CHAPTER 2

Environmental Philosophy, Education and Sustainable Development Nexus

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2.1 Introduction

Since the United Nations Conference on Human Environment of 1972, governments have made it a policy to integrate sustainable development concerns in national agenda at all levels. The universities globally have responded by creating diverse courses focusing on various aspects of sustainable development using both multidisciplinary and interdisciplinary approaches. The education for sustainable development is a relatively recent concept and not all educators and programmes have embraced it adequately. It is however important to note that all courses have the potential to address sustainable development issues. It is therefore crucial that all learning institutions make deliberate efforts to mainstream education for sustainable development in all their activities.

The international community has made tremendous efforts to address emergent environmental challenges. Conferences held by experts and governments have called for greater innovations and investment of more resources in sustainable development activities and education. Conferences such as Stockholm, Belgrade, Tbilisi, Rio and the recent Johannesburg Summit represent deliberate and focused advances to address global environmental crises. Following the diverse deliberations and recommendations from various conferences, the decade between 2005-2014 has been identified as the United Nations Decade of Education for Sustainable Development (DESD). This decade is dedicated to recognition of the valuable role of education in developing sustainable societies. The decade is intended to champion the re-orientation of all education toward sustainable development. This implies that sustainability thinking be streamlined in all activities and at all levels of decision-making in learning institutions.

To succeed in the decade’s endeavours it is important for universities especially to ask themselves several questions regarding education for sustainable development. The universities need to reflect on their activities and their responsiveness to globalised social, economic and political paradigm shifts. The universities therefore need to ensure that they are socially, economically and environmentally relevant in their triple

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mission of research, teaching and community engagement (UNEP, 2006). This chapter argues for every teaching and learning activity to be attuned to sustainable development ideology. Further, discussion on what universities in particular need to consider in the process of mainstreaming education for sustainable development should be guided by an accurate understanding of i) sustainable development as a concept, ii) education for sustainable development paradigm and iii) workable mainstreaming approaches and strategies.

2.2 Concept of Sustainable Development

Sustainable development is a concept that is generally built around three components: environment, society and economy. Each component in sustainable development is imbued with its own set of values and theoretical underpinnings. The economic aspect for instance aims towards the creation of material wealth and productive economies; the social aspect aims at improving the quality of life of people and ensuring equity between and among people, communities and nations; while the environmental aspect emphasizes on protection and conservation of our natural environment (Mckeown, 2002:9).

Nevertheless, there is no universally agreed diagrammatic illustration of the three aspects of sustainable development and concepts of weak and strong sustainability has been described (UNEP, 2006). According to UNESCO (1997:12), sustainable development is “not a fixed notion, but rather a process of change in the relationship between social, economic and natural systems and processes.” The weak sustainability model is where the three pillars of sustainability (economics, environment/ecological and social political spheres) are considered to interact but as different entities with only small degree of overlap between them. The biophysical (ecological sphere) aspect regards the environment as a natural world of water, living organisms and landscapes. The world is rich in natural resources such as water, soil, minerals, plants, animals and micro-organisms and these play crucial regulatory and ecological functions. Living organisms interact with each other and with the physical surroundings forming life support systems and processes. The biophysical aspect forms the wide base where everything is anchored and supports jobs and lives of people (Taylor & Paxton, 1994:8). Human’s interference with the ecological sphere results into problems such as pollution, loss of biodiversity, degradation of life support systems, global climate change and ozone destruction.

Economic sphere of sustainable development pays more emphasis on the process of valuing, access and utilization of natural and other resources for commercial, non-commercial and employment benefits (SADC REEP, 2002:5). Economic aspects are geared towards improvement of livelihood of the local people and the country as a whole. Economic problems are linked to crisis in development associated with the improvement of the social and economic conditions. In the ‘developed world’
high economic growth has led to increased consumption and demand on natural resources, mostly from developing countries. In developing countries, exploitation and inequality have contributed to poverty and deprivation (RU/SADC, 2000). The economic dimension of environmental problems is characterized by destructive and uncontrolled resource extraction, environmental destruction, resource depletion, poverty, hunger, conflicts and social oppression (Zarner, 2000:4; Ekins, 1993).

The social political sphere of sustainable development considers people as part of the biophysical world who are capable of developing diverse interpretive meanings of their environment through interaction with each other and the environment (Di Chiro, 1987:25). All societies have an intimate attachment to the environment and identify themselves with natural resources in terms of having a language, culture, indigenous knowledge, mythology, art, spiritual rites and religious beliefs (Gatheru, 1996). These attributes bind the community together with respect to social systems, structures and cultural practices.

Socially, it is appreciable that after interacting with the environment, the societies have developed sophisticated systems such as common language, education systems, transport, telecommunications, computers and other forms of technology. However, it is notable that this has also been accompanied with increase in environmental insecurity, conflicts and violence. Many countries are at war, not to emphasize the constant fear of terrorism globally. Some nations have huge stockpiles of nuclear and other weapons with potential of massive destruction. Most countries' expenditure on military activities and surveillance runs to huge budgetary proportions. These spending on armoury, defence and surveillance usually substitute investment in social welfare (Ekins, 1993). Some new technologies have led to disappearance of culture, artefacts and social capital such as traditional farming and fishing methods and implements (Ndaruuga, 2003). Neglect of social issues lead to increased stress, abandoned children, divorces and degradation of social values (RU/SADC, 2000).

The political dimension on the other hand is involved with the decision-making processes with regard to how resources are used, produced, organized, distributed and redistributed and by whom and with what consequences (Leftwich, 1983:11). This includes policies and decisions that govern people's interactions with each other and with the biophysical world, which are developed by governments, traditional authorities and other powerful individuals and groups. Political problems are characterised by a crisis in democracy, power relations, denial of basic human rights such as access, discrimination, repression, exploitation of people for economic gain, oppression and displacement of people (RU/SADC, 2000). Political aspects related to the environment are evident in all countries of the world. For instance in the Kenyan Tana Delta, people were displaced to create room for development of agricultural projects which had little relevance to the local pastoralist communities (RoK, 1991). While mainstreaming the sustainable development aspects described above it is also important to pay attention to Johan Hattingh's model which has
been described as the one representing strong sustainability (UNEP, 2006). His model comprise of three circles (spheres) embedded within one another whereby the interlocking values and logic are inseparably intertwined with one another as shown in Figure 1.

Hattingh argues that each wider circle serves as a holding space for the sphere embedded within it, and serves to enable and sustain it. This illustration implies that all human and non-human activities take place in the ecological sphere. Human activities in particular have been identified as critical in sustenance of the bigger ecological sphere. Human activities can be categorized as social development, which embodies economic, political and technological aspects of the society. This illustration argues that activities in one sphere may have negative impacts, even to the point of disruption or destruction, on the larger sphere.

![Figure 1: Portrayal of sustainable development in terms of three embedded spheres (Source: Hattingh: undated)](image)

This model therefore recommends that there is need to critically look beyond simplistic mitigation remedies, and focus more on prevention of impacts, precaution and safe minimum standards, and even non-negotiable thresholds in the social as well as the environmental spheres – thresholds that we should not even approach as a result of our economic activities. Hattingh also argues that the most important implication of the image of three embedded spheres is that economic, socio-political and environmental considerations do not each have their own logic and values separate from the other spheres but are rather intertwined from the outset. Thus this model calls for fundamental rethinking on everything that we up until now have conceptualised as economic activity, socio-political engagement, and the environment.
2.3 Role of Education in enhancing Sustainable Development

Consideration of sustainable development has also been accompanied by increased acknowledgement of education as having a major role to play in alleviating environmental problems and promoting sustainability. Since 1992, a new look at education and its potential to contribute to sustainable development has led to evolution of the concept of Education for sustainable development (ESD). ESD was necessitated by the need for education to advance to a level whereby it can create opportunities for engagement with local sustainability issues and to learn from one another as people define and construct their future environment (Stapp & Wals, 1993; Jensen & Schnack, 1997; Fien, 1993). Development of ESD hinges on the consideration that education is never a neutral process or activity (Fien, 1993; Babikwa, 2004). By virtue of the abstract nature of sustainable development and its constantly evolving nature, different people conceptualise education for sustainable development and the related processes differently. This has made it difficult to have a unified conceptual agreement for ESD and is consequently influencing processes employed to engage in ESD by practitioners.

The different conceptualisations of ESD influence the way educators institute practical actions to address educational matters, whether knowingly or unknowingly. Analysis of education for sustainable development therefore, calls for clear understanding of the different philosophical orientations that underpin it and how education could be reoriented to nurture relevant sustainable development outcomes. According to Babikwa (2004), ESD is particularly a complex concept and its implementation a composite venture informed by diverse philosophical currents; including philosophies of development, education and environmentalism. Interpretation of these theoretical underpinnings of ESD is an important first step in having universities whose courses; programmes and activities are geared towards sustainable development. Their relationships are illustrated in figure 2 below.

![Figure 2: Philosophical positioning of ESD](Source: Babikwa, 2004): where: PP = Power/politics/political influence; R/use = Resource use and W/c = Wealth creation
The society's development goals and the philosophies that inform them form an integral part of ESD. This is because there exists a strong mutual relationship between development practices and the sustainability challenges, which ESD aims to address. For instance, 20th century interventions are driven by notions that development refers to economic growth and that modernisation is the right strategy for pursuing it. These ideologies have led to unsustainable patterns of development largely responsible for many of the environmental and development problems experienced in the world to-day (Babikwa, 2004).

Thus for ESD to be capable of enhancing community mental and systems transformation, it is important to prioritise interventions that critique modernism and its basic assumptions, such as polluter pay principles or the ability of humans to cure or restore damaged ecosystems is unlimited through technological advancement. It's also important to enhance sensitivity to all philosophies underlying actions geared towards the attainment of sustainable development so that nothing is done for the sake of it. Being sensitive and critical will empower all stakeholders to pursue options that are sensitive to the socio-economic and ecological impacts of development processes and also enhance understanding of each other's limitations.

Babikwa (2004) also contends that in addition to the educational orientations of practitioners, it is also important to beware of the different discourses that represent environmental interventions. Environmental interventions can be considered at two broad levels: technocentrism and ecocentrism.

Technocentric environmental ideologies

Technocentrism or anthropocentrism is an environmental ideology whereby human interests are given a more elevated consideration over the natural environmental concerns (Pepper, 1984). It is characterised by a strong belief in scientific and economic rationality to resource exploitation, environmental regulations and management strategies guided by technical approaches and economic incentives. Technocentrism embodies two approaches, the cornucopian and accommodationist positions (Fien, 1993:26). The cornucopian position is founded on the belief that the environment should be exploited for economic growth and human well-being and any problem experienced in the process can be solved through science and technological quick fixes (O'Riordan, 1989b). In the case of Kenyan wetlands resources, this would mean, for instance, accentuating over-harvesting of fish with the assumption that the wetland can later be restocked with the same or another species as well as giving the wetland time to recover. This neglects the fact that besides human beings, the depleted fish species are part of the wetland's complex food web and other organisms are affected in the process.

The accommodationist (managerialist or light green reformists) on the other hand contend that "the environment can be managed to satisfy human needs and wants provided that certain accommodations to ecological principles are made through
Improvements in environmental legislation and management practices” (Fien, 1993:26). For instance in the case of wetland resources, this may entail identifying the resources being exploited and enacting restrictions towards exploitation of those at higher risk. This is a popular practice and is currently represented by the various acts including the Water Act, Forestry Act, Agriculture Act, Environmental Management and Coordination Act in Kenya which accentuate cost benefit analysis, environmental impact assessments and legal redress to environmental issues. These managerial methods are weak especially where manpower resources and facilities to monitor and determine the threshold levels of exploitation are low. There is likelihood of abuse of the natural resources leading to extensive environmental degradation especially where the legal prescriptions are not adequate or specific.

Educational interventions rooted in techno-centric environmentalism are mainly dominated with technocratic educational programmes that exhibit strong confidence in the potential of science, technology, ‘experts’ and legal quick fixes to address sustainability concerns. The views give the impression that environmental resources are infinite with an endless use. These considerations usually lead to environmental crisis since they are ignorant of the complex and dynamic nature of environmental problems and solutions. The interventions may also be loaded with ‘dos and don’ts’ about the environment instead of acknowledging the role of empowering people to make their own choices and decisions on how to relate with the environment harmoniously. The aspects of sustainable use of resources and the focus on carrying capacity may not be given adequate attention in these considerations. The major shortcoming of these interventions is their failure to seek and integrate views of key stakeholders (e.g. local communities), and therefore do not reflect an interpretation of community local context and development of grassroots based responses.

Ecocentric Environmental Ideologies

Ecocentric environmental ideologies are characterised by a strong belief in the importance of nature’s role in influencing people’s identity and sustainable living. There is wide recognition that people depend on the environment for their survival and that threats to the environment are brought about by peoples’ influences such as materialism, economic growth and the associated social inequities such as in gender, race and class (Fien, 1993:27). Ecocentric ideology can be viewed at two positions, the dark green and the red green positions. The red green position (Fien, 1993:27) is also referred to as human welfare ecology (Eckersley, 1992:36), communalism (O’Riordan, 1989a) and ecosocialism (Eckersley, 1992). This position views the environment as a social construction capable of sustaining natural systems, economic development and just human societies (Eckersley, 1992). Environmental crisis is considered to result from inequality in distribution of resources coupled with unjust selfish economic practices (Pepper, 1996; Capra, 1983). For natural resources, this would mean recognition of the many valuable products and services
identified, exploited and enjoyed by people, but also acknowledgement of disparities in access, distribution and use of these resources due to varying human interest. The disparities could also occur as a result of ownership and governance, which gives some people sweeping powers over resource use decisions without considering other people directly or indirectly dependent on that resource. Ecosocialists seek for harmony between society and nature and also between individuals and groups within society (Ryle, 1988).

The dark green position (Fien, 1993) is also referred to as biocentrism (Daly Comb, 1990) or Gaianism (Lovelock, 1979:vii). This position views the environment as inseparable from people. It views people, land and other species as equal at every level and champions for respect of rights of nature (Fien, 1993:28). They argue for ecological laws to regulate social relationships and institutions to realise the utopia ideal of man’s behaviour being governed by his/her cooperative living in harmony with the natural surrounding in a classless society. For wetlands resources, this would mean recognition and respect for the value of wetlands and human dependence on them just like other animals and plants. This ideology seeks appropriate human and human-environment interactions that recognise and respect everybody and every species’s rights to resources from the environment.

Eco-centric oriented educational interventions are motivated by an aim of empowering people to manage their environment as well as nurturing of harmonious relations between society, nature and individuals within society. Thus there is great emphasis of critical dialogue among those directly affected by particular sustainable development challenges aimed at re-orienting society’s modes and relations of production. Thus the community is facilitated through active analysis of their socio-economic contexts and in the process participates as co-creators of grassroots relevant interventions. The interventions employed are therefore not dictated by experts to passive recipients.

2.5 Educational Philosophies

Educational practices are conceptualised as located within three major frameworks. These theoretical frameworks present different ways of characterizing and explaining different educational processes and their related outcomes through teaching and learning (Kemmis et al. 1983; Fien, 1993; Janse Van Rensburg, 1995). These perspectives include the neoclassical (vocational), liberal (progressive) and social critical (transformative) orientations. The orientations take cognisance of the Habermas knowledge-constitutive interests (Habermas, 1972). Although these professional positions are ideological, they always consciously or unconsciously filter into the educational practices by different people, influencing the direction of educational programmes and their ultimate outcomes. Thus it is necessary for ESD training to lay down strategies on how to develop appropriate manpower b
selecting and engaging within appropriate educational frameworks. Detailed view of these orientations is provided below.

The neoclassical educational framework

The neoclassical educational framework shares relationships with the Habermas technical knowledge interest whose emphasis is on the need for mastery and control over the physical world (Habermas, 1972:309). This knowledge interest is based on need for verifiable observation, experience, explanations of cause and effect and predictions as the basis for control of the environment. According to Fien (1993:19), this knowledge interest accentuates the need for instrumental knowledge and education that can satisfy physical and economic needs to allow one to fit into the society as it is presently constructed. Programmes informed by this interest regard education as a technical activity geared to achieving specific educational and sustainable development ends (Janse van Rensburg, 1995; Higgs, 1998).

A view held by Carr & Kemmis (1986:35) is that it treats education as a set of alternative means to achieve given ends. Grundy (1987:12) refers to this technical interest as "a fundamental interest in controlling the environment through rule-following action based upon empirically grounded laws."

This orientation would entail respect for factual, verifiable and instrumental knowledge about sustainable development that can be used to perform simulations to predict the causes and effects of various activities in environment. This would imply that people have adequate knowledge about sustainable development attributes to the extent of being able to explain everything. Education would serve as a means of recruiting people to the already discovered and verified knowledge on sustainable development. This would also imply that all sustainable development problems could be identified and solved through the application of science and technology. Nevertheless, not all attributes of sustainable development are quantifiable and verifiable. Some aspects are intangible and subjective and this approach may not be adequate in addressing these issues.

The liberal progressive educational framework

The liberal progressive educational orientation (Fien, 1993:22) shares similar features with the Habermas (1972: 310) practical knowledge interest. Its main emphasis is on understanding the environment (such as farmland) so that one is able to interact with it, to live in it as part of the world but not to compete with the environment for survival (Grundy, 1987:13). This is a realisation of the inherent significance of nature’s role in influencing people’s identity and sustainable living. Human beings are considered as inhabiting both the social and physical world.

Habermas (1972), argues that there are three fundamental human interests; namely the technical, the practical and the critical or emancipatory, knowledge-constitutive interests that influence the different types of knowledge and educational processes.
The main interest is understanding and participating in the cultural traditions that shape social life (Fien, 1993:22). Emphasis is on communication and interaction which provides for personal and social development including development of individual subjectively, constituted meanings that are laden with historical, political and social dispositions. Habermas (1972:309) argues that “access to the facts is provided by the understanding of meaning, not observation. The verification of law-like hypotheses in the empirical-analytic science has its counterpart here in interpretation of texts.” In the case of sustainable development, understanding is judged according to whether the interpreted meanings assist in the process of making judgements about how to act rationally and morally (Grundy, 1987: 14). In this case students are made to understand sustainable development phenomena by enhancing real life experiences and practical activities, without ignoring development of higher-level critical skills. Essentially sustainable development activities are viewed as subjective, arising from symbolic interaction, communication and building of consensus.

The socially critical educational framework

The socially critical educational framework concurs with Habermas’s (1972) emancipatory or socially critical knowledge interest that is driven by the recognition of the existence of deception about the true meaning of events (Grundy, 1987:19). This view emphasises the need for freedom of individuals from false consciousness in terms of addressing injustices and inequality within the society that could emanate from the influence of ignorance, authority and tradition upon human reason (Fien, 1993:22). This interest is geared towards liberation from restrictions that hamper freedoms of individuals and communities towards realisation of self-identified needs. According to Higgs (1998:8), emancipatory interest seeks to promote ‘self knowledge’ in learners to emancipate them from irrational beliefs and misunderstandings they inherited from habit, tradition and ideology. The learners are involved in self-reflection “to be aware of ideological origins of their existing beliefs and purposes of life, conscious of inequalities and other problems created by unequal power relations in society” (Fien, 1993:19). This is geared towards helping them to think and act in the interests of promoting social justice and democratic principles.

This orientation could be more inclined towards encouraging development of self-awareness of one’s relationship with other people and with the environment as well as one’s rights and responsibilities in championing for its conservation and degradation. It would also promote self-realisation of the limitations hindering actions for sustainable development. The orientation involves going deeper in exploring the root causes of the sustainable development problems including aspects that are both internal and external to the educator. This could entail the educator reflecting about his/her context, personal dispositions and exploring how they influence personal perceptions and local action.

Table 1 below provides a summary of different aspects of educational practice.
addressed within the three frameworks. Mainstreaming ESD within universities requires that educators are conversant with the ideologies informing their practices. According to UNESCO (2005), reorienting education towards sustainable development requires that educators pay more attention to:

- Broadening participation in sustainable development activities and initiatives
- Be more explicit about values and ethics that shape and guide practice and decisions
- Consider issues of quality and relevance in educational work
- Develop and support initiatives that engage proactively with change and transformations in education, society and the environment that are both practical and theoretically informed.

On this basis an integrated approach that equips learners with both theoretical and problem solving practical skills would be the best in pursuit of education for sustainable development.
### Table 1: Educational orientations, characteristics and implications

<table>
<thead>
<tr>
<th>Item</th>
<th>Neo-classical Education</th>
<th>Liberal (progressive) Education</th>
<th>Critical (emancipatory or transformative) education</th>
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| Education     | - Viewed as a technical activity, and an instrument or tool for achieving pre-determined behavioural goals and preparing people to perform specific tasks;  
                - Teacher-centred,  
                - Neutral activity fully in the hands of the educator/technical expert to manipulate in order to change learners behaviour; | - Is a social process preparing people for life rather than work  
                - It should be learner centred | - A social process empowering people to critique and transform oppressive socio-cultural, political and economic structures;  
                - Used to perpetuate dominant socio-economic and political relations  
                - Levels power gradients in society, |
| Role of the school | Select and 'fill-up' students with technical knowledge and skills for later work roles in society. | Develop an autonomous, good and virtuous individual to reform society within the existing social structures | - Inextricably linked to the social, economic, cultural and political structure of society  
School and society reflect each other. Society viewed as having inequities. School prepares students to participate in addressing societal problems immediately. |
| Educators     | - Viewed as experts in changing learners behaviours,  
                - Designers of learning environments that elicit desired behaviour,  
                - Experts to transmit knowledge | - Viewed as facilitators of the learning process, organisers of learning opportunities, who enable learners to take advantage of those opportunities | - Co-learners and co-constructors of knowledge in a situation of mutual respect in order to respond to challenges collectively and individually; collaborative agent |
| Learning objectives | - Behavioural and predetermined by the expert educator | co-constructed and outcomes collectively determined/derived from community | co-constructed based on material conditions of the people |
| **Learners** | - Lack the right knowledge skills and attitudes (must be taught by the expert – like an empty vessel to be filled) | Central to the educational process, learners experiences are seen as the basis for learning, Seed to nurture | - Experienced co-constructors of knowledge and central actors in the learning process; - Critical, constructive co-participants, and Fire to kindle |
| **Learning and change** | - A linear process involving knowledge acquisition, attitude and behavioural change, (all depend on being equipped with knowledge) | - Participatory social process in which stakeholders depend on understanding social phenomena and being able to interact with it; - Expected to occur through reforms based on people's understanding of the situation and informed decision-making. | - Social transformative process; - Revolutionary aimed at levelling power gradients |
| **Expected learner outcomes** | Technical skills to fulfil work roles | Personal and social development through engaging in critical thinking and problem solving. Pupil is self-actualising, reflective and potent. | - Student is a critical constructive co-participant. Self-actualisation viewed within a social context. - Learner participates in social transformation and is transformed in the process, besides engaging with ideologies underpinning the current reality. |
| **Knowledge** | ‘True knowledge’ helps to solve technical problems, and its creation is a responsibility of the expert educator/researcher through objective science pre-packaged learning experiences | Knowledge is socially constructed in participatory manner, | - Socially constructed and dependent on one’s personal location, should enable people to be critically aware and challenge the dominant oppressive power relations and structures in society |
| **Value of knowledge and knowing** | Knowledge is objective, external to the knower, prescribed as facts and concepts, and individual matter and context | Knowledge is subjective, private, and individual matter and context | Knowledge socially constructed through a dialectical process, teacher and student participate, |
| Teaching/learning Methods | Social engineering methods such as show and tell, guided questioning, lecture method. | -bottom-up, participatory, democratic, experiential and collaborative. -Active learning, inquiry, negotiation and problem solving. Emphasis on research to understand context. Project work, issue based methodologies, cross curricular themes, simulation games, role play, dramatization, solitaire, environmental studies, environmental audits impact assessments. | bottom-up, creating critical awareness; conscientisation through dialogue; critical enquiry; Active learning methods, socially critical inquiry, reflection. |
| Teacher and learner roles and relationships | Teacher more endowed with knowledge which s/he transmits, has more power and control, relationship hierarchical. Learner receives (empty vessel). | Teacher is a facilitator or organizer. Learners explore the environment and construct own knowledge. Low teacher power and control. | Teacher and the learner are partners, co-learners. Teacher is a project organizer or resource person. Shared responsibility, power sharing and participatory control by both parties. |
| Educational failure | Associated with learners weakness | Associated with the exclusion of the majority of people from the planning and development of educational plans and strategies; lack of ownership of educational programmes | Autocratic socio-political structures which lead to transmittal educational processes; disempowering methods and content. |
| Resources – people, places and publications | Dependence on books, posters, experts, RDDA (Research, Develop, Distribute and Apply) approach | Material development is an individual affair. Teacher is slightly influenced by experts but s/he participates fully. | All people participate in planning, development and critical reflection of the resources being developed. Very weak boundaries between school and non-school resources. |

Source: Adapted from Kemmis et al. (1983); Fien (1993); Janse Van Rensburg, (1995); Lotz (1995); Gough & Robottom (1993); Le Roux (2000)
2.6 Mainstreaming ESD in Learning Institutions

The sustainability concept cannot be said to be static, but would automatically evolve as new thoughts and ideas come to the fore as a result of new engagements and research findings. In mainstreaming ESD in learning institutions, university courses and programmes for instance are expected to be responsive to these emergent developments in order to remain relevant and competitive. Biophysical, socio-political and economic challenges facing humankind are evident at the local level and are therefore some of the areas that the community expects the university to come to their assistance. As such all courses (programmes) should strive to address these societal concerns.

According to Di Chiro (1987:25) “an adequate understanding of environmental problems requires that they be viewed as the products of contesting discourses, activities and interactions among human societies.” This implies the need for university staff to prioritise negotiations, dialogue and theoretically informed action taking. The teaching action itself is also expected to be critical of the contextual challenges and expected learning outcomes. According to Mckeown (2002:16), ESD is more than a knowledge base related to environment, economy and society. It also addresses learning skills, perspectives, and values that guide and motivate people to seek sustainable livelihoods, participate in democratic society and live in a sustainable manner. Transforming the prescribed curriculum into locally relevant learning processes remains the biggest challenge for every programme developed justifying the need for every university staff to be sensitive to educational philosophies/frameworks. The trainers and trainees are expected to engage in a process of conceptualising the future, examining local cultures and contexts (past and present) and setting achievable milestones. These challenges require that research and experiential learning form the basis of every ESD implementation process.

The ESD model argues for greater emphasis on natural and social interactions between and within societies as well as with the diverse components of the environment. This wider consideration makes every discipline of study relevant and as having the potential to domesticate addressing of sustainable development aspects directly or indirectly. According to UNESCO (1988:27), the various aspects selected and integrated in diverse courses should underscore the role of population and economics especially the cost-effect relationships between resource management, conservation, cost of pollution control and economic benefits on a long-term basis.
2.7 Conclusions

Careful consideration of the concept of sustainable development should form the crucial spheres of building courses at university level in order to enhance Education for Sustainable Development. ESD is not education for education’s sake, but education that is responsive to socio-economic, human and ecological concerns of society. Training programmes need to prepare learners to respond to diverse sustainability concerns by being able first to interpret the problem, categorise properly and institute well ‘philosophically grounded’ and practical intervention. The philosophical grounding should integrate both local and external worldview sustainable development challenges and interventions to enable empowerment and ownership of the process and products by all stakeholders. This way ESD becomes a transformative process and can reorient society and its systems towards pursuit of options sensitive to local sustainable development needs and challenges.

2.8 Review Questions

i. Using relevant examples, compare and contract conventional education and education for sustainable development.

ii. In which ways can you translate your specialised knowledge into tangible benefits for sustainable community development?

iii. Critically comment on the appropriate educational framework necessary to actualise ESD in your routine learning process.

iv. Critically examine the changes you think would be needed at the university level to transform it into a driver of change for sustainable development

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