terms of their orientation to the curriculum presented a big challenge to CAs, taking into account that the curriculum was newly introduced and that some teachers felt out of their depth (CA1:7). This attributed to a negative feeling towards CAs (CA1:6).

From conversations with the two CAs, it was evident that they were fully aware of the challenges. **Firstly**, they admitted that many CAs' own understanding of Sustainable Growth and Development was also (in addition to the teachers) limited. **Secondly**, no training or orientation had been offered to teachers with regard to LO2 – generic training and training for the Accounting content was given priority. **Thirdly**, teachers perceived the content as complex, because they did not interrogate the material sufficiently. **Fourthly**, some principals created problems in this regard, since they perceived EMS as a "loose subject" and they were not selective as to who would teach EMS. **Fifthly**, most EMS teachers were not competent to teach concepts related to LO2; and **in the sixth place**, EMS in its current form does not provide for progression to the FET phase in Business Studies and Economics.

The above remarks of the CAs concur with some of the challenges identified in Chapter 1 as well as by the teachers during the interview. Only two teachers (B and C) felt that LO2 content is not a prerequisite for grade 10 Business Studies

and Economics. It was also interesting that the CAs identified the issue of progression as a challenge, particularly since some teachers implied that the transition from grade 9 to grade 10 is important. The Review Committee of the NCS concurs that generally, there is far greater subject knowledge required for the beginning of grade 10 than is currently provided at the end of grade 9 (DoE, 2009). All the teachers felt that knowledge about sustainable business practices is relevant in EMS education, but one teacher felt that it should not be in the grade 9 curriculum because of the priority given to Accounting (cf. Section 5.4.1.2).

6.5 CONCLUDING REMARKS

This chapter dealt with the analysis of Theme 2: the EMS curriculum and Sustainable Development. The focus in the EMS curriculum was Learning Outcome 2: Sustainable Growth and Development. Theme 2 was divided into two parts: Part 1 focused on the EMS curriculum and sustainable development, while Part 2 dealt with the teaching and learning aspects of EMS. First, an overview of the analysis process was presented. Thereafter, the data pertaining to Part 1 and Part 2 were presented separately. This chapter was concluded with the consolidation of Parts 1 and 2, together with an analysis and discussion of the key findings of Theme 2.

An important finding of the analysis of Part 1 is the complexity of this learning outcome; the depth and breadth of curriculum concepts for LO2 are not fully understood by teachers. Given South Africa's history, many teachers felt that redress is an important aspect. The nature of Sustainable Growth and Development with regard to the economic, societal and environmental

relationship is consistent with Theme 1. The predominant responses with regard to curriculum content were identified as economic factors, followed by societal and then environmental impacts.

An important finding of the analysis of Part 2 is that the teachers find LO2 difficult to teach. The teaching approaches and resources seem to be varied. A common factor is that even though the time spent on LO2 is limited because of the priority given to Accounting, most teachers felt that it was important that sustainable development should be included in the new curriculum as a key focus area.

The next chapter delineates the research synthesis, conclusions and recommendations.

CHAPTER SEVEN

SYNTHESIS, CONCLUSIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

In recent years there has been growing recognition of the fundamental role education can play in sustainable development. Teachers can, through ESD, convey a set of values which can be reflected in their teaching strategies. Whilst interpretations of sustainable development on the one hand, and ESD on the other, may differ in terms of emphasis, two prominent points have emerged.

First, there is a widespread recognition of the need for a symbiotic relationship between the economy, environment and society to ensure the wellbeing of current and future generations. Within this relationship the responsibility of the government is implied; to pursue growth and development which will be sustainable. The global economy underscores neoliberal economic policies which have impacted on resource efficiency, strain on the ecosystems and the competing needs of the welfare of society. The benefits, on the other hand of increased global competitiveness leads to increased production and consumption which could lead to export-led growth, job creation and technological advancement. The challenge is for society, the government and the business sector to make the right decisions to realise growth and development whilst protecting its resources and ultimately the planet. The emphasis should be on development that can be sustained over the long-term, whilst ensuring that a balance between the economy, society and the environment is promoted.

The second point purports that education is an indispensable tool for developing a better understanding of the concerns noted in the first point (above). The objective is to advance learning about the effects of human activity on the quality of people's lives and the future of life on the planet. The latter theme suggests that deliberate efforts and initiatives are needed to foster sustainable development through learning. The research reported in this study therefore unfolded within the parameters of two broad themes: the conception of sustainable development which was explored in Theme 1 (Chapter 5), followed by Theme 2: EMS education and sustainable development (Chapter 6).

This dissertation comprised seven chapters. **Chapter 1** provided a background to the research, as well as the motivation for and potential value of the study. The major concepts were clarified, the research problem discussed and the research question and sub-questions outlined. In **Chapter 2** the literature on globalisation and neoliberalisation was reviewed, complemented by a discussion on the impact of these factors on South African society and environment. In addition, the understanding of sustainable development, its dimensions, the economy-environment-society relationship and key indicators of sustainability were described and elaborated on. **Chapter 3** reviewed the literature on Education for Sustainable Development (ESD) and established how it related to a specific learning area at school level, namely Economic and Management Sciences (EMS). A discussion of the EMS curriculum followed, focusing on its purpose and particularly on the features of Learning Outcome 2: Sustainable Growth and Development. **Chapter 4** addressed the research framework: its epistemological and ontological assumptions were defined, followed by a presentation of the research design, strategy and approach. **Chapter 5** provided

an analysis of Theme 1: Conceptualisation of Sustainable Development. This consisted of the categorisation and coding of the data of the eight interview questions which were presented, illustrated and the findings discussed. **Chapter 6** offered an analysis of Theme 2: the EMS curriculum and sustainable development. The focus within the EMS curriculum was Learning Outcome 2: Sustainable Growth and Development. Theme 2 was divided into two parts: Part 1 focused on the EMS curriculum and sustainable development, while Part 2 dealt with the teaching aspects of EMS education. This chapter also presented a consolidation of the key findings in Parts 1 and 2 of Theme 2. The final chapter, **Chapter 7**, outlines a synthesis of the preceding chapters, providing conclusions and recommendations based on the analysis that emerged from the research.

7.2 RESEARCH SYNTHESIS

The ultimate aim of this study was to explore the importance and relevance of sustainable development by means of an understanding how a particular group of EMS teachers' "make sense" of sustainable development in EMS-education. Within this sense-making process, teachers tap into their existing knowledge and context, as well as the construction of knowledge in the light of new experiences. There is an extensive body of literature about the influence of teacher conceptions with the aim of understanding a particular phenomenon (cf. Chapter 3). The purpose of this case study was not to represent the world, but to represent the case, which was of special interest to the researcher. As discussed in Chapter 3, the research objective was not to transform policy, find a solution to a problem or justify an occurrence. The research was identified as basic research: designed to investigate a phenomenon (e.g. sustainable development) and to get to the nature of the reality with regard to that phenomenon. The

views of two EMS CAs were also taken into account. The data was collected through in-depth interviews, subject-object interviews and curriculum documents. The literature was reviewed and the analysis was done by means of content-analysis.

The Department of Education is in the final process of revising the curriculum for EMS in the GET-band for implementation in 2013. An important curriculum amendment is that sustainable growth and development was not stated as a separate curriculum topic, but rather integrated in the CAPS. It was also important to establish the views of the teachers with regard to the CAPS document (cf. Chapter 6).

7.2.1 Sustainable Development and EMS- Education

Figure 7.1 summarises the categories and sub-categories identified by the teachers as discussed in Chapters 5 and 6. The first theme (Chapter 5) of the research dealt with the conceptualisation of sustainable development in general: understanding the concept “sustainable development” and other related concepts, e.g. “sustainable growth”, “globalisation”, “unsustainable business practices”, “sustainable lifestyles”, “economic growth” and “what it is that needs to be sustained”. The second theme (Chapter 6) of the analysis examined how teachers understood the EMS curriculum and LO2. In order to obtain a holistic picture of their understanding of LO2 it was also important to identify the issues related to their teaching practice. In addition, the introduction of CAPS, and more specifically the integration of LO2 in the CAPS policy, was interrogated and reflected on by the teachers.

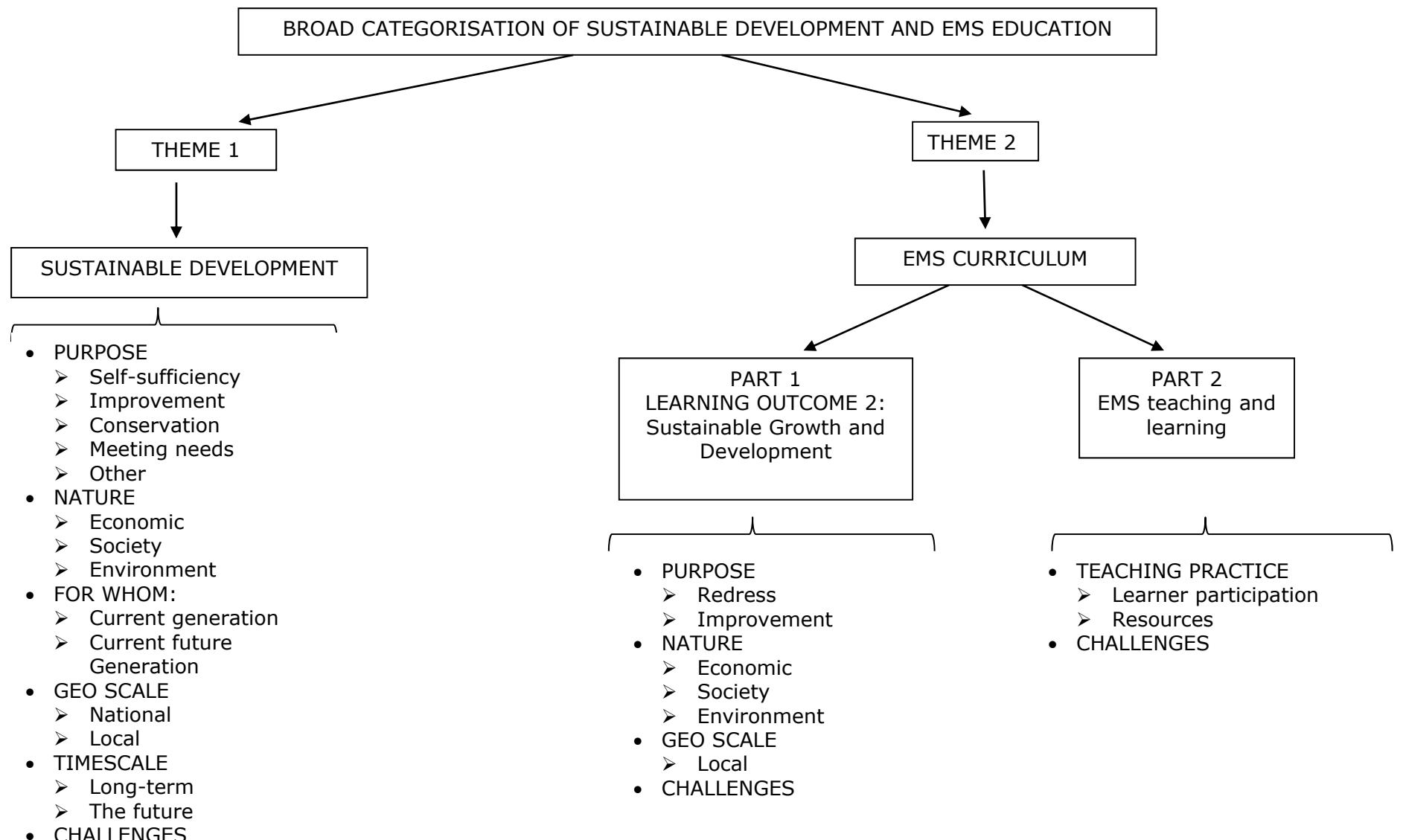


Figure 7.1: Broad categorisation of sustainable development in EMS education

Based on the analysis and findings which emerged from the study, the following conclusions are made:

7.3 CONCLUSIONS

7.3.1 Teachers from a post-conflict society have a different position to the conceptualisation of sustainable development

In this study, redress is an important focus of sustainable development, which may signal that teachers from a post-apartheid society have a different emphasis on how they make sense of sustainable development. The literature refers to reconstruction or redistribution of wealth as one of the themes depicted in the economic sustainability sphere (cf. Chapter 2), but in the South African context "redress" is firmly rooted in apartheid history, and in many instances it implies personal restitution. There may be several reasons why teachers considered redress as an important aspect of sustainable development: **1)** it formed part of the prescribed content in the EMS curriculum at the time of the study; **2)** the South African apartheid past is still firmly embedded in the psyche of many South Africans; **3)** redress continues to be a central focus in economic development frameworks proposed by the government, e.g. RDP, GEAR, and now New Growth Path; **4)** its implementation by the government is perceived as lacking and therefore seems to be a recurrent objective; and **5)** redress is perceived as the solution to development problems such as poverty, joblessness, inequality, etc. All of this may have implications of the values teachers' project and how curriculum content is taught. Teachers may have the view that social and economic development is the responsibility of government and for government to achieve this is to increase its competitiveness in the global arena. This may explain teachers' stance on globalisation, and their emphasis on the

economic imperatives to sustainable development: illustrating how teachers themselves buy into the neoliberal agenda.

Whilst South Africa's apartheid history is important in EMS education, an overemphasis on redress could present a rather insular focus which may stifle further exploration of other issues critical to sustainable development. The CAPS, has a lesser focus on redress, and some of the previous curriculum concepts for Sustainable Growth and Development are spread across the senior phase, e.g. "redress" is covered in Grades 7 and 8, whilst "sustainable use of resources" is mentioned in Grades 8 and 9 (cf. DoE, 2010, pages 13, 16 and 17). No detail of the concepts is offered in CAPS, which could imply that teachers will have to rely on their own insights for teaching, e.g. "sustainable use of resources". Some of the aspects presented in the ESD-EMS synthesis in Figure 7.1., could be applied as teachers deal with the three topics in the CAPS, i.e., the economy, financial literacy and entrepreneurship. This could present opportunities for teachers to further interrogate the curriculum and decide for themselves how they could integrate the imperatives for sustainable development in the EMS classroom.

7.3.2 Economic factors are the key indicator for sustainable development. The three subsystems: economy, society and environment and its symbiotic relationship are commonly illustrated in the sustainability literature by means of an intersecting Venn diagram (cf. Chapter 1). In this study the focus was also to establish how teachers attached importance to the economy, society and the environment. It is important to note that even though a code list was prepared for performing the analysis, the depiction of the three elements emerged from

the data; in other words, teachers were not informed beforehand of the three subsystems or how and if they are connected. In terms of the interrelatedness of economy, society and the environment, the following can be concluded:

Economic growth and development factors were identified as a key imperative for sustainable development, expressed by teachers as e.g. increased productivity, profit maximisation, intensified global competitiveness, increased foreign investment, increased employment, etc. These examples are typically what proponents of globalisation, privatisation and neoliberalism view as economic growth and prosperity, whilst opponents warn against resource depletion at the expense of "growth". South Africa's fragile economic climate came under scrutiny soon after 1994, because it had to deal with apartheid debt and the rebuilding of a free and democratic society. Whilst its economic strategy was focused on reconstruction, restitution and development, it was also driven by increased international trade, deregulation and privatisation. As discussed earlier, the global economic agenda has its main priorities in a capitalist system, where many indirect costs are considered negligible. EMS teachers viewed South Africa's increased global competitiveness and ultimate profit-driven motives as central to the realization of economic prosperity and sustainability. The interconnection of the economy, society and the environment was not explicitly recognised, e.g. economic development in the interest of the broader environmental and social context. The full scope and meaning of sustainable development was not explicit. Teachers could make the connection between sustainable growth, sustainable development and economic growth, and in explaining these concepts they mostly referred to economic factors. However, there was very little indication of detail concerning the impediments of growth

and development. Many teachers could not link concepts to the depth and breadth of some of the issues highlighted in the sustainable development literature, e.g. production levels within the limits of the ecosystem, health risks as a result of increased global competition, sustainable consumption and production, the upsurge in green economies, eradication of poverty, etc.

7.3.3 Sustainable development is complex

The most common challenge to sustainable development was that it was complex to understand *and* to teach. Overall, teachers found it difficult to articulate their understanding of what sustainable development is, even in terms of their conceptualisation of LO2. The literature on sustainable development reaffirms its complexity and ambiguity (cf. Daly, 1991; Bonnett, 1999; Scott and Gough, 2004; WCED, 1987; and others).

CAs admitted that this aspect of the curriculum is not a priority and that no training in this area was given to teachers. UNESCO advocates the training of teachers as a key strategy in achieving a sustainable society. This does not refer only to the training of new teachers, but should also be directed to the updating of knowledge and skills of in-service teachers. Similarly, UNDESD (United Nations Decade of Education for Sustainable Development) has directed attention to the integration of sustainable development in all educational settings.

7.3.4 Fragility of sustainable development as a priority in EMS education

Sustainable development is not seen as a curriculum priority, even though awareness of issues which affect the current and future welfare of ordinary citizens, especially those in developing contexts can be facilitated in EMS

education. Contemporary economic issues can be discussed and debated in the EMS classroom. In this way certain aspects which were identified in the analysis of the study can be addressed, such as the nature (economic-society-economy), timescale (long-term), geographical scale (local communities) and focus (current and future generation).

Even though the teachers admitted that they did not spend much time or resources to teach or critically look at the content, they considered sustainable development as important content in the curriculum and acknowledged its relevance in EMS education, e.g. in terms of economic development for a developing country like South Africa. In addition, they view government's responsibility to address socio-economic issues as particularly important in the long-term. A few teachers acknowledged the South African context and how society could benefit from sustainable development: e.g. ethical practices for both business and government and an increase in the living standards of communities, as well as poverty, health, education, the living standards of the people, HIV, people who lost their dignity, and training for a sustainable income. Teachers relayed personal aspirations for the attainment of a sustainable lifestyle, which implied that they recognised the importance of a balanced lifestyle, healthy living and a good quality of life. EMS teachers are situated within a country which has a particular history; and an education system which emanated from this context. The undermining of sustainable development as curriculum content in EMS education was common and mostly as a result of systemic factors which relate to the next point, i.e. the relegation of sustainable development to an "airy-fairy" learning outcome, whilst in general, the teaching of Accounting was given priority by CAs and teachers. The weighting of

Accounting is even higher in CAPS than the NCS. Notwithstanding the relevance of Accounting, the priority assigned to it in this learning area is a contentious issue amongst teachers. If anything, Accounting as a discipline is firmly embedded in neo-liberalism with its emphasis is on profit maximisation, profit accumulation and shareholder wealth maximisation.

7.3.5 Affluence blinds sustainability

The literature on sustainable consumption and sustainable lifestyles evolved from extensive rethinking of affluent lifestyles and excessive material consumption. Teachers may find it more difficult to create an awareness of sustainability at schools where learners come from middle- to high income households. These learners, who do not have to face the challenges of day-to-day survival and poverty, may become insensitive to sustainability issues. In some instances, the school's ethos is of such a nature that it can hinder the teachers' intentions to create an awareness of pertinent issues of sustainable development which the learner may learn from, e.g. choices as a consumer, the management of waste, etc.

The following section deals with the contributions and limitations of the research.

7.4 CONTRIBUTIONS AND LIMITATIONS OF THE RESEARCH

7.4.1 Contributions of the research

Even though the literature suggests the importance of ESD in a wide spectrum of disciplines, ESD is a new terrain to EMS education at school level. This research could create an awareness of sustainable development imperatives and how it

can be integrated in EMS education. The above conclusions of the study could assist EMS education practitioners, CAs, and other stakeholders to orientate teachers to reflect critically on the curriculum content. Also, in terms of the South African context, it can contribute to the knowledge and practice of EMS education in general and with regard to sustainable development in particular. This research also points to the challenges which EMS teachers encounter in the teaching of EMS, which could be reflected upon and taken into account in future EMS teacher orientation programmes.

7.4.2 Methodological reflection

The research problem was addressed within a constructivist-interpretive paradigm, a qualitative approach and a case-study design strategy, all of which were described in Chapter 4. The analysis process was discussed in detail in Chapter 5 and 6. The methodology, research design and approach were thoughtfully considered to provide a systematic investigation and understanding of the key issues. Inter-subjectivity is an inherent characteristic of the constructivist-interpretive framework; the researcher therefore kept a "distanced" stance in the research process to uphold confirmability.

The intention of this research was not to transform, make decisions, find explanations or make predictions, but was designed to find an understanding of the wider conceptualisation of sustainable development in EMS education. In addition, its practical value lies in guiding and/or supporting EMS education practice in South African schools. Given this, the case study design provided a unique learning experience: the objective was therefore not to generalise the findings to the broader population. In addition, and in order to ensure the credibility of the findings, the researcher paid special attention to the procedures

described in Chapter 4, striving to minimise bias and to comply with the ethical considerations. Even though the context was different, the inclusion of interview questions and a code list based on other proven studies in the literature added to the dependability of the findings. For future studies, the qualitative approach could be substituted or triangulated with quantitative methods, e.g. a survey, should a larger sample of participants be needed.

The restriction imposed by the DoE not to collect data at schools during the 4th school term, could present challenges with time scheduling, as was the case with the teachers' strike that occurred during the 3rd term. Access to the schools was restricted during the period of the strike; fortunately the strike was called off shortly before the end of the school term.

7.4.3 Limitations of the research

Details about the delimitations of the study, e.g. the scope, sampling, sampling size, etc., were discussed in Chapter 4. The findings should be interpreted in the light of some of the limitations that naturally emerged from the design of the study. Since all EMS teachers also teach in the FET phase, they generally attached a lesser priority to EMS curriculum content, particularly because of the inference that a progression of curriculum content from the Senior phase to the FET phase is mostly applicable to Accounting.

Although the motivation for the study was directed at understanding, there are still certain areas which need to be explored or expanded. The recommendations for further research are outlined in the next section.

7.5 RECOMMENDATIONS

The literature reviewed of sustainable development, ESD and the EMS curriculum was discussed in Chapters 2 and 3 and formed the theoretical basis for this study. In addition, the latest EMS CAPS curriculum, which will be implemented in 2013, was also reviewed. The CAPS includes the topics Economy, Financial Literacy and Entrepreneurship, which can be related to the following issues of sustainable development: economic sustainability, sustainable entrepreneurship and issues relating to accounting education. Based on the analysis of the study and the theoretical underpinning, the following recommendations are made:

7.5.1 The intention of an ESD-EMS synthesis is to illustrate how the curriculum concepts in the CAPS could be applied to develop a better understanding of sustainable development; e.g. consumption and production patterns and specifically the role of business and how its operations impact on the environment and society in general. Even though sustainable growth and development content is fragmented in the CAPS, EMS educators could consciously start thinking of alternative ways to enhance its integration in the teaching of EMS. Figure 7.2 is an illustration of how the EMS curriculum could be expanded to accommodate sustainable development, followed by a discussion of the three topics in CAPS:

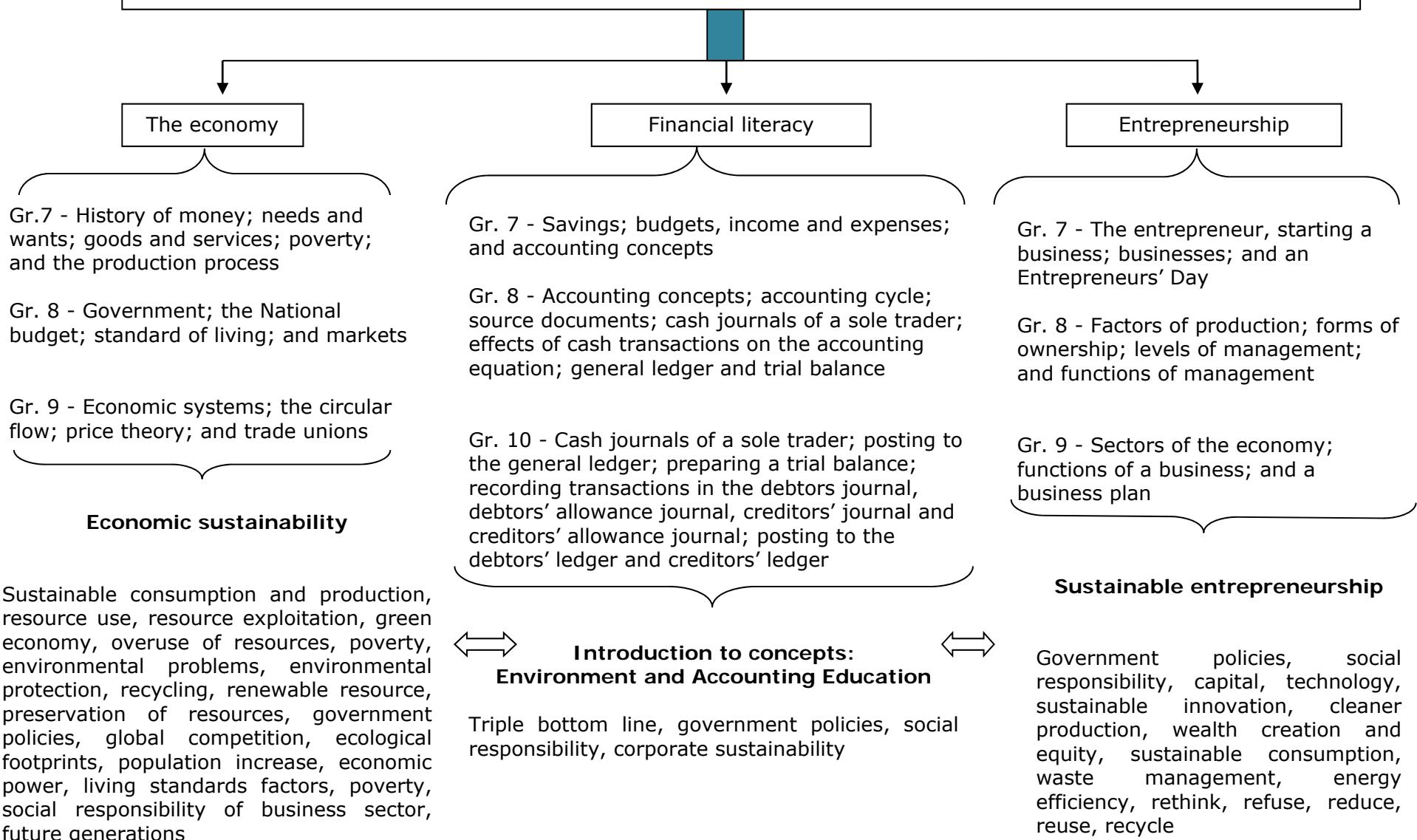


Figure 7.2: An EMS-ESD synthesis

Topic 1: The economy. Knowledge about the economic cycle, economic systems and the National budget is important, but could be integrated with issues which directly affect economic systems, development, poverty and the role of government, e.g. introducing how capital, human and physical resources can be managed without its exploitation exclusively for economic gain. Issues related to economic development such as the ecological footprints of businesses, conservation and management of resources, changing consumption and production patterns, etc. (Figure 7.2) could be systematically introduced.

Topic 2: Financial Literacy. In terms of Accounting education at the most fundamental level, teachers could provide the basis of both the moral (ethical behaviour, serving society and the public interest) and practical (getting the job done) dimensions of accounting. Sustainability accounting or triple bottom line accounting (profit, planet and people) has more relevance in the FET phase and in undergraduate studies in Accounting. More research needs to be done in this area of EMS education.

Topic 3: Entrepreneurship. Sustainable Entrepreneurship adds a new dimension to the general undertaking of entrepreneurship; not only could the economic/business success be accounted for, but also the benefits for society and the environment. Entrepreneurs could manage to the triple bottom line by e.g. balancing economic wellbeing, social equity and environmental resilience through entrepreneurial behaviour (cf. Chapter 2). Research on sustainable entrepreneurship is defined as "the investigation of opportunities to bring into existence 'future' goods and services, how they are discovered, created and exploited, by whom, and with what economic, psychological, social, and

environmental consequences" (Cohen and Winn, 2007:35; italics in original). Integration of curriculum content in this regard would be sustainability-related opportunities, using environmentally friendly processes from the start of the business operations. Or, entrepreneurial activities aimed at social objectives and environmental improvements, whilst yielding considerable economic potential. For example, the business operations can intentionally reduce its carbon dioxide emissions, manage its waste or use its energy efficiently.

7.5.2 An awareness of sustainable development in EMS education: The teachers acknowledged that sustainable development is conceptually and contextually relevant within the EMS discourse. The sustainability literature argues in favour of a balance between the economy, society and environment. Whilst, economic development was identified by the teachers as the main focus of sustainable development, a re-conceptualisation of the impact of economic development on society and the environment could be related in depth and breadth to e.g. the use of resources, whether human, capital or natural. This could then be linked to the imperatives of national, regional and international agreements; sustainable consumption and production; and global competitiveness.

The DoE could mandate curriculum developers and advisors to support teachers with a reorientation to the curriculum, suggesting teaching strategies towards an increased awareness of sustainability. The emphasis on the symbiotic relationship of economy-society-environment could be integrated in CAPS. There is a potential to integrate a new approach in EMS education, taking cognisance of how the opportunities and challenges of globalisation and neo-liberal policies and

how it affects communities, their livelihoods and the deprivation of the environment. For example, how do teachers develop practice where affluence blinds sustainability issues? Teachers can, with a broader understanding of sustainable development, enable learners to look critically at their own lifestyles, consumption patterns and choices which impact on the quality of their lives.

Whilst contextual challenges, e.g. school ethos, timetable overload, leaner profiles, support from CAs etc., impact on teaching practice, a step towards an enhanced awareness of sustainable development could be to encourage teachers to reflect on curriculum content and their teaching practice. For example, the focus could shift towards education for transformation, and not merely education for the reproduction of knowledge. EMS education provides the ideal platform to integrate contemporary issues, business principles and economic developments. For example, the current global economic crisis and how South Africa, as a global player, respond to national issues which affect sustainable economic development. Also, South Africa has been involved in the international arena in sustainable development summits, e.g. the Johannesburg Summit in 2002, the host to the upcoming global climate change conference (COP17); and locally, with the adoption of sustainable development imperatives in various organs of the State. Or, why the Millennium Development Goals were adopted or the why the UN called for a DESD. These issues could be applicable in the EMS classroom and highlighted when learners are taught how businesses work and how they should conduct themselves. Whilst learners are taught about the input and output of production processes, they are also made conscious of its impact, and the reasons why they (learners) should be attentive consumers and responsible citizens. In this way knowledge is actively constructed by the teacher and will

therefore shape his/her conception of sustainable development. The constructivist notion of how the teacher “comes to know” is a process of adaptation based on and constantly modified by the experiences of the teachers. What value can teachers’ conceptions bring to learners? For example, the notion alluded to earlier that affluence blinds sustainability was the conception of teachers based on contextual experiences. Teachers could therefore instil an enhanced awareness by the learners to feel compassion for the economically deprived and for those whose livelihoods and security depend heavily on the natural world. Teachers could encourage learners to make direct links, e.g. the five R’s (refuse, reduce, reuse, recycle and rethink) and how it may impact on their own lives.

The literature on specific pedagogies and teaching practice for ESD is limited; the focus in the literature is mostly on subject matter. ESD action plans in relation to existing curricula need to be locally relevant and culturally appropriate. To optimally facilitate the EMS curriculum constructs and the integration of ESD, curriculum linkages and sustainability methodology for EMS may develop over time. The strategies identified by McKweon (cf. Chapter 3) could be adapted and made relevant to EMS teaching practice. Teaching strategies could expand to interactive learning strategies, for example the incorporation of Web-posting and Integrated Web-course management systems at schools where internet access is not a problem. In this way teachers within a specific district could share teaching approaches and learning material, and they could start sustainability forums.

7.5.3 Accounting as a separate subject. In the Grade 9 EMS classroom most of the time is spent on the Accounting component in terms of content and

assessments. In the CAPS curriculum the allocation for Accounting is even higher than its current weighting in the NCS. Chances are, as concluded in the previous section about the fragility of sustainable development, that Topics 1 and 3 will again be neglected because of the priority given to Accounting. An enhanced awareness sustainable development in EMS education, as recommended above, will not materialise optimally if limited time is spent on the respective topics. Accounting as a separate subject, as it was for the NATED 550 Curriculum (before NCS), for grades 8 and 9 is recommended.

7.5.4 Further and future research: This study has explored one particular case of EMS teachers' understanding of sustainable development, however further research could be undertaken to more comprehensively examine what learners' understanding of sustainable development is. Also, further research to explore the aspects of EMS education which could prepare learners to think critically about the role of business and its participation in the local, national or global economy. Such research could have implications for how teachers approach the concept of sustainable development in their practice. The orientation to ESD could be explored in terms of teaching strategies, e.g. if and how active learning initiatives can be extended. Future research could be conducted in the FET phase: Business Studies, Accounting and Economics. Since EMS for the Senior Phase is considered as general basic education in preparation for the FET phase, the topics of the ESD-EMS synthesis as discussed above could also filter into the respective FET-subjects. The prevalence of ESD could be explored for a more nuanced understanding in terms of topics which relate to the specific subject, e.g. "cleaner production", "sustainable entrepreneurship", "corporate social responsibility" and "triple bottom line reporting"

7.5.5 Introduction of ESD in the EMS teacher education training programmes: The ability and capacity to teach aspects related to sustainable development in EMS education will depend on the teachers' knowledge and beliefs about the subject matter and its pedagogy. Given the value-laden nature of ESD, teacher education training programmes can play an important role in shaping subject matter and pedagogies towards sustainability — a role which teacher educators could consider. In addition, the training course could make provision for collaboration and partnership between EMS university-based teacher educators and EMS school-based teacher educators, the business community and environmental professionals. Such collaboration could include critical inquiry about curriculum content and appropriate ESD-specific teaching approaches. Teachers and teacher educators could combine their knowledge, skills and pedagogies in a coherent and structured manner.

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ADDENDUM A**THEME 1: SUSTAINABLE DEVELOPMENT**

QUESTION 5: What is your understanding of sustainable growth?

Yellow – understanding of concepts

Green – teaching practice

PARTICIPANT A

1 Sustainable Growth, well I've told the kids you know obviously growth means to
 2 grow and go forward, sustainable growth. A lot of the kids came up with different
 3 answers, because I usually ask the kids this/ you know what they see sustainable
 4 growth as being you know, how do they see it. Do they experience it at home^{LOC}, do
 5 they experience it in their daily living^{LOC} and some kids say like they've told me the
 6 bread came up actually, the car prices came up. The way that our demand^{ECO} for
 7 cars goes down when the price goes up or when the supply^{ECO} comes down the price
 8 of those things goes down or up, that's how I explained it to them because
 9 sometimes you can't really make it too complicated for the kids, it has to be simple
 10 enough for them to understand what it means. That is how I explain it to them.

CODELOC
LOC
ECO
ECO**PARTICIPANT B**

11 As a teacher sustainable growth, it depends and again it's for me also a very vague
 12 topic^{CONT}. What I normally do and I think that's why learners can normally link very
 13 well to the topic. What I normally do is contextualize it in their particular situation,
 14 try to make it more personal. Like a topic in terms of sustainable growth, I would
 15 normally introduce that to them in terms of why it is important for them to grow
 16 mentally, to grow physically and if there's no physical growth then obviously there's
 17 a problem and obviously then I would again draw examples in like that they were in
 18 Gr. 5, 6 and 7 and now they're in Gr. 9 and little bit more used to school situation
 19 which means that they grew over the years into the educational system, so where I
 20 would normally take them from the known and then I move to the unknown which is
 21 now sustainable growth or just growth development. It's there then that I would
 22 then try to link it then to economic^{ECO} growth so then I would basically take it further
 23 explaining to them the importance of why a country^{NAT} must grow and then explain
 24 to them little bit more and elaborate more on economic development^{ECO} in our
 25 particular situation in South Africa^{NAT}. So that is what I basically do with the learners.

CONT

ECO
NAT
ECO
NAT**PARTICIPANT C**

26 Sjoe, this is now difficult you know^{cont}. You know when I explain sustainable growth I
 27 also probably look at my economics background. So I would go, for me for example I
 28 understand it say listen here, we need to have a sustainable growth in South
 29 Africa^{NAT}, in Kraaifontein^{LOC}, in our community^{LOC}. We know this is the facets; this is
 30 the stuff that is causing problems in our community^{CONT}. Where do we go from here?
 31 Ok, so I would go and to my understanding is first teaching my children little about
 32 the history of certain things and then bring it back to them and then they need to tell
 33 me from there onwards. So I just see it as one of those learning outcomes where it
 34 is something that affects them here and now^{CGEN} and that is also how I approach it.
 35 Not according to the curriculum of the education department, but according to how I
 36 know or what I know what they need to know for next years specifically about that
 37 topic. Because we are a focus school for scholars so we focus on things that our
 38 learners need to know for Gr. 10 and not always following what the education
 39 department said, we did it in the past, because of those CTAs that they gave us, but
 40 then when you looked at that topic it was not really widely touched in the CTA's. Just
 41 through experience we just, it's just been put there, were done with it, let's
 42 continue. So it is just info that they need.

CONT

NAT
LOC
LOC
CONT

CGEN

PARTICIPANT D

43 My perception of this is: let's say I decide to become active in the community and I
 44 give money to the community^{LOC} to build a clinic, it would be to not just leave it at LOC
 45 that. It is to return continuously and to see if there is enough stock and maybe if it
 46 needs to be painted and that there is enough staff^{NEED}. One must not just start an NEED
 47 idea and say I'm giving R50 000 for the community^{LOC} and now I've done my part. LOC
 48 The project must continue working^{IMPR}, which is my idea of sustainable, economic IMPR
 49 growth.

PARTICIPANT E

50 My understanding if the term sustainable growth is whether it's the economy^{NAT} or NAT
 51 whether it's an organisation^{LOC} that's able to sustain itself and to grow every year. So LOC
 52 there is development taking place in the business every year. In my estimation that
 53 would be sustainable growth where new opportunities and avenues and expansion is IMPR
 54 explored^{IMPR} and the business grows in terms of its profits^{ECO}, in terms if it's number ECO
 55 of people employed and things like that.

PARTICIPANT F

56 For me, if I had to break the word up sustainable is and must be maintained, so you NAT
 57 as a farmer say to the people here is a piece of land you can work this piece of land, ECO
 58 I give it to you. What you do with it, it's yours, all right, so you can initially help CONT
 59 them but it must be sustainable. You can't just give people stuff in that context, they NAT
 60 must maintain it. So if you talk about growth you must maintain it. If we look at our ECO
 61 country^{NAT} specifically electricity^{ECO} why did we have a problem? Because all the CONT
 62 planning wasn't done^{CONT} and I don't want to say it is an affirmative action problem, NAT
 63 but there wasn't planning because some of the top structure's left. A country^{NAT} needs to grow and sustainability is to maintain it, that's what I'm saying.

PARTICIPANT G

65 If I have to explain it to the learner like I understand it/, I would tell the learner that
 66 at the moment sustainable growth is a challenge for the government to implement/.
 67 At the moment they're target 5%^{ECO} per year and they can't even reach that. [What ECO
 68 should they do to get there?] What Zuma is going to do now is to get foreign help^{ECO}
 69 from India or wherever he was now. [China] China yes, the first thing is to get ECO
 70 money into the country^{NAT} through investments^{ECO}, where foreign companies NAT
 71 want to open new businesses or they want to invest^{ECO} / So the first thing is to get ECO
 72 money into the country, he must start there and maybe it is the first step that he did ECO
 73 right/. The second thing is creating jobs^{ECO} and maybe through foreign ECO
 74 investments^{ECO} this could happen. The world cup has made employment^{ECO} possible, ECO
 75 but it is finished now and we wonder where that people will be employed now? ECO
 76 Where the economy^{ECO} is concerned/, and you have seen the strikes/ that is taking ECO
 77 place/, in other sectors as well. This means that there has to be given more salaries ECO
 78 and this is not always the solution for growth^{CONT}. There has to be more ECO
 79 production^{ECO}, there must be more generating of money^{ECO} and at this stage/ they CONT
 80 are struggling to meet their goal of 5%^{CONT}. They have put a lot of things in place to ECO
 81 achieve the goal, but at the moment they are struggling, because it starts with ECO
 82 employment and investment^{ECO} and they are not improving this by much. The gap CONT
 83 between rich and poor are still too big^{CONT}. I would have liked to tell you that growth ECO
 84 is taking place, but we are not reaching our goals^{CONT}.

QUESTION 6: What does sustainable development mean to you? Is it the same as sustainable growth?

PARTICIPANT A

1 Development is basically the same as growth I would say because it's also going
 2 forward, it's also growing. It's the same thing. [So in your opinion there's no
 3 difference?] It's not the same thing, there is obviously a difference in it, but I
 4 bring it down to also that it's similar to each other, because it's both growing, it's
 5 both going forward^{IMPR}, developing you know. As the market^{ECO} grows so does IMPR
 6 the country's economy^{ECO} also grow? As the demand^{ECO} for cars go up the ECO
 ECO

7	economy ^{ECO} of our country ^{NAT} also, you know it goes up, it develops because if	ECO
8	cars don't sell we won't develop you know. There won't be any development. No	ECO
9	employment ^{ECO} , that kind of thing.	NAT
	PARTICIPANT B	ECO
10	My understanding would be even from the subject in terms of its sustainability	
11	that the subject must not phase out. That the subject EMS, we must keep in our	
12	school system. So in terms of the sustainability of it is that although there are a	
13	lot of obstacles that can hamper sustainability and in terms of the subject, from	
14	a subject point of view I would say that one must be able to address that and	
15	overcome those particular problems/. What I personally understand about	
16	sustainable development would be just that you need to keep/ and make sure	
17	that no matter what comes your way that you need to be positive that you need	
18	to be optimistic, that you need to be motivated and enthusiastic about life,	
19	because you know again for me and I'm really just personalising this now. That if	
20	I can keep a positive approach in terms of sustainability in terms of to sustain in	
21	all fears of my life I would be able to, from a subject point of view, I would be	
22	able to motivate the pupils in terms of why and how they can become more	
23	sustainable, not just only from a subject but even the problems that they	
24	encounter from day to day life.	
	PARTICIPANT C	
25	No, growth is something that's going to be a yearly thing; it's going to take	LT
26	years ^{LT} , o.k. looking from where we started in 1994 to where we are now.	
27	Development, this is how I see it personally: development is something which is	
28	- it can be daily, it can be monthly, it can be yearly. It is how we develop things,	
29	what we do to get to that growth finally ^{LT} . Because growth is not something that	
30	can happen in few days time or a few months or a few years. We are when it	
31	comes to sustainable growth here in South Africa we are still very far ^{CONT} .	CONT
	PARTICIPANT D	
32	Not to stop ^{IMPR} , to say: o.k. I have built a clinic, but what is the next step? It is	IMPR
33	working and everyone knows about it, but to get doctors to work there now... So	
34	you shouldn't just get one thing in place and think it is good enough. It must	
35	develop en grow continuously ^{IMPR} / [So you don't think that sustainable growth	IMPR
36	and development is the same thing?] Sustainability I would say is to make sure	
37	that you have a project and to monitor it so it continues to grow. Sustainable	
38	growth and development I would say is to go further ^{IMPR} , you get the doctors	
39	etcetera. So sustainability is one thing and development and	
40	growth is another.	
	PARTICIPANT E	
41	I think it is quite closely related ^{CONT} , sustainable growth and sustainable	CONT
42	development. The way I see it is that it is very closely related ^{CONT} ; in fact	CONT
43	sometimes those two are very much interchanged ^{CONT} very easily/. It depends on	CONT
44	which textbook you are going to consult. One textbook will refer easily to	
45	sustainable growth where the other one will refer to sustainable development,	
46	but if I would have to explain it in my own words I would imagine sustainable	
47	growth is where possibly you are growing your labour forces ^{ECO} so in my	ECO
48	explanation it is things that's developing like the number of employees ^{ECO} you	ECO
49	have in your business. Opportunities ^{ECO} are there you know. Sustainable	ECO
50	development I think is a broader term I would imagine that sustainable	
51	development would be...I don't know, you have people say it's the same thing?	
	PARTICIPANT F	
52	Well development like I said to you is the people. Developing their skills and	SOC
53	having things in place to develop them, like I said firstly education ^{SOC} , you're	SOC
54	looking health ^{SOC} , you're looking at uplifting poverty ^{SOC} . I can't think that people	SOC
55	don't have running water ^{SOC} so for me growth is uplifting these people's houses.	SOC

56 How do you expect people to develop when they are living in these
57 conditions? ^{SOC} [So sustainable growth and sustainable development are two
58 different aspects?] The focus is more on infrastructure^{ENV} and development, what
59 the government sets in place^{SOC} and this will be programs or projects focusing on
60 the people itself, development that's how I see it.
61 That how I teach it.

PARTICIPANT G

62 I would say development is firstly developing people's skills^{ECO}. You have your
63 resources, but have you developed it? We are rather running out of resources^{ENV}
64 on the moment, so I think the challenge here is to develop the resources that
65 you already have^{IMPR}. So I would say sustainable development is all about
66 developing resources^{IMPR}. [Why do you think we are running out of resources?] This is a good question. I don't know I only find that we are running out of it^{ENV}.
67 I don't know if we are draining it^{ENV} and whether we have
68

69 the technology^{ECO} to generate new resources^{ECO}? I don't know, I wouldn't be able
70 to tell you why we are running out^{ENV}. [Are you specifically referring to natural
71 resources?] Yes, natural^{ECO} and human resources^{ENV}. We have so many unskilled
72 workers and people^{ECO} who leave school early and we need skilled

73 workers^{ECO} to develop our country. Skilled workers leave the country^{ECO} because
74 of low income rates^{ECO} and we need them for growth and development.

QUESTION 7: How would you describe unsustainable business practices?

PARTICIPANT A

1 Unsustainable business? Well a business that doesn't develop means it's not
2 producing, it's not selling^{ECO}. So that is unsustainable development/business. [A
3 business that has unsustainable business practises?] Well, if they're not
4 producing^{ECO} it's just no development in that business if you're not selling, that is
5 my opinion I would say. 'Cause the whole point of a business is to make a profit
6 and if there's no profit that means there's no development, there's no growth
7 within that business^{ECO}. And it's because probably the marketing of that company
8 or that business is not doing its job probably.

PARTICIPANT B

10 One can basically start from; you can look at it from no growth, no in terms of
11 where the product reached its point of saturation. Which means that they've been
12 in business for so long, been selling the same product for so long and customers
13 are just not interested in the product as a result when customers are not interested
14 in the product. What will happen then is that the profitability will be negatively
15 affected and as the profitability will be negatively affected^{ECO}, businesses will not be
16 able to carry on with the production and the manufacturing^{ECO} thereof to such an
17 extent that they would and as the productivity drops^{ECO} then we know that
18 retrenchment^{ECO} and all those kinds of stuff will obviously kick in which can
19 ultimately then result in bankruptcy^{ECO}.

PARTICIPANT C

21 Unsustainable business practices. Now from what point of view, do you want me to
22 look from a business' point of view? [You can from a business' point of view or a
23 point of view in terms of the future of a business] O.K. Unsustainable is probably
24 businesses like we teach our learners when we start with entrepreneurship that is
25 where we start, that is where we tell them: Listen here, your business won't be
26 sustainable if you don't know what you need to do, if you don't have the right
27 marketing, if you're not working with your finances properly^{ECO} or your books is not
28 correctly and things like that. So a business can be unsustainable if they don't
29 follow that normal business ethics^{ECO} or the things that they need to know to run a
30 business.

PARTICIPANT D

33 Well it could be one of the two things that come to mind. The one is a one-time
 34 school funfair what means that maybe you bake pancakes to collect money for the
 35 school, but it is a one-time thing and it does not generate a continual income. On
 36 the other hand I think about something that can be unethical^{ECO}. It could be a
 37 business that misuses our natural resources, like cutting of trees for paper or wood,
 38 but they are not planting trees to replace the ones they cut off^{ENV} I don't know
 39 which one of the answers is correct... The first idea is not to have a regular income,
 40 but on the other hand it is to exploit your workers^{SOC} or the environment^{ENV}.

ECO
ENV
SOC
ENV

PARTICIPANT E

43 An unsustainable business is a business where there is no long term future^{LT} for LT
 44 that particular business in other words there is a downward spiral, a business is ECO
 45 losing market shares^{ECO} or sales and it will not be able to meet its obligations over LT
 46 a sustained periods of time^{LT}.

PARTICIPANT F

47 You can't maintain your business when you are running an unethical business so I ECO
 48 am talking about ethics^{ECO} there. If you are evading taxation^{ECO}, because what is ECO
 49 going to happen the government is losing out^{SOC} they are not getting the money in SOC
 50 to grow because of not paying tax. So I think unethical business practises^{ECO} which ECO
 51 is false advertising, there are many things like price fixing, because it affects the SOC
 52 consumer it affects the pocket of the consumer, the buying power of the ECO
 53 consumers^{SOC}. I can talk all day, so if any business is unethical^{ECO} it is going to have SOC
 54 an affect on the consumer and an impact on the government^{SOC}. So it is going to have SOC
 55 impact and there is already your unsustainability. The same with social SOC
 56 responsibility, if the business says they are going to be socially responsible^{SOC} for a SOC
 57 project e.g. they are going to children that come from rural areas food, the bread SOC
 58 scheme, it flopped too, because people got greedy and some of the schools didn't SOC
 59 get that bread. With social responsibility sometimes a business wants status, o.k. I SOC
 60 know now the criteria is totally different, but to have that image that they are doing SOC
 61 something and maybe if they don't qualify for the status and they say they are SOC
 62 socially responsible, the government can look at them etc. and they don't maintain SOC
 63 it, so that whole project falls apart^{SOC}. So there your sustainable development of SOC
 64 the people for that project that they committed themselves falls flat and they are SOC
 65 not maintaining part of the bargain. So it's a partnership, because the government SOC
 66 can't afford to uplift everybody or to maintain it so everybody needs to be socially SOC
 67 responsible^{SOC}.

PARTICIPANT G

68 This is probably someone with no long-term goals^{LT}. He's short-term goal is to LT
 69 make money and he only thinks of the present^{LT}. If he is not going to plan for the LT
 70 long-term or set long-term goals, he is not going to be sustainable. I cannot think
 71 of an example of an unsustainable business, I would say it has to do with planning
 72 and long-term goals. If you are not going to set these goals you wouldn't be able to
 73 be sustainable.

QUESTION 8: Do you think it is important that we teach sustainable business practices in EMS? Why?

PARTICIPANT A

1 Most definitely yes.[Why?] Because it's going to be used, it's used every day, it's
 2 going to be used once you have left school. It should be used; it's all over us you
 3 know^{OTH}. Our economy at the moment isn't of the best but like I said it's going to
 4 be used. They need to know what's going on out there in the world^{OTH}. Why
 5 certain things are happening and why certain prices are the way they are.

YES

OTH

OTH

PARTICIPANT B

6 I would say most definitely again my nature and my style of teaching would be
 7 once again that all the business concepts or the business terminologies needs to
 8 be apply first and foremost to the level of the learners whereby they need to
 9 understand how they can apply it in their personal lives, because if it becomes a
 10 lifestyle. If the concepts, the business concepts can become a lifestyle^{SOC} which
 11 means that the lifestyle will then become a habit and the habit would then
 12 become a passion and if their passionate about it the concept which means
 13 they've applied it, they would be able to know how to relate to it and gain a
 14 better understanding of the concept in a business world^{SOC} so I would say yes.
 15 Now I know I'm very vague, but in just to contextualise it now or just perhaps to
 16 put it now more in a better context then would be one can think of only one
 17 particular component of it would be basic problems or problems within a
 18 business. Any business face problems whether it's going to be absenteeism
 19 whether it's going to be a decline in customers, whether it's a drop in sales,
 20 whether it is just from a macro point of view, where we are going to have that
 21 the government is most probably going to implement policies that the companies
 22 would most probably not be too happy with^{ECO}. So that can create problems and
 23 having those kinds of problems in the company, the level of creativity must also
 24 increase. So what I am trying to say is that if learners would be aware of the fact
 25 that they're going to face problems in their daily lives and to know how to deal
 26 with the problems from a different point of view in terms of different techniques
 27 that they would be able to understand it better. When businesses face problems
 28 and the varies techniques that the business can use like few examples would be
 29 brainstorming techniques camper nominal techniques and obviously explain to
 30 them in detail as to how they can use those kinds of techniques in their day to
 31 day lives and how a business in practise would normally use it.

YES

SOC

SOC

ECO

PARTICIPANT C

32 Not Gr. 9 no I don't think so. Reason why I say so, time in Gr. 9 we don't have
 33 so much time. Or let me say what we do at our school, at our school we don't
 34 have so much time. Our basic aim is to get our Accounting done. We do have this
 35 curriculum, we do follow these things but we touch on it. Six months, or say nine
 36 months of the year is spent on Accounting, so to teach that where they are not
 37 really going to be, I mean we are now in a situation where we don't teach
 38 learners things that they are not going to be tested about. We can tell them
 39 about it, but I know specifically in Gr. 10 in Business Studies they are taught
 40 that. So why should I tell them that in Gr. 9? So I just leave it out, we just don't
 41 touch it at all.

NO

PARTICIPANT D

42 If my second answer is correct, if it is about ethical practices^{ECO}, then yes. I YES
 43 always tell the students that in the old regime, if you were an entrepreneur it ECO
 44 was about making a profit. So if you wanted to exploit your workers^{SOC} by SOC
 45 working 12 hours for R5 per hour, you could. You could also exploit natural ENV
 46 resources^{ENV} by using live things. In the new regime with the new laws they ENV
 47 really are trying to make sure there is something for our descendants. I always ECO
 48 teach them about the 3P's. You must make a profit^{ECO}, because you have workers SOC
 49 that need to be paid, and if you don't make enough profit there won't be an ENV
 50 income for them. Then there is the other two left: the people^{SOC} in your business, SOC
 51 the people that work for you and the people in the community. You must be ENV
 52 responsible, you can't sell them dagga. You must also be responsible towards ENV
 53 your planet^{ENV}, because I want my grandchildren to experience the National CONS
 54 parks and all the plantations and the Knysna forest. If the government didn't
 55 make sure of the regulations, it maybe wouldn't be there anymore^{CONS}.

PARTICIPANT E

56 Well absolutely yes! [Why?] Because then there would be a lot more thought into YES
 57 what projects their getting into, they would work through the process a lot
 58 longer. Some people will enter projects spontaneously without doing a viability ECO
 59 study for example so people will actually work out whether this business will be FUT
 60 profitable^{ECO} in ten or twenty years time^{FUT}.

PARTICIPANT F

61 Well again it is a very wide concept^{CONS} so... [Or sustainable practises?] No CONS
 62 definitely, if you look at the government at the moment, the corruption... For me YES
 63 as a citizen of this country it really goes against everything that I believe. People
 64 are working hard and let's face it, the majority of the people are still not paying
 65 taxation so now that money is being abused, so we all have to change our OTH
 66 mindset^{OTH}. We all have to run ethical business practises^{ECO}; we have to have an ECO
 67 ethical government^{SOC} that these children look up to. You know what my children SOC
 68 are talking about this week? We in leadership roles should set examples, because
 69 if we don't set examples we confuse children, but I agree with you 100% we
 70 have to teach them this because who is going to teach them this YES
 71 otherwise and that's life. EMS is one of the most fantastic subjects
 72 because if you get out of the classroom it is business, if you enter a shop
 73 it is business.

PARTICIPANT G

74 Yes it is important that we teach this to our children, but unfortunately they are YES
 75 not motivated these days. The problem is that many times when I do a business
 76 plan I ask them what type of business they would open and they would respond
 77 with answers like opening a liquor store or selling drugs^{SOC}. I ask them to come SOC
 78 up with ideas and they can't even answer me. So when I explain concepts like
 79 sustainable growth and development then you first have to think about what type
 80 of business you would open and whether it will sustain you in the short- and
 81 long-term^{FUT}. It should create work opportunities^{ECO} for other people that will give FUT
 ECO

82 them a future and that will improve their living standards^{SOC}. Many of the SOC
 83 children leave school and work, without wanting to go study. So a sustainable SOC
 84 business... I don't even know what example to give you. I think it is very
 85 important to at least tell the learners that it is a good thing to start a business
 86 and to maybe show them a good business plan that is sustainable and that would
 87 create work opportunities^{ECO} and that there are a need for that product. So it is
 88 important to teach them these concepts. If the learners aren't academically
 89 performing but they have business skills, they should go for it.

QUESTION 9: In which ways do you think you have a sustainable lifestyle?

PARTICIPANT A

1 In which ways? [Do you think you have a sustainable lifestyle?] To an extent I
 2 would say but also I would say no, so I fall in between, somewhere in between.
 3 [What makes it sustainable for you? Your lifestyle?] Well sustainable lifestyle... I
 4 don't know, I'm guessing now. I haven't worked that long to say that I am, that
 5 I can, I'm earning enough income or I'm earning enough money. So I'm still
 6 growing you know I'm still doing this industry or profession actually, so I can't
 7 really answer you on that one, not yet.

PARTICIPANT B

8 Being a very goal-oriented person I have achieved a lot of personal goals and
 9 career goals and even academic goals like our subject, more to the Gr.12 level
 10 now have achieved the highest marks in the Western Cape. So it means it's a
 11 goal I have set a few years ago which we've managed to achieve. I've also
 12 achieved personal goals from a physical and fitness point of view in terms of
 13 been doing the Comrades and then **from a savings point of view**^{ECO} in terms of
 14 what I've achieved from my financial side being **very savings orientated**^{ECO}
 15 which is very much applicable to the Gr. 9 level as that I would motivate them
 16 and I would always again draw back from my examples in terms of I've
 17 achieved over the years, **by simply living a disciplined life in all spheres**^{SOC} from
 18 a Christian/spiritual point of view as well and also from a I would say financial
 19 point of view. Did I answer that one?

ECO
ECO

SOC

PARTICIPANT C

20 Is that now to do with my personal lifestyle? [In general, how do you perceive a
 21 sustainable lifestyle?] I don't know. In today's world with things going on...
 22 don't know I mean I can say fine I have a good marriage, I have my children, I
 23 have a job, I have a car and then I have what I should have, but **is that enough**,
 24 is that sustainable, **is it going to last**^{LT} Do you understand? So, I can't really
 25 answer whether I do have a sustainable lifestyle because I don't know, can I
 26 really sustain my lifestyle? I mean anything can happen from that perspective.
 27 Say for example my husband decides after so many years of marriage no we are
 28 done. How is my lifestyle going to be sustained? Is it going to be the same
 29 lifestyle that I had, do you understand what I am saying, so from where on
 30 now? What?

LT

PARTICIPANT D

31 No, at this stage I am guilty. I am extremely overweight, I am unfit, I have
 32 **unhealthy eating habits**^{SOC} and I don't get enough sleep. I tell students whole
 33 day long to sustain a **healthy, balanced living**^{SOC}, but I don't have one. My
 34 circumstances are a reason for this, but I still know how to be sustainable
 35 towards myself and how to look after my health and I had a big scare when I
 36 realised my health was not what it is supposed to be. I am doing one thing; I
 37 am sleeping a bit more. I still don't eat healthy, I still don't do exercise, I'm still
 38 not on my goal weight. I know I have to reach these goals, but I told myself
 39 that my son got a post and my daughter is at university and now I am going to
 40 take care of myself, now is the time for surviving. Then I will know it is
 41 sustainable. I just want to claim that where my health and physique is
 42 concerned, that I am not sustainable, but my intellect... Last night I voluntarily
 43 went to a course about emotional-intelligence. There is also a world symposium
 44 that is presented in Cape Town that will cost about R5 000 and it is about
 45 leadership and development. I begged the governing body to fund me for this. I
 46 grab every opportunity I can get to my personal development and intellectual
 abilities.

SOC
SOC

PARTICIPANT E

47 Wow now that question can mean a lot of things^{CONT}. [It doesn't have to be personal; it can be in a broad, general way. How would you describe to learners what they need to aspire to in order to have a sustainable lifestyle?] I think a sustainable lifestyle compiles a lot of things^{CONT}. One is financial independence and also financial security^{ECO}. Regular incomes you know, you are able to meet your needs^{NEED} you might have. Basic and luxury needs^{NEED}

48 CONT
49 ECO
50 NEED
51 NEED
52 LT
53 ECO

53 over a period of time^{LT}. So just in financial terms^{ECO} that is sustainable to me.

54 Then there are other things that can be sustained like your spirituality and other aspects of your life, your family, you know that can also sustain you for a long time^{LT}. So in my view there is a whole lot of aspects to that question, but in business or financial terms^{ECO} it would mean to have your regular income and financial security^{ECO}. You don't have to depend on others^{SSUF}.

55 LT
56 ECO
57 ECO
58 SSUF

PARTICIPANT F

59 I don't because I think I work too hard. I don't sleep a lot... I try because I have 60 a child that's interested in social work so she is very into community. She 61 uplifts, she is incredible so from that point of view I am involved and helping, 62 and where we can we help. Just getting back to saving and investment^{ECO}, these 63 children do not have a clue. There is so much money and from Gr. 8 I teach 64 them that next time it's their birthday they should tell their parents they only 65 want half the money and the other half they should put in unit trusts and save. 66 We can't let the government be responsible for us when we are 80 years old^{SSUF}
67 so I do a lot of that too. Savings is very important in my own house^{ECO}. My 68 daughter works much better with money than me because I taught her that. 69 Productivity also comes into that LO, you can't be lazy^{ECO}. You know how hard I 70 work and I am old, but I work hard, most nights I sleep 3 hours and when I say 71 to the children they have ten minutes to study for tomorrow's test and they talk, 72 I want to have a fit because they are wasting time. So it is productivity^{ECO} and 73 also coming late for meetings I can't understand it, I am talking much broader. I 74 can talk a whole day on this; we have to change our mindsets, in South Africa 75 we have to change our mindsets^{SOC}. I don't buy this Africa time and that, if a 76 meeting is at 10 you are there before 10 o'clock. With children being absent and 77 parents supporting children being absent and writing them a false note. You are 78 absent when you are ill and that's it. I don't like being absent, the times I have 79 been absent I can count on my one hand. It is ethical principles you should have 80 and it is something that is nonexistent in this country^{CONT}. It is such a broad 81 concept^{CONT}, if you want to be sustainable you have to work hard^{ECO}, I'm a 82 widow and I am not going to get married again so I work hard. I don't look into 83 anybody's eyes for money, I work hard and I budget^{SSUF}. I can keep my 84 daughter at varsity, she hasn't got a bursary, and do you understand what I am 85 saying? It's taking responsibility; it's taking our human resources and taking 86 responsibility for land that was supposed to be reserved^{ENV}. We don't just let the 87 contracts be signed and now there is development. That's not for me right, 88 development, but at what price^{ENV}? So that's another issue, there are so many 89 issues in this country that needs to be addressed^{CONT}, so that's why I am saying 90 this subject is so fantastic.

CONT
CONT
ECO
SSUF

ENV
ENV
CONT

PARTICIPANT G

91 If you talk about a sustainable lifestyle I would say yes, but living standards 92 cannot be sustained with a salary that doesn't pay enough^{SOC}. That is why I am 93 one of the biggest supporters of the strike; I want to maintain a sustainable, 94 quality lifestyle^{SOC}. I don't want to worry about surviving and at the moment I 95 am sometimes just surviving. So I can't say that it is sustainable, sustainability 96 is long-term^{LT} and quality-based^{SOC} but my salary doesn't allow that. My wife 97 and I talk about alternative ways of income, many of us have to get a second or

SOC
SOC
LT,SOC

98 third job by selling things. So I would say that I try to maintain a sustainable
 99 lifestyle, but a better salary would have helped.

QUESTION 10: What is your understanding of economic growth?

PARTICIPANT A

1 Economic growth, well economic growth has to do with our economy obviously.
 2 Like I said, as a business grows, an economy grows. The more employment^{ECO} ECO
 3 there is the better our economy develops. That is what you want to see, so
 4 economic growth is when the demand or something is going up and the prices
 5 are also going up which means it's level, it's coming together you know.

PARTICIPANT B

6 My personal view would be economic growth is job creation^{ECO}, inflation rate^{ECO} ECO
 7 low^{ECO}, I think even now it is between 3 and 6% what the previous governor of ECO
 8 the Reserve Bank which was his aim (Tito Mboweni) to get it between 3 and 6% ECO
 9 so now that we are within that. I would say that in itself creates economic ECO
 10 growth. The low interest^{ECO} environment that we also find ourselves in, which ECO
 11 can also create economic growth. So it's mainly creating of jobs^{ECO} having a ECO
 12 good GDP^{ECO}: Gross Domestic Product and as I've said, such a lot of other stuff. ECO
 13 Good solid political climate, sound healthy political climate^{ECO} and having good ECO
 14 policies in place would create ultimately economic growth. That's how I see it. ECO

PARTICIPANT C

15 O.k. That is a good Gr. 12 question; there is the difference about economic ECO
 16 development and economic growth. Economic growth is basically where ECO
 17 products, where we... Ok let me just think about this. It is just basically for ECO
 18 business purposes now. Our products to get new every time, more products so ECO
 19 we can sell more^{ECO} so that the economy can grow so that... Oh develop or have ECO
 20 new products^{ECO}. People get more jobs^{ECO}, we sell it to people, we sell it ECO
 21 externally, export it^{ECO} and then get our economy to grow. I'm just looking from ECO
 22 an economic Gr. 12 perspective. ECO

PARTICIPANT D

23 That our country should produce more than what they produced the year ECO
 24 before^{ECO}. In other words there will be more work opportunities^{ECO}. There will be ECO
 25 more consumption^{ECO}, because our population are growing, but it won't help if ECO
 26 we are growing and there are no work opportunities for an increasing ECO
 27 population^{CONT} and the income decreases. So I will say growth goes hand in CONT
 28 hand with production and the income that must increase^{ECO}. Then our ECO
 29 countries^{NAT} economy will grow. NAT

PARTICIPANT E

30 Economic growth... that's interesting. Again I am going to say there are a lot of CONT
 31 different views^{CONT} on it and economic growth is developing the potential growth^{ECO} ECO
 32 of the individual so that he can make a contribution to the economy^{ECO}. O.k.,
 33 so in my estimation economic growth is giving people the capacity to ECO
 34 contribute^{ECO}. So if you have school learners that are unskilled they leave the ECO
 35 school and they are unskilled. To provide them with skills^{ECO}, they would make a ECO
 36 contribution to the growth of the economy. In short that is what economic ECO
 37 growth means to me. To capacitate people to contribute^{ECO} to the economy ECO
 38 whether it is giving them skills to be brick layers, computer literate or whatever
 39 skills is required to make this economy turn. ECO

PARTICIPANT F

40 For me economic growth I'm also looking at technology^{ECO}, you just don't grow
 41 with a building, do you understand what I am saying? Growing for me is
 42 technology^{ECO}, it is not just buildings. Infrastructure, yes^{ECO}, if we are going to
 43 demolish a building for something better, that is safer^{ECO} or whatever or have
 44 economically smaller houses, but don't give people a contract for a house and
 45 then subtract two years later. That is not sustainable, so again there the
 46 responsibility was shifted and no research was done^{CONT}. Those people are
 47 sitting now with cracked houses. I am an animal person and I live close to the
 48 beach that developments there, the plots were sold at definitely under cost
 49 price. I don't know how it happened, but now all that animals, also insects and
 50 birds, they are now in the streets trying to feed. A lot of your fynbos, that is
 51 destroyed forever, some of the fynbos you can't replant^{ENV}. The ecosystem is
 52 disturbed and for me that is at what cost and price^{ENV}? Where they are building
 53 houses now or flats or hotels, the insects were there to control diseases,
 54 everything is viral these days, why? Things are being demolished and systems
 55 are being removed that we can't see^{ENV}. There must be more responsibility,
 56 there is no responsibility^{ENV} and decisions that were taken years ago, I am not
 57 saying all decisions were good, but nature decisions... What are we leaving
 58 behind for our children?^{CFGGEN} Just buildings? Are we still going to have some
 59 places where they can just go and sit and enjoy seeing birds or are we going to
 60 start destroying that too^{ENV}? [Are you saying economic growth shouldn't take
 61 place at the cost of nature?] I want my grandchildren and great-grandchildren
 62 to experience all the animals, birds and species^{FGEN} and not to let greed destroy
 63 that^{ENV}.

PARTICIPANT G

64 I always try to explain the difference between economic growth and economic
 65 development to the children, but I am not 100% sure myself^{CONT}. The one talk
 66 about improving your living standards^{ECO} and development is all about
 67 improving your natural resources and production factors^{ECO}. It is to develop your
 68 labour, raw materials and entrepreneurship^{ECO}. Are you talking about economic
 69 growth? I am talking about economic growth. As EMS teacher what is your
 70 understanding of the term economic growth?] I would say that economic growth
 71 is to better your production^{ECO}. Here we talked about the GDP, the more you
 72 produce the better for your country^{ECO}. If this happens growth will take place,
 73 but it is a challenge to improve the country's production capacity^{CONT}. Production
 74 must take place, even if it is tertiary or secondary^{SCA}, more must be produced.
 75 Needs must be identified to be able to produce more, because economic growth
 76 is measured by this^{NEED}. The more you produce, especially for other
 77 countries^{GLO}, the more you can export and at this stage we import too many
 78 products^{CONT}. For an economy to grow we need to produce more internally, but
 79 also produce more for exports so that we can generate an income^{ECO} for the
 80 country^{NAT}.

QUESTION 11: What is your understanding of globalisation?

PARTICIPANT A

1 Globalisation, we haven't dealt with that yet, were going to deal with that still
 2 with the Gr. 9's. We haven't dealt with that topic yet so I haven't really gone into
 3 that yet, as yet I would say.

PARTICIPANT B

4 My understanding of globalisation would be that companies not just only in South
 5 Africa, but located globally across the borders, international, other countries as
 6 well. Not just only in one particular country but where one company could have
 7 various businesses or it could be of the same kind of business in various
 8 countries. [Do you think it's a good thing?] Most definitely, because one can
 9 draw from the experience, the competencies, the resources from other countries

10 as well, which can make you more marketable and companies can then become
 11 more profitable^{ECO}, because now they can tap into what we don't have we can
 12 find from other companies in other countries. So most definitely companies can
 13 benefit from that by not just being situated in one country, but in another
 14 country^{ECO}. And obviously because of the exchange and the currencies^{ECO} as well.

ECO
ECO
ECO

PARTICIPANT C

15 O.k, I was telling my Gr. 9's the other day. I see globalisation as, you see I look
 16 at it from the earth's perception: You have the earth and then you have America
 17 here, North, South, you have Asia and Europe and everybody here. And then we
 18 have the seas in between, the different oceans. Globalisation actually brings the
 19 world together and makes it easier for people^{IMPR}, it takes all the oceans away
 20 and it pushes all these continents together, because then it looks like a round
 21 ball without the ocean. So that is how I see globalisation, making it easier^{IMPR}.
 22 The other question whether I think globalisation is sometimes a good thing, that
 23 is also another question on its own, but that is basically just bringing the world,
 24 especially in businesses and marketing in selling our products, to make it
 25 easier^{IMPR}. You know I was telling my learners now the other day: If globalisation
 26 is not taking place then people will still actually see Africa, although some people
 27 still see Africa or SA as the place where we wear skins and drive elephants and
 28 all those things. If there wasn't globalisation we wouldn't have really, because
 29 most of our clothes we don't have our own South African car^{ECO}, we have a car
 30 that's been assembled here, but we don't have our own things^{ECO}. Everything is
 31 coming from overseas^{ECO}. What would you have done if we didn't have exports or
 32 international markets^{ECO}? [Do you necessarily then see it as a good thing?] You
 33 know... Sometimes yes, sometimes no looking at South Africa, looking at a
 34 capitalist perspective no. Just thinking of our country, having a black government
 35 but still a white economy, no I don't see globalisation as a good thing^{CONT}. Just
 36 from that, because with globalisation our poor people are still in the same
 37 position or they are just getting poorer and the rich people
 38 still getting richer^{CONT}.

IMPR
IMPR
IMPR
IMPR
ECO
ECO
ECO
ECO
CONT
CONT

PARTICIPANT D

39 That the buying and selling do not only exist in South Africa anymore, but around
 40 the world^{ECO}. That if I want to buy an adaptor from America today, to be able to
 41 get the internet, I will be able to receive it within 48 hours. So we can't just think
 42 of trading in terms of the Strand or South Africa, the world is now our shop and
 43 we can buy anywhere. There are off course problems because of this, but there
 44 are many advantages^{CONT}. It implies greater competition and we know that this
 45 will mean better quality^{ECO}. [What will be the disadvantages of globalisation?] I
 46 think local companies are struggling, these small companies want to start certain
 47 skills and want to do something but suddenly they have to compete with the
 48 world^{ECO}. They can't produce in mass, so that will mean that their prices will be
 49 higher. Their marketing won't be great, because it will cost a lot of money. I
 50 think that our government, to a certain extent, tries to protect these smaller
 51 companies in South Africa so that they are not exposed^{ECO} so much. I also read
 52 the other day that they are against recruiting, to help local suppliers.

ECO
CONT
ECO
ECO
ECO
ECO
ECO

PARTICIPANT E

53 Globalisation is making it possible for us to have one economy or access to the
 54 entire world. That in a nutshell means globalisation. In other words I have
 55 freedom going to any market, to buy anything, to be part of that economy. There
 56 is freedom of movement from one economy to the next^{ECO} or one country to the
 57 next. So globalisation means making the world a smaller place that each one of
 58 us can participate in all activities at our disposal^{ECO}.

ECO
ECO

PARTICIPANT F

59 I have got quite a strong view. The thing with globalisation the unfortunate thing
 60 is we battle to compete with China^{ECO}; the biggest problem for us is China I
 61 actually read to my children out of the newspaper that in one of the factories
 62 there are 10 people that committed suicide in China, because of their conditions.

63 They work at the bottom of the factory and sleep at the top. They basically work
64 24 hours, we can't compete. Firstly they are highly productive, but they get very
65 little pay. There is no unemployment there, unemployment is a issue on its own
66 here, we can bring that in too. Because of the world trade organisation we are
67 also member and they try to basically have no restrictions or barriers for import
68 and export. We can't really compete always... our textile industries are all
69 messed up^{ECO}. My one friend's husband is into the manufacturing of clothes and
70 has been bankrupt five times, just because he can't compete with China. He
71 can't make the clothes as cheaply, because they mass produce too. Besides that,
72 because they're so productive and you're biggest overhead cost is your labour
73 and theirs is so cheap. We can't compete with that and then overseas they're
74 agriculture, in about three or four countries they subsidise their agriculture so on
75 the world markets they can get much cheaper prices as opposed to us. We can't
76 and we will never see the best fruits and vegetables, because they are being
77 exported. We can learn from globalisation, technology and techniques. The main
78 problem is we can't compete. The proudly South African campaign, all the little
79 toys and things were outsourced to China. Why would the government or
80 whoever was responsible for that take that work away from us? Globalisation is
81 causing problems because we don't have consistent structures in place^{ECO}. If
82 those countries are subsidising agriculture why is our government not doing that
83 so that we can also become competitive^{ECO}? We are not competitive enough,
84 because we are not productive enough, we are lazy^{ECO}. I'll tell you now this
85 generation is lazy and that's the problem and we will have to do something about
86 our productivity. Everything is a mind shift; we have to change our mind shift.
87 That is one of the problems with globalisation and how it is affecting us, we can't
88 compete. Pricewise we can't compete. It is cheaper for us to buy imported
89 clothes at the moment, I mean my days it wasn't^{ECO}. That is a problem, but the
90 positive of that is that other countries are investing in South Africa and starting
91 businesses here^{ECO}, there is a lot of Chinese shops opening up here and there are
92 one shop I usually go and buy from. She regularly goes over brings her stuff
93 through, so there are positive and negative things to it. The technology is so that
94 you can sit in your home and run businesses all over. South Africa is still being
95 used to dump unwanted stuff that they can't sell on their markets and
96 unfortunately although according to the world trade organisation that our
97 government can put a tariff on those dumping, but they don't do it^{CONT}, because
98 then that countries again retaliate against us when we sell our stuff. It's a very
99 difficult situation and I don't have the answers^{CONT}. Those are the issues we are
100 struggling with, why have a proudly South African campaign if you are not
101 supporting it^{CONT}. We were excluded from the world for so long, because of
102 apartheid and we need that technology and better equipment so that our
103 production can increase^{ECO}. But if you're then going to invest in equipment you
104 are going to have less employees and that increases unemployment situation^{CONT}.

ECO

ECO

ECO

ECO

ECO

ECO

CONT

CONT

CONT

ECO

CONT

PARTICIPANT G

105 This is always difficult for me to explain^{CONT} because they don't understand it. I
 106 tell them to see it as a world market. They should see it as countries that can
 107 communicate and trade more effectively with each other. Globalisation is the
 108 reason why we are able to wear Nike shoes, a watch from Switzerland or a
 109 Billabong sweater from Australia. This is how countries work together to do
 110 business with each other. So basically I always tell them it is a world market
 111 where you can get anything from anywhere, imports and exports^{ECO}. I also tell
 112 them that you can watch a live game that is played in New Zealand because of
 113 the technology that interconnects countries^{ECO}. The learners are still young so
 114 that is how I try to explain it to them so that they understand it better. I try to
 115 explain difficult concepts in a practical manner. [Do you think globalisation is
 116 advantageous? Is it a good thing for South Africa?] This is a good question, I
 117 haven't really thought about it. The first thing that comes to mind is that it is a
 118 good thing. You learn other countries' cultures, you see how they do things and
 119 they can see how you operate. They can get hold of your products, so in that
 120 context it is a good thing. I haven't really thought about it in a negative way, so I
 121 will say that it is advantageous for our country^{ECO}.

CONT
ECO
ECO
ECO

QUESTION 13: We were talking about this LO, sustainable growth and development.
 Now, can you tell me what is it that needs to be sustained?

PARTICIPANT A**PARTICIPANT B**

1 Economic growth in terms of job creation^{ECO}, better GDP, healthy climate for
 2 foreign investment^{ECO}, increase in profitability and productivity^{ECO}, etc. ECO
 3 Development of Human Resources^{SOC}, in terms of skills development by using SOC
 4 the legislation in place.

PARTICIPANT C

5 Community development^{SOC}. If government can sustain the community in terms SOC
 6 of unemployment, housing, poverty and crime^{SOC} SOC

PARTICIPANT D

7 Entrepreneurs^{ECO} – business not only for one or two months. Profitability^{ECO}, so ECO
 8 that businesses can get bigger and bigger. With regard to people, social ECO
 9 responsibility^{SOC}. Customers – see that there is training. The planet^{ENV}, we ENV
 10 cannot just take out gold, for example. There must be something for ENV
 11 descendants^{ENV}. If we cut off trees, we need to put it back in nature^{ENV}. The three ECO
 12 P's are important for sustainability: Profit^{ECO}, People^{SOC} and Planet^{ENV}. For a SOC
 13 better South Africa. ENV

PARTICIPANT E

14 I think in the South African context, what needs to be sustained is our ECO
 15 manufacturing sector^{ECO}. We are far too dependent on agriculture and mining, or ECO
 16 the primary sector. It has sustained itself, but it is just not enough to have ECO
 17 growth and development. What needs to be sustained is manufacturing^{ECO}, that ECO
 18 needs to be developed and grown and almost everything else will fall in place, ECO
 19 new jobs, etc^{ECO}, which fall short in our country. The impact which China has, it ECO
 20 is setting an example by capturing various markets all over the world, by
 21 producing.

PARTICIPANT F

22 You need to sustain your infrastructure^{ECO} and to sustain it means you've got ECO
 23 roads now, but you need to sustain it. This roads in Durbanville, if it rains I can't
 24 see those lines, because it's not been sustained. You have to maintain stuff to be
 25 sustainable and so you can have now this new train, but it has to be maintained.
 26 That whole LO for me is when two things, we are talking about hospitals, schools
 27 and infrastructure^{ECO}, then I talk about people^{SOC}. We have to uplift our ECO
 28 people^{SOC}, we have to make sure people aren't dying of TB and dying of AIDS SOC
 29 and that people are educated on AIDS. You can't take the human and the SOC
 30 infrastructure and separate it. For development I'm thinking more people, SOC
 31 growth I think of the economy and infrastructure. It is as if you are asking me
 32 how long a piece of string is. Because I don't actually have an answer for that.

SOC
SOC
SOC**PARTICIPANT G**

33 The human resources^{SOC} and natural resources^{ECO}. To develop people^{SOC} and to SOC
 34 keep them here in terms of their skills and to study further. Then also to develop ECO
 35 the natural resources that we have. Like I have mentioned earlier to develop and SOC
 36 sustain our resources, this is the challenge^{CONT}, because we are running out and CONT
 37 why I don't know^{CONT}. So I would say that human resources^{SOC} and natural ECO
 38 resources^{ECO} need to be sustained.

CONT
SOC
ECO

ADDENDUM B

THEME 1: CATEGORIES		
PURPOSE: IMPROVEMENT		CODE: IMPR
Q5	continuous (working) (Q5D48) new opportunities, avenues & expansion (Q5E52)	
Q6	going forward (Q6A5) grow continuously (Q6D35)	
Q11	selling our products, to make it easier (Q11C25)	
PURPOSE: CONSERVATION		CODE: CONS
Q8	If the government didn't make sure of the regulations, it maybe wouldn't be there anymore (Q8D55)	
PURPOSE: MEETING NEEDS		CODE: NEED
Q5	meeting needs (Q5D48)	
Q9	meet your needs (Q9E52)	
Q10	Needs must be identified to be able to produce more, because economic growth is measured by this (Q10G76)	
PURPOSE: SSUF		
Q9	you don't have to depend on others (Q9E58) We can't let the government be responsible for us when we are 80 years old (Q9F66) I don't look into anybody's eyes for money, I work hard and I budget (Q9F83)	
PURPOSE: OTHER		CODE: OTH
Q8	it's all over us (Q8A3) need to know what's going on (Q8A4) to change mindset (Q8F66)	
PURPOSE: MEETING NEEDS		CODE: NEED
Q5	enough resources to continue (Q5D46)	
NATURE: ECONOMIC		CODE: ECO
Q5	demand and (Q5A6) supply (Q5A7) linked with economic growth (Q5B22) linked with economic development (Q5B24) profits (Q5E53) resources (electricity) (Q5F60) growth target (Q5G66) get foreign help (Q5G68) creating jobs (Q5G72) where economy is concerned (Q5G75) more production, must be more generating of money (Q5G78)	
Q6	market (Q6A5) economy (Q6A6) demand (Q6A6) employment (Q6A9) number of employees (Q6E48) opportunities (Q6E49)	

	<p>developing people's skills (Q6G62)</p> <p>technology (Q6G69)</p> <p>generate new resources (Q6G69)</p> <p>skilled workers leave the country (Q6G73)</p> <p>low income rates (Q6G74)</p>
	<p>no profit, no development (Q7A7)</p> <p>profitability negatively affected Q7B15)</p> <p>no production/ manufacturing (Q7B16)</p> <p>retrenchment (Q7B18)</p> <p>bankruptcy (Q7B19)</p> <p>not working with finances properly (Q7C27)</p> <p>don't follow normal business ethics (Q7C29)</p>
Q7	<p>unethical (Q7D36)</p> <p>losing market share Q7(E45)</p> <p>unethical business (Q7F48)</p> <p>evading taxation (Q7F49)</p> <p>short-term goals rather than long-term goals (Q7G67-68)</p>
	<p>government implement policies companies not too happy about (Q8B21-22)</p> <p>ethical practice (Q8D42)</p>
Q8	<p>profit (Q8D48)</p> <p>will be profitable (Q8E59)</p> <p>ethical business practices (Q8F66)</p> <p>create work opportunities (Q8G81)</p> <p>from a savings point of view (Q9B13)</p>
Q9	<p>financial independence and also financial security (Q9E51)</p> <p>saving and investment (Q9F62)</p> <p>productivity (Q9F72)</p> <p>more employment (Q10A2)</p> <p>job creation (Q10B6)</p> <p>inflation rate low (Q10B7)</p> <p>low interest (Q10B10)</p> <p>good GDP (Q10B12)</p> <p>political climate, sound healthy political climate (Q10B13)</p> <p>develop or have new products (Q10C20)</p> <p>get more jobs (Q10C20)</p>
Q10	<p>we sell it externally, export it (Q10C21)</p> <p>produce more than what they produced the year before (Q10D23)</p> <p>work opportunities (Q10D24)</p> <p>more consumption (Q10D25)</p> <p>giving people capacity to contribute (Q10E33)</p> <p>provide them with skills (Q10E35)</p> <p>looking at technology (Q10F40)</p> <p>infrastructure (Q10F42)</p> <p>building for something better, that is safer (Q10F43)</p>

	<p>improving your living standards (Q10G66)</p> <p>improving your natural resources and production factors (Q10G67)</p> <p>develop your labour, raw materials and entrepreneurship (Q10G68)</p> <p>about the GDP, the more you produce the better for your country (Q10G72)</p> <p>produce more for exports so that we can generate an income (Q10G79)</p>
	<p>Good thing, because one can draw from the experience, the competencies, the resources from other countries as well, which can make you more marketable and companies can then become more profitable (Q11B8-11)</p> <p>So most definitely companies can benefit from that by not just being situated in one country, but in another country (Q11B12-14)</p> <p>exchange and the currencies (Q11B14)</p> <p>we have a car that's been assembled here, but we don't have our own things (Q11C30)</p> <p>Everything is coming from overseas (Q11C31)</p> <p>if we didn't have exports or international markets (Q11C32)</p> <p>That the buying and selling do not only exist in South Africa anymore, but around the world (Q11D39-40)</p> <p>It implies greater competition and we know that this will mean better quality (Q11D44-45)</p> <p>I think local companies are struggling, these small companies want to start certain skills and want to do something but suddenly they have to compete with the world (Q11D46-48)</p> <p>our government, to a certain extent, tries to protect these smaller companies in South Africa so that they are not exposed (Q11D50-51)</p> <p>freedom of movement from one economy to the next (Q11E55)</p> <p>making the world a smaller place that each one of us can participate in all activities at our disposal (Q11E56-57)</p>
Q11	<p>The thing with globalisation the unfortunate thing is we battle to compete with China (F59-60)</p> <p>Because of the world trade organisation we are also member and they try to basically have no restrictions or barriers for import and export. We can't really compete always... our textile industries are all messed up (Q11F66-69)</p> <p>The proudly South African campaign, all the little toys and things were outsourced to China. Why would the government or whoever was responsible for that takes work away from us? Globalisation is causing problems because we don't have consistent structures in place (Q11F78-81)</p> <p>If those countries are subsidising agriculture why is our government not doing that so that we can also become competitive (Q11F82-83)</p> <p>We are not competitive enough, because we are not productive enough, we are lazy (Q11F83-84)</p> <p>It is cheaper for us to buy imported clothes at the moment, I mean my days it wasn't (Q11F88-89)</p> <p>That is a problem, but the positive of that is that other countries are investing in South Africa and starting businesses here (Q11F88-91)</p> <p>We were excluded from the world for so long, because of apartheid and we need that technology and better equipment so that our production can increase (Q11F101-103)</p> <p>it is a world market where you can get anything from anywhere, imports and exports (Q11G109-110)</p> <p>technology that interconnects countries (Q11G112)</p>

	This is a good question, I haven't really thought about it. The first thing that comes to mind is that it is a good thing. You learn other countries cultures, you see how they do things and they can see how you operate. They can get hold of your products, so in that context it is a good thing. I haven't really thought about it in a negative way, so I will say that it is advantageous for our country (Q11G115-120)	
Q13	Entrepreneurs (Q15D1) Profitability (Q15D2) in the South African context manufacturing sector (Q15E8-9) almost everything else will fall in place, new jobs, etc. (Q15E12-13) infrastructure (Q15F16) natural resources (Q15G27)	
	NATURE: ENVIRONMENTAL	CODE: ENV
Q6	infrastructure (Q6F58) running out of resources (Q6G63) natural and human resources (Q6G71)	
Q7	misuse of natural resources (Q7D38)	
Q8	exploit natural resources (Q7D46) must be responsible towards planet (Q7D53)	
Q9	taking our human resources and taking responsibility for land that was supposed to be reserved (Q9F86) development, but at what price (Q9F88)	
Q10	lot of your fynbos, that is destroyed forever (Q10F51) The ecosystem is disturbed and for me that is at what cost and price (Q10F52) There must be more responsibility, there is no responsibility(Q10F54) Things are being demolished and systems are being removed that we can't see(Q10F55) and not to let greed destroy that (Q10F63)	
Q13	The planet (D3) There must be something for descendants (D5) If we cut off trees, we need to put it back in nature (D5)	
	NATURE: SOCIAL	CODE: SOC
Q6	education (Q6F53) health (Q6F54) poverty (Q6F54)	
Q7	what the government sets in place (Q6F59) exploit workers (Q7D40) government is losing out (Q7F49) social responsibility (Q7F56)	
Q8	lifestyle (Q8B10) gain better understanding (Q8B14) exploit workers (Q8D44) people in the community (Q8D50) ethical government (Q8F67) type of business - liquor store (Q8G77) improve living standards (Q8G82)	
Q9	by simply living a disciplined life in all spheres (Q9B17)	

	healthy, balanced living (Q9D33) in South Africa we have to change our mind sets (Q9F75) living standards cannot be sustained with a salary that doesn't pay enough (Q9G92) and quality based (Q9G96)	
Q13	social responsibility (D3) People (D6) uplift our people (G22) human resources (G27)	
TIMESCALE: LONG-TERM		CODE: LT
Q6	it's going to take years (Q6C26) we do to get to that growth finally (Q6C29)	
Q7	no LT future (Q7E43) no LT goals (Q7F68) only thinks of the present (Q7F69)	
Q9	is that enough/is it going to last (Q9C24) over a period of time (Q9E53) is long-term (Q9G96)	
TIMESCALE: THE FUTURE		CODE: FUT
Q8	ten to twenty years (Q8E60) short-term and long-term (Q8G80-81)	
FOCUS: CURRENT GENERATION		CODE: CGEN
Q5	affects them here and now (Q5C34)	
FOCUS: FUTURE GENERATION		CODE: FGEN
Q10	I want my grandchildren and great-grandchildren to experience all the animals, birds and species (Q10F61-62)	
FOCUS: FUTURE AND CURRENT GENERATION		CODE: FCGEN
Q10	but nature decisions... What are we leaving behind for our children? (Q10F58) our country (Q10D29) for the country (Q10G80)	
Q10	but nature decisions... What are we leaving behind for our children? (Q10F58) Production must take place, even if it is tertiary or secondary (Q10G74) but nature decisions... What are we leaving behind for our children? (Q10F58) The more you produce, especially for other countries (Q10G77)	
GEO/SCALE: GLOBAL		CODE: GLO
GEO/SCALE: NATIONAL		CODE: NAT
Q5	South Africa (Q5B25) South Africa (Q5C29) the economy (Q5E49) our country (Q5F60) the country (Q5G69)	
GEO/SCALE: LOCAL		CODE: LOC
Q5	at home (Q5A4) their daily living (Q5A5) in Kraaifontein (Q5C29) in our community (Q5C29) community (Q5D44) in an organisation (Q5E50) Whether it's an organisation (Q5E51)	

GEO/SCALE: SCALE/AREA UNDEFINED		CODE: SCA
CHALLENGES: CONTROVERSY		CODE: CONT
Q5	<ul style="list-style-type: none"> very vague topic (Q5B11) difficult topic (Q5C26) causing problems in community (Q5C30) weaknesses in system (Q5F61) strikes (Q5G75) more salaries not solution to growth (Q5G77) employment & investing (Q5G81) gap between rich and poor (Q5G82) 	
Q6	<ul style="list-style-type: none"> here in SA still very far (Q6C31) very much interchanged Q6E43) 	
Q8	<ul style="list-style-type: none"> very wide concept (Q8F61) 	
Q9	<p><i>can mean a lot of things (Q9E47)</i></p> <p><i>It is ethical principles you should have and it is something that is nonexistent in this country (Q9F80)</i></p> <p><i>It is such a broad concept (Q9F81)</i></p> <p><i>so many issues in this country that need to be addressed (Q9F89)</i></p>	
Q10	<ul style="list-style-type: none"> increasing population, no work opportunities (Q10D28) different views (Q10E31) responsibility was shifted and no research was done (Q10F46) difference between economic growth and economic development to the children, but I am not 100% sure myself (Q10G64-65) challenge to improve the country's production capacity (Q10G73-74) at this stage we import too many products (Q10G77-78) 	
Q11	<ul style="list-style-type: none"> looking at South Africa, looking at a capitalist perspective no. Just thinking of our country, having a black government but still a white economy, no I don't see globalisation as a good thing (Q11C34-36) because with globalisation our poor people are still in the same position or they are just getting poorer and the rich people still getting richer (Q11C36-38) here are off course problems because of this, but there are many advantages (Q11D43-44) South Africa is still being used to dump unwanted stuff that they can't sell on their markets and unfortunately although according to the world trade organisation that our government can put a tariff on those dumping, but they don't do it (Q11F93-96) It's a very difficult situation and I don't have the answers (Q11F97-98) Those are the issues we are struggling with, why have a proudly South African Campaign if you are not supporting (Q11F98-100) But if you're then going to invest in equipment you are going to have less employees and that increases unemployment situation (Q11F102-103) This is always difficult for me to explain (Q11G105) 	
Q13	<ul style="list-style-type: none"> Like I have mentioned earlier to develop and sustain our resources, this is the challenge (G29-30) because we are running out and why I don't know (G30-31) 	

ADDENDUM C**THEME 1: FREQUENCY OF MENTIONS**

CATEGORIES	CONCEPTS	PARTICIPANTS							TOTAL	%	
		A	B	C	D	E	F	G			
FREQUENCIES											
PURPOSE: IMPR	Q5: SUSTAINABLE GROWTH			1	1			2	17	8%	
PURPOSE: IMPR	Q6:SUSTAINABLE DEVELOPMENT	1		1				2			
PURPOSE: IMPR	Q10: ECONOMIC GROWTH					1	1	2			
PURPOSE: IMPR	Q11 GLOBALISATION		1					1			
PURPOSE: CONS	Q8: IMPORTANCE OF SUST. BUS. PRACTICES				1			1			
PURPOSE: NEED	Q5: SUSTAINABLE GROWTH			1				1			
PURPOSE: NEED	Q9: SUSTAINABLE LIFESTYLES				1			1			
PURPOSE: NEED	Q10: ECONOMIC GROWTH						1	1			
PURPOSE: SSUF	Q9: SUSTAINABLE LIFESTYLES				1	2		3			
PURPOSE: OTH	Q8: IMPORTANCE OF SUST. BUS. PRACTICES	2				1		3			
NATURE: ENV	Q6:SUSTAINABLE DEVELOPMENT					1	2	3	15	7%	
NATURE: ENV	Q7: UNSUSTAINABLE BUS. PRACTICES			1				1			
NATURE: ENV	Q8: IMPORTANCE OF SUST. BUS. PRACTICES		2					2			
NATURE: ENV	Q9: SUSTAINABLE LIFESTYLES					2		2			
NATURE: ENV	Q10: ECONOMIC GROWTH					4		4			
NATURE: ENV	Q13: WHAT IS TO BE SUSTAINED			3				3			
NATURE: ECO	Q5: SUSTAINABLE GROWTH	2	2		1	1	5	11			
NATURE: ECO	Q6:SUSTAINABLE DEVELOPMENT	4			2		5	11	94	45%	
NATURE: ECO	Q7: UNSUSTAINABLE BUS. PRACTICES	1	4	2	1	1	2	1			
NATURE: ECO	Q8: IMPORTANCE OF SUST. BUS. PRACTICES		1		2	1	1	1			
NATURE: ECO	Q9: SUSTAINABLE LIFESTYLES		1			1	2	4			
NATURE: ECO	Q10: ECONOMIC GROWTH	1	4	3	3	2	2	4			
NATURE: ECO	Q11 GLOBALISATION		3	3	4	2	8	3			
NATURE: ECO	Q13: WHAT IS TO BE SUSTAINED		2		2	2	1	1			

NATURE: SOC	Q6:SUSTAINABLE DEVELOPMENT				4		4				
NATURE: SOC	Q7: UNSUSTAINABLE BUS. PRACTICES			1		2		3			
NATURE: SOC	Q8: IMPORTANCE OF SUST. BUS. PRACTICES	2		2		1	2	7			
NATURE: SOC	Q9: SUSTAINABLE LIFESTYLES	1		1		1	2	5			
NATURE: SOC	Q10: ECONOMIC GROWTH		1					1			
NATURE: SOC	Q13: WHAT IS TO BE SUSTAINED	1	2	2		1	1	7			
WHO FOR: CGEN	Q5: SUSTAINABLE GROWTH			1				1			
WHO FOR: CFGN	Q10: ECONOMIC GROWTH					1		1			
TIMESCALE: LT	Q6:SUSTAINABLE DEVELOPMENT			2				2			
TIMESCALE: LT	Q7: UNSUSTAINABLE BUS. PRACTICES			1			2	3			
TIMESCALE: LT	Q9: SUSTAINABLE LIFESTYLES		1		1		1	3			
TIMESCALE: FUT	Q8: IMPORTANCE OF SUST. BUS. PRACTICES				1		1	2			
GEO/SCALE: LOC	Q5: SUSTAINABLE GROWTH		2		2	1	1		6		
GEO/SCALE: NAT	Q5: SUSTAINABLE GROWTH		1	1	1	1	1	1	6		
GEO/SCALE: NAT	Q10: ECONOMIC GROWTH				1				1		
CHALLENGES	Q5: SUSTAINABLE GROWTH	1	2			1	4	8			
CHALLENGES	Q6:SUSTAINABLE DEVELOPMENT		1		1			2			
CHALLENGES	Q8: IMPORTANCE OF SUST. BUS. PRACTICES						1		1		
CHALLENGES	Q9: SUSTAINABLE LIFESTYLES					1	3		4		
CHALLENGES	Q10: ECONOMIC GROWTH				1	1	1	3	6		
CHALLENGES	Q11 GLOBALISATION		2	1		4	1	8			
CHALLENGES	Q13: WHAT IS TO BE SUSTAINED						2	2			
									208	100%	

ADDENDUM D**THEME 2: INTERVIEW TRANSCRIPT**

QUESTION 1: What is your understanding of Learning Outcome 2 of the EMS curriculum, i.e. "Sustainable Growth and Development"?

Colour coding:

Yellow – understanding of concepts **Green** – teaching and learning

Line **Participant A**

1 From what I've done so far with the kids, just identifying you know demand,
2 supply, how they understand it. Growth of the economy, the growth and
3 demand in the economy, how it goes up, how it goes down, that kind of thing.

Participant B

4 It's a very difficult and challenging outcome^{CONT}, because you need to go in
5 detail in terms of explaining it to the pupils. Some pupils find it extremely
6 challenging so you need to cover it from varied areas and make sure that they
7 understand it. The concept in terms of just the development of it. For me, even
8 as a teacher it's a challenging concept^{CONT} which time doesn't always allow us
to go in detail with it

Participant C

9 O.k, sustainable growth is basically, how I see it when I teach it for the Gr. 9s
10 is how it affects my learners' community^{LOC} because of the situation where our
11 school is situated, so we are looking at that from our community's
12 perspective^{LOC}. Poverty and health and education and all those things and how
13 it's affecting them^{SOC}. According to the notes the sustainable growth. They just
14 explain it and they explain to us about the RDP and how that started after
15 1994^{REDR} and all that, but I don't teach it the way it is been told or the way the
16 text book is given. So that is basically what I'm doing, I just teach it out of my
17 children's point of view and how they see it.

Participant D

18 Well, what we do in school... can I tell you what our problem is? Our problem is
19 that EMS in our school consists out of Accounting and a little bit of Business
20 Economics. We told our previous principal that there are 3 outcomes for
21 Business Economics and there is one outcome for Accounting, but in a ten day
22 cycle we have six periods for accounting and two for Business Economics. So
23 we have watered down this part of EMS extremely and I can't handle it
24 anymore. I went to see the new principal about this problem last week, so that
25 Business Economics could get more periods, but like I've stated previously
26 everything's still just on paper. What we have done at this stage about
27 sustainable growth and development is we have talked a little about RDP^{REDR}.
28 The other teachers on my subject-team, I'm more involved with the seniors,
29 but then they come with the planning and tell me to just talk briefly about
30 these concepts, because it is not that important. Nowhere in the books is the
31 history the same, so we are not going to concentrate on that! The children are
32 just told of what sustainable development is and that raw materials should not
33 be wasted^{ENV}. They are also been told that there are RDP, which means that
34 the government really tried to fix what was wrong in the past^{REDR}, but taking
35 into account the background of our school and its milieu, it is something that
36 should get more time and attention^{CONT}.

Participant E

38 In my view sustainable growth and development means to grow in the
39 economy and making it sustainable. In other words making it workable for
40 people to sustain themselves^{ECO}. So sustainable growth and development
41 means growing the economy in terms of more entrepreneurs, bigger
42 businesses and more businesses, more opportunities^{IMPR} and also making it
43 possible for those businesses to sustain themselves. That's my broad
44 understanding of what it is.

Code

CONT

CONT

LOC

LOC

SOC

REDR

REDR

ENV

REDR

CONT

ECO

IMPR

Participant F

45 For me if you look at economic growth is looking at the infrastructure^{ECO} of the
 46 country and when I look at development I'm looking at the person and the living standards of the people, looking at socio-economic issues like poverty,
 47 HIV, people who lost their dignity, don't have electricity and uplifting that^{SOC}.
 48 So those are the two things for me. One the one side there is growth –
 49 infrastructure, railways, and nuclear power stations^{ECO} and on the other side is
 50 developing people and uplifting them because of the apartheid where people
 51 lost a lot of their dignity, self-respect^{SOC} etc. and then obviously they don't
 52 always have the training for a sustainable income because it is lacking where
 53 they are coming from^{SOC}. So that is how I see it, the two components.
 54

Participant G

55 About LO 2? For me it is quite a difficult concept to explain to the learners^{CONT}.
 56 With sustainable development... at the moment they are struggling to create
 57 work opportunities^{ECO} possible and I think it begins there. Your growth starts
 58 when you create work opportunities in the community or for other people^{SOC}.
 59 So for example if you can create work, the growth will start there. This is what
 60 I explain to the learners and the more you produce^{ECO} and the more people
 61 become employed, the more your country's income will be. So for me it will
 62 begin with creating work opportunities^{ECO}. At the moment we are struggling
 63 with poverty^{SOC} and if we do not look at that the country will not grow. Growth,
 64 to me, will start with creating work opportunities^{ECO} and to reduce poverty^{SOC}.
 65 This will be my focus.

QUESTION 2: Could you identify the curriculum aspects specific to this Learning outcome: sustainable growth and development

PARTICIPANT A [*Question was more specific to the integration of curriculum aspects, which was subsequently changed to focus on LO2 aspects only*]

1 Yes I have actually with this topic actually; I have integrated some of the other
 2 previous work that we have done, especially the business part of EMS. Like for
 3 example running the business. What is making the business effective? That kind
 4 of thing. Even as far as accounting for that matter. Integrating that into this
 5 topic, that makes it quite more interesting.

PARTICIPANT B

6 It's not clearly stipulated, it's not clearly outlined in terms of what you need to
 7 do in the classroom^{CONT}. I mean it's such a vague topic: growth and
 8 development in terms of what's going on in the world of business or in the world
 9 of the economy^{CONT}. The topic lends it over to such a lot of info that one can
 10 basically explain to the learners and then one must obviously take into
 11 consideration it's only in a introductory phase where it's only Gr. 9s, but you
 12 have different, especially in our/my school you have different level of pupils so
 13 you need to be able to accommodate all of them so therefore I don't think that
 14 even the outcomes and even the guidelines indicate as to how far you need to
 15 go with this particular outcome^{CONT}.

CONT

CONT

CONT

PARTICIPANT C

17 Ok, what we do is we look at the budget^{IMPR}; we take this learning outcome and
 18 break it basically into different forms for the year. So in February I would look
 19 at the budget, the National budget^{IMPR} and look at those perspectives, what is
 20 been given. Then later on the year when it is the local government's budgets^{IMPR}
 21 and then take it from that perspective also, hey. So the budget is the one part
 22 we are looking at. We do look at RDP^{REDR}, but like I said not in such detail. And
 23 then there's another one. That is now a question that you caught me
 24 unguarded. Oh, then we look at globalisation, foreign marketing, international
 25 marketing^{ECO}, pertaining to sustainable growth. Looking at that aspect and then
 26 putting in how, what we can do to promote that in South Africa. So that is the
 three things.

IMPR

IMPR

IMPR

REDR

ECO

PARTICIPANT D

27 Because I concentrate so much on the seniors I have no idea^{CONT}, I just get the
 28 Gr. 8 and 9 work. I can tell you what I do with them, we do business functions
 29 and we do the importance of saving and demand en supply^{ECO}, we brought in a
 30 little bit of economics. The history of banks and managing, then planning and
 31 organizing^{ECO} and we also do entrepreneurship^{ECO}. Entrepreneurship is what
 32 business economics is about in our school. It is a difficult task^{CONT}, but we help
 33 them to make personal budgets. When their parents are setting up budgets the
 34 children should be able to tell them to save and why it is important^{ECO}. What I
 35 do with my class, I know the other teachers don't, is the National budget^{IMPR}.
 36 There I told them to gather information and when we talk about budgeting I tell
 37 them how the National budget^{IMPR} works. I know this doesn't happen in all the
 38 classes. Can I tell you something, I know nobody liked the CTA (*Common Tasks*
 39 *Assessment*), but I am so sorry it is going to be taken away. It gave people that
 40 idea that LO2 in Gr. 8 and 9 is not as important as in Gr. 10, 11 and 12, a
 41 loophole to say they are just teaching the content they like. Where in the past
 42 they had to look at Sustainable Growth and Development and touch on every
 43 aspect, so that the child had an idea. They now just leave it out, because there
 44 is no formal testing and we cannot ask internal questions about it. [*So they*
 45 *aren't being tested about this?*] At this stage we have received nothing that can
 46 tell us what to do. They have only told us that CTA is off. One of the sources
 47 told me at a cluster meeting that we will all get a questionnaire on the same day
 48 and others say no... I am very unhappy about this. I went to see my new
 49 principal, because I want the Business Economics part to play a bigger part. My
 50 Gr. 10, 11 and 12s are struggling because they don't have the background
 51 knowledge about Business Economics i.e. Sustainable Growth and Development.
 52 [*Is it necessary for specific Gr. 9s?*] Yes definitely, it is very important! The
 53 Gr.10s have got so much more work to do than in Gr.9, but when you talk
 54 about things like sustainability, different sectors and business functions^{ECO}, they
 55 have to have the basic knowledge. We only have two periods in a ten-day cycle,
 56 so we just touch on topics, for example, do you know there is something like
 57 that? You don't have enough time to write tests and help the students to
 58 remember these things better, so you have to start from the beginning in Gr.10.
 59 This is a pity, I am seriously busy with this problem, and luckily I have a
 60 wonderful, supporting principle. So where I was just subject head of Gr.10, 11
 61 and 12, I am from next year in charge of the gr.8-12s. now I can do something
 62 about this problem.

PARTICIPANT E

63 With Sustainable Growth and Development we would identify just certain
 64 aspects of businesses that can be sustained, so with entrepreneurship^{ECO} for
 65 example we would have a topic on that and identify businesses that can start
 66 either in school level or after matric and university and that is needed in the
 67 economy and that can be sustained. We look at aspects like school leavers and
 68 what kind of businesses can they start and we look at micro businesses^{ECO}, like
 69 can you start it in your community? Is it sustainable in your community^{LOC} or
 70 those kinds of aspects we look at in Gr. 9? But I must admit we do not spend a
 71 lot of time on it. Possibly a week or two for the whole year.

CONT

ECO

ECO

ECO

CONT

ECO

IMPR

IMPR

ECO

ECO

ECO

LOC

PARTICIPANT F

72 What I do firstly is I don't look at a textbook, I look at about ten textbooks and
 73 then compile my own notes and I don't go in depth, because we've got the
 74 Accounting component and then we've got EMS which is more business
 75 orientated so I condense all the theory and this is part of the theory to a
 76 maximum 14 pages. So I take out teaching children the concepts so if I feel like
 77 for example Economic Development and Growth I would look at the budget^{IMPR}
 78 because the government plays an important role there and then I take it
 79 further. Unfortunately I'm newspaper mad, my whole class is full of business
 80 reports and nobody is allowed to touch a business report in the staffroom, I take
 81 it to my class. I would now for example look at government spending^{IMPR} but I
 82 would also look at the corruption going on, because that is actually a big issue
 83 for me, So I bring that in, I don't just stick to what the assessment standard is,
 84 I will look at the assessment standards, because we must do the budget^{IMPR}, but
 85 am I teaching my children to look further. They also have to be accountable; do
 86 you understand what I am saying? There is no use we have things in place when
 87 we look at the RDP, which also falls under that and it flopped because people
 88 didn't manage it properly and that's why things are flopping now too. It (RDP) is
 89 not happening because of mismanagement^{CONT}. So I bring that in, I look broader
 90 and I also teach from the newspaper, I always say, this is not what I am saying,
 91 the newspaper is saying that that is what they are reporting (To cover myself).
 92 So the first part I look at infrastructure^{ECO} and then there I look at, like I have
 93 said, I don't go in depth. It is not important to me that they know where all the
 94 nuclear plants are, they just need to know what infrastructure is^{ECO}. It just
 95 doesn't happen and it's not just to have it, it must be maintained. Now with the
 96 soccer you can bring that in. There is no use we host something like that but we
 97 don't have the infrastructure^{ECO} so I emphasise the government gets X amount,
 98 where does the money come from, what do they spend it on etc. So that is the
 99 infrastructure and I look at what do they see as infrastructure? Then the second
 100 part I focus a lot on human development, because I think that is a big part of it
 101 and I do like to look at what happened in the apartheid years, because I think
 102 people need to know^{REDR}. There is no use saying it was sixteen years ago and it
 103 is resolved, because it is not resolved. What about the people that are 70 or 80
 104 years old? It is not apartheid anymore but those people can't go to varsity or be
 105 schooled, so there I bring in social grounds. So when I look at the development
 106 of people I look at poverty, I look at electricity. The basic needs that are not
 107 met, sanitation^{SOC}, I drive past a squatter camp every day and I'll tell them: You
 108 know what crosses my mind everyday when I drive past there, besides that
 109 they steal electricity, if I had a daughter and that in the evening she must go to
 110 a mobile toilet outside, the scary part of it. If we think of the rape statistics so I
 111 make children aware of what is going on. You can't go through life with blinkers
 112 on and I also look at on what the government is granting social grants on^{SOC}.
 113 Funny enough I only saw the other day, if you are not married and you've got a
 114 child you can actually get a grant, I didn't even realise that. I've got a few
 115 issues over that, but it doesn't matter that is my own thing and then I also look
 116 at things like poverty and aids because they need to know. A few years ago
 117 when we had a specific minister what was her view about Aids and the mess up
 118 there and people died because of ignorance on the part of the government. So
 119 the thing is I don't want my children to be ignorant I talk openly, but I don't talk
 120 politics, I don't believe in that, but a lot of things are political factors we are
 121 looking at, I look at socio-economic issues when I look at the development of
 122 people, you can't move away from it^{CONT} and then obviously what I also do is,
 123 because I teach Business to Gr. 12, I bring in things like the social responsibility
 124 of the business sector^{CONT} and then I also look at things like... businesses are
 125 still ignorant^{CONT}, a large percentage of their employees are HIV positive and
 126 what can they do? So I stick to basic notes what the children need to know
 127 according to the syllabus, but when I educate them I educate them broader. We
 128

129 talk broadly, we talk about the newspaper, and we talk relevant things that are
 130 happening now. I also talk about why people's land is given back to them,
 131 because people need to know it^{REDR}. The problem is I am teaching now what I
 132 didn't go through, so a lot of times children hear things through their parents or
 133 some parents don't even educate them on that and I was part of that so I talk
 134 to them about it. My parents were very liberated and my father had factories
 135 and he would bring his workers children to come play with us so it was never a
 136 race thing. I think affirmative action is also very important, I bring all this in to
 137 tell the learners that affirmative action was not implemented to promote race,
 138 because if you think of your designated groups there were also women that
 139 were discriminated against and disabled people, because although they are not
 140 supposed to discriminate against disabled people, they still do. I cover a wide
 141 spectrum, but it is things that are happening now. Sometimes I tell them
 142 something and then the next day it is in the newspaper. That is my focus, but
 143 we also do the budget^{IMPR}, I don't want them to learn everything that the
 144 government is spending money on. What I do is I give them a pie chart where I
 145 integrate my exercises, I bring a lot of newspaper articles in and then I ask
 146 questions about that. With the pie chart I am bringing in presentation too and
 147 then I'll ask them questions relating to that, like what do the government spent
 148 most of their money on and why^{IMPR}. It is drawing information from them it is
 149 not just feeding them, the other thing I say to them is listen to your parents,
 150 but don't be indoctrinated. You have to form your own opinions, because my
 151 daughter was born in 1990 so they didn't grow up with apartheid when you talk
 152 to them about it they don't believe what you are saying. With the RDP and basic
 153 needs^{REDR}, I lived in Stellenbosch and Sundays I would go and do missionary
 154 work in the Cape Flats and I say I know how a shack looks I know how big it is.
 155 I sat in one, so it is basically just enlightening them, because the children in our
 156 school have money and they have no idea of how other people live^{CONT}. I don't
 157 want children to think shame - feel sorry for them, but it is when people are
 158 uplifted despite these circumstances.

PARTICIPANT G

159 I cannot remember the specific aspects of LO2; I'm not able to answer that
 160 question^{CONT}.

QUESTION 3 and 4: Could you describe your teaching and learning activities, as well as your resources used for this particular learning outcome?

PARTICIPANT A

1 Well what I've done is actually today I have drawn up graphs with them where
 2 we explain to them how that when the price of a product goes up the demand
 3 goes down and then the supply goes up, the price goes up. So I try to explain
 4 that to them so they understand and I try to bring it more to earth, to ground, to
 5 things that they experience every day and how the bread price for example goes
 6 up because of the demand and because the bakers' price goes up, transport goes
 7 up, petrol goes up, so the prices also go up you know, so that's how I bring it
 8 back to them to reality you know. At the moment I mostly use notes, projector,
 9 internet, most of the time the internet actually. [A Textbook?] We don't really
 10 have a textbook that we use, we use most of our notes we get from one textbook
 11 and then from there all the teachers that do EMS we work from the one textbook
 12 and then we have, we use notes and then the notes go onto the projector and
 13 then they write the notes down from the projector, because we're trying to
 14 encourage writing and reading skills at the school you know because the kids
 15 don't read and write that much.

PARTICIPANT B

16 I'm a very practical person; I do draw a lot from my personal experience being
 17 an entrepreneur myself. I do make a lot of examples of how pupils can apply it in
 18 a practical context in terms from a business point of view what they can do from
 19 a developmental point of view and how they can grow a business like a lot of
 20 examples I would normally use and the pupils relate very easily to it in terms of a

REDR

IMPR

IMPR

REDR

CONT

CONT

21 chicken business and I always just pretend and I had a chicken business and I
 22 would normally give the name of the business which is linked to my surname and
 23 then they relate very closely to it and very good to it which means it gives a
 24 better understanding for them, so in terms of examples and in terms of the
 25 practicality of it I do make a lot of examples. Very limited resources. Keeping in
 26 mind that I think it's mainly because of the time frame. The resources that I
 27 normally use would be just a PowerPoint and then obviously the whiteboard, but
 28 from a more of a visual form must admit very limited. We're using a textbook
 29 from a guy from Gauteng, which the learning area head of the subject
 30 recommended that we need to use. I must admit I can't remember the exact
 31 name of the textbook, but that I can find out for you.

PARTICIPANT C

32 Normally in the beginning of the year we would take the budget, the learners get
 33 a copy of the budget in the newspaper. Then we would first discuss it in the class
 34 and then I would give them a little activity. Normal things that they need to do is
 35 where I would give them a case study with a budget where they would have to
 36 answer some questions and then maybe they have to draw a pie graph of the
 37 different sectors of the department and how much everybody was given so that
 38 its one activity. I had an activity already where the learners had to write to the
 39 minister of housing a formal letter where they had to write about their house
 40 situation here in Kraaifontein. So that was an activity already given and the other
 41 day I did a specific topic and then I asked the learners to write a rap song about
 42 sustainable growth and poverty and things and it was actually very nice because
 43 they would come up and like the Afrikaans classes and they would speak like:
 44 "Armoede in ons gebied en dit is die werkloosheid..." You know they would make
 45 up their own little rap song and they would do it so from that different things...
 46 we do a formal one where they have to do research and things, but then we do
 47 this also to make it to bring some comedy and laughter into the classroom. And
 48 then there's another one that I did, another type of assessment. I would say this
 49 is the different things that sustainable growth, how does it affect us? This is
 50 poverty this is this and that food, people that don't have food, and people that
 51 don't have housing and so on. They take an article from the newspaper, but I
 52 would then give them a specific task, for example find an article in the newspaper
 53 and then you write me your comments about that article. So that is the type of
 54 activities I would give learners Resources: Ok we are in a very lucky position,
 55 we have the internet available on a daily basis, so the internet, newspaper. And
 56 then because we have the interactive whiteboard it is very easy for the learners.
 57 Like when I was doing the rap, I took the topic sustainable growth and then I
 58 went on Youtube and then I found a example of a rap, so I could show it to them.
 59 [Are you talking about the rap song?] The song yes, so you can go into Youtube
 60 and then you find an example, because we don't use a specific textbook. It is
 61 basically that: newspapers, the internet. For that specific topic the internet is
 62 basically the biggest resource that we use.

PARTICIPANT D

63 Well, I have a data-projector in my classroom now. I believe that when I explain
 64 something, I have to give the learner an activity so that they can practise it on
 65 their own. So for example when I do resources and factors of production, they
 66 have to paste pictures of all 4 factors with the product in the middle. They have
 67 to illustrate how the factors are used to make the product. This way they
 68 remember it more effectively, because they have to go and search for examples
 69 of the factors of production. When I do budgeting with them, then I tell them
 70 their allowance and their expenses. They all have expenses like cigarettes and so
 71 forth. So they have their income and their expenses, now they have to make a
 72 personal budget. When I do supply and demand, I let them come and to it on a
 73 practical manner on the board. There will be at least six or seven examples of a
 74 growing demand and vice versa. So I teach for one period and then the next
 75 period they have to do a activity to practise their new knowledge. It is really a

76 problem when we only have two periods, at the end of the day we don't have
 77 enough time to get through all our work. If you give one class, and one class is
 78 practical, then your periods for ten days are over. Resources that I use are the
 79 next question. In the beginning I only used transparencies and now I have a data
 80 projector in my class. I really try with PowerPoint, but I need a lot of pictures.
 81 The children don't learn the same, so when I talk about capital or raw materials
 82 everyone will not understand. When I use a slide with pictures for those first and
 83 second impressions and then give the describing words and definitions, it is like
 84 they learn better. It makes associations for them and they learn more efficiently.
 85 With management I try to bring in concepts with straws and needles to explain it
 86 to them in a practical manner. I then ask them what happened today? That guy
 87 maybe did a bit of plumbing and that guy organised by doing something
 88 practical, but my periods are usually not enough. There is not always time for all
 89 of this, but I try making it more interesting for them.

PARTICIPANT E

90 It would be in terms of activities. I wish I could show you one or two, but it
 91 would be an activity where we would have data response kind of questions or a
 92 scenario being sketched out for the learners. Where Tom started his own
 93 business, say for example a vegetable garden and how is he going to sustain it.
 94 Is it viable for him, do a cost benefit analysis for him and all those kinds of
 95 things. So it would basically be an activity the children have to look at, like
 96 maybe a paragraph or two that they have to read you know and then have to
 97 analyse it and see whether the business can be sustained or not. So those kinds
 98 of activities I would give them to do. The teaching resources would be personal
 99 experiences, the experiences that we know of, people who started their own
 100 businesses, ended and created businesses and we would also ask them to do a
 101 project or assignment on it as well, you know to go and research and see what
 102 new businesses are opening in your community and it would be from textbooks.
 103 That would be our sources. [Do you have a prescribed textbook?] No we don't
 104 have a prescribed textbook; we draw up our own notes.

PARTICIPANT F

105 As I've said I read a lot, my whole classroom is full of business reports and
 106 mainly I look at the ten textbooks, but I use very little of the textbooks. Basically
 107 I look at the theory and then I check my assessment standards, I think that's
 108 going to be something of the past, that I cover everything, but as I said it's
 109 condensed for me. With this subject we unfortunately have to focus on
 110 Accounting, because these kids are going to Gr. 10 and they don't have the
 111 basis, that a downfall for all of us. If we can have five days a week, if it can be a
 112 subject that is recognised and I think it is a very important subject, then we can
 113 spend much more time on this. The textbooks have very little accounting, our
 114 children will never be able to do accounting if we use the textbooks. I would say
 115 to you it is integrated, although some weeks we don't do the theory part at all
 116 and then maybe one week we would just do theory, but it is difficult to start with
 117 accounting as a new concept and now tomorrow you are doing theory. When I
 118 work out my year plan or my term planner I will say to them this is what we
 119 need to cover and they get a booklet. This is the theory that they need to cover
 120 and then I make suggestions to integrate it, but again it is up to the individual
 121 teacher, as long as when we reach that date to set a test, they have covered
 122 both sections. I let the children research for me and then they also talk, they
 123 have to come and tell me what they want to be someday and why, even the
 124 expectations what they want to be, they are so ignorant. It is getting to know
 125 them better and seeing what they're views are. Sometimes I tell them to go
 126 research something like in Gr. 8 EMS I tell them to go read about the latest cell
 127 phones, which is a fantastic topic for them. When we do something and I see...
 128 like when we do strikes, there is so much in the newspaper now, in their tests I
 129 gave them a whole thing about strikes although we haven't even done it yet. We
 130 spoke about it in the class and their marks were inflated which is so normal they

131 didn't know why people strike, ignorance. I would say I work with my basis which
 132 is my term and year planner. I cover all the LOs and assessment standards, but I
 133 bring in the newspaper and what's happening today and I always tell children
 134 that they can forget the theory but if they just remember what I'm telling them
 135 now that's important and I think it is things they need to know.

PARTICIPANT G

136 We have a prescribed textbook that I haven't really used this year, because it
 137 doesn't provide the child with enough information about certain topics. So when
 138 you talk about sustainable growth and development the learners wouldn't know
 139 what it is about. The textbook is limiting, we have to get our own resources to
 140 give the child more information. So where the resources are concerned, it is very
 141 limiting on the moment. If you do not do your own research you wouldn't have
 142 enough information to cover topics like these.

QUESTION 12: If you look at the weighting according to the NCS for Gr. 9 you will see that in LO1 you have 20% for the economic cycle, while in LO2 you have 15%, which is what we were talking about. Then LO3 is 30%, i.e managerial, consumer and financial knowledge and skills and LO 4: entrepreneurship is 35%. What is your view of the appropriation of that? The weighting guides you to the time you need to spend in terms of content and in terms of assessment. Do you think it is a good appropriation and do you agree with the 15% that LO2 gets?

PARTICIPANT A

1 I think it's a good break-up because in a way LO2 is important, so maybe I
 2 would say in a way I would say it's a bit little I would say, but in a way it's
 3 also giving only a drop of what is important and once you reach a higher level
 4 which is Gr. 10 for those who are doing Business Studies I think there they
 5 will learn probably then more of what that actually means. So at this point in
 6 time I would say the break-up is quite fine. It gives you a wide spectrum of
 7 what the subject is about and what they learn, it's different; it's not just one
 8 specific thing you know.

PARTICIPANT B

9 Well I would fully understand why there would more emphasis been put on
 10 the last ones in terms of entrepreneurship. It is because you know that our
 11 major companies cannot supply us with enough jobs so the emphasis should
 12 definitely be on creating jobs and becoming an entrepreneur. I think that in
 13 its 15% provision is sufficient, but again I must be honest in saying that I
 14 don't even think we can do the 15 % in explaining LO2. I would even say
 15 what is going on, I can only talk, I can only say from my own school
 16 experiences that we most probably only give 5%, if it's not less, for this
 17 particular learning outcome. And again, I know I'm saying it again and again,
 18 it is simply because of the fact that we need to spend more time in explaining
 19 the Accounting part of EMS. [Which is Learning Outcome 3] What is the
 20 percentage we allocate? [30%] Which is only 30%, but I would say that we
 21 don't even spent 30%, we probably spent 70-80% on that particular one. I
 22 think it's quite interesting now that we're talking about it. This whole EMS in
 23 Gr. 9 should definitely be revisited. The reason for that is because you don't
 24 do any justification to the Accounting part. Are you with me? How on earth
 25 can we prepare pupils in just allocating 30%, if I'm just thinking in terms of
 26 Accounting it's 70%. So then the subject is more obviously weighted on more
 27 towards the economic and business side of it and which means when those
 28 pupils want to do Accounting, they're going to struggle with it. They're not
 29 going to be able to do it when they get to Gr. 10 and that's the problem that
 30 most of the Accounting teachers are facing. For me as a Business Studies and
 31 Economics specialist, I've got no problem in terms of when pupils come to me
 32 from Gr. 9 to Gr.10, in explaining it to them and it is most probably because
 of if I'm just looking at the break-down of it, that there is a bigger percentage
 been allocated to the business concepts or business side of it.

PARTICIPANT C

33 You know my personal thing is, I would take that 15% and put it with LO3
 34 and I would take that away. [Why?] I don't see why the learners should be
 35 taught that. I would take it more down to Gr. 7 and 8, but in Gr. 9 when the
 36 learners need to make choices for Gr. 10, for their subject choices, that is a
 37 unnecessary LO there. [Do you think that is important that whatever they
 38 have been taught in Gr. 9 should filter in to Gr. 10?] Yes, I do think so and
 39 that is what we do with EMS. When I do sustainable growth I'm looking at it
 40 from economics perspective and what the learners need to know next year for
 41 Gr. 10. The same with for example entrepreneurship, then I would look at
 42 what the learners need to know for Business Studies Gr. 10. [But if you take
 43 that 15% away, obviously that gap would be there?] No, not really. [For
 44 economics specific?] No it won't, because economics you start all over, you
 45 start with every concept the learners have been taught all over in Gr. 10. So
 46 no, it won't be.

PARTICIPANT D

47 I am very guilty, because I didn't even know about this, I am too concerned
 48 with the Gr. 10, 11 and 12s. I just get the Gr. 8 and 9 works that should be
 49 done and I present it to the class. That this ratio is not practised is fact. We
 50 only concentrate on the 30 and 35% and they are just touched on briefly. My
 51 first feeling is that entrepreneurship is important; you can't be a successful
 52 entrepreneur if you do not know about economic, sustainable growth. So no, I
 53 wouldn't just make it 15%, I would have made the Accounting less. It is not
 54 because I don't feel like doing Accounting, I present it and it is a lovely
 55 subject. I would have made it 20% and entrepreneurship 30 % how much is
 56 the other? [The first one, economic cycle, is 20%.] I understand that the
 57 economic cycle is necessary, but I would have made it 15%. Especially if you
 58 go further in Business Studies, sustainability is important. Maybe it's because
 59 the person that does our preparation for EMS Gr. 9 didn't make us aware of
 60 this ratio, so we couldn't say anything about it. [Percentage wise, what % per
 61 year do you spend on Accounting, Gr. 9?] We have a 10-day cycle and 6
 62 periods of the 10 days go to Accounting and two go to the other. It is not fair,
 63 because 30% gets 6 sessions and 70% gets 2 sessions. But like I said, they
 64 didn't bother to listen to us, because our vice principals were all Accounting
 65 people and they didn't want to give in. Now the one Accounting vice-principal
 66 has left and I am not afraid of the other one. I think because I have a lot of
 67 contact with the Education Department and I work with them, the other
 68 realise that I can make trouble for them, so we were allowed to look at this
 69 problem. This content has really been neglected and it is so important,
 70 because so much of this LO I do in Gr. 10, 11 and 12 must have started in Gr.
 71 8 and 9. I am really ashamed as I sit here, I only realise this now. [You've
 72 mentioned earlier that you have to start again in Gr. 10?] I didn't realise this,
 73 I have to start from the beginning to explain everything, but you just told me
 74 that it is supposed to get 15%, so we have to give more attention to this,
 75 then we won't have to start from the beginning. Because now I speed to get
 76 through the work and it isn't necessary. You just gave me more ammunition
 77 to fight with.

PARTICIPANT E

78 LO2 is how much? [15%. That is the guidelines according to the NCS, but it is
 79 just a guideline.] What is the topic there? [What we discussed]
 80 Sustainable Growth and Development. I think that the allocation is, this is not
 81 only my view but also the Department's view, it is completely out of line
 82 according to what we as a school need. We would for example spend very
 83 little time on things we view as not so important, as other things that we feel
 84 are very important. For example on LO3 we spend maybe 70% of our time
 85 and only 30% on all the other three LOs because we feel the accounting part
 86 is extremely needed for because we can see that in the results of our matrics,
 87 because the basics that we use to have in accounting in Gr. 8 and 9 is now

88 lost because only 30% of the time should be spend on it. I do however feel
89 that we need to spend more time on LO3 and on LO4, entrepreneurship.
90 There is a need for that, but not at the expense of Accounting and that is
91 what happens now. EMS has replaced Accounting and to the detriment of
92 those people who want to study Accounting, we spend 70%. We need to
93 spend even more time on Accounting, because we feel EMS should be a
94 subject on its own and accounting should be a subject on its' own and not
95 replace Accounting with EMS. We should be spending more time on it, but we
96 can't because of time.

PARTICIPANT F

97 That's quite a difficult one, I think it should be higher because I think if you
98 look at the issues we have just discussed now and if you think of the subject
99 going further to matric, most of the content is actually in LO2. We didn't even
100 touch on unemployment, because that comes in with your socio-economic.
101 Your whole Business Studies subject is based on socio-economic, so why
102 would that just be 15%? Entrepreneurial skills if I think of the Business
103 Studies syllabus is one little chapter, it is a very short little section they do.
104 Not that I say it is not important, because we have to create our own work, so
105 I don't always believe in how they categorise this stuff either. Just looking at
106 sustainable development, there your entrepreneurial skills should come in, it
107 should be linked it shouldn't be a separate thing. It is actually for me the
108 same thing, because how are you going to develop people, because
109 everybody can't go to varsity and we want people to be creative and
110 innovative with technology and with globalisation. I think that percentage
111 should be higher. If Accounting can be 5 days a week, it would solve our
112 problem, because then we can carry forward the business section. We spend
113 most time on accounting, because next year they go to Gr. 10 and they don't
114 have the basis, that's why I look at those ten books. I take the LOs and
115 assessment standards and cover everything, but low key. What they do in 5
116 pages I do in a paragraph, but my activity exposes them to what's really
117 going on. So my learners are very well equipped, we always do very well in
118 that external exam, they used to think it is a joke. My approach is different,
119 but it is hard work, I do research and it didn't happen from the textbooks. The
120 emphasis of the textbooks are sometimes different, it is like they wrote it
121 from a different syllabus.

PARTICIPANT G

122 To tell you the truth we spend very little time on this. [What do you spend the
123 most time on?] Accounting. We try to cover the other 3 LOs as quickly as
124 possible. When you talk about sustainable growth and development, we
125 haven't even touched on that in the Gr. 9 classes. We have done the cycle,
126 entrepreneurship and a business plan, but from March onwards we have done
127 Accounting. Why? Because in Gr. 10 the learners need to be on a certain level
128 to be able to continue. Percentage wise we have spent 60% of the 75% we
129 have done this year on Accounting. The reason for this is that they need
130 certain knowledge to be able to do Accounting in Gr. 10.

ADDENDUM E



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CONSENT TO PARTICIPATE IN RESEARCH

Dear

I am a PhD-student at the University of Stellenbosch conducting a research project titled: The relevance, importance and applicability of sustainable development in Economic and Management Sciences education. The purpose of the research is to have an in-depth look at how Economics and Management Sciences (EMS) at the Senior Phase level is taught, enacted and understood by teachers, specifically with regard to Learning Outcome 2: Sustainable Growth and Development. I am particularly interested in conducting interviews with two Grade 9 EMS teachers. The interviews can be conducted in either Afrikaans or English.

Pseudonyms will be used in the research report to protect the name of the school and participating teachers. Any information that is obtained in connection with this study and that can be identified with the school will remain confidential, and in respect of the conditions specified by the Western Cape Education Department. I have obtained approval from the Western Cape Education Department as well as consent from the principal of the school.

I would appreciate it if you could participate in the project. Attached please find the consent form outlining the details of the project. Please feel free to contact me if you need further information.

Thanking you.

Carina America

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ADDENDUM F

(E-mail to participants)

Dear

Research Project: LO2: Sustainable Growth and Development – EMS Grade 9

Thank you very much for taking part in this project. There is a last request, please.

The Department of Education is currently busy with a process of revising curricula for different subjects (Primary and High Schools) in order to contribute to the enhancement of the quality of teaching and learning at school level. Attached is the Final Draft (EMS) of the amendment to the NCS, i.e. the Curriculum Assessment Policy Statement (CAPS) for implementation in 2012. The key topics and weighting are stated on page 6 and an overview on page 8. Briefly state your views (below) regarding the amended curriculum, specifically with regard to the current LO2: Sustainable growth and development and its exclusion / integration in CAPS.

Your comments will remain anonymous.

Thanks very much for your contribution to this project.

Kind regards

Carina America

ADDENDUM G**Participant Information**

Years teaching experience

.....years andmonths

Qualifications:

*please write/type

.....
.....
.....

Current position: Teacher

*please tick (✓) where HOD:

applicable and add subject Subject Head:

for HOD or Subject Head

Current teaching subjects

(2010)

EMS: Grade (s)

Business Studies: Grade (s)

Economics: Grade (s):

Accounting: Grade (s):

Years teaching experience

per subject

*please write/type

Subject	Years teaching of following grades				
	8	9	10	11	12
EMS					
Business Studies					
Accounting					
Economics					

Profile of the school:

[any important information about the school, e.g. medium of instruction/ student profile, etc]

Other information, e.g. any achievements/ media coverage, etc regarding the teaching of any of the above subjects

ADDENDUM H 1

I must be honest, It wasn't since our interview that i started looking critically at the learning outcomes. We just accept and do the work presented to us.

We moan about big classes, discipline problems, loads of admin. work, literacy problems yet we are faced with learning outcomes we hardly look at, do not care whether goals or outcomes are reached or just totally ignore the outcomes and focus on others we are more familiar to.

This is the first time in years I really looked at learning outcome 2 of Grade 9 Env. and realised that I haven't been focussing on the topic sustainable growth and development (maybe my lack of knowledge on the topic, or my disinterest) focussing rather on the national budget (income and expenditure), what RDP is and some projects, importance of savings and different types, explaining what globalisation is (never giving a thought of its disadvantages)

I wish I had more time to have a critical reflection on all the outcomes, specifically no. 2, & because your workload, teaching, admin., setting question papers, marking, sport, extramural activities does not allow you to

I'm looking forward to reading your ^{final} ~~analytic~~ evaluation of the outcomes.

Good luck and all of the best with your research project.

ADDENDUM I**INTERVIEW TRANSCRIPTS OF CURRICULUM ADVISORS****Curriculum Advisor 1**

[If you look at the EMS curriculum, what is your understanding of LO2: sustainable growth and development?] Ok I need to think about this quickly. My understanding of sustainable growth and development is how it impacts on the growth of the country. Everything that is covered for both Gr. 8 and 9 in that LO has to do mainly with the redress aspect of the economic policies. That was my understanding of it. When they had to look for example at the section on RDP that was the policy the government had to follow at that time, at the time that they were writing the curriculum. Subsequently they moved in different directions and so I think they were trying to establish an understanding of economic growth at the time. That is broadly speaking of what my understanding was of that LO. I don't necessarily think that they should have tried to do it in Gr. 8. I think they could have simplified it a bit more in Gr. 8 and looked at more detail in Gr. 9 because I think the learners are a little bit too young in Gr. 8 to really understand that we were looking at economic growth and what that is actually. So I don't necessarily think that the Gr. 8's needs to be exposed to the detail we are looking at, but I also think that Gr. 9, the way in which it was written left less room for flexibility, so economic growth is an important part or it is important for the country and sustaining it especially is very important. But the way it was written they shouldn't have focussed on a specific aspect like RDP. They should have written it in such a way that there was more room for the teacher to move into the current, more recent trends, because that kind of thing is ever changing and it changes more quickly than one actually knows. [What is it then that needs to be sustained?] That is a good question. Can I fetch my curriculum statement because I can't remember all the "goetertjies" that are there. [It doesn't necessarily have to relate to curriculum aspects. Just in general, we talk about sustainable development, but have you thought about what is it that needs to be sustained?] Look it is not stated explicitly and my understanding of sustaining growth would mean that one needs to look at your labour and work force. In this country I think it is often neglected and so our workforce makes a noise ever so often. If you look at the noises they make it leads to industrial action and it takes money out of the economy most of the time. It doesn't always have a positive perception of the image of the country. As soon as people start with industrial action in the country, I am just thinking from a relative point of view and relative in the sense of family. I get all these phone calls from family members across the world, "What is happening in your country?" kind of thing. So from that point of view I think we need to look at that, so we need to sustain a stable work force and we need to try and minimize industrial action. It has positives and negatives attached to it. What else should be sustaining? I haven't really considered it, I am just reflecting on what I taught earlier today when we were looking at key success factors of sustainability and we looked at the business as such and I am thinking we need to sustain business enterprises in South Africa and especially small businesses and if you take it back one step even further where our focus is on job creation and poverty alleviation, maybe what we need to be looking at is sustaining employment and helping small businesses sustain themselves. I am just trying to think about it logically, because if you are thinking about it we are focussing all our energy on entrepreneurship for example, but how many people are actually going out there and becoming entrepreneurs and taking those chances. So we need to look at human resources here as well, but we need to sustain small businesses because then they are there and then they are gone you know? Then you see them and then you don't, so what is the missing link there? [Why do you think that EMS teachers are struggling with the concept sustainable growth and development?] I think first of all because they don't understand it and they don't interrogate the material enough. It is important to ask yourself questions and relate it to everyday experiences and I think that teachers don't do that. Many of them say they don't have textbooks, the textbooks aren't written the way it must be written and I don't

think that sustainable growth and development can exclusively be taught out of a textbook. So I think one of the gaps is the lack of interrogation of the assessment standards. Secondly I feel that teachers don't work with one another, they don't discuss things. I might reason on one level, but it is only when you really test what you are thinking with somebody else that you know you are on the same wave length or on the same page and so that networking becomes an important aspect of what you take back into your classroom. In the old days we would just get together over a cup of coffee and share ideas and say this is what I've been doing and we would somehow find a common ground and we would compile something or at least leave with a common understanding. I find that that is lacking and it is lacking because teachers are complaining about administrative overload, they don't have time like they used to have it in the old days I think that is the main thing. The thing is I think that when teachers were trained it was not EMS as such, it was a very specialised area, you either did BCom-General or BCom-Accounting, you specialise in your field and so I think teachers are struggling to make the links now, it is a very new area. I think the way sustainable growth and development are written in the curriculum is very much like a pie in the sky and as soon as it becomes that, teachers tend to avoid it. Especially when you think in terms of the context and realities that you have in front of you, with regards to the type of child you have in your classroom and the facilities that your school has. You are looking at a township school versus a school that has all the facilities. [So what kind of training do you then do in order to equip teachers to help with their understanding?] I must tell you that little training, if any, was done for sustainable growth and development for those LO's. I know that the focus was on entrepreneurship and so there were lots of roll-outs on how to approach the entrepreneurship assessment standards, specially looking at the business plan and also then LO 3 which also then was bridging the gap for Accounting. I don't recall ever that we even discussed or considered that learning outcome to need training, or for that matter even LO 1, which is the whole thing on the economic cycle. I know that there has a lot to have been said like it is a circular flow, but it was never addressed as such in training. I think that the WCED's response to that was that they allowed the CAs to go on that National Council of Economic Education (NCEE) course, so that was the response. The expectation would be that what the CAs learnt on that course with regards to economics would then be cascaded into the schools. I think it has started to be put in place from this year only, but maybe the focus was more on FET teachers and not on the junior teachers or the teachers teaching EMS in Gr. 8 and 9. I don't recall at all for LO 2, so they actually left it open, I also don't think that at a provincial level CA's were given the scope to have such training, because remember the training was always done at head office, but because EMS are part of the GET (General Education and Training) and there is no formal exam in the end of Gr. 9 I don't think that was prioritised as a need and I think that was why it was never really addressed. [With regard to the CAPS document, LO2 is excluded/integrated, what is your view?] I don't think that it has been integrated, I think they have just taken it out, because it has been like a prickly pear. [If you look at the ratio in terms of covering the content and assessment, LO3 has been increased to 43% now.] Which we disagree with. [How can we then ensure from the CA's and the department's position that the conceptualisation of sustainable growth and development by teachers needs to be done in a way that can make it easier for them to explain it to the learners?] I hear you. You want a strategy to give to those teachers to approach those concepts so that they can carry over that knowledge to the learners. [We work from the premise that it has not really fallen away. Although it's not there, there are elements of sustainable growth and development still. You just said that you didn't really deal with it in the way you should have] I think it was left up to each district to support their schools. They expected us to deal with the difficulties the teachers were experiencing. So if I've got to say school A and the teacher says what you mean with this section then the responsibility was on me to unpack it for that teacher. And to provide resources for the teacher to use in the classroom so I was expected to develop material then and to mediate that concept to the teacher. What a lot of teachers did was they focussed on recency because they just stated explicitly that this happened in the past and we have moved on from here and we want to focus more on recent trends and we

have access to the internet, it is downloadable and the children have been talking about it. They tended to focus on recency, which is not a bad thing I would think in the light of where the curriculum came from. The whole idea of that curriculum was transformation anyway. I don't think that is a bad thing and I think it is a step in the right direction. It is showing the proactiveness of that teacher to move with that trend. In terms of now and support or with future support, I think we shouldn't fall into the traps we fell into with RNCS. First of all I don't think we should give generic training, because generic training actually means nothing and so I am hoping that from the department of basic education that is not going to be the brief. We have little authority against briefs like that so we can't exactly chop and change things based on the need in the classroom. The brief of generic training or orientation as I prefer to call it, there is little we can do other than classroom support. I was hoping that they would look more in detail into teaching concepts and so that when we do have to do orientation that we then rather focus on conceptual understandings and give teachers the resources and possible teaching strategies as apposed to generic training, because that will make more sense. It would create that understanding and most teachers walk around with stuff in their heads long before they will have to go and teach it. If they have got those information and they have the ability to walk around with it and to interrogate it properly then I think the chances of that being taught properly are better than what it is now. I find that because they themselves don't really understand it, well they have a understanding but it is a superficial understanding, and because they haven't really interrogated it they tend to cover it on the surface. [What is your view then about the new structure of EMS, according to the CAPS document?] I haven't looked at it in too much detail. The one thing I did see is that they are weighting Accounting even more heavily, the learning outcome, more heavily than they are weighting it now and my feeling is that it is wrong, because it is part of General Education and Training (GET), and the whole idea or my idea of GET is to give the learner enough of a grounding in all of the commercial areas not just one specific area. My feeling is that it needs more time, then they should pull it out of EMS and call it Accounting as they did in the old days and say then this is a learning area called Accounting, if that is what they want to do but I don't think they should do it at the expense of either aspects which ground the learner for economics and for business studies. That is a strong feeling I have and then I get the impression that the focus on entrepreneurship has been shifted and I surprised at that because the whole idea entrepreneurship was to empower people to employ themselves. Do you see what I mean? I don't understand because the whole point, is we wanted to give you the skills to start your own business, then why shift the focus now, and shift it in such a dramatic way, that you are looking now at Accounting to such an extend because the teachers are complaining they get through the work and they add more things? The children can't cope with cash receipts journals and cash payment journals now you add DAJ and, I think its CAJ, they add the ledges, the allowance journals. They can't even cope with the creditor's journals and the debtor's journals, now why do you want to add that? [But if you listen to the teachers, many of the schools are doing Accounting anyway?] But that is the problem that is why it is not EMS anymore. It's just Accounting, so take it out and call it Accounting. That was actually the point I made, when I spoke to Take it out and call it Accounting. It doesn't make any sense because it's not general education and training anymore. General education and training implies we giving you a little bit of everything and so you master that and you specialise in Grade 10. [So what is then the directive from the departments' side: as a guideline for teachers to abide by?] I was about to say to you. Remember the Curriculum statement is Policy and so when you looking officials you need a unified voice from all 8 officials in all 8 districts to start with. You can't go according to personal points of view with regards to policy. Now if I am a strong Accounting, if I'm an official with strong Accounting background, I'm going to push LO 3. If I'm official that believes in general education and training, I'm going to steer my districts' teachers in that way, because I want general education and training. So first of all we all need a unified point of view. And not steering everybody according personal preference. Second of all, education officials don't have a good standing with teachers. [Why is that?] Because they feel we sold them out. And we are the department. And

there is a negative connotation attached to being part of the department without quite understanding that they are also part of the department and they are also bound by the conditions of employment. But they just have this negative view of officials. Are you coming to tell us this and this and this again? And we will not listen to you; we will do what works in our classroom. So there's that perception. And that's a difficult one to break. And especially if they've perceive you to be a lot younger than what they are so what can you possibly know. What can you tell me that will possibly make it easy for me in the class, there is that kind of view point. So that's a big challenge. And one has to be very careful in terms of relationship building with one's teachers when you approaching something as sensible as weighting a LO. You have to be very careful how you get that message across. And it's also important that you do it in such a way that they don't feel they've been told to do it, so I, in standard setting meetings for example I would give them a little information booklet and as a rule I would give them a task that was integrated, that integrated everything they taught for that term, because I tried to get them to teach a little bit of each LO, every term. And so I used to give them a task that was integrated across the LO's and not focussed on one and what I did was I tried to link assessment standards that has a natural kind of link, they had room for natural integration and obviously then also try to establish the concepts of test writing especially in Grade 9. *[Was it well received, this method?]* It wasn't initially received well, not from Grade 7, 8 or 9. Not initially, not in my first year. It was kind of, you know, you taking one step forward and ten steps back. And it was partly because it wasn't a real understanding of how to make links naturally and it was a new thing. *It was a new curriculum and people were feeling a little bit out of their depth. But two, three, four years later when they started to discover these links for themselves, it became easier.* To the point now that those same teachers who were resistant initially are now phone me and saying: I'll help where I can with newer teachers. And that were a major shift for me. Because once they've made the shift, they were fine. And they just naturally started to do it, and what very interesting was, they then started to plan their own work schedules. They didn't need me to do all the work schedules for them anymore. Or to put things together for them, anymore. Or for me to give them research anymore. Because they started to develop their own and they became more confident with theirs. But those teachers weren't also far between and those were you more experienced teachers. *[You've answered the question about the Accounting part: at one school 90% of EMS is Accounting]* Do you know what they do? *They cram the economic cycle and that idea of sustainable growth and development and that little bit of management in LO 3, the management means of payment story, that little bit there. They cram that into the first term and for the rest of the year they just do Accounting.* And they kind of keep their options open with entrepreneurship and so if the CA puts enough pressure on them and ask enough questions and calls for their tasks for moderation, then they will do entrepreneurship just to satisfy them. But other than that they will push that on Grade 8, do that little bit in the first term and the rest will just be Accounting. And that is true, that is true. *[Now, coming back to this LO 2: Sustainable growth and Development. Do you think it is important in terms of progression either FET Business studies or FET Accounting? Do you think it is important that we need to look at this from a conceptual basis in Grade 8 and Grade 9, or can learners start the FET phase without having grounding?]* No, I don't think so. I don't think so. *[Why is that?]* I think that people, I think that the learners must be given an understanding. They need a general understanding of these concepts. It must be taught properly. Simply because when you specialise, you must know what you specialising in. You can say: I'm going to start economics next year and not have any clue of supply and demand. I'll just give you an example: Last year when I moderated the PI assessments task, the assessment section A, I was presented with a class of children who drew the supply and demand graph on the same axis. It was two demand graphs. So you can't have a child going into Grade 10, thinking that supply and demand, they can have the incorrect idea of supply and demand. They must at least know what it is and that it involves a graph and that, you know that there is a law that attach to demand and a law attach to supply and that there's a relationship; a positive and a negative relationship. They need that

understanding, even though it is that basic, in the same why for the other concepts. **They need that understanding because they can't go in there totally clueless.** I don't think they can, but I don't think they need to go in with a level of specialization, they must go in with a level of mastery and I think the problem with the Accounting aspect is, is that there is a expectation what they go in with a level of specialization and they can't do that in General Educational and Training. They've must have master it. Because a) All children learn differently and b) Some children are going to retrain knowledge and loose some of it, other children will retain most and loose little, depending on what they like. So the child that is able to apply things more easily, is going to retain more knowledge and so that is going to be probably your child that will go into Accounting, because the type of child or the type of learner require for Accounting, a) must have a good grounding in maths and it must be a child that works. It's a special kind of a child that you need for that because its application all of the time. But at the same time that child might also decide that they have an interest in economics and it wouldn't be ungrounded because it is also application. So you have to ground the generally, you can't just ground them for one area. *[But yet you will find at some schools, teachers say they start all over in Grade 10, they start from scratch as if learners know nothing?]* But I think that's a problem that schools create. Principles create that problem because they take any subject teacher to teach Grade 8 and 9 EMS because it seems as a loose subject. So anybody can teach it, from the PT (physical training) teacher because he doesn't have enough periods, the life orientations teacher because he hasn't got enough periods to fill his timetable to the art and culture teacher because they don't have enough periods to full his time table, so whether or not the people are able to teach, it they find themselves teaching it. And then you will have a situation were your grade 10 teacher have to start from scratch because anybody were teaching. But if you take, if principals are more selective in terms of the qualifications of teachers then that won't happen and thirdly teachers need to talk to one another. So whether you are a subject expert or not you must then talk to the subject experts. You can't work in your little silos because it you don't know, how are you going to know either than ask? And they can ask, they can ask their peers at school, they can network or they can ask their CA's. *[If as you look at Sustainable Growth and Development, and the way it is structured in the current curriculum and obviously as part of your training: other than RDP, how do you relate it to the community?]* I don't think that that link has been made. Despite the fact that there are a number of projects, in communities, that look at those things. I mean if you look at the proudly Mannenberg project just for example, and you look at the community based structure of growing vegetable in certain townships areas for sustaining, for sustaining school communities for example, for feeding, into feeding schemes for school children. **I don't think those links has been made.** *[Are those links relevant to EMS?]* I think they are. I definitely think they are. In terms of linking it to training, I don't think it has been made. **As I said to you, I think it is a neglected area and I don't think that it is even a consideration.** I don't think it has been identified as a need as such, but yes I do think so. I do agree that that concept of ubuntu and ubatipile is grounded into community and a sense of community. It can't just happen. It can't just happen. So I do agree with that. I'm just trying to think in terms of sustaining it. If you leaving a project like that, up to individuals, to sustain, keep it going, the chances that it will happen is very slim because for obvious reasons. If you think about who are the drivers of those projects, it's usually the elderly women in the communities and so if those people falls away, those pillars falls away, how would one then sustain it? One has to think about getting them to start those projects but to pull in the younger children, from as earlier ages as possible to capacitate them, because that's the only way that it is going sustain. And it you also look at the Proudly Mannenberg project, it's very quietly presently and some aspects of that project has already fallen away. It's only really the neighbourhood patrol that is still continuing, and who is doing it? The women. So even if you looking at the sustaining the gender things, one has to look at how to do that. *[Do you think that real life contexts, should be taken into account in the EMS classroom?]* Absolutely. *[And what impact does the real life context of a learner have on teaching and learning?]* I think that experience is your best teacher. And I believe that the teachers relate the curriculum to everyday real life experiences, the

understanding learners would have, would be far better than giving them book knowledge. Especially with that type of project. And if you think about the concept of ubuntu, how better to learn it, than to experience it? Because that's a concept that you can't really give texted book knowledge of. You can, you need to experience it in order to, to know and understand and then take it that one step further. So I do believe there is room for that. But then we could also argue, resources: time. Time has a big factor. Especially since in EMS school principals tend to steal time from us. So that's another factor. But there is room for it, definitely. You know I'm just thinking of those two concepts, but there's many more. Now you've got me thinking. I'll possibly be calling you because I'll possibly be going to think about something and then say to you I want to add something. [By all means, you can do that.] Because I tend to think about things. [What are the challenges that, you have in general about advising teachers on EMS?] Teachers generally struggle with how much detail to give learners. And it is difficult to quantify detail. You really only have two and a halve hours per week. At some schools they even, at some schools it become three periods of 50 minutes. And what they do is that they take two of them for Accounting and one for the other part of EMS. And then schools become even more technical. They break that: the Accounting teachers teach the two periods of Accounting and the business teacher teaches the one of EMS so the fluency is almost broken to an extent because it's two subjects if you think about it. So that's a challenge, because you're coming in now as an Accounting specialist and as a business person. You're not coming in as; you're not seeing it as EMS. So that's a big challenge. And then the dept one give to teachers, when one has to advise them for EMS because if you take something like the marketing assessment standards in LO4. You know what marketing entails. It's actually a big process. It's a massive thing and you can take weeks to just cover that. Now if you go back to sustainable growth and development and you looking at something like RDP and you want to take it in ASGISA. Or you're looking at Ubuntu and Bathupile and you start talking about everything around that, it can take days to cover that. So it becomes a challenge because you team to think now what is important. [Do you cover globalization at all with the teachers in the training?] We haven't done any training for EMS, in that way. We haven't look at, I don't recall looking at any in-depth concepts like globalization, ubuntu. We haven't done that. We've only done training for EMS in Accounting, because that's the only needs that's ever has been identified. And then rolling out business plans and entrepreneurship training.

Curriculum Advisor 2

[Wat is jou begrip van die leeruitkomste twee wat in die NCS was vir EBW, volhoubare groei en ontwikkeling? Hoe konseptualiseer jy daardie leeruitkomste?] Ek sal sê dit gaan basies oor ekonomiese groei en ontwikkeling en al die faktore wat 'n bydrae lewer tot die groei en ontwikkeling van die ekonomie. Om dit te konseptualiseer na die leerarea toe, dit gaan mos rondom volhoubaarheid, dit wil sê hoe kan 'n mens dit volhou? As 'n mens praat van volhoubaarheid dan bring jy ander faktore ook in werking soos ons praat nou van hulpbronne en basiese hulpbronne, hoe kan ons die land se hulpbronne effektief benut vir die land se mense. Vir my gaan dit rondom bewaring en effektiewe benutting. Dit is hoe ek LU 2 sien en daar moet goed in plek gesit word deur die minister van finansies om daardie groei in ons ekonomie te bewerkstellig. Die ekonomie moet groei, daar moet jaarlike groei in die ekonomie wees om as ware ons mense te kan akkomodeer. Dit is maar hoe ek daardie LU 2 sien. [Die EBW kurrikulum spesifiseer areas waarop gekonsentreer moet word, in verband met die spesifieke kurrikulum aspekte wat in die kurrikulum gedeck word. Wat op die oomblik val onder LO2?] Die eerste een daar gaan mos rondom bewaring van die omgewing, so wat die kurrikulum maak met LU 2 is dit probeer nou vir die EBW leerders ook sê die hulpbronne van die land moet op een of ander manier bewaar word en effektief benut word. So wat hulle in die kurrikulum nou gemaak het, hulle het basies in daai LU 2 verskillende kurrikulum aspekte in die skoolprogramme ingebring. Hoe kan ons leerders leer om die omgewing te bewaar? Hoe kan ons die leerders help om besoedeling te voorkom? Daar kry jy die integrasie met die ander leerareas ook, so wat hulle dan in die kurrikulum doen in EBW is hulle bring alles

rondom hulpbronne, die kind moet kan identifiseer watter soort hulpbronne kry 'n mens. Ons kry fisiese hulpbronne, ons kry menslike hulpbronne, ons kry finansiële hulpbronne. So wat hulle dan gemaak het met die kurrikulum, hulle het sekere aktiwiteite en take rondom daardie. As ons praat van menslike hulpbronne dan bring hulle die hele storie in van die werwing van die regte soorte mense om dit in EBW in die skole en klaskamers in te bring. Gevallestudies rondom daardie hulpbronne, watse finansiële hulpbronne kry 'n mens? Identifiseer die finansiële hulpbronne en skryf artikels of beatwoord gevallestudies rondom dit. So dit is basies dít wat hulle in EBW aangespreek het. [Maar as 'n mens nou kyk na die kurrikulum self, hulle bring konsepte in soos heropbou en ontwikkeling, spaar en beleggings. Die HOP aspek is vir my iets wat baie sterk uitkom. In hoe 'n mate pas dit by LO2] Dit pas heeltemal, uit my ondervinding. Die kurrikulum is opgestel en spruit voort uit ons Grondwet uit, nou ons groot probleem waarmee ons sit in Suid-Afrika is die "redress". Ons moet die ongelykhede aanspreek en ons moet dit regstel en die enigste manier hoe om dit te doen is deur die bewusmaking van die ongelykhede van die verlede. Een van die groot ongelykhede van die verlede was huis dat 'n sekere gedeelte van die bevolking is benadeel, so daar moet heropbou plaasvind. Nou hoe bring jy dit in in die kurrikulum? Jy bring dit in deur wat doen die regering rondom dit, die regering se program is heropbou en ontwikkeling en GEAR. So sekere ekonomiese strategieë moet érens ingeskryf word in die kurrikulum, so wat die skrywers van die kurrikulum toe gedoen het is om bietjie aandag daaraan te gee, so bietjie propaganda te maak vir die regering in daai kurrikulum deur te sê dat daar ongelykhede in die verlede was en hoe gaan ons hierdie ongelykhede regstel. Die ongelykhede kan net reggestel word deur heropbou en ontwikkeling en as 'n mens praat van heropbou en ontwikkeling dan praat 'n mens van alle aspekte wat daarmee gepaard gaan, soos die behuising en onderwys. Al daardie goed waarvan daar 'n tekort is, waar daar aangevul moet word. Ek dink dit is relevant, iewers moet die leerders... Jy kan nie jou verlede vergeet nie, jy moet op die verlede bou om 'n beter toekoms te hê. So die kurrikulum en daardie spesifieke LU wil eintlik vir die leerders vertel dat iewers in ons geskiedenis was daar ongelykhede en baie van die mense is benadeel en baie mense het nie kwaliteit lewe gekry nie, so iewers moet daar opgebou word. Ek sal sê die heropbou en ontwikkeling is baie relevant. Die groot vrae wat daarmee gepaard gaan is die volhoubaarheid daarvan. Die regering besef watter geweldige taak was dit, toe die program begin het, ons het al hoeveel jaar van demokrasie. Die aanvanklike idee was om vir almal huise te gee, wat het verander? Baie min. Daar is miljoene huise al gebou; maar die backlog is nog nie aangespreek nie. Heropbou moet die key wees van daardie LU. Die groot vraag is hoe kan ons dit onderhou? Ons kan dit net onderhou deur ekonomiese groei, met ander woorde ons ekonomie moet groei en daar moet geld invloei om die finansies te hê om daardie huise te bou of daardie werk te voorsien. [My volgende vraag is: "What is it that needs to be sustained?"] Human development. Menslike ontwikkeling moet gehadhaaf word, as jy baie belê in mense dan kan daai mense werke vervul. As jy as 'n land in jou mense belê, met ander woorde eintlik moet die plakkernskampe se mense hulle eie huise bou, sien jy wat ek bedoel? Dit kan gedoen word as die regering die kapasiteit het en die mense het om die proses te draai. So wat ek byvoorbeeld sal doen as 'n mens in 'n plakkernskamp bly is om al die mense bymekaar te hou en sê jy bly nou op jou stukkie grond en ons sal vir almal 'n huis gee, maar kom ons gemeenskap doen dit en ek subsidieer jou om dit te kan doen. Kom ek leer vir jou die skill om te bou en die skill om te messel, sien dit is die enigste manier hoe 'n mens dit kan volhou. [In my onderhoude met die EBW onderwysers het dit tog vir my uitgekom dat daar uitdagings is. Wat sou jy sê uit jou ervaring as gewese kurrikulum adviseur, waarom dink jy het onderwysers gesukkel met hierdie leeruitkomste?] Kom ons begin by die begin, wat die departement gedoen het, hulle het lukraak die kurrikulum geïmplimenteer. As ek sê lukraak sal ek sê hy het sekere skole binne die WKOD geïdentifiseer as pilot skole. Dit is die eerste ding, die pilot skole, nou ons skool is 'n pilot skool, toe is ek vakhoof daarso. Nou ek kom van die universiteit af, jammer om dit nou self te sê, maar my kennis is bietjie meer as die ander s'n, maar ek moes die leiding gee rondom dit. Met ander woorde ek het ekstra boeke gelees en gekyk na die kurrikulum 2005 en die konsepte rondom dit, en die ander groot ding wat my die basis gegee het om leiding te neem by ons skool is die feit dat daardie stadium van

die kurrikula het ons gedoen "people's education". Nou people's education se beginsels stem baie ooreen met kurrikulum 2005 se beginsels en dit is waar hulle voorsprong gegee het rondom dit. Ek kon by ons skool effektiel leiding gee aan die onderwysers wat geen kennis gehad het daarvan nie. Die tweede probleem waarmee ons gesit het in die skool is baie van ons onderwysers in die skole was die ouer grade. Die ouer grade kan jy maar sê was gewoond aan die rote learning en rote teaching. Die onderwyser is die sentrale punt in die onderrigproses en hy dra net inligting oor. "The children are empty vessels", hulle ontvang die inligting en gee dit deur. So wat met die nuwe kurrikulum toe gebeur het is eerstens moes die onderwysers drasties verander het en baie van hulle was nie geonderlê in die beginsels van die nuwe kurrikulum nie. Die storie het ook uitgegaan dat hoekom hulle gesukkel het is die persone wat die departement gekies het om die mense op te lei, het die boodskappe verkeerd gaan uitdra, van die fasiliteerders het sommer by -ek het ook ingesit by sulke werksessies toe ek nog 'n onderwyser was- dan kom hulle in en sê hulle: "smyt weg daai handboeke, smyt weg daai inhoud, die kinders hoef nie meer te leer nie, die kinders leer vir mekaar in groepies. Sien jy? So die fasiliteerders wat aangestel is op daardie stadium om die ander te onderrig het self ook nie die kennis gehad nie. Ek wat in die vergadering gesit het, het meer kennis gehad. Hulle kon baie van daardie vrae wat ek vir hulle gevra het daar in die sessie kon hulle nie beantwoord nie. So een van die probleme, ons kyk eers na die probleme en dan die uitdaging, een van die probleme was die boodskap het sommer van die begin af verkeerd uitgegaan. Smyt weg die inhoud, kinders hoef nie meer te leer nie. Hulle kan net daar discuss en 'n paar oefeninkies doen ens. Dit is die begin van die probleem en dan is dit die departement het pilot skole gekies en so aan, wat toe gebeur het is dat daar was nooit opgevolg deur die pilot skole nie. Niemand het vir my ooit wat leiding gegee het, kyk daai manne en dit is ervare manne wat onder my wat langer as ek skoolgehou het, maar die feit dat ek vakhoof was het beteken ek kon vir hulle leiding gee. Wat ek ook gemaak het, ek het onmiddellik in my klaskamer vir hulle gewys ek was die voorloper met dit. Die dokumentasie sê nou jy is die fasiliteerder en verander die banke ensovoorts in jou klaskamer en ek het dit gedoen en vir die onderwysers genooi om te kom insit, kom woon 'n klas by en dan sien julle. Dit het baie van daardie manne gehelp rondom dit. Ek sou sê hoekom die onderwysers gesukkel het rondom dit en met die EBW is enige onderwysers kan gevra word om EBW te doen en as jy nou kyk na EBW Gr. 8 en 9, jy moet Rekeningkunde agtergrond het, jy moet Ekonomiese en Bedryfsekonomiese agtergrond het om dit te kan doen. Baie onderwysers is in skole gevra om EBW aan te bied, dan het hulle Geskiedenis, Afrikaans en Engels gehad, hulle het ander vakke gehad op Universiteit of College. Ewe skielik is hulle gekonfronteer met ekonomiese begrippe en terme en hulle kon nie dit oordra nie en dit het by baie skole gebeur. Ek was die kurrikulum adviseurder by EBW, ek kan vir jou sê by 80% van die skole se onderwysers was nie gereed om EBW aan te bied nie, in my distrik. Ek as kurrikulum adviseur moes as ware vir hulle weer van vooraf leer om EBW aan te bied. Wat is EBW? Wat is die unieke kenmerke van EBW? Alhoewel die departement vir hulle georiënteer het met 'n week lange sessie oor wat is EBW, en die dametjie wat EBW in ons ding gegee het, die dametjie was ook nie 'n goeie fasiliteerder nie. Ek was een van die mede aanbieders, ek moes telke male haar korregeer rondom die aanbieding. Dit is van die probleme en challenges wat daar lê. Ek sou sê baie van ons onderwysers is in die vakgebied ingedruk sonder dat hulle die agtergrond en die kennis gehad het om dit te kan aanbied. Ons uitdagings in EBW lê daar om daardie mense heeltemal te bemagtig. [Dit sluit aan by my volgende vraag, wat is dan die tipe opleiding wat vir onderwysers wat gebrekkige kennis het: wat het die opleiding eintlik nou behels om vir hulle tot op 'n punt te bring waar hulle gemaklik daardie tipe inhouds kan oordra?] Kyk die groot ding wat ons gemaak het, miskien moet ek vir jou dokumentasie gee, ek was een van die fasiliteerders né. Die opleiding van EBW bestaan uit twee sessies uit, 'n sessie A en sessie B. Sessie A was generies van aard, as 'n mens praat van generies van aard dan praat 'n mens van dit is algemeen. Elke onderwyser wat in die sessie gesit het was geleer om 'n lesplan op te stel en 'n vakraamwerk en werkskedeule. Daar is begin by die begin, watter beginsels is onderlê in die kurrikulum? Daai onderwysers moes toe die beginsels onder die knie kry, social justice ens. Die eerste generiese sessie was om die onderwysers as ware te breinspoel

om die nuwe kurrikulum te aanvaar, om bietjie voor te berei vir die nuwe kurrikulum. Die tweede aspek van die opleiding was gemik op EBW, dit was om die inhoud aan die onderwysers deur te gee. As jy nou gaan kyk na die deelnemers handleidings sal jy sien dit was onvoldoende, daar is net geraak aan elke aspek. Die eerste ding was daar is gekyk na unieke kenmerke van EBW, dit kom uit die gids uit. Die onderwysers is vlugtig gevat deur die unieke kenmerke van EBW. As jy kyk na die inhoud van Gr. 7-9 dan sal jy sien dat die opleidingsdokumente verskil heeltemal van inhoud wat die onderwyser eintlik moet oordra. Hy is bewus gemaak van die doel van EBW, maar aan hom is daar nie in die opleidingssessies oorgedra van wat is die ekonomiese kringloop byvoorbeeld nie. En wie is die deelnemers van die ekonomiese kringloop nie so daar is nie met hulle definitiewe content gedoen nie, wat is private en openbare eiennaarskap. **Die content is nie werklik aangespreek in die oriënteringssessies nie.** [So die onderwysers het baie staat gemaak op die handboek?] Om hulself te bemagtig moes hulle terug gaan na die handboeke en self bestudeer in die handboeke en dit is 'n probleem. Baie van die onderwysers het dit nie gedoen nie, hy het hom maar verraad op wat hy aan die hande kon kry, uit koerante en so aan, dit is miskien dit. Die oriëntering was vir my onvoldoende. Om by jou vraag te kom dan ook is wat 'n mens dan moet maak is om vir hulle dan te vat deur die EBW inhoud in GR. 7, 8, 9 en 10 of Gr. 7, 8 en 9. Dit is die inhoud en dit is wat 'n mens moet oordra. [So as 'n mens kyk na volhoubare groei en ontwikkeling as 'n konsep en uitkoms, die onderwysers was dus nie goed onderlê in dit nie?] Ek sou so sê ja, hulle is glad nie goed onderlê in daai ding nie. As 'n mens kyk na wat word verlang binne volhoubare groei en ontwikkeling, hulle moet kan weet wat is ekonomiese beleidrigting. As jy vir 'n ou sê wat is ekonomiese beleidring, jy moet darrem so bietjie ekonomiese kennis hê. As jy praat van almal spaar en belê, weet die onderwysers van spaar en watter soorte rekenings kry 'n mens? Watter alternatiewe is daar vir spaar? Wat is produktiwiteit? Sien jy, sulke konsepte onder volhoubare groei en ontwikkeling. Wie van hulle weet wat is die definiese van produktiwiteit? Die tekortkominge kom daar in, die onderwysers was nie goed ondelê in die inhoud van volhoubare groei en ontwikkeling nie. [So konsepte soos globalisasie was dit ingebring?] Dit is nie ingebring by hulle nie, dit was ingebring by die Gr. 10 – 12 Ekonomie, want globalisering en armoede vind meer plaas in die Gr. 11 sillabus, alhoewel hulle dit aanraak. Daar is nie in diepte... As ons kyk na armoede, die Gr. 11's dek armoede deeglik. [In Besigheidstudies?] Nee, in Ekonomie. LU 3, is daar 'n hoofstuk oor armoede en 'n hoofstuk oor globalisering. [In hoe is die 'scaffolding' en progressie van inhoud in EBW nodig vanaf die seniorfase na die FET fase vir Besigheidstudies of Ekonomie?] Ek hoor wat jy sê [Die meeste van die onderwysers het vir my gesê hulle begin van vooraf in Gr. 10. Hulle maak asof die leerders niks weet nie. Nou my vraag is in hoe 'n mate het ons die voorkennis nodig om dit makliker te maak vir die leerders, om konsepte soos globalisasie, produktiwiteit en soos ekonomiese groei beter te kan verstaan?] Nee ek dink ons het dit nodig, dit is nodig om daai konsepte vir die leerder in Gr. 8 en 9, om hom 'n beter leerder te maak. As jy 'n leerder kry wat byvoorbeeld nie EBW doen nie en vir die eerste keer in Gr. 10 Ekonomie het en al konsepte. Dan sal jy dit kan memoriseer, jy sal dit kan beantwoord. **Dit is hoekom die leerders bevoordeel is as hulle op 'n vroer ouerdom in Gr. 8 en 9 kennis maak met van die begrippe.** Die groot dilemma waarmee mens sit met dit, jy het jou leerarea waarmee jy sit tot daar in Gr. 9, maar nou gaan dit mos rondom die keuse van vakke. Van die leerders gaan nie aan met Besigheidstudies en Ekonomie nie, so hy verloor eintlik as ware daai kennis, as jy Wetenskap vakke byvoorbeeld gaan doen, ek wyk nou so bietjie af, maar hy gaan doen nou Wetenskap vakke. Op een of ander stadium gaan hy weer te doen kry met globalisering of met armoede binne in die vakke, want dit kom by die integrasie sien jy? Dan sal daai begrippe van betekenis wees wat hy geleer het in Gr. 9. So ek sou sê 'n leerder wat te doen het met daai begrippe in Gr. 8 en 9, dit gaan net tot sy voordeel wees, maar as jy 'n skrander leerder is en jy kry nie met daai goed te doen nie en jy kies Ekonomie en Besigheidstudies, dan sal jy kan memoriseer. [Hoe kan 'n mens dit dan makliker maak vir onderwysers? Onderwysers wat sukkel met hierdie terminologie en wat sukkel veral met die tipe leeruitkomste. Ons kan nou sien dat as 'n voor of 'n nadeel, die CAPS dat LO2 nou weggeval het of gaan integreer, ons gaan nou daaroor praat, maar in hoe 'n mate vir julle, wat het julle gedoen om die konsepte

makliker te maak vir die onderwysers?] Nou kyk wat ek nou gemaak het, daar is ander kurrikulum adviseurs, al my werkswinkels het ek gebruik as ware om konsepte aan die onderwysers oor te dra. Ek vra vir hulle vooraf ook in my brieve, kom met vrae na die vergaderings toe, van hulle sal my bel en sê hulle weet nie eers wat is produktiwiteit nie of het ek nie iets oor armoede vir hulle nie, kan ek nie ietsie sê oor armoede nie. Sien ek dink dit is die way forward, indien die departement nie geld het om die onderwysers op te lei nie, dan moet jy op 'n ander manier te werk gaan om daai inligting oor te dra. Die werkswinkels moet nou nie meer wees vir moderering nie, sien die modereringswerkinkels word verdeel in twee sessies. Die eerste uur sessie gaan wees oor die inhoud van EBW, kom ons hou gereeld werkswinkels en vergaderings of ons kan dit hou by die drie vergaderings van die jaar. Kom ons sê gebruik 'n uur en 'n half aan die inhoud en om die inhoud aan die onderwysers oor te dra. Die ander uur en 'n half word dan gebruik om te modereer en dit is hoe ek my onderwysers meer bemagtig het. *[Maar dit wil nie sê almal het dit so gedoen nie.]* Die is reeds die probleem, daar was nie 'n univorme manier van werk nie, ek is anderste as ander manne, ek het probeer om my ouens in my distrik te bemagtig met die inhoud, want ek het geweet baie van die ouens het nie opleiding omvang rondom dit nie. *[Jy kry dit so hier en daar waar die onderwysers sê dat training help nie.]* Dit is so, juis omdat daar word te veel gewerpt op generiese aspekte in plaas van vak-spesifieke inhoud. Dit is vervelend vir hulle, hulle moet nou weer leer van lesplanne en goed en administratiewe aspekte rondom dit. *[Dit is dinge wat hulle heel waarskynlik by 'n ander vak ook gedeck het.]* Dit is die ding. *[Baie van skole het glad nie geskroom om te sê hulle spandeer 80 – 90% aan Rekeningkunde nie en toe ek vir die onderwysers gevra het van die ratios met die LO's en die tyd wat aan die inhoud moet spandeer word, het hulle gesê hulle steur hulle nie eintlik daaraan nie, want 90% van hulle doen Rekeningkunde. Die ander 10 – 20% doen hulle vinnig die ander 3 LO's en kyk dat hulle net so oorsigtelik. In hoe 'n mate is dit problematies vir jou? Of is dit nie?]* Dit is en kom ek sê vir jou dit was baie problematies. Die WKOD het nie leiding gegee in daai opsig nie. Die WKOD het hulle gegooi na die skole toe, so wat gebeur het is dat al jou model C skole soos in almal het Rekeningkunde in Gr. 10 as 'n vak, so wat die Model C skole gedoen het is hulle wou hê al die Gr. 9 leerders moes Rekeningkunde doen om hulle voor te berei vir Gr. 10, which is right. So wat toe gebeur het is hulle het hulle nie gesteur aan die leerarea EBW nie, vir model C skole was die leerarea 'n Rekeningkunde leerarea. So 80% van die werk was Rekeningkunde, toe kom ons as adviseurs en sê vir hulle dit kan nie so gedoen word nie. Dit is 'n EBW leerarea. So wat die departement toe gedoen het, is hulle het begin met die GTA's. So daardeur het die departement gedwing en forseer om af te wyk van die Rekeningkunde aspek en te konsentreer op die bedryfs en ekonomiese gedeelte. Dit is nogsteeds die geval, wat toe gebeur het by die GTA's, hulle het heeltemal Rekeningkunde uitgelos in die eerste 3 jaar se GTA's, there was an uproar. Ons werk onself dood aan Rekeningkunde om voor te berei vir die kinders vir die jaar, julle vra niks Rekeningkunde in die GTA nie, julle mors ons tyd. Toe begin daar weerstand opbou teen die GTA's, hoekom is dit vandag hier en waar kom dit vandaan? Die WKOD het 'n sekere groep wat hy moet tevrede stel dit staan die koerante vol dat GTA's is 'n mors van tyd en dit is swak, swak tegniese versorging. Dit is minor verskonings, die groot ding was daar is nie Rekeningkunde in nie. Die laaste jaar van die GTA's was daar Rekeningkunde in. Dit was te laat gewees, so al die model C skole het die Ekonomie en Bedrysekonomie heeltemal geïgnoreer en net Rekeningkunde gedoen, which is right. Wat in ons bruin en swart skole gebeur het, hulle het dit anderste gedoen. Hulle het min Rekeningkunde gegee, baie Bedrysekonomie en wat gebeur toe in Gr. 10 Rekeningkunde? Die getalle daal, die gatalle in die bruin en swart skole het van daardie reuse getalle gedaal. Ons sit vandag in die bruin en swart skole met 'n handjie vol Rekeningkunde leerders as gevolg van dié storie. In die Model C skole sit ons vandag met Rekeningkunde, ek het dit nou weer gesien. My seun moes in Gr. 9 kies en hy vat Wetenskap vak, maar hy word gedwing om Rekeningkunde as 'n vierde vak te vat, dit is in die kombiasies in van die model C skole. Die klem was hulle wou ten alle tye die Rekeningkunde by die kinders hou. *[Voortsetting van onderhoud via telefoon: Wat is jou siening van die CAPS dokument?]* Heropbou en ontwikkeling word nie aangespreek in die nuwe kurrikulum nie. Daar moet juis 'n groter bewustheid daarvan wees om ongelykheid

uit te skakel. Vorige model C skole skram weg van die onderwerp, dit moet huis daar aangespreek word want daar is nou groter diversiteit. Om sommer die Los nou net so uit te los is ook nie reg nie, want daar was ontsegliek baie beplanning in gesit toe die kurrikulum geskryf was. [Wat is jou seining oor die verhouding tussen onderwysers en die kurrikulum adviseurs] Daar is 'n negatiewe houding wat onderwysers van kurrikulum adviseurs het, omdat baie KAs nog nie in klaskamer gestaan het nie, veral die jonges. Hulle mag die professionele kwalifikasies hê, maar kan nie vir ervare onderwysers leiding gee nie.

ADDENDUM J

PARTICIPANTS' WRITTEN COMMENTS OF CAPS (EMS)

PARTICIPANT B

In favour of the new curriculum. The new curriculum lends itself to an integrated Accounting and Business Studies programme

A more balanced curriculum in respect of time allocated to the different components and content which will ensure that educators will complete the syllabus successfully. This will result in learners being better equipped for the challenges, in particular Accounting.

Concerns:

Topics are too vague and the depth of the content is not adequately elaborated on.

The topics on trade unions seems not to link to the sustainable growth and development and would have been more appropriate to have addressed socio economic issues such as unemployment, poverty, crime and piracy, etc.

These are all challenges of economic sustainable growth and development. It would be more educational value to be exposed to real South African related issues. This highlights the commitment towards social responsibility which is also neglected by the government. This would have linked to the sustainable use of resources.

It is also strange that gender is emphasized in the topic of trade union because a member clarifies it better.

The section on the Weighting of curriculum (p4) is incomplete, It makes it difficult to comment on the total breakdown of work in this document.

PARTICIPANT C

I really don't have a problem with sustainable growth being left out, as I told you it's not a practical topic for grade 9 and doesn't get the attention it should get. It is well dealt with in grade 10 Economics, where the learners are more mature to understand the impact of this topic.

I am a bit worried about the fact that so much weight has been put on financial literacy as the learners take quite some time to grasp Accounting concepts. The time allocation for EMS not enough to complete all these topics, especially in Grade 9. I also find although the grade 7 curriculum states that some Accounting concepts must be done, are neighbouring schools are not doing it and thus we struggle with these learners in grade 8 and 9. This year alone with all the interruptions, we were only able to complete the CRJ, CPJ, DJ, CJ, General ledger, Trial balance and Income statement. If the learners had to write a CTA, quite a few of them would not have made it.

What I also see is the exam weight for Grade 9 is now 50 – 50, which in my opinion is great, because most of the time learners pass the yearmark and doesn't pay any attention to exams and learners pass Grade 9 without a care in the world. At the end we sit with a low self-esteem child in Grade 10 that has no idea of writing an exam. The gap between grade 9 and 10 will now also be made smaller.

I do hope that my views will be of help to you.

PARTICIPANT D

Die "sequencing" wat hulle die inhoud plaas om aangebied te word is nie baie logies vir my nie. Hulle vat 'n onderwerp (of sal ons sê 'n vak) en dit word in verskillende kwartale aangebied. Byvoorbeeld ek sal al die ekonomiese-werk eers afhandel en dan kyk na entrepreneurs, anders gaan die leerders nie die geheel prentjie sien...dit gaan hulle deurmekaar maak.

Poverty word in graad 7 aangespreek...en slegs daar....ek dink dit gaan baie nou saam met ekonomiese groei en opbou en ontwikkeling....daar word nie daarop gekonsentreer nie. Persoonlik dink ek dit is ongelooflik belangrik dat leerders weet hoe dit was in die verlede, hoe het die regering al projekte aangepak om dit te verbeter en hoe belangrik is die volhoubaarheid daarvan.

Wat van spaar en beleggings as konsepte? Dit word in die finansiële deel saam met die rekeningkunde bespreek, maar wat van die detail? Suid-Afrika het 'n nuwe Kredietwet daargestel sodat mense minder spandeer en dat daar meer gespaar word. Dit is belangrik dat leerders leer hoe belangrik spaar is, waar kan hulle spaar en wat word met die spaargeld gedoen.

Ek hou van die feit dat die regering so in detail gedoen word.

PARTICIPANT E

Firstly it is very encouraging to see that financial literacy gets a weighting of 43%. In my opinion that weighting should be increased to 60% as learners would then be better prepared for Accounting in Grade 10.

I would recommend that in Term 3 the topic "The economy" Trade Unions be replaced by Sustainable Growth and Development, because it is important to develop the thinking of learners along those lines instead of having a focus on Trade Unions. In essence, Sustainable Growth and Development exposes the learners to a large variety of ways in which they could contribute to the Growth and Development of our economy. Trade Unions on the other hand could be discarded from the curriculum as it does not have as great an impact on learners as Sustainable Growth and Development. There are more skills to be transferred under the topic of Sustainable Growth and Development, than under Trade Unions. One of South Africa's biggest problems is poverty and educating our learners on Sustainable Growth and Development will give them the necessary tools to deal with problems such as poverty eradication. Sustainable development also educates our learners on the programmes initiated by the Government regarding income distribution and equity, the RDP and many other such programmes.

PARTICIPANT F

With reference to page 6 the 'Weighting', the content does not seem to link 100% to the Grade 9's individual planning per term. The curriculum seems to be dominated by Accounting in Grade 9. The 'economic' side to the curriculum seems to be watered-down and the actual content seems to be too vague with reference to the depth in which topics will need to be discussed.

Sustainable growth and development and the socio-economic issues such as unemployment, crime especially corruption, piracy, etc. which form the basis of SA's economic problems because it hampers sustainable growth and development seems to be neglected in the curriculum.

It appears that more Accounting will be done with the extension of e.g. the Allowance Journals.

Personally it would have made more sense to have a Grade 8 syllabus which would be focused on socio-economic issues and a Grade 9 syllabus that is focused purely on Accounting, which will equip learners with the necessary Accounting skills so that they could continue successfully with Accounting in Grade 10, if they wish to do so.

Clear guidance will have to be given on the depth of the "economic topics" or else educators will once again focus on Accounting and further neglect the "economic" side of the syllabus.

It is very strange that reference is made to the role of women in trade unions. It is not an issue! Why is it being made one? Subtle discrimination against women in the workplace as a socio-economic issue would have been more relevant in the syllabus. Trade unions seem to be an isolated topic that does not seem to be integrated effectively into the new suggested curriculum. It would have made more sense to have a topic Labour Relations in SA and the role trade unions currently play and how unresolved labour disputes impact on the business and the economy as a whole. More focus could have been placed on the impact of industrial actions such as strikes on the business and economy.

Introducing business functions in Grade 9 is questionable. More focus should be placed on equipping learners with a broad economic/Accounting background as a sound basis for Business Studies, Economics and Accounting as possible subject choices in Grade 10.

PARTICIPANT G

I didn't have enough time to make an in depth study of the new curriculum. Busy with exams, setting of Question papers, marking etc. Please forgive me. At a glance I picked up the following about the curriculum:

1. Two hours per week for EMS not enough for the wide range of topics to be covered.
2. Weighting for financial literacy only 43% which includes Accounting. During my experience I've found that the number of concepts to be covered in Accounting you need 50% of the weighting for Accounting alone.
3. The end of year exams account for 60% of final mark (previously only 25%) a significant shift (more learners will fail)
4. Bringing back class tests, good idea, forces learners to start study again

Some problems I foresee:

1. How do you deal with educators who refuse to cover economic and entrepreneurial topics and only focus on Accounting?
2. Educators teaching EMS with little or no Accounting background (esp. with the wide range of topics to be covered)

Regarding LO2: Sustainable growth and development

1. Excluded in planned curriculum (very surprising) as it is one of the most important topics in EMS.
The future of a country's economy rests on sustainable growth and development
2. It's only mentioned in the role of trade unions in sustainable growth and development as well as sustainable use of resources in the different sectors of the economy
3. What about the role of the budget and the role of savings and investment on sustainable growth and development as well as the successes and shortcomings of RDP in sustainable growth and the importance of globalization on economy

Would have loved to have these topics back in LO2, but who am I kidding: when it was part of the curriculum I totally ignored it or sometimes only mentioned it to my learners. Its only thanks to you that I have started to critically look at these very important topics and realised that learners needs to know about sustainable growth and development and the importance of it to the economy.

Good luck with the project.

Learning Outcome 1: The Economic Cycle

The learner will be able to demonstrate knowledge and understanding of the economic cycle within the context of the economic problem

ASSESSMENT STANDARDS**GRADE 7**

- Explain needs and wants and how the differences between them impact on communities and the environment
- Describe the different types of businesses and activities within the primary, secondary and tertiary sectors
- Explain the concepts "free" and "economic" (scarce) goods, and the influence of demand and supply on market prices.
- Describe and debates the power relationships, economic rights and responsibilities between:
 - consumer and producer
 - Employer and employee
 - Government and business

GRADE 8

- Describe the historical development of money and its role in societies and their economies
- Discuss how trade (import and export) addresses the economic problem (choice and opportunity cost), and the role of banks in investing in the economy
- Explain how different economic systems address the economic problem (e.g. planned, market and mixed economies)
- Discuss the role, rights and responsibilities of trade unions
- Explain inflation, its reasons for changes in the inflation rates

GRADE 9

- Explain the different flows of money, factors of production, goods and services in the SA economy
- Discuss the role of the foreign sector in the economic cycle
- Illustrate by means of a graph and discuss how demand and supply influence prices
- Critically assess the influence and actions (strikes and stay-aways) of trade unions in general and during the apartheid era on:
 - the South African economy
 - political, economic and social transformation
 - labour issues
- discuss the effect of the National budget on the economy (taxation and expenditure on education, social welfare, health and security)

Learning Outcome 2: Sustainable growth and development

The learner will be able to demonstrate an understanding of sustainable growth, reconstruction and development, and to reflect critically on its related processes

GRADE 7

- Collect information on the influence of Apartheid economic policies on ownership, poverty, wealth and quality

GRADE 8

- Investigate and describe how the National budget is used to influence growth and redress economic inequalities

GRADE 9

- Discuss how the National budget, regional and international agreements can be used to facilitate sustainable growth and development

<ul style="list-style-type: none"> Identify steps required to redress socio-economic imbalances and poverty Compare and discuss the difference between savings and investments Discuss the meaning of productivity 	<ul style="list-style-type: none"> Investigate how the RDP could have been used to stimulate economic growth and restructuring (e.g. capacity building, jobs) Discuss the importance of savings for investments Investigate and report on how technology can improve productivity, economic growth, living standards, etc. 	<ul style="list-style-type: none"> Investigate and debate the successes and shortcomings of the RDP Explain the role of savings and investments in economic prosperity and growth Discuss productivity and its effects on economic prosperity, growth and global competition
<p>Learning Outcome 3: Managerial, Consumer and Financial Knowledge</p> <p>The learner will be able to demonstrate knowledge and the ability to apply responsibly a range of managerial, consumer and financial skills</p>		
<p>GRADE 7</p> <ul style="list-style-type: none"> Explain the role of planning, organising, leading and controlling (e.g. financial and procedural controls in a business) Discuss different approaches to leadership and management Describe the importance of administration in managing a business (record keeping, storing documentation) Discuss the use of technology in telecommunication services (e.g. cell phones) and financial transactions (e.g. ATM, Internet) in improving administration, communication and access to information Draw up an elementary statement of net worth, using personal records Explain the different processes of human resource management 	<p>GRADE 8</p> <ul style="list-style-type: none"> Differentiate between financial concepts used in business (e.g. fixed assets, current assets, liabilities, owner's equity) Develop leadership and management strategies that will ensure a return on investments Complete source documents (e.g. receipts, deposit slips, cheques) and record elementary cash transactions in a statement of receipts and payments Use keyboard skills and function keys in developing, storing and retrieving basic information Explain the concept and analysis of statement of net worth Investigate the various methods of savings and investments (e.g. savings accounts, fixed deposits, shares, unit trusts), and calculate the return on a variety of investments Describe the levels, categories, remuneration and responsibilities of jobs 	<p>GRADE 9</p> <ul style="list-style-type: none"> Complete a basic income statement and balance sheet for a service and retail business Investigate the public relations, social responsibility and environmental responsibility strategies and actions of different business and organisations Complete cash and credit transactions in the books of service and retail businesses <ul style="list-style-type: none"> Use a cash receipts and payment journal and a debtors' and creditors' journal; Post journals to the general ledger and draw up a trial balance Use keyboards skills and function keys in developing storing, retrieving an editing business documentation Analyse financial statements for decision-making at a basic level Differentiate between the forms of credit purchases (e.g. open accounts, instalment sales, credit card, debit cards, smart cards, travellers' cheques): <ul style="list-style-type: none"> The use of different means of payment in the economy The advantages of cash purchases Research laws affecting basic conditions of

		employment and non-discrimination in the workplace
Learning Outcome 4: Entrepreneurial Knowledge and Skills The learner will be able to develop entrepreneurial knowledge, skills and attitudes		
GRADE 7		
<ul style="list-style-type: none"> • Compare essential characteristics and skills needed to be entrepreneurial from two different simple case studies of practising entrepreneurs in own community • Use idea generation techniques to make recommendations on using community resources to generate income in a responsible way • Participate in a joint venture between the school and the community/parents by taking ownership of producing a product or service • Run a business event using one or two of the ideas or opportunities identified in a questionnaire that had been designed • Design posters or other materials to advertise own business venture 	GRADE 8 <ul style="list-style-type: none"> • Identify financial institutions and organisations promoting entrepreneurship • Discuss different ideas for starting a business (including ideas to attract tourists, franchising) • Differentiate between the forms of ownership in the informal and formal sectors (sole proprietor, partnership, close corporation) • Evaluates the financial viability of a business (e.g. start-up costs, production costs, sales, profit) • Engage in a business activity that involves purchasing, production and marketing (should involve financing of business with own or borrowed capital – e.g. bank overdraft) 	GRADE 9 <ul style="list-style-type: none"> • Generate, through SWOT analysis, possible business ideas to meet the need for manufactured goods or services • Develop a business plan (including a budget) for a manufacturing, service or tourism enterprise based on the best business opportunity from the ideas generated • Engage in the business activity planned and discuss the reasons for choosing a particular form of ownership • Conduct a marketing campaign to promote a product and discuss the self-selected advertising media • Research the role of small, medium and micro enterprises in wealth and job creation processes