

Full thesis

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**The significance of participation in capacity development and project
sustainability: A case study of the Zimbabwe Secondary Teacher
Training Environmental Education Project (St²eep).**

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ABSTRACT

This study uses a systems thinking perspective to explore the role and meaning of participation, capacity development and project sustainability in the Zimbabwe Secondary Teacher Training Environmental Education Project (St²eep). Since there was no consistent critical reflection upon the different assumptions that underpin these important aspects of St²eep in the original project design, this study aims to articulate a theoretical framework for guiding the project. St²eep is a donor-funded project, located in the Ministry of Higher and Tertiary Education in Zimbabwe that seeks to integrate environmental education across the curriculum of secondary teacher education.

The study first develops a theoretical framework drawing on systems thinking. In particular it uses the holistic and constructivist perspectives embedded in systems thinking to describe a number of analytic frameworks that are used as a guide to investigate participation, capacity development and project sustainability in the St²eep case study.

The research methodology comprises a qualitative case study approach, which contains elements of an instrumental, evaluative and critical case study. Data-collection methods include document analysis, focus group discussions, focus group interviews, semi-structured face-to-face interviews and participant observation. Data analysis follows the constant comparative method of coding and categorising data as outlined by Strauss and Corbin (1998).

The outcomes of this research show that participation processes in St²eep evolve around the interactions between a political dimension and a learning dimension. The political dimension relates to giving the project stakeholders a critical voice, allowing them to shape the project and involving them in the decision-making process. This approach has fostered an ongoing learning process in a small team of committed stakeholders based on the principles of collaborative learning, team learning and action research. Participation was shown to enhance capacity-development processes at individual and institutional level by the provision of support through learning teams, and by the renegotiation of responsibilities and power relations between lecturers involved in St²eep, donor representatives and college administrations. The strong operational role of the donor organisation was seen as a serious threat towards individual and institutional capacity development since it creates a functional but artificial and independent project system within the college system and takes over any local institutional support structure that it might seek to develop. Fostering continuous learning and capacity development, St²eep's participatory approach was shown to contribute to a better understanding of the interconnectedness of factors that influence future

sustainability of the project and the implementation of environmental education. This has assisted in the development of different scenarios on the sustainability of the project. The research shows that the project-sustainability planning process draws directly from St²eep's ongoing learning process, with individual and institutional capacity development featuring strongly in the different scenarios, and with the external context such as the economic situation and the low priority of environmental education being recognised as important factors that need to be considered.

Drawing on the findings from the case study, this study makes a tentative recommendation that donor organisations should focus more on capacity-development initiatives and avoid taking on a strong operational role in project activities. The research also recommends that there is need for a deliberate focus on both the political and learning dimensions of the participation process in order to foster local ownership. Making the learning aspect much more central in St²eep is presented as a possible strategy for motivating a larger number of college lecturers to become involved in the project and the implementation of environmental education. The study also urges St²eep to combine the different scenarios that have emerged during the project sustainability planning process and to focus on the benefits that stakeholders want to see sustained.

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LIST OF ABBREVIATIONS AND ACRONYMS

CTA	ACP-EU Technical Centre for Agricultural and Rural Co-operation
DTE	Department of Teacher Education, University of Zimbabwe
EEOP	Environmental Education Orientation Programme
NMT	National Management Team
SADC REEP	Southern African Development Community Regional Environmental Education Programme
St ² eep	Secondary Teacher Training Environmental Education Programme
SWOT	Strengths, Weaknesses, Opportunities, Threats
VVOB	Flemish Office for Development, Co-operation and Technical Assistance
ZWEECF	Zimbabwe Environmental Education Consultative Forum

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CHAPTER 1: INTRODUCTION

1.1 BACKGROUND TO THE ST²EEP PROGRAMME

St²eep is an acronym for the Secondary Teacher Training Environmental Education Programme. It is a partnership project, representing a partnership between the Zimbabwe Ministry of Higher and Tertiary Education and the Flemish Office for Development, Co-operation and Technical Assistance (VVOB), the main donor to the programme. As the St²eep lead facilitator, I represent the donor within this project. The initial stage of the project runs from 2003 to 2006. The project is based in Harare, Mutare and Bulawayo secondary teachers' colleges, where it aims to integrate environmental education into the curriculum and to support environmental education initiatives in the colleges and pilot schools in order to enhance the sustainable utilisation of natural resources. Already existing environmental education processes and initiatives in Zimbabwe form the basis of this programme. The Presidential Commission of Inquiry into Education and Training (Zimbabwe, 1999) dedicated a whole chapter to environmental education, thereby acknowledging that environmental issues are at the forefront of development and that it is important to educate people about environmental issues for the achievement of sustainable development. The Commission also recommended that environmental education should be integrated and made examinable in those subjects that best allow for the integration of environmental education processes and content.

Another important milestone for environmental education in Zimbabwe was the development of Zimbabwe's National Environmental Education Policy (Zimbabwe, 2004) through a multi-stakeholder consultative approach, which took place between 2000 and 2001. Background research during this process by representatives of the formal education sector revealed that this sector was very subject-discipline oriented. In secondary and tertiary education, most environmental education takes place through carrier subjects such as the natural sciences, where there is a focus on the biophysical aspect of the environment (Shava, 2003). Teacher educators were very supportive of the policy-development process because they believed it could strengthen environmental education initiatives that were already under way (Heberden *et al.*, 2001). Recognising that adoption and implementation of the formulated environmental education policy is a lengthy process, it was agreed that action on the ground should be strengthened to establish environmental education initiatives, even before the policy was officially launched by the Ministry of Environment and Tourism (Chimbodza *et al.*, 2004). This marked the beginning of the St²eep programme, which was formulated through strong involvement and consultations with stakeholders. This programme

consequently seeks to implement some of the recommendations of the Presidential Commission of Inquiry and of the National Environmental Education Policy.

1.2 WHICH PROBLEMS IS ST²E²EP RESPONDING TO?

As in the rest of Southern Africa, the majority of people in Zimbabwe (about 69%) live in rural areas, where they rely on natural resources for their livelihoods (Chenje *et al.*, 1998). Key natural resources include fuel-wood, water, healthy ecosystems, and fertile land for agriculture and grazing. These natural resources and access to them are, however, threatened by increasing population levels, poverty, over-consumption, pollution, loss of biodiversity, soil erosion, limited access to education and health services and limited livelihood options (Lotz-Sisitka, 2004). These threats and underlying causes of environmental degradation undermine the livelihoods of people and can contribute to increased poverty and further degradation of the environment. Many people live in ongoing conditions of risk, which are exacerbated by drought and flooding (linked to climate change) and diseases such as malaria and HIV/AIDS. In an urban development context, many of the urban environmental problems can be attributed to weak local government capacity, limited capital investment for infrastructure improvements and weak monitoring of compliance to various regulations. This not only leads to impoverishment, but also squalid conditions for habitation (Chenje *et al.* 1998, Lotz-Sisitka, 2004). A recent government initiative to ‘clean up’ cities has resulted in approximately 700,000 people losing their homes or their source of livelihood, or both. Already belonging to the poor and disadvantaged segments of the population, they have been driven deeper in poverty, deprivation and destitution and have been rendered more vulnerable (United Nations, 2005).

It is in this context that St²eep has worked with environmental education as a process that strengthens and contributes to the sustainable use of natural resources, alleviation of poverty and sustainable development.

1.3 THE MAIN STAKEHOLDERS IN ST²E²EP

There are a number of stakeholders who have an interest in, and who participate in, the St²eep programme in various ways. These are outlined in Figure 1.1, and then discussed in more detail.

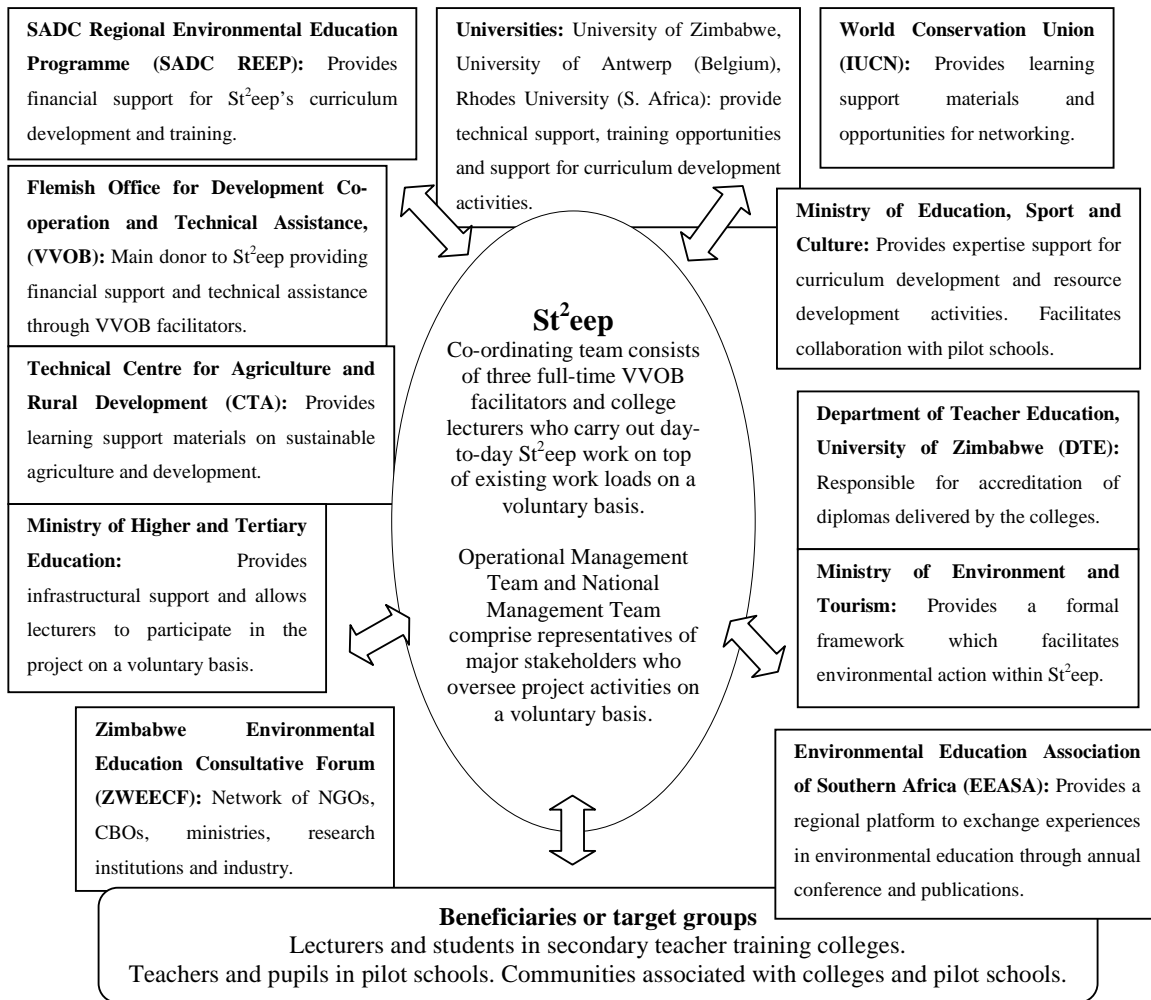


Fig. 1.1: Main stakeholders in St²eep

The Ministry of Higher and Tertiary Education is the main stakeholder, who mandates the project to operate in the different teacher training colleges in Zimbabwe and oversees the partnership with VVOB, the main donor to the programme. The Ministry of Education, Sport and Culture is also an important stakeholder since it receives qualified teachers from the secondary teacher training colleges. St²eep is piloting its programme in six pilot schools, where it supports environmental clubs, provides training for the teachers, and explores the implementation of environmental education in the school curriculum. The Ministry of Environment and Tourism has a particular interest in St²eep because the project implements some of the strategies suggested by the national environmental education policy. Officials from the Ministry of Environment provide support in the form of expertise during environmental education training workshops or logistical support during the commemoration of environmental days. St²eep also works closely with the Zimbabwe Environmental Education Consultative Forum (ZWEECF), a broad network of governmental and non-governmental organisations involved in environmental education. St²eep is able to draw extensively from the expertise available in this network. The Department of Teacher Education

(DTE) at the University of Zimbabwe is another important stakeholder and is responsible for the accreditation of the diplomas that are delivered by the colleges. Any syllabus review facilitated by St²eep needs to be approved by DTE. Besides being an administrative authority, DTE also supports St²eep through expertise from its staff. Representatives from the three Ministries, ZWEECF and DTE, together with the environmental education co-ordinators and representatives from VVOB, serve on the St²eep Operational Management and National Management Team, where they provide a steering role to the project.

International organisations, such as the SADC Regional Environmental Education Programme (SADC REEP) and the World Conservation Union (IUCN), and research institutions, such as the University of Antwerp, Rhodes University and the ACP-EU Technical Centre for Agricultural and Rural Co-operation (CTA), provide support through resource materials and expertise or the provision of training or attachments in areas such as environmental education and research, and in the development of resource materials and training programmes.

1.4 BRIEF OVERVIEW OF ACTIVITIES WITHIN THE ST²EEP PROGRAMME

Figure 1.2 shows the key result areas that guide St²eep's activities towards the achievement of its aim to integrate environmental education into the curricula and to support environmental education initiatives in the colleges and pilot schools in order to enhance the sustainable utilisation of natural resources (Zimbabwe & VVOB, 2002).

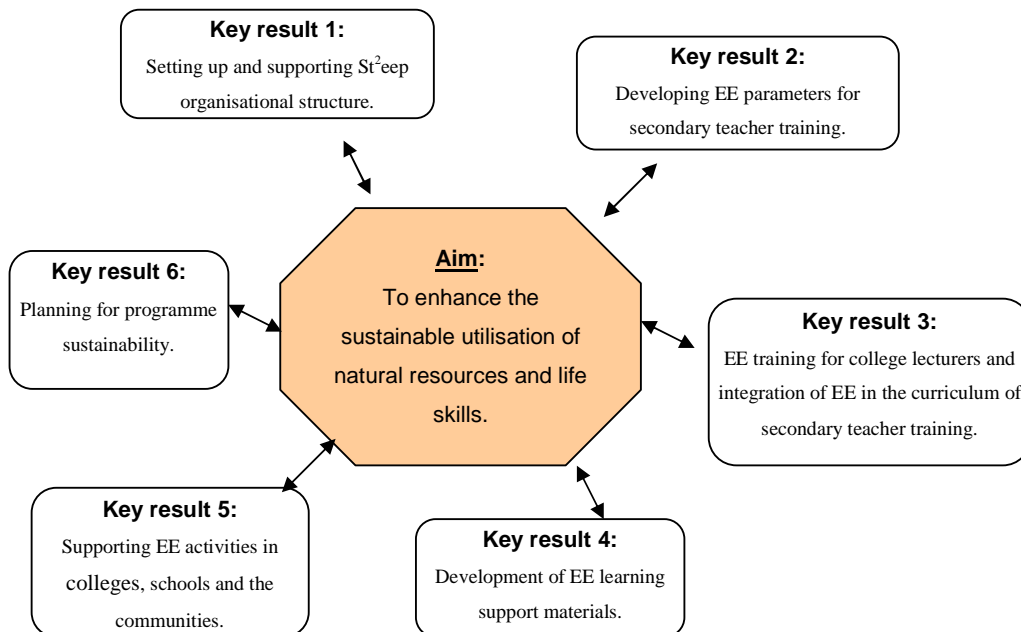


Fig. 1.2: Key result areas of the St²eep programme

The first year of the St²eep programme (2003) was characterised by a variety of activities that aimed at making the project structures operational, raising awareness of environmental education, development of environmental education parameters for secondary teacher training, supporting national and college-based environmental education activities, building the environmental education capacity of lecturers, and the development of infrastructure such as functional resource centres with educational materials, computers, telephone and Internet connection. These activities have proved to be essential in establishing a sound base from which the integration and implementation of environmental education in the curriculum could be further prepared and established. Since 2004, St²eep has focused more and more on the institutional environment in which the integration process has to function. By involving college administrations and academic boards, the department of teacher education from the accrediting university, the two Ministries of Education and the Ministry of Environment and Tourism and administrations of pilot schools, St²eep is working towards the implementation of environmental education as an institutional requirement rather than as a voluntary initiative. Since 2004, St²eep has focused mainly on the following result areas:

- *Curriculum development:* An environmental education orientation programme for lecturers has been developed and is being implemented with groups of lecturers in different subject areas from the three secondary teacher training colleges. This orientation programme is the first step in a longer syllabus-review process, during which lecturers will integrate environmental education in their subject area through numerous section meetings and consultative follow-up visits. The revised syllabuses will be presented for approval by the accrediting university at the end of the year. The aim is to integrate environmental education into all subjects by the end of 2006.
- *Resource development:* The development of a book on learning resource materials that can strengthen the implementation of environmental education in schools has been supported. The production of learning support materials to assist the implementation of environmental education in those subjects that have integrated environmental education in their syllabuses is also explored.
- *Support of environmental education activities in colleges and pilot schools:* These include activities and projects with students from environment clubs and lecturers from the environmental education steering teams. Steering teams consist of the college environmental education co-ordinator and college lecturers who are responsible for environmental education activities within the colleges. Implementation of waste-management systems, the

propagation of indigenous trees, the development of school and community gardens using permaculture techniques, the commemoration of environmental days, and environmental field trips are examples of such activities. Members of the college environmental education steering teams also organise mini environmental education orientation programmes for teachers from the pilot schools.

- *Networking with environmental education-related organisations* in and outside Zimbabwe is pursued to explore opportunities for better co-operation between projects and co-funding of St²eep activities.
- *Research*: A baseline survey within St²eep has been carried out and other methods of researching project activities are supported. Action research towards programme sustainability is ongoing.

1.5 AN IN-DEPTH LOOK AT ST²EEP

Popkewitz (1987) considers the difference between the surface and underlying layers of meaning in institutional life. He argues that the surface layer of meaning is provided by publicly accepted criteria or standards by which people judge success or failure. To say that the St²eep programme is very successful at the moment might constitute little more than a reference to this surface layer of meaning, which could be provided by the following ‘publicly accepted’ criteria reflected in the progress monitoring reports which provide an overview of the project’s progress over three-monthly period intervals and the end-of-year result monitoring reports which look at St²eep’s achievement of results over a one-year period (St²eep, 2004b; 2005a; 2005b):

- St²eep is able to carry out its planned activities towards the achievement of its aim and objectives.
- There is evidence of support from different important stakeholders, such as ministries, college principals, lecturers, teachers from pilot schools, and local and regional environmental education-related organisations. This has resulted in a very conducive environment in which the programme can operate.
- A good number of lecturers are actively involved in the key activities of St²eep, i.e. the operational structures, the environmental education orientation programme, the curriculum and the resource development process.

Popkewitz (1987, p. 3) argues that ‘the underlying layer of meaning directs attention to the assumptions, pre-suppositions and “rules of the game” that give plausibility and legitimacy to the ongoing actions’. By exploring the underlying layer of meaning within St²eep we might be able to

identify assumptions and disclose the hidden problems, tensions and things that might not be said openly. Chimbodza *et al.* (2004) initiated a critical review of the St²eep programme and raised questions about the meaning of participation at the operational level in terms of the extensive operational role of the donor. The authors critique the lack of long-term vision on the support of the environmental education integration process, as well as future role and commitment of the stakeholders within this process. At the moment there is no clearly articulated theoretical framework to guide the St²eep programme.

In a review of the Learning for Sustainability Pilot Project in South Africa, Janse van Rensburg (2000) remarks that few projects go through life with clearly articulated guiding frameworks at the level of their philosophical and ideological underpinnings. She argues further that ‘latter-day development projects have finely enunciated logical-frameworks (log-frames) to manage and measure project activities and outcomes – but the philosophical orientations to the project, its aims, activities and outcomes, are difficult to reflect in a log-frame’ (p. 6). Despite there being no explicit philosophical and theoretical framework guiding St²eep, it is guided by some principles that its stakeholders consider appropriate. In their review of the St²eep programme, Chimbodza *et al.* (2004) identified some of the principles guiding the programme. These include participatory action research situated in a general participatory approach within the programme, greater focus on processes, as illustrated by the open-endedness of the programme, and a focus on capacity development across different levels. It is believed that these principles facilitate a conducive and supportive operational framework for environmental education processes in secondary teacher education in which people are empowered to engage with environmental issues and changes in their own curriculum. But is the meaning and role of participation and capacity development within St²eep clear? Are these just hollow phrases to legitimise the activities?

I have been able to reflect on St²eep processes through my engagement with planning, reports, meetings, activities and discussions within the programme. This has made me realise that there is no consistent critical reflection upon the different assumptions that underpin three important aspects of St²eep – **participation**, **capacity development** and **programme sustainability** – which are of great concern to the majority of stakeholders involved (see Chapter 4). This is illustrated by the fact that these issues are often mentioned in reports, during St²eep evaluation meetings, planning meetings of the national management team or operational management team, and in personal communications between programme’s stakeholders. By reflecting in this study upon the different assumptions underpinning these aspects, I seek to explore the ‘underlying layer of meaning’ within St²eep. It is hoped that this will contribute to the articulation of a theoretical framework to guide the

programme (see Chapters 5 and 6). Key to the articulation of this theoretical framework is a deeper understanding of the relationship between participation, capacity building and programme sustainability (see Chapters 2, 4, 5 and 6). These three dimensions of the programme form the focus of the research question.

1.6 RESEARCH QUESTION AND GOALS

One might think that an exploration of the St²eep programme in terms of participation, capacity development and sustainability constitutes three completely different research projects. I would argue, however, that this thesis is an initial necessary step in providing greater insight into these issues in order to appreciate the broader system that occurs within and around St²eep. Since participation, capacity development and sustainability planning are very much related within St²eep, the research, at this stage, becomes more meaningful if they are considered in an integrated manner.

I begin this research with two main assumptions. The first is that St²eep's focus on the participation of all stakeholders enables capacity development across different levels; the second is that this enhances the development of a sound framework through which engagement with environmental education processes can be sustained within secondary teacher training in Zimbabwe.

This brings me to the following research question:

What is the significance of the participatory orientation for capacity development and programme sustainability within St²eep?

In response to this research question I work towards the following research goals:

- A review of the participatory orientation and processes,
- A review of the interrelated dimensions of capacity development, and
- A review of the sustainability issues and processes

It is anticipated that attaining these goals will assist in:

- Articulating how a participatory approach contributes to capacity development and project sustainability in donor-funded initiatives such as St²eep.
- Informing current practice of VVOB in terms of capacity development, participation and project sustainability (see Chapter 6 for recommendations to this effect).

1.7 OVERVIEW OF THE STUDY

In addressing the above-mentioned research question and goals, the thesis is structured as follows:

Chapter 1: This chapter describes the background to the St²eep programme and gives an overview of its aims and objectives, its activities and its major stakeholders. Besides describing the research question of the thesis, the chapter also provides a rationale for carrying out this research.

Chapter 2: This chapter provides a theoretical framework on systems thinking as an overall approach towards capacity development, participation and project sustainability. I first explain the holistic and constructivist perspective of systems thinking. I then proceed to review the concept of capacity development and a number of learning approaches that have been described by researchers as useful in a systems thinking perspective. Here I focus on their social constructivist perspective and the role of participation, after which I describe an analytic framework to evaluate the participation process. The last section illustrates that systems thinking provides a suitable approach for dealing with the complexity of project sustainability, and that capacity development and participation are key conditions for project sustainability.

Chapter 3: In this chapter I describe the case study approach adopted for this study. Besides giving the rationale for using this approach, I also explain why this particular case study contains elements of instrumental, evaluative and critical case-study approaches. I then proceed to outline the different data-collection methods, which include document analysis, focus-group discussions, focus-group interviews, semi-structured face-to-face interviews, and participant observation. The chapter also describes the process of data analysis which follows the constant comparative method of coding and categorising data as outlined by Strauss and Corbin (1998). Validity and ethical considerations of the study are highlighted in the last part of the chapter.

Chapter 4: This chapter presents the data generated from a number of sources which provide detailed insight into the reality of the St²eep project in order to explore how St²eep's implementation processes and objectives relate to participation, capacity development and project sustainability. The first section of this chapter presents the data that relate to participation and explores this issue in view of broad vs. narrow participation, ownership, power, motivational factors, and the role of participation in the learning process. The second part reviews the data that relate to capacity development and provides insight into the role of individual and institutional capacity development in St²eep and the relationship between these two concepts. In the third section I describe the process of self-evaluation and critical reflection that has emerged among St²eep stakeholders to learn and plan about project sustainability. The last section also explores how project sustainability is understood within St²eep.

Chapter 5: In this chapter I draw on the theoretical framework presented in Chapter 2, and on the data presented in Chapter 4, to discuss the results of the research as regards participation, capacity development and project sustainability. I outline the political aspect of participation, and the role of participation in learning processes that feature within St²eep, such as collaborative learning, team learning and action research. I then explain how St²eep's capacity-building initiatives relate to a holistic approach as outlined by Horton *et al.* (2003). The last part uses a systems perspective to illustrate the complex interrelated factors that influence participation, capacity building and project sustainability.

Chapter 6: This chapter provides a summary of the outcomes of the study. I describe how participation enhances capacity-development processes at individual and institutional level in the provision of support through learning teams and in the renegotiation of responsibilities and power relations between lecturers involved in St²eep, the donor representatives, and college administrations. I also emphasise the complexity and interrelatedness of participation, capacity development and project sustainability in St²eep. Finally I present some recommendations with regard to the role of donor organisations in development projects, the central role of learning in St²eep, and the need to combine the different sustainability scenarios as a whole. Possibilities for future research are also indicated.

1.8 CONCLUSION

Within this chapter I have described the background to the St²eep programme and explained that St²eep seeks to integrate environmental education into the curriculum of secondary teacher training colleges in Zimbabwe in order to enhance the sustainable utilisation of natural resources. I gave an overview of the major stakeholders involved in St²eep, and outlined its key result areas and activities with students and lecturers in the colleges and pilot schools. The chapter identified participation, capacity development and programme sustainability as three important concerns among project stakeholders and pointed out that there is no consistent critical reflection upon these issues. I explained that this thesis, by reflecting upon the different assumptions underpinning these issues, seeks to articulate a theoretical framework that can guide the programme and which is based on a deeper understanding of the relationship between participation, capacity development and programme sustainability that form the focus of the research question.

In the next chapter I expand upon the key concepts introduced in the research question, and explore how St²eep's implementation processes and objectives relate to participation, capacity development

and programme sustainability. Systems thinking as a key theoretical framework for the study is also introduced.

CHAPTER 2: SYSTEMS THINKING – AN INCLUSIVE FRAMEWORK FOR CAPACITY DEVELOPMENT, STAKEHOLDER PARTICIPATION AND PROJECT SUSTAINABILITY

2.1 INTRODUCTION

This chapter provides a theoretical framework drawn from systems thinking as the overall approach towards the consideration of capacity development, participation and project sustainability in this study. I first explain the holistic and constructivist perspective of systems thinking. I then proceed to review the concept of capacity development. Here I describe the traditional approach, which is positioned in a classical, reductionist tradition, and the movement towards a more holistic approach that is in line with the systems thinking perspective. Recognising that ‘learning’ features prominently in both systems-thinking and capacity-development literature I review a number of learning approaches that have been described by researchers as useful in a systems-thinking perspective: these include collaborative learning and communities of practice, team learning and action research. Here I focus on their social constructivist perspective and the role of participation, after which I describe an analytic framework to evaluate the participation process. The last section illustrates that systems thinking provides a suitable approach for dealing with the complexity of project sustainability and that capacity development and participation are key conditions for project sustainability.

2.2 SYSTEMS THINKING

2.2.1 Holistic perspective of systems thinking

An interesting line of thought which challenges the analytical approach of reductionism is the mental model of ‘systems thinking’. Brinkerhoff *et al.* (1990) base systems thinking on the idea that many natural and social phenomena can be treated as a system, defined broadly as a set of units or elements that interact with one another to confer some types of inputs into some types of outputs. Morgan (2005) presents systems thinking as a way of thinking that looks at the whole first. He argues that systems thinking focuses on processes, patterns and relationships, with cause and effect separated in time and space. Systems thinking pays little attention to the idea of ‘objective knowledge out there’ that can be collected but rather takes a post-modern way of seeing the world, where nothing is objective and independent of its context (Morgan, 2005). Systems thinking is not

something new: some writers argue that it was the most common form of human thinking before Western rationalism in the early part of the eighteenth century. Its modern form began to take shape in the 1920s, influenced by the study of biology and the demonstrable existence of systems effects in the natural world (Morgan, 2005). Traditional decision making – which assumes a linear relationship between symptom, action and result – often doesn't work when dealing with complex real-world systems.

The difficulty in controlling and predicting complex social systems, such as organisations operating in their environments, is attributed by Galbraith (1999) to the interaction of multiple feedback loops (closed chains of causality) that define the system structure, share some variable in common, and contain a variety of delays. He gives an example of a positive feedback loop in a university where 'an increase in enrolments provides additional funds which supports an increase in academic staff which provides for the enrolment of more students which produces additional funds and so on' (Galbraith, 1999, p. 143). He notes that the behaviour of systems is mostly insensitive to changing values of parameters (such as student enrolment, average research productivity per staff member, weights assigned to various research products) which are embedded in the causal loop structure. The feedback structure adapts so that the impacts of the changes on system behaviour are limited. Galbraith argues that the fundamental behaviour is not affected by the parameter changes but controlled by the system structure, and influencing system behaviour involves changing the structure, i.e. the number and strength of feedback processes.

Chapman (2003) also recognises the self-regulating characteristic of organisations. He refers to organisations as 'adaptive systems', and calls their resistance against attempts to make them change their 'resilience'. He goes on to argue that one of the characteristics of adaptive responses is that they are generally non-linear and unpredictable. Recognising that organisations are more like complex adaptive systems, Chapman argues that it is rather difficult to control them like a machine and uses an interesting metaphor to illustrate this: 'To try to control them would be like throwing a bird tied to a rock in order to predict its target' (p. 53). However, while it might be difficult to control them, complex adaptive organisations can still be managed or influenced but it requires a different approach based on 'systems thinking'. Chapman's suggested strategies to do this include: 1) the provision of an attractor for the system; 2) the use of a management style based on the concept of the learning organisation,¹ which focuses on learning what works rather than presuming

¹ See, for example, Senge (1990).

that this can be deduced from analysis; or 3) an evolutionary approach which fosters innovation and variety and then selects outcomes that are consistent with the required direction of change.

By taking a systems approach, the whole complex of bi-directional interrelationships emerges with the system of inputs, processes, outputs, feedback and controls, providing more useful results than traditional methods. System thinking also helps to integrate the temporal dimension of any decision. Instead of looking at discrete ‘snapshots’ at points in time, a systems methodology helps to see change as a continuous process (Wikipedia, 2005). Based on a case study of change management involving a higher education institution, Cao *et al.* (2003) propose a systemic perspective to help with understanding and managing organisational change. They suggest that the effectiveness of change management can be greatly improved if the diversity and interactions of organisational change are understood and managed systemically by creatively using different methods together in one intervention. They present different aspects of critical systems thinking as helpful in managing diversity and interaction in organisational change: 1) critical awareness, 2) methodological pluralism, 3) emancipation to guide intervention towards local improvement, and 4) participation.

2.2.2 A theoretical perspective for systems thinking

The ideas described above illustrate systems thinking as a world view based on an understanding of the interconnectedness, complexity and wholeness of the components of systems in specific relationship to each other. These interrelationships are responsible for the manner in which systems operate, resulting in the patterns of behaviour and events we perceive (Bellinger, 2004). Checkland (quoted in Mingers, 2000, p. 739) makes a distinction between ‘hard’ systems thinking and ‘soft’ systems thinking. Hard systems-thinking approaches, such as systems engineering and systems analysis, are rooted within a classical reductionist science paradigm, which tends to focus on relatively simple, well-structured systems, able to control variability through the use of laboratory experiments. Checkland notes that, while science has been very successful when dealing with well-structured systems with controllable variables, its approach is inadequate and incomplete for dealing with unstructured, real-world organisational problems. These require a systemic, holistic approach that recognises their emergent properties and a soft approach that deals with their lack of structure (Morgan, 2005).

Checkland (quoted in Mingers p. 739) argues that hard and soft systems thinking do not exclude each other but are complementary. He argues that soft systems thinking belongs to the phenomenology tradition, which focuses on the subjective understandings of the individual. Based on a secondary literature review on the soft systems method, which is a prominent school of soft

systems thought, Holwell (2000) indicates that it is broadly agreed that the soft systems method falls within the phenomenology tradition following an interpretive approach. The soft systems method focuses more on the subjective understandings of the individual than on the observation and explanation of 'social facts' (Mingers, 2000). Systems thinking, therefore, is based on a constructivist epistemology where knowledge is not viewed as reflecting a reality but is based on convention, human perception, and social and cultural experience (Kim, 2001).

The holistic approach of systems thinking resonates well with an emerging holistic approach in capacity development. The next section gives an overview of the capacity development concept and contrasts the traditional reductionist approach towards capacity development with the more recent holistic approach, which can be situated in a systems thinking perspective.

2.3 CAPACITY DEVELOPMENT

A lot of recent literature can be found on capacity development and there seems to be a general consensus that words like 'capacity' and 'capacity building' or 'capacity development' are often used as slogans with no specific meaning. A growing body of literature therefore tries to deepen the understanding of those concepts and to make them more useful in a specific context. Trying to trace the roots and meaning of capacity development, Lusthaus *et al.* (1999) indicate that the term 'capacity development' has been emerging since the 1980s and has become a concept that captures many ideas and lessons from past development activities. These include institution building, institutional development, human resource development, management/administration, organizational development, and integrated rural development, among other, similar terms.

Baser (2000) indicates that the increased interest in capacity development in recent years is a response to widely acknowledged shortcomings in development assistance in the past. The capacities concerned range from the more measurable technical skills to the less tangible dimensions such as experience and creativity, social cohesion and social capital, values and motivation, habits and traditions, and institutional culture, among others (Lavergne & Saxby, 2001). Some authors use the concept of 'core capabilities', which refers to the creativity, resourcefulness and capacity of individuals and social entities to learn and adapt and allows them to realise their human and social potential to the highest possible level. As an example of this approach Lavergne and Saxby mention the Community Development Resource Association of Cape Town, which locates the foundation of capacity development in the values, vision, self-definition and confidence of people themselves.

2.3.1 Traditional approach to capacity development

In their book *Evaluating Capacity Development*, Horton *et al.* (2003) describe early attempts in capacity development which focused on 'hardware', such as the construction of facilities and the provision of basic equipment, with technical advisers from the North who were often sent to lead programmes in the South. Later on, capacity development efforts shifted their focus to 'software', which included staff knowledge, skills and attitudes. This resulted in the training of individuals in organisations in order to strengthen project-level capacities, which in turn were expected to improve the general capacity and performance of the whole organisation. While individual training and project support will obviously remain important, evaluation of numerous capacity-development programmes has exposed a number of weaknesses in this traditional approach.

The limited capacity of an individual or of a specific project is seldom the main constraint to an organisation's effectiveness. A focus on individuals or projects fails to take account of the fact that the general performance of an organization is deeply embedded in the economic, social and political context of a country. Individuals that are trained might also fail to find a conducive environment at their workplace to make use of their new knowledge, skills and attitudes, and the traditional approach does not focus on this broader framework. Sometimes, the traditional approach undermines the capacity of an organization. The training of individuals can result in some of them finding better jobs elsewhere, and therefore contributes to the brain drain and capacity depletion in those organisations that are targeted for capacity development. Nils Boesen (2004) refers to an observation in Kenya, where 70 economists, planners and financial managers were trained between 1970 and 1981: by 1992 only four of the trained individuals remained.

The traditional approach to capacity development relates to the technological approach to knowledge management as described by McGrath and King (2004). This model of knowledge appears to have a largely unproblematic view that knowledge is universally applicable and can be captured in a set of synthesised notes on best practice that can be shared round an organisation.

2.3.2 A more holistic approach to capacity development

Currently a more holistic approach towards capacity development is being advocated, and from the evaluation studies carried out by Horton *et al.* (2003) and a paper entitled *Capacity Building of Southern NGOs* by Tandon and Bandyopadhyay (2003), the following guiding principles can be stated:

- Organisations should be responsible for their own capacity-development initiatives.

- Capacity-development initiatives should focus on the needs and priorities of the organisation as a whole instead of the capacities of its individuals and parts.
- There is a need to focus on the process of capacity development, which is as important as its goals.
- Monitoring and evaluation should be built in from the outset and continue throughout so that capacity development can be a self-reflecting and evolutionary learning process.
- Capacity development is a continuous and ongoing long-term process.
- There is need to engage stakeholders in the capacity-development process.
- Political support needs to be cultivated in order to assure support from decision-makers in high-level positions such as ministers of relevant ministries.
- The autonomy of the organisation is important as it allows the organisation to carry out its own analysis, to chart out its own direction and, in turn, to pursue its goals.

The more holistic approach towards capacity development acknowledges the social and experiential aspect of knowledge and learning where there is greater emphasis on the creation of knowledge and knowledge sharing than on the dissemination of that which was already codified (McGrath & King, 2004, p. 170). McGrath and King refer to Polanyi (1967), Davenport and Prusak (1998) and Lave and Wenger (1991) to stress the importance of context and a rejection of the universalist position of the technological approach.

In a review of the United Nations Development Programme's knowledge about development and the provision of technical assistance to developing countries, Lopes and Theisohn (2003) introduce the notion of capacity development as an endogenous course of action that builds on existing capacities and assets, and the ability of people, institutions and societies to perform functions, solve problems and set and achieve objectives. The authors present ten default principles that inspire ownership and transfigure leadership, and in the process help ensure capacity development. These are:

1. *Developing sustainable capacities is a long-term process.*
2. *Respect for the local value systems and need to foster self-esteem.* It is not easy to achieve mutual understanding in instances of external co-operation where different worlds of knowledge, ways of thinking and arguing, culture and values meet. However, imposition of alien values can undermine confidence and lead to cynicism and mistrust.

3. *No blue print approach.* From the realisation that knowledge cannot be transferred but has to be acquired, learned and reinvented, capacity development draws upon voluntary learning, with genuine commitment and interest.
4. *Challenge mindsets and power differentials.* Capacity development is not a power-neutral process, and mindsets and personalities, informed by language and culture, dictate the course of communication and collaboration. Challenging mindsets and vested interests is difficult but the authors argue that transparency and dialogue are essential steps in this process.
5. *Think and act in terms of sustainable capacity outcomes.* The authors argue that leadership is critical to protect capacity investments. The development industry is currently more oriented towards ‘getting the job done’ than sustainability.
6. *Establish positive incentives.* Donors often hand out incentives in the form of salary supplements, and travel and meeting allowances. Yet such practices drain the public service of its most able employees and reduce the motivation for a comprehensive reform. The authors argue that incentives that help maximise capacity are grounded in governance systems based on the rule of law and human rights.
7. *Integrate external inputs into national priorities, processes and systems.* External development agencies should be flexible in adapting to the rules and procedures of the country they operate in and should respond to national needs and agendas. Where national systems are not strong enough, they should be reformed and strengthened, not bypassed.
8. *Build on existing capacities rather than creating new ones.* This implies the primary use of national expertise, the strengthening of national institutions, as well as the protection of social and cultural capital.
9. *Stay engaged under difficult circumstances.* The authors argue that people should not be held hostage to irresponsible governance and that low capacities cannot be an argument for withdrawal or for driving external agendas. On the contrary, the weaker the capacity, the greater the need.
10. *Remain accountable to ultimate beneficiaries.* Transparency should be fostered as the foremost instrument of public accountability, and development should be firmly anchored in stakeholder participation.

The principles suggested by Horton *et al.* (2003), Tandon and Bandyopadhyay (2003) and Lopes and Theisoohn (2003) point to capacity development as a complex, long-term learning process rather than a linear pathway of planned inputs and expected outcomes that are often associated with the

logical framework approach in development programmes. The logical framework approach implies a linear chain of causality from inputs and activities to outputs and successive levels of outcomes, suggesting a degree of predictability that makes it possible to plan in advance and a capacity to measure outcomes that may be unrealistic in many cases (Lavergne, 2002).

Moving away from the reductionist, linear simplicity of the logical framework approach, and more in line with principles of systems thinking and a holistic approach to capacity development, certain organisations are now experimenting with new approaches like ‘outcome mapping’. Earl *et al.* (2001) introduce the concept of outcome mapping, in which outcomes are defined as changes in the behaviour, relationships, activities or actions of the people, groups and organisations with whom a programme works directly. Within this concept, stakeholders would be accountable for demonstrating that they are progressing towards impact, and they could improve their effectiveness without being accountable for the impact or ultimate goal of the project itself. In this scenario, feedback on performance concentrates on improving rather than on proving, on understanding rather than on reporting, and on creating knowledge rather than on taking credit. Outcome mapping is just one example of a growing body of literature that is challenging the analytical approach known as reductionism, a style of thinking that still dominates much of the discussion about capacity development.

Morgan (2005) summarises the reductionism approach as follows:

- Explanation of the whole comes from the cumulative properties of the parts, leading to discipline-based ways of thinking about human behaviour.
- Crucial is the value of planning, control, order, efficiency, standardisation and prediction in terms of human events.
- It tends to see problems in terms of simple causal relationships rather than from a broader systemic awareness.

Based on the findings of six evaluation studies under the umbrella of the ‘Evaluating Capacity Development’ Project, Horton *et al.* (2003) identify five priorities for capacity development that reflect a systems perspective:

1. From individual to organisational capacities

This trend is based on the observation that organisations do not necessarily change and grow stronger when individuals learn and develop their capacities in isolation. While individual knowledge, skills and attitudes are important, research has shown that they are not sufficient

to develop organisational knowledge and promote change. Capacity-development efforts must also include team-building and the development of the organisational procedures and systems that channel human abilities towards achieving the organisational goals. Most current definitions and frameworks for capacity development recognise the importance of different levels of capacity – such as the individual, organisational and societal levels – and the relationships among them (Lusthaus *et al.*, 1999; UNDP, 1997; Baser, 2000; Lavergne & Saxby, 2001; Lopes & Theisohn, 2003; Horton *et al.*, 2003). Thinking in terms of those different levels is important as it helps focus on the wider context in which development programmes occur.

2. From hard to soft capacities

There has been an ongoing shift in emphasis from developing ‘hard’ capacities, such as constructing facilities and providing equipment, towards ‘softer’ capacities, such as the provision of technical education and, more recently, attempts to develop the social expertise and skills that are essential for leadership, management and more effective networking – for example, skills in environmental scanning, self-assessment, facilitation, team-building and communication. This trend reflects a growing awareness that facilities, resources and inputs alone will not lead to lasting improvements in an organisation’s performance. The distinction between hard and soft capacities is in line with the distinction between hard and soft systems thinking described earlier.

3. Maintaining relevance in changing times

As society’s concerns and expectations are changing, the pressure on organisations is shifting beyond efficiency and effectiveness to relevance so that they can provide services that meet rapidly changing needs. Horton *et al.* (2003) suggest that both operational (hard) capacities and adaptive (soft) capacities are needed to improve efficiency and relevance (Figure 2.1). Operational capacities contribute to an organisation’s efficiency and internal coherence, while adaptive capacities contribute to an organisation’s relevance in relation to the interests and concerns of its external stakeholders.

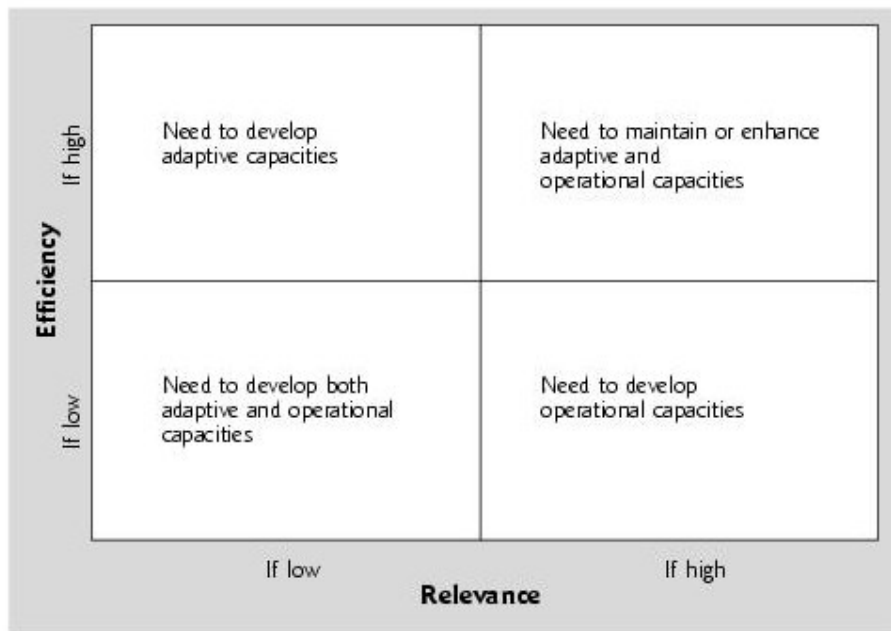


Fig. 2.1: Capacities needed to improve efficiency and relevance (from Horton et al., 2003)

4. From operational to strategic management

There is an increasing realisation that it is necessary to go beyond managing an organisation as an isolated entity, with a focus on programme and process management concerned with efficiency issues, towards a more systemic approach of managing complex programmes, partnerships, alliances and networks of individuals in several organizations.

5. Need for continuous learning and change

There is an increasing emphasis on the capacity of people and organisations to learn from experience and to change in ways that will enhance their performance. In times of ever-changing technological, political, economic, environmental and social conditions, people and organisations need adapt to changing conditions in order to avoid becoming out of date.

Illustrating the interconnections between capacity development at the individual and the organisational levels, Huyse (2006) draws from Eraut's (2003) work which illustrates the importance of addressing organisational factors (providing challenges and support) as a condition for effective individual capacity development. The research by Eraut (2003) on the learning of early and mid-term career professionals indicates that both confidence and commitment are primary factors that affect individual learning. Confidence was shown to depend on the successful completion of challenging work, which in turn depends on how the learner is supported. Commitment was shown to be generated through social inclusion in teams and by the organisation's

appreciation of the value of the work (both for clients and for career progress) through normative feedback.

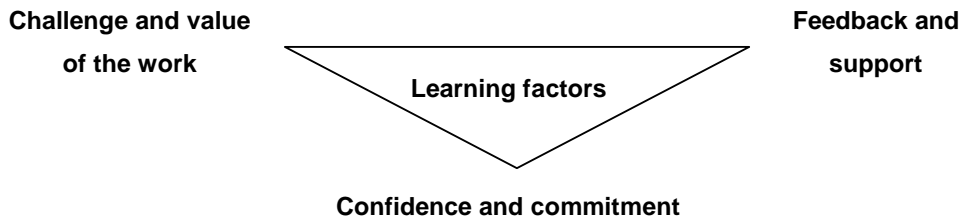


Fig. 2.2: Learning factors in mid-career professionals (Eraut, 2003)

Morgan (2005) provides some interesting key systems thinking issues and concepts that are relevant for capacity development. I have summarised them in Figure 2.3.

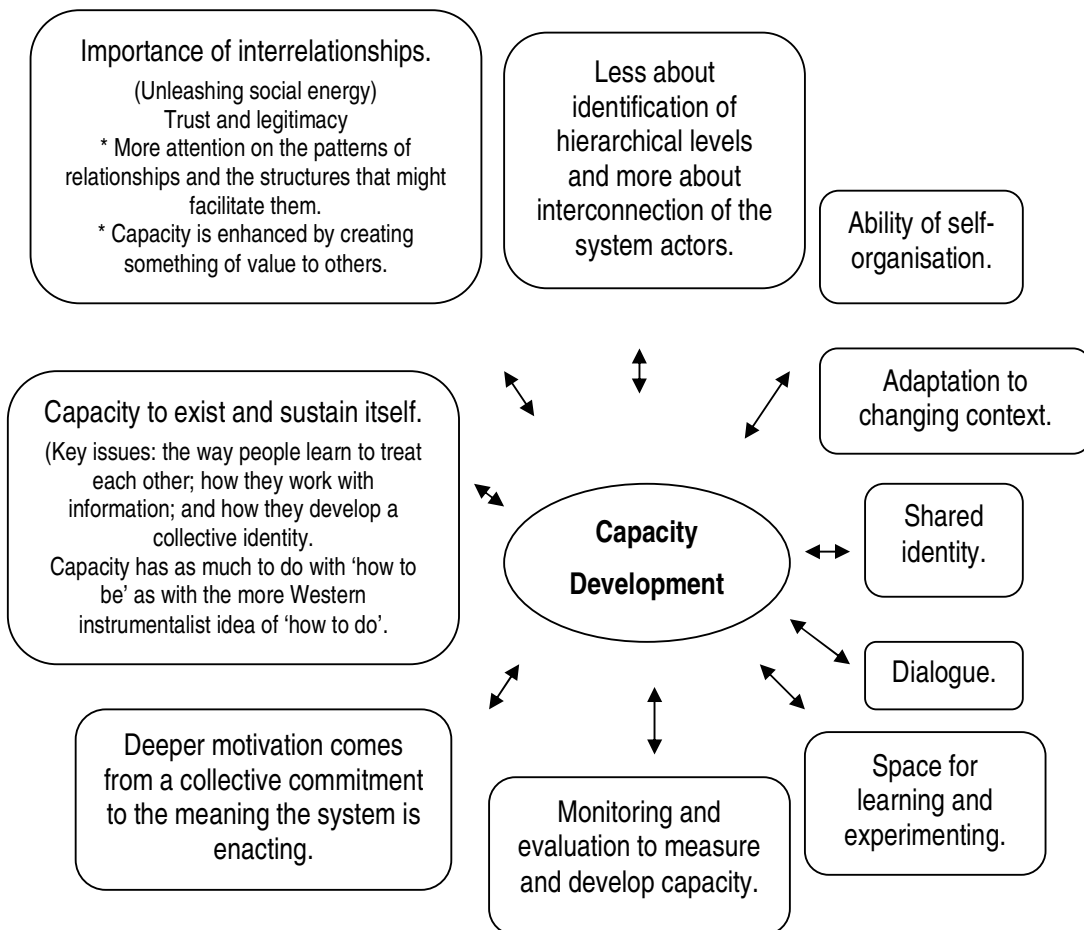


Fig. 2.3: Key issues of systems thinking that relate to capacity development

Brinkerhoff *et al.* (1990) suggest that practical use of systems-thinking theory has been hampered by its abstractness. However, the literature now provides some frameworks that can help to analyse complex systems and processes. The principles of capacity development that I referred to above (Lopes & Theisohn, 2003; Horton *et al.*, 2003) and the systems-thinking issues highlighted in Figure 2.3 might provide a useful starting point from which to develop an analytical framework with which to research the complex process of capacity development. They will therefore provide an analytical guide when I analyse the capacity-development processes in St²eep (see Chapter 5).

In the next section I will delve deeper into the issue of learning, which features prominently both in systems-thinking and capacity-development literature.

2.4 LEARNING IN A SYSTEMS-THINKING PERSPECTIVE – THE ROLE OF PARTICIPATION

Literature on systems thinking (e.g. Morgan, 2005) and on capacity development (e.g. Horton *et al.*, 2003) refer to the importance of learning as a way of improving systems capacity and performance. In this section I discuss a number of learning approaches that have been described by researchers as useful in a systems-thinking perspective and which I consider relevant to this research as they will guide me in my analysis of the learning processes in St²eep.

Participation takes a central role in the different approaches, which include:

- Collaborative learning and communities of practice
- Team learning
- Action research

2.4.1 Collaborative learning and communities of practice

In the previous section I indicated that systems thinking appears to be based on a constructivist epistemology. This theoretical perspective provides a useful framework to explore the issue of learning further. Rogoff *et al.* (2003) question learning approaches based on transmission (behaviourist approaches) and acquisition (individualised constructivist approaches) in which knowledge is brought across a boundary from the external world to the mind of the learner. Similarly, Lave and Wenger (1996) note that conventional explanations view learning as a process by which a learner internalises ‘externally available’ knowledge, whether discovered, transmitted from others or experienced in interaction with others. Such a focus does not consider the nature of the learner, the world and their relations.

The idea is proposed that learning is a process of transformation involving participation in ongoing cultural activities (Rogoff *et al.*, 2003; Lave & Wenger, 1996). Rogoff *et al.* introduce the concept of intent participation, whereby learners engage collaboratively with others in the social world. This emphasis on the collaborative nature of learning is an important characteristic of social constructivist learning theory. Kim (2001) draws on Derry (1999) and McMahon (1997) to indicate that social constructivism emphasises the importance of culture and context in understanding what occurs in society and in constructing knowledge based on this understanding. This perspective draws strongly from the work of Vygotsky (Kim, 2001; Daniels, 1996; Atherton, 2005), well known for the 'zone of proximal development' and the 'general genetic law of cultural development' (Daniels, 1996). The underlying assumption of Vygotsky's zone of proximal development is that psychological development and instruction are socially and culturally embedded and that to understand them one must analyse the surrounding society and its social relations (Hedegaard, 1996). Vygotsky defined the zone of proximal development as 'the distance between a child's actual developmental level as determined by independent problem solving and the higher level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers' (as quoted in Daniels, 1996, p. 4) The general genetic law of cultural development refers to Vygotsky's thesis of the social formation of the mind whereby 'social relations or relations among people genetically underlie all higher functions and their relationships' (Daniels 1996, p. 6). Daniels indicates that the zone of proximal development provides the setting in which the social and the individual are brought together and where the psychological tools such as speech and language have a mediational function. Lave and Wenger (1996) indicate that Vygotsky's concept of zone of proximal development has been interpreted in different ways, reflecting different views of the 'social' and carrying different implications for schooling and instruction.

Lave and Wenger distinguish between the 'scaffolding', 'cultural' and 'collectivist' or 'societal' perspectives of the zone of proximal development. The 'scaffolding' interpretation informs pedagogical approaches that provide support for the initial performance of tasks that will be carried out without assistance at a later stage. The cultural interpretation sees the zone of proximal development as the distance between the cultural knowledge provided by the socio-historical context and the everyday experience of individuals. The societal perspective concentrates on processes of social transformation. It defines the zone of proximal development as 'the distance between the everyday actions of individuals and the historically new form of the societal activity that can be collectively generated'. Within this perspective research in learning 'goes beyond the

context of pedagogical structuring and includes the structure of the social world in the analysis and the conflictual nature of social practice' (Lave & Wenger, 1996, p. 144).

Building upon this societal perspective, Lave and Wenger place participation at the core of their theory of situated learning, which involves communities of practice. Such communities are involved in organising around some particular area of knowledge and activity giving members a sense of 'joint enterprise and identity'. Using their observations of different apprenticeships, Lave and Wenger explain that as people join communities of practice they first learn at the periphery and, as they become more competent through the mastery of knowledge and skill, they then move towards the centre and full participation in the socio-cultural practices of the community (Smith, 2003). The nature of the situation impacts significantly, hence the importance that is attributed to contextualised knowledge and learning within situated learning theory.

Smith (2003) raises questions about the omission of certain issues (such as power relations) in Lave and Wenger's analysis that can inhibit entry and participation in communities of practice. Lave and Wenger have offered useful insights into the field of organisational development, where growing interest in 'the learning organisation' in the 1990s resulted in an increased focus on informal networks and groupings (Smith, 2003). Lesser and Storck (2001) note that, in some organisations, communities of practice are becoming recognised as valuable organisational assets. Reasons for this include the potential of communities of practice to overcome slow-moving traditional hierarchy, handle unstructured problems, share knowledge outside the traditional structural boundaries, and to develop and maintain organisational memory; this is on top of 'the value that individual members of a community obtain in the form of enriched learning and higher motivation to apply what they learn' (Lesser & Storck, 2001, p. 832).

2.4.2 Team learning

Simons (2004) explores how systems thinking can help to evaluate social learning that focuses on the improvement of stakeholders' environmental awareness and societal practical changes in natural resources management. The evaluation focuses on 'team learning', which aims at 'alignment in people's thoughts and energies ... collaboratively constructing a more common balanced understanding of a situation' (p. 476). Simons refers to Senge (1990), who notes that team learning is best pursued through methods of dialogue that are participatory and characterised by reflective openness. Participation is described as the freedom to speak one's mind and to state one's view. Reflective openness entails challenging one's own thinking, whereby our mental models or the assumptions that shape our understanding of the world and how we take action come to the surface

and are subjected to open criticism. Senge argues that systems thinking can help to bring together people's mental models in a shared systemic language, generating team learning and understanding, and a shared sense of purpose. Team learning can contribute to what Senge *et al.* (1994, p. 238) call 'scenario planning' as a way for people to develop a better understanding of each other's tacit beliefs as they describe plausible futures.

Team learning also features prominently in self-assessment, which is considered to be a useful approach for enhancing stakeholders' involvement in and commitment to development and educational programmes, as well as to strengthen organisational capacity. It is an evaluation approach that does not rely on external evaluators or pre-determined, fixed methods (Gubbels & Koss, 2000). It aims at engaging the stakeholders of a programme in critical reflection and analysis instead of 'just' consulting them. Self-assessment can be seen as a way of capturing the useful knowledge that is embedded in the experience of the stakeholders and the organisation. Following Davenport and Prusak (cited in McGrath & King, 2004), in this process knowledge can be generated by connecting people within organisations by sharing stories and learning together in teams. By taking the nature of the process into account rather than the outcome, the programme becomes a catalyst for long-term social and structural change (Mog, 2004).

At this point it is necessary to clarify the difference between 'teams' and 'communities of practice', which were discussed earlier. Storck and Hill (cited in Lesser & Storck, 2001, p. 832) characterise the difference between the two constructs as follows:

- Team relationships are established when the organisation assigns people to be team members. Community of practice relationships are formed around practice.
- Similarly, authority relationships within the team are organisationally determined. Authority relationships in a community of practice emerge through interaction around expertise.
- Teams have goals, which are often established by people not on the team. Communities of practice are responsible only to their members.
- Teams rely on work and reporting processes that are organisationally defined. Communities of practice develop their own processes.

2.4.3 Action research

Acknowledging that organisations are complex systems (human activity systems) located within wider complex systems (society), Crawford (2004) considers systems thinking as a governing principle of organisational performance measurement. He argues that a systemic learning approach

is needed for an organisation to remain consistent with its purpose by constantly assessing its performance in satisfying stakeholders in society. Crawford (p. 265) refers to Checkland, who makes the distinction between hard and soft systems discussed above (see Section 2.2.2) and draws on Fowler (1997) to link this thinking to the process of monitoring and evaluation. Crawford argues that monitoring and evaluation can be understood as involving a form of ‘action research’ into the performance of the project and the project itself as a form of action research into some aspect of a bigger global problem. Action research within a soft systems perspective could be a response to Mingers’s (2000) argument that the subjectivist attitude in soft systems thinking is unable to bring about radical changes and loses connection to the wider social and political structure that shapes individual beliefs. Crawford refers to Argyris *et al.* (1985), who identify the following crucial elements of action research:

- a collaborative process between researchers and people in the situation,
- a process of critical inquiry,
- a focus on social practice, and
- a deliberate process of reflective learning.

Kemmis and Wilkinson (1998) indicate that action research consists of different stages which are characterised by self-reflective cycles, consisting of critical reflection on practice, followed by planning and observation of action, resulting in specific outcomes that are again reflected upon and lead to further action. The spiral of self-contained cycles of planning, acting and observing, and reflecting, often represented as key features of action research in literature (Kemmis & Wilkinson, 1998; Lupele 2003), may not always be very clearly outlined (Kemmis & McTaggart, 2000). On the contrary, the process is much more fluid, open and responsive, whereby initial plans become adapted in the light of learning from experience (Kemmis & McTaggart, 2000). An important feature of action research is the concept of reflective practice, which is linked closely with the experiential learning cycle developed by Kolb (1984), who proposes that learning is a cyclic process, of acting, reflecting, thinking, deciding, and again acting. Taylor & Fransman (2004) note that experiential learning is seen by many educators as being a powerful medium for transformative learning and bridging theory and practice. They argue that ‘action research can enable the participation of individual actors in generating their own personal and contextually relevant theories which are grounded in (as well as inform) practice’ (p. 27). Local realities of community experience therefore become a crucial focus for bridging theory and practice.

Torres (cited in Weiler, 2003, p. 79) argues that action research is ‘sweeping across the world’ as an effective method of teacher education and is transforming classrooms. The term is passed around

with its many promises of teacher reflection, liberation, critical consciousness, and problem solving. Weiler argues that, without a dialogue of what action research means for the Zimbabwean context of teacher education, the term remains simply jargon. During his study on action research in teacher training in Zimbabwe, Weiler found that, while most teacher education programmes in the country require students to complete a research project that resembles action research, there is little acknowledgement of this trend in the Zimbabwean literature. Weiler goes on to say that a conducive environment is needed to make action research effective. He also indicates that action research can be a centrepiece of reform that assists teacher educators in rethinking and making education more meaningful.

Having discussed three learning approaches that are considered relevant in a systems thinking perspective in order to improve systems capacity and performance, I now turn to a discussion of how the participation process, which takes a central role in these learning approaches, can be analysed.

2.5 ANALYSIS OF THE PARTICIPATION PROCESS

This section is concerned with the politics of participation as different stakeholders interact with each other. To facilitate the analysis of the participation process in St²eep, I selected four guiding key elements in the participation process which Van Petegem *et al.* (2005) identify as follows:

- Actors in the participation process: who participates?
- Levels or degree of participation.
- Channels of participation: ways and opportunities for interaction. How are actors able to participate?
- Cycle of participation: informing, preparation, decision making, implementation and evaluation.

These are discussed in more detail below.

2.5.1 Actors in the participation process: ownership, power position and motivation

Ownership

Anderson *et al.* (2002) identify three characteristics of the ownership process in development programmes. First, ownership is not a goal that develops automatically or that can be nurtured 'later' out of a programme or project that is initially donor-driven. Second, even if recipient ownership is 'built into' a project or programme from the outset, 'it will ebb and flow, stronger at some moments than others' (p. 13). This implies that the donor organisation must be patient, but not

passive, in its fostering of ownership. Third, the local partner and stakeholders must have the capacity to assert ownership. Often, this will require that projects and programs have capacity-enhancing activities within them.

Anderson *et al.* also advocate renegotiation towards partnerships that are less unequal with regard to bargaining power, more tolerant of differences in views, and based upon the local partners and stakeholders driving the development process, with donors assuming a more flexible policy approach. The outcome of this approach is control of development assistance being passed to the recipient partners. Anderson *et al.* point out, however, that such a move towards recipient ownership often conflicts with the institutional interests of donors whose approach is project-focused with explicitly or implicitly tied assistance.

Power position

Van Petegem *et al.* (2005) note that actors in the participation process have different power positions. These different power positions are determined by the material, social, economic and cultural capital (Bourdieu, cited in Van Petegem *et al.*, 2005, p. 16) that operate in the social field in which the initiative (in this case the donor project) is located. Other determining dimensions, which Hargreaves (1995) identifies in the context of professional development, include:

- *Technical dimension:* Different skills and knowledge of the actors.
- *Moral dimension:* Values and expectations pursued by the actors in the participation process.
- *Political dimension:* Difference in capacities and networks to maximise power positions.
- *Emotional dimension:* Ability to deal with emotions linked to the participation process such as success, disappointment, motivation and power.

Other dimensions that can determine the power position of actors identified by Van Petegem et al. include:

- *Personal characteristics:* Capacities of the actors to be able to participate such as assertiveness, and verbal and listening skills.
- *Time dimension:* Time that can be invested in the process.
- *Social dimension:* Social pressures.

Foucault (quoted in Wilson, 1998, p. 38) recognises the relational character of power whereby ‘some men can more or less determine other men’s conduct, but never exhaustively’. In other

words, Foucault moves beyond the notion of power as a thing ‘dominating and imposing its rationality upon the totality of the social body’ (*ibid.*). Foucault marginalises refusal and prohibition as power in its frustrated or extreme form and argues that in most cases power relations are productive, opening up a whole field of responses, reactions, results and possible interventions. Consideration of productive power relations broadens the sovereign view of power which is associated with the notion of ‘power positions’. Drawing from Foucault’s notion of power as relational and productive, Taylor & Fransman (2004) indicate that transformation of a dominant discourse can be brought about with the introduction of new knowledge into an institution and that participation is an ideal transformer of discourse.

Motivation

Actors in the participation process have their own motives, reasons and expectations for participating in the process. These expectations can be result-oriented (wanting to achieve something or see something changed) or process-oriented (possible input, openness, input from other actors) (Van Petegem *et al.*, 2005). Howard *et al.* (2002) identify six motives for participation:

- *Technical motives*: Situations where technical input is needed from the actors.
- *Pragmatic motives*: When participants are asked to participate because they own some key information.
- *Educative participation motives*: Development of knowledge and skills as a result of the participation process.
- *Democratic motives*: Action against social injustice.
- *Human rights motives*: Right of people to be involved in decisions that affect them.
- *Transformative motives*: To change society.

Participation because of the group (i.e. a communitarian interest) can be seen as another motive for participation (Van Petegem *et al.*, 2005). The ideology of Ubuntu (a Zulu word) can be another important motivational factor for participation. A rough translation of Ubuntu into English could be ‘humanity towards others’ or ‘I am because we are’ (<http://www.ubuntufund.org/overview.html>). Louw (1998) points out that Ubuntu articulates a basic respect and compassion for others and serves as a spiritual foundation for African societies. It both describes human beings as ‘being-with-others’ and prescribes what ‘being-with-others’ should be all about. *Ubuntu* underscores the importance of agreement or consensus and defines the individual in terms of his/her relationship with others, illustrated by a preference for co-operation and team work.

2.5.2 Levels or degree of participation

Level of participation refers to the degree of involvement in the participation process. The participation ladder of Arnstein (1969) is a classical framework that can be used to analyse levels of citizen participation. This framework was adapted by Thoburn, Lewis and Shemmings (cited in Sinclair & Franklin, 2000, p. 2), Hart (1997) and Shier (cited in Sinclair & Franklin 2000, p. 2) to study children’s participation. Figure 2.4 shows the different ladders that highlight the level of involvement, and hence empowerment, achieved by different styles of participation (Sinclair & Franklin, 2000).

Arnstein	Thoburn, Lewis & Shemmings	Hart	Shier
Citizen control	Delegated power Involvement in service design	Child-initiated, shared decisions with adults	Children share power and responsibility for decision making
Delegated power		Child-initiated and directed	
Partnership	Partnership Participation	Adult-initiated, shared decisions with adults	Children are involved in decision-making processes
Placation	Involvement Consultation	Consulted and informed	Children’s views are taken into account
Consultation	Keeping fully informed	Assigned but informed	Children are supported in expressing their views
		Tokenism	Children are listened to
Therapy	Placation	Decoration	
Manipulation	Manipulation	Manipulation	

Fig. 2.4: Participation ladders (adapted from Sinclair & Franklin, 2000)

Van Petegem *et al.* (2005) note that such models have the advantage that participation can be visualised and that the different levels can be used as reference points. Their disadvantage is that they are rather one-dimensional and absolute, while real-life situations, such as schools, are often

more organic. There is a danger that such models are used to make value judgements about participation processes, making the wrong assumption that a process of participation is a gradual build-up from the lowest step of the ladder towards the highest step, the higher steps being more valuable than the lower ones (Van Petegem *et al.*, 2005). Another problem is that the ladder models do not take account of the context and situation in which the participation process is operating (Jackson, 2005). Other models, like Rajani's 'model of adolescent participation' (Rajani, 2001), integrate a number of factors that have featured separately in other models (Jackson, 2005; Van Petegem *et al.*, 2005). Rajani's model (Fig. 2.5) brings the institutional settings in which participation occurs, the geographical setting, the roles of the participants, and their participation level into one model.

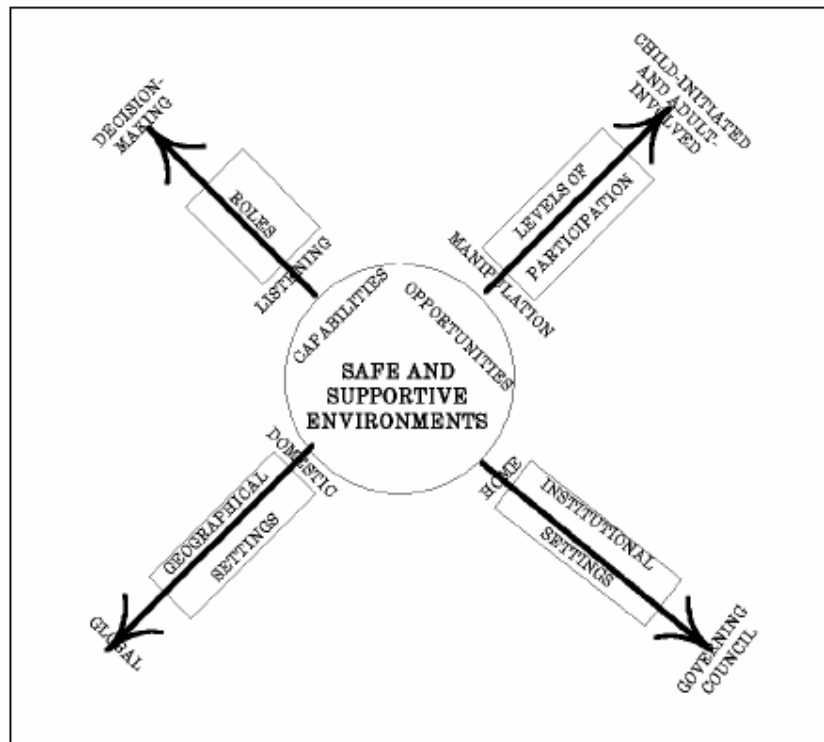


Fig. 2.5: A basic framework for promoting meaningful participation (Ranjani, 2001)

Within this model, the goal of adolescent participation programmes is to ensure that young people have the capabilities, opportunities and supportive environments necessary to participate effectively and meaningfully in as large a space as possible. Rajani's model makes clear the contexts in which participation takes place and shifts the focus away from the project level towards that of the individual participant by separating the role of young people from their level of participation.

Jensen *et al.* (2003) developed an analytical framework for the concept of participation in environmental learning. This framework generates a number of questions to interrogate notions of participation in environmental education, encouraging thinking with participatory discourse, thinking beyond it, and thinking against it:

- Who defines what we call participation?
- Who is implicated in participating?
- Participation in what?
- What is the degree of freedom the participant has to participate, or not to participate?
- What are the criteria for being a participant?
- What is the basic structure of the conceptualisation?
- How important is the participants' participation within the complete process?
- How is the participation justified?
- Whose (rather than what) reality counts in the process of participation, and the processes of judging its effectiveness?
- How is the process of decision-making organised?
- What are the participants' views on the role and value of their participation within the process of environmental learning?

This framework is attractive because it can be applied at the programme level where it can be used to analyse critically what Jensen *et al.* call 'different utterances about participation in [environmental education], including theoretical and political commitments, ideological and pedagogic groundings, and potentials for transformation and tyranny' (p. 422).

Van Petegem *et al.* (2005) used the following continuum of different participation levels in their research: non-participation, being informed, being asked for an opinion, and taking part in the decision making. These different representations of the participatory process show an increased interest in understanding the nature of, and the power relations inherent in, participatory processes, and serve as a useful framework when considering participatory practice in a project such as St²eep.

2.5.3 Channels of participation: Ways and opportunities for interaction.

Interaction between the actors in the participation processes occurs directly or indirectly through participation channels (de Vries, cited in Van Petegem *et al.*, 2005, p. 31). These can have a formal, non-formal or informal character (Baert, cited in Van Petegem *et al.*, 2005, p. 32).

- *Formal participation channels* refer to participation in institutionalised structures.

- *Non-formal or alternative participation channels* refer to activities and engagements outside the institutionalised decision-making structures, such as participation in specific activities like special environmental days commemorations, ICT support activities, staff development activities, one-way communication (notice boards, newsletters) or two-way communication (direct informal contacts, surveys). It also refers to characteristics of communication in terms of access to information, how the information is delivered (or explained), and whether there is clarity about the value of the different communication channels.
- *Informal participation channels* refer to the general participation culture, attitudes or open-door policy. Van Petegem *et al.* show that the success of formal participation depends on the level of informal participation. From their research on participation in schools they concluded that a participatory culture in schools can be observed at the following three levels:
 1. In the internal functioning of the formal participation channels. Five main characteristics were selected as a basis of analysis for this level:
 - Recognition from the school of the members of the participation structure.
 - Clarity about the mandate of the participation structure.
 - Practical, organisational support from the school.
 - Appreciation of the work of the participation structure by the school.
 - Interaction between representatives in the participation structure and those that are represented.
 2. In the openness or the encouragement of the school towards the non formal participation. This level is based on how the school (administration) is approachable and stimulates suggestions, questions and initiatives from actors outside the school administration.
 3. in the attempts of the school to approach those actors that are difficult to get access to.

2.5.4 Participation Cycle

Van Petegem *et al.* (2005) identify five phases in the participation cycle: informing, preparation, decision making, implementation and evaluation. While there is some positive indication towards involving participants as early as possible in the participation process, Verba and Nie (cited in Van Petegem *et al.*) indicate that it is more important to create a feeling that participation is possible and taken seriously than to create opportunities for participation.

In sections 2.4 and 2.5 above, I have discussed different learning approaches and the process of participation, being relevant processes within a systems-thinking perspective, and important features of a holistic approach towards capacity development (as discussed in section 2.3). I now turn to a discussion on project sustainability.

2.6 PROJECT SUSTAINABILITY

This section gives an overview of some experiences and arguments from the literature pertaining to project sustainability, illustrating that systems thinking provides a suitable approach for dealing with the complexity of project sustainability. It also shows that capacity development and participation are key conditions for project sustainability.

The literature often refers to the unsustainable position of donor organisations within development programmes (Lavergne, 2002). The sustainability aspect of donor-funded educational programmes is often overlooked during the planning stage, resulting in programme failure once the donor pulls out. Donor organisations develop and run activities, deliver inputs and outputs, and assume that the programme will work autonomously. However, experience from donor-funded programmes shows that this classic strategy is unlikely to be sustainable (Lavergne, 2002). The classic donor approach, involving short-term outcomes, creates a protected and artificial environment in which the project operates, resulting in a lack of ownership or local commitment and therefore in unsustainability. Chimbodza *et al.* (2004) critically reflect in their paper on the extensive operational role that VVOB/donor staff are playing in St²eep. They argue that this is not sustainable in the long run, and they raise questions about the meaning of participation at the operational level.

Fukuyama (2004) argues that donor organisations are often responsible for the destruction of institutional capacity instead of capacity development. He refers to the contradiction in donor policy whereby outside donors want both to increase the local government's capacity to provide a particular service and to actually provide those services to the end users. In reality the latter objective almost always wins out because it often leads to visible results, which can be a huge incentive for the donor. However, the direct provision of services by the donor often undermines the local government's capacity to provide those services once the aid programme terminates. Fukuyama goes on to argue that the problem of capacity destruction cannot be fixed unless donors make a clear choice that capacity-building is their primary objective rather than the services that the capacity is meant to provide.

The above-mentioned concerns are an illustration of the shortcomings of the classic donor-funded project-mode approach towards complex change processes. As I discussed in the section on systems thinking, such an instrumentalist approach is inadequate for dealing with unstructured complex social systems. Moulton *et al.* (2001) give an interesting quotation from a review of basic education reforms in five African countries, which illustrates this point of view:

The reformers were attempting, to some extent, to build factories, using blueprints, rather than farms, using seeds, fertilizer, soil and weather. They saw their challenges as building an efficient factory – to ‘get the right policies’. Once reform policies were in place, they hoped the system would function more or less mechanically. What the case studies have shown, however, is that whether the various activities thrived or failed depended on how well ‘farmers’ nurtured each reform during the implementation phase (p. 8).

Boesen (2004) expresses two views on the role that donors can play to enhance their effectiveness towards ownership and commitment. One view advocates that aid agencies must become more participatory – using better participatory techniques – and listening better. The second view questions the participation designed and managed by aid agencies. In this view aid agencies must withdraw much more completely, and only ‘enter by invitation’. Horton *et al.* (2003) highlight the importance of clarifying the purpose and intent of the relationship, as well as presenting a clear division of roles and responsibilities as core elements of a successful partnership between donors and recipients.

Ward (2002a), in a review of the SADC REEP programme, states that one of the major dimensions of the sustainability of development programmes is considered to be the sustainability of their benefits. Therefore, he argues, it is vital that there is some framework with which to interpret and evaluate these benefits. It is not simply a case of sustaining developments but also of assessing whether these are the sort of developments that ought to be sustained. Ward goes on to argue that a more sophisticated understanding of the ‘what’ and ‘how’ of the sustainability of development programmes emerges in different situations. He also indicates that this understanding is contested within and across contexts. In his arguments he draws strongly on post-structuralist and post-modern orientations in an attempt to consider multiple knowledges rather than seeking to legislate for one ‘objective’ knowledge.

Ward identifies six themes that provide a framework for the exploration of the sustainability issue within the SADC REEP programme. These themes are: policy support; appropriate technology; environmental protection; socio-cultural aspects; professional, institutional and management

capacity; and economic and financial aspects. The study emphasises the importance of continuing to open up space for the review and critique of terms that are closely associated with the notion of programme sustainability.

From the review so far it is becoming clear that project sustainability is a complex issue that cannot be addressed by simple, technical interventions but which requires a systemic approach that looks at it holistically, taking in account all the different aspects and involving all the different stakeholders. Mog (2004) argues for the need to create a systemic process of learning and innovation that is focused on the values inherent to sustainability. The process-oriented criteria from Mog's framework for the evaluation of sustainable development programmes seem useful in an analysis of the sustainability of any development project. I will now briefly explain these criteria.

Character of participation

To achieve sustainability, active involvement and ownership by the local partners is essential as they will eventually be responsible for sustaining the processes of change (Mog, 2004). A crucial factor in the sustainability of environmental education programmes is broad-based community participation (Estrella & Gaventa, 1997; Mog, 2004). To achieve successful and sustainable community involvement, Mog presents three critical principles, based on the work of other researchers:

- respect for local perspectives and ideas;
- local control in setting goals, making decisions, and planning and implementing the programme;
- local capacity to evaluate and solve problems through appropriate means of assessment, analysis and experimentation.

Success and nature of institution- and capacity-building efforts

If the process of change is to be sustained over time, then local people and their institutions will have to be responsible for making them last. Sustainable programmes therefore need to invest resources in developing the local social capital necessary to maintain performance over the long run.

Diversity, multiplicity and adaptability of ideas promoted by the programme

While every development programme promotes certain ideas – such as policies, ideas or methods designed to help achieve programme goals – providing a full variety of options, no

matter their source, ensures that the programme's recommendations are adoptable, adaptable and locally appropriate.

Accounting for heterogeneity, diversity and dynamism

A programme's ability to interact and influence a community depends upon the fact that the target population and the context it operates in are diverse, heterogeneous and change over time.

Understanding and use of local knowledge, skills, initiative and constraints

Ultimately, it is the local people who are going to have to do most of the work and make most of the investments required to create change within their community. It is therefore necessary that a programme investigates and makes use of the knowledge, skills, initiative and constraints of the people it hopes to serve.

Recognising the influence of external conditions, markets and policies

There is need to be aware of the broader context in which a project operates. No community or individual is isolated from external influences (economic, demographic, political, social, cultural, environmental) at local, national, regional or global level. Even if the programme has no control over them, it is necessary to investigate them and consider them when designing interventions.

Mog's framework for the evaluation of sustainable development programmes is clearly inspired by a systems approach that seeks to focus on the interconnectedness of things. At the same time Ward (2002b) warns us to be aware of the fact that, whenever we use systems-thinking models to study certain issues, we still make our own interpretations, ignoring certain things while putting others into new contexts. While systems thinking focuses on the interconnectedness of things, Ward argues that it is not possible to consider everything and that we therefore make political decisions of inclusion and exclusion in selecting the boundaries around our areas of study. The strength of systems thinking can therefore be undermined by the drawing of boundaries that exclude certain complex variables because we assume that we do not have responsibility for them or because they are just too unpredictable or difficult to control, as is often the case when dealing with complex social systems. Critical consideration of any systems-thinking model is therefore advisable.

The different ideas and suggestions presented above (including the critical vantage point on systems thinking provided by Ward, 2002), provide an analytical framework with which to evaluate project

sustainability, which will help to provide more insight in how St²eep is dealing with project sustainability and to explore the role of capacity development and participation in this issue.

2.7 CONCLUSION

In this chapter I have illustrated how the holistic perspective of systems thinking, with its strong focus on the interrelatedness of things, provides a useful approach towards complex issues such as participation, capacity development and the sustainability of development programmes. I have outlined that systems thinking appears to be based on a social constructivist epistemology, where knowledge is not viewed as reflecting a reality but is based on convention, human perception, and social and cultural experience. I then positioned new trends in capacity development within this perspective. I did this by showing how recent literature has been advocating a more holistic approach towards capacity development that acknowledges the social and experiential aspect of knowledge and learning and approaches capacity development as an endogenous course of action that builds on existing capacities.

I also showed how participation takes a central role in a number of learning approaches that both systems-thinking literature and capacity-development literature refer to as important for learning in order to improve systems capacity and performance. The role of participation is also highlighted during the review of literature on the issue of sustainability of development projects. I noted that the role of the donor often threatens project sustainability and that there is need for more meaningful participation by the local partners. I also explored possible frameworks to investigate capacity development, participation and project sustainability, which will help provide in the following chapters more insight about these issues in the context of St²eep.

In the next chapter, I discuss the research methodology employed in this study.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 INTRODUCTION

In this chapter I describe the case-study approach adopted for this study and explain the rationale for using this research method. The chapter also outlines the different data-collection methods and the process of data analysis. Validity and ethical considerations of the study are highlighted in the last part of the chapter.

3.2 CASE STUDY APPROACH

This research follows a case-study approach in order to explore participation, capacity development and project sustainability within St²eep. I decided to adopt a case-study approach because this will allow the use of different qualitative methods to find out what is going on in St²eep in relation to the issues discussed in Chapter 2 and outlined in the research question (section 1.6). Yin (1994, p. 13) defines a case study as ‘an empirical inquiry that investigates a contemporary phenomenon within its real-life context’. Gall, Borg and Gall (cited in Charles & Mertler, 2002, p. 277) call it a study, either descriptive or historical, of a particular phenomenon within a larger setting. According to Stake (1994), the purpose of undertaking a case study can be an interest in understanding the case itself, not necessarily because the case illustrates a particular phenomenon, problem or issue. Stevenson (2004) draws upon Yin (1994), Wadsworth and Merriam (cited in Stevenson, p. 41) to explain that, besides being exploratory or descriptive in purpose, case studies may also address explanatory research questions and involve data collected over time to illuminate, for example, how a process of introducing, developing and implementing a particular initiative was enacted or evolved, or how a change has taken place.

Case studies are most commonly conducted within an interpretive (naturalistic or constructivist) paradigm of inquiry (Stevenson, 2004). Interpretive research is concerned with getting a better understanding about participants' meaning of their experiences, interactions and actions. Stake (1995) distinguishes between intrinsic and instrumental case studies. He argues that the intrinsic case study usually intends to better understand a particular case. Bassey (1999) refers to it as a story-telling and picture-drawing case study, both of which are analytical accounts of educational events, projects, programmes or systems aimed at illuminating theory without making generalisations. Instrumental case studies, according to Stake, aim to develop general understanding about a broader issue or question by studying a particular case. Bassey refers to them as theory-seeking and theory-testing case studies, being particular studies of general issues which may lead to

what he calls ‘fuzzy propositions’ and ‘fuzzy generalisations’. A collective case study refers to an instrumental case study extended to several cases. Such a study, through a number of cases, seeks to develop insight into an issue, phenomenon, population, general condition or refine theory (Stevenson, 2004).

Case studies can also be framed within a critical- theory orientation. In interpretivist case studies the focus is on informing rather than transforming practice. Critical theory-based research seeks not just to understand or explain social reality but to transform it. Stevenson (2004) distinguishes between non-interventionist and interventionist types of critical case studies. Interventionist case studies, with methodologies like individual and participatory action research, are concerned with mobilising stakeholders to work collaboratively for change (Smith cited in Stevenson, p. 45).

Another interesting category of case study is referred to by Bassey (1999) as the evaluative case study, which seeks to explore some educational programme, system, project or event in order to focus on its worthwhileness. Evaluative case studies are not necessarily theory-generating but draw on theoretical perspectives. An evaluative case study may be formative (in helping the development of the programme) or summative (in assessing it after the event) Lotz-Sisitka and Raven (2004) indicate that during the case study work in the Gold Fields participatory course initiative, evaluative case studies existed not purely for judgemental reasons but to share the meanings that were made through interactions between researchers, course participants, tutors and context. This brings us to the central point of ‘learning’ during case-study research. Flyvbjerg (2001) argues that the proximity to reality which any case study entails and the learning process which it generates for the researcher will often constitute a prerequisite for advanced understanding. He indicates that experience has shown that the researcher who conducts a case study often ends up by casting off preconceived notions and theories, which is a central element in learning and in the achievement of new insight. So it will be up to the researcher to design a case-study approach that is best suited to facilitate the learning process within the specific context and aims of the research.

Classifying my research as a particular kind of case study tends to be problematic, since I identify elements of three different case-study approaches in this study: the instrumental, evaluative and critical approaches. There are a number of reasons for this. In the first place, I wish to gain a better understanding of the meaning of St²eep participants’ experiences, interactions and actions in terms of participation, capacity development and project sustainability. The research extends over several cases, each representing a different process within St²eep. These include the following:

- The development and implementation process of the environmental education orientation programme (EEOP) (September 2003 to July 2005).
- The syllabus review process at Belvedere Technical Teachers College for Geography & Environmental Science and Professional Studies (June 2003 to December 2004).
- The follow-up process in terms of the implementation of the revised syllabus.
- The planning towards project sustainability.

I can therefore argue that my research contains elements of a collective instrumental case study (Stake, 1995; Stevenson, 2004) or theory-seeking case study (Bassey, 1999), whereby the focus is the issue rather than the case itself, and because the case is in some way expected to be typical of something more general.

Secondly, there is also some overlap with the evaluative case study (Bassey, 1999). The research seeks to explore an educational programme, St²eep, and as such could actually help in the development of the programme and even provide information about its worthwhileness. Thirdly, the research also has some elements of an interventionist critical case study (Stevenson, 2004), since the researcher and other St²eep stakeholders plan together towards the sustainability of the project. In this case, the research seeks not just to understand or explain social reality but to transform it. I find the availability of different categories of case studies in the literature helpful in making an informed choice about what kind of case-study approach to use in order to maximise the learning process as indicated by Flyvbjerg (2001). Bassey (1999) helpfully acknowledges the difficulty of categorisation because some educational case studies might either overlap too many categories or stand outside them. Something to be expected in view of what Stake (1995) refers to as a general expectation in qualitative research that phenomena are intricately related through many coincidental actions and that understanding them requires looking at a wide sweep of contexts: temporal and spatial, historical, political, economic, cultural, social and personal. I am therefore not particularly concerned about the overlap of different case-study methods here as it will help me to investigate a complex social process such as St²eep.

3.3 DATA COLLECTION

Bassey (1999) urges researchers to be creative and adventurous in their choice of data-collection methods and to be guided by considerations of research ethics. This advice fits nicely within case-study research, which has no specific methods of data collection or analysis that are unique to its methods of enquiry. For the design of the data-collection methods in this research I have tried to be systematic and to avoid collecting more data than I would be able to analyse (Bassey, 1999) or

devoting too many resources to data collection at the expense of data analysis (Eraut, cited in Huyse, 2005). All records from St²eep activities from which I intended to collect data were classified by type, date, time and place, and back-up files were kept on different computers and flash memory stick. I designed the data-collection techniques in such a way that most data sources were readily available. The section below gives a brief description of the data-collection techniques used during the research.

3.3.1 Document analysis

The documents analysed included minutes of meetings, monitoring reports, workshop reports, evaluation reports, discussion documents and St²eep publications. It was fairly easy for me to establish the potential usefulness of documents in advance (Stake, 1995) because most of the project-related documents provide a record of activities that I was myself involved in. I therefore had first-hand knowledge of their content and their relevance in terms of the research question. Copies of the documents are stored both in hard copy and as digital files and were coded for easy retrieval and analysis. I transferred significant quotations from the documents to the research file, ensuring that they were properly labelled so as to source and treat each as a data item (Bassey, 1999).

Documents about the following events were analysed:

- Training needs analysis workshop, 'Greening your lecturing', 7–9 October 2003, Bulawayo (St²eep, 2003a).

This workshop provides insight into the needs of the lecturers (the target group) and the important stakeholders of St²eep (see Appendix 4, Table App. 4.2) in preparation of the environmental education orientation programme. I was particularly interested in this workshop report because it documents the actual feelings, ideas and expectations of key stakeholders in terms of the environmental education orientation programme, the syllabus review programme, environmental education, and the St²eep programme as a whole.

- St²eep evaluation workshop, 1–2 December 2003, Harare (St²eep 2003b).

At the end of the first year of St²eep, a SWOT (strengths, weaknesses, opportunities and threats) analysis was carried out during an evaluation workshop attended by about 25 key stakeholders from different organizations (see Appendix 5, Table App. 5.3). This workshop focused on the achievement of project objectives and analysis of strengths and weaknesses, which were then used to negotiate a way forward. The workshop report documents how workshop participants negotiated meaning from the experiences and issues about the project that were expressed during the workshop and how this helped them to come up with

suggestions for further action. The report therefore provides a rich picture of what was going on in St²EEP at the end of its first year.

- Monitoring system in St²EEP: Results Monitoring Report 2004 (St²EEP 2004b), Progress Monitoring Reports for the periods Jan.–March 2005 (St²EEP, 2005a) and April–June 2005 (St²EEP 2005b).

Three St²EEP monitoring documents provide progress reports on key result areas of the project as indicated in the project's logical framework. Analysis of these official reporting documents allows comparison between official information about the project and information obtained from other data sources, such as the evaluation workshops and various interviews, and therefore provides deeper insight in the reality of the project.

- Development and use of the St²EEP sustainability discussion document, June 2004 – August 2005 (St²EEP 2005c).

This document reflects critically on a number of factors that are considered important for the sustainability of the project. These include characteristics of the processes within St²EEP (the general working approach), the relevance and benefits of environmental education for the educational system, St²EEP's operational planning, and the human resources in the project. This document is particularly relevant for this research since it seeks to develop different scenarios towards the sustainability of the project.

- Mid-term self-assessment workshop, 1–2 December 2004, Harare (St²EEP 2004a).

The report about this workshop provides insight in organisational and process-related issues such as motivation and incentives, co-operation and relationship with the donor, strengths and weaknesses of the different stakeholders, programme procedures, and decision-making. During the workshop, participants 'unpacked' the St²EEP programme, which at the end of the workshop assisted in the identification of the main threats to its sustainability and feasible action to respond to those threats.

- National Management Team Meeting, 10 December 2004 (St²EEP 2004c).

This document reports on discussions about the outcomes of the mid-term self-assessment workshop (mentioned above) during a meeting of the National Management Team (NMT), which is the highest structural level within St²EEP and plays an important role in the formulation of policy, giving advice, making recommendations and approval of annual plans. Since the NMT contains the managers of the institutions where St²EEP is active, it plays a crucial role in planning towards project sustainability.

A major challenge during the collection of data through document analysis is to organise the considerable amount of raw data that is obtained. My research question provided a guide for

organising the material during the data-collection process, but I also tried to keep my mind open for unexpected clues (Stake, 1995).

3.3.2 Focus group discussions

Kitzinger (1994) refers to focus groups as group discussions organised to explore a specific set of issues, such as people's views and experiences on certain issues. They are distinguished from the broader category of group interviews by the 'explicit use of the group interaction' (p. 103) as research data. Focus group discussions are well suited for obtaining data on a group's attitudes and perceptions and are effective for bringing to the surface issues that may be considered sensitive and/or controversial by the members (Wamahiu & Karugu, 1995). They may also be used to get discussants to talk about the problems they encounter and suggest possible solutions. Focus group discussions are very common during St²eep workshops, where stakeholders are asked to discuss some guiding questions. Outcomes of the discussions are captured on a flip chart and are presented and discussed further in plenary sessions. This information is also captured in the workshop reports.

Wamahiu and Karugu consider the focus group discussion to be an action-oriented technique in which the researcher does not attempt to change the situation immediately. However, the outcomes of focus group discussions during St²eep workshops have sometimes led to actual changes in the way things are done in St²eep and within the colleges. In this case we actually enter the field of action research, which Cohen and Manion (as cited in Wamahiu & Karugu, 1995, p. 174) define as a 'small-scale intervention in the functioning of the real world and a close examination of the effects of such intervention'.

Data for this research were collected during the following focus group discussions:

- During SWOT analysis of St²eep's syllabus review process during the training needs analysis workshop, 7–9 October 2003, Bulawayo (Appendix 4).
- During SWOT analysis of the St²eep project during the first year evaluation workshop, 1–2 December 2003, Harare (Appendix 5).
- During the mid-term self-assessment workshop, 1–2 December 2004, Harare, on the following issues (Appendix 6):
 - * Outputs achieved by St²eep
 - * External factors affecting the project
 - * Structures, procedures and processes in St²eep
 - * Incentives and motivation
 - * Role of the donor in St²eep

3.3.3 Focus group interviews

Schurink *et al.* (1998) describe a focus group interview as a purposive discussion of a specific topic or related topics taking place between small groups of individuals with a similar background and common interests. The aim is to obtain specific information from clearly identified groups of individuals. Two focus group interviews of about one hour were carried out with lecturers from the Professional Studies section and from the Geography and Environmental Science section, both from Belvedere Technical Teachers College (BTTC). The aim was to learn more about their experiences in the implementation of environmental education and about their needs for support.

A set of guiding questions for the interviews was developed by a small team of St²eep members and revised with the input of colleagues. The questions were not directly related to the research question, but I considered it interesting to analyse the outcomes of these interviews as they might give some insight into key stakeholders' feelings about St²eep and the integration and implementation of environmental education. The actual interviews were facilitated by the vice-coordinator of the environmental education steering team of BTTC who was interacting with the respondents while I was taking notes during the interviews. Permission was obtained to capture the responses on computer during the interview and respondents were informed about the confidentiality of their responses and were given an opportunity to comment on the interview report. The guiding questions for the focus group interviews are supplied in Appendix 2.

3.3.4 Semi-structured face-to-face interviews

Stake (1995) indicates that a qualitative case study seldom proceeds in the same way as a survey, with the same questions asked of each respondent; rather, each interviewee is expected to have had unique experiences and special stories to tell. He advises qualitative interviewers to arrive with a short list of issue-oriented questions, possibly handing the respondent a copy, indicating there is concern about completing an agenda. The purpose of an interview is not to get simple 'yes' and 'no' answers but the description of an episode, a linkage, an explanation. Schurink (1998) refers to open-ended interviews in which the questions are open-ended but are pre-formulated, carefully arranged and put to all the interviewees in a fairly similar sequence. As a result, the data are obtained relatively systematically, which facilitates their comparison.

I worked out a research-question-based set of questions that were used as guidelines during the interview. The questions were tried out in pilot form and discussed with colleagues in advance.

During the interview, the main questions were kept in mind, probes were carefully created, and occasionally ‘a question was asked to assure that what was said was said, or asking if they meant what clearly was not meant’ (Stake, 1995, p. 66). To minimise the possibility of interviewees providing socially desirable responses, I promised confidentiality of their comments and began the interview with what might be perceived as less-threatening kinds of questions (Preskill *et al.*, 2003). I asked permission from the respondents to use a tape recorder as this allowed me to attend to the direction rather than the detail of the interview and then listen intently afterwards.

After the interview I paraphrased the interview and tried to make a shortened report of what was on the tape. This method requires much less time than producing a full transcript of the interview (Bassey, 1999). Stake (1995) argues that getting the exact words of the respondent is usually not very important: it is what they mean that is important. I therefore reconstructed the account of the interview shortly after the interview and submitted it to the respondent for accuracy. The final report of the interview was stored in a computer file and divided into data items, each labelled so that, if separated from the rest of the interview report in the process of analysis, it could be easily identified and tracked back to source (Bassey, 1999). Semi-structured interviews were used to get more detailed information from some key stakeholders’ experiences, beliefs and opinions about participation, capacity development and project sustainability within St²eep.

In the selection of the respondents I used the purposive sampling method, whereby ‘information-rich participants ... who share commonalities are identified’ (Brotherson, cited in Schurink *et al.*, 1998, p. 317). Since I am actively involved in most St²eep processes I was able to identify potential respondents who I knew had enough experience and knowledge to share concerning the research issues. The following five respondents were interviewed:

- Respondents with operational responsibility within St²eep:
 - I1: St²eep management, local partner
 - I2: St²eep management, donor
 - I4: St²eep facilitator, local partner
- Respondents representing the local beneficiaries of St²eep (no active operational responsibility within St²eep):
 - I3: Went through the environmental education orientation programme (EEOP) and actively participated in the syllabus review process as Lecturer-in-Charge and therefore had some power over the other lecturers within the section. Respondent has a generally positive attitude towards environmental education and St²eep.

I5: Went through EEOP and participated in the syllabus review process as a lecturer. Respondent has a rather negative attitude towards St²eep and environmental education.

I have purposely avoided giving a detailed description of the respondents' positions within St²eep or within the college to safeguard the anonymity of the respondents.

To come up with guiding questions to investigate the meaning and significance of participation, I adapted the analytical framework for participation in environmental learning from Jensen *et al.* (2003) (see section 2.5.2). One of the questions on project sustainability draws from Ward's (2002a) research, which indicates that one of the major dimensions of the sustainability of development programmes is considered to be the sustainability of their benefits. The questions about capacity development draw from the literature's indication that capacity development is a long-term change process which is directed at different levels and is affected by many factors (see section 2.3.2). The guiding questions for the face-to-face interviews are supplied in Appendix 3.

3.3.5 Participant observation

As an active participant in a wide variety of St²eep activities, I was also able to collect data from personal observations during these activities. Wamahiu & Karugu (1995) describe some advantages of participant observation for qualitative research, which also apply within my research. First it enables the researcher to obtain in-depth data. Second, actual behaviour is recorded as it occurs, not only what people say or do or what they feel ought to be. Third, the truth of statements can be cross-checked. Being immersed in the day-to-day activities of St²eep, I felt like a participant observer throughout the research period, and I had to make sure that specific observations that I considered relevant were written down. Relevant observations were treated as data items and coded so that they could easily be traced to the date, time, place and context that the observation was made. Two examples of such recorded observations are included as Appendix 10.

Having discussed the case-study methodology and the data-collection methods, I now turn to a discussion on how the data was analysed.

3.4 DATA ANALYSIS

Bell (1993, p. 127) says that 'a hundred separate pieces of interesting information will mean nothing to a researcher or to a reader unless they have been placed into categories'. In view of this,

the process of data analysis follows the methodology for coding and categorising data proposed by Glaser and Strauss (1967; see also Strauss & Corbin, 1998; Charmaz, 2000; Robinson & Bradley, 2004). During this process, I constantly looked for similarities and differences, for groupings, patterns, and items of particular significance (Bell, 1993). This can be seen as an inductive approach, whereby the research findings emerge from the dominant or significant themes inherent in the raw data (Thomas, 2003). Dye *et al.* (2000, p. 1) draw on Patton to describe inductive analysis as a process whereby patterns, themes and categories of analysis emerge out of the data rather than being imposed on them prior to the data collection and analysis.

Bassey (1999) notes the value of developing ‘analytic statements’ in case-study research that reflect the main themes or arising issues evident in the data. Stake (1995) notes that major efforts to develop understanding from coded data will usually require early identification of relevant variables and situations in which the variables are observable, just as major efforts to develop understanding from direct interpretation are more likely to succeed with early identification of situations in which the issues become apparent.

The literature review that I carried out on the issues in the research question provided some idea of possible categories early on in the research. The conceptual framework for capacity development and participation filtered from the literature helped to develop initial coding categories as a way of organising the data (Wamahiu & Karugu, 1995). While my ‘informed hunch of likely categories’ (Bell, 1993, p. 127) helped in working with the data, it did not impose a preconceived restraining conceptual framework within which the data had to be categorised. The categories and themes that emerged during the analysis were fully grounded in the data and could be very different from the categories picked up from the literature, which framed the initial starting points for coding.

The collected data were read and ‘fractured’ (Priest *et al.*, 2002) into meaning units (i.e. parts of sentences, sentences or paragraphs that address a single theme or issue). These are then closely examined and compared for similarities and differences, following the ‘open coding’ process as described by Strauss and Corbin (1998). Examining the data several times for both differences and similarities helped in grouping the data into different categories. This process is characteristic of the ‘constant comparative method’ described by Glaser and Strauss (1967, p. 105), involving a process of critical reflection in working with the data. As I came across data for which there were no predetermined variables, a new category and code was developed. Predetermined categories could also be fine-tuned during the data-analysis process. During the research, I tried to refrain from applying or laying on top of data, theories and concepts but to maintain some analytic distance from

the data. Straus and Corbin (1998, p. 66) refer to this analytic approach as ‘close listening’ to the data (i.e. abstraction from data). This helped in the examination of my own ‘taken for granted’ assumptions about data. Straus and Corbin (p. 68) argue that ‘false assumptions will not stand up when rigorously compared against the data incident by incident’.

In case the properties were not evident within the data, I used two analytic tools provided by Straus and Corbin (1998). Firstly, the use of ‘questioning’, not to generate data but rather to generate ideas or ways of looking at the data (p. 90). Secondly, the use of ‘theoretical comparisons’, whereby experience or literature is not used as data and, rather, properties and dimensions derived from comparative incidents (from experience or in the literature) are used to examine the data at hand (p. 80).

In order to further develop the categories identified and to explore how categories relate to each other I applied the process of axial coding. Strauss and Corbin (1998, p. 124) describe axial coding as a process of ‘reassembling data that were fractured during open coding ... [in order to] relate categories to their subcategories to form more precise and complete explanations about phenomena’. Axial coding was done very much in parallel with the open-coding process and was facilitated by an analytical tool that is described by Strauss and Corbin as the paradigm. This tool helped me to learn more about the context or conditions in which the phenomena are situated (using questions like ‘why’, ‘where’, ‘how come’ and ‘when’), the actions/interactions that are arising under those conditions (using questions such as ‘who’ and ‘how’) and the consequences (using questions as to what happens or doesn’t happen as a result of those actions/interactions) (p. 128). I didn’t use this paradigm as a rigid tool but more as a guide to dig deeper into the data, to keep me going again when I got stuck in the data analysis, and to learn more about what is actually going on in St²eep. The coding processes described above helped me to reflect on and compare emerging categories, identify emerging trends and issues, and to present the findings as a set of interrelated concepts instead of a mere listing of themes (Strauss & Corbin, 1998).

Fig. 3.1 provides an overview of the categories of analysis used in this research.

Main theme	Category	Sub-categories
Participation	Narrow vs. broad participation Ownership	Role of the donor Relevance

	Power	Issue of power
	Motivation and incentives	Relational nature of power Communication
	Participation and learning in St ² eep	Individual capacity development Institutional capacity development External factors Learning through participation in a relevant exchange process Team learning through dialogue
Capacity development	Individual capacity development	Opportunities for skills development Opportunities for personal growth Knowledge, skills and changed practice Hard and soft capacities
	Institutional capacity development	Identification of key institutional capacities Visible support from the institutions and change
Project sustainability	Planning for different scenarios towards project sustainability	
	Understanding project sustainability	Individual benefits Institutional benefits
	Roles in ensuring sustainable implementation of St ² eep activities	What the project should do to ensure sustainability Indicators of future sustainability

Fig. 3.1: Overview of categories of analysis

3.5 VALIDITY CONSIDERATIONS OR TRUSTWORTHINESS

During this research I was conscious of the fact that I am strongly involved in most processes within the St²eep programme. Therefore I do not consider myself as an outside researcher but as part of what is being researched. My strong involvement within the process under study has some evident implications in terms of validity. Bassey (1999, p. 76) refers to the concept of ‘prolonged engagement’ introduced by Lincoln and Guba to explain that spending enough time on a case can help in becoming immersed in its issues, build the trust of those who provide data, and avoid misleading ideas. Stevenson (2004, p. 43) refers to Marshall and Rossman when he emphasises the need for ‘interpretive or qualitative researchers to be sensitive about their own experiences and understandings in shaping the study because they will decide what parts of the participants’ stories will be told’.

The following considerations throughout the research process helped to strengthen the validity of my research:

- Continuous critical reflection on my (explicit and hidden) assumptions and epistemological orientation (self-reflexivity, as described by Lather, 1986).
- Continuous critical reflection on my role within the research process and the processes under research (self-reflexivity, as described by Lather, 1986).
- Openness about my own motives during the research and presentation of them for negotiation and reflection with stakeholders involved in the process under research (self-reflexivity, as described by Lather, 1986).
- Negotiation of meaning and interpretation in collaboration with stakeholders involved in the process under research. Interpretations from interviews, for example, were presented to and negotiated with the people interviewed (face validity, as described by Lather, 1986).
- An audit trail/research journal with records on what happened.
- Continuous consultation with peers and supervisor.
- Triangulation, being possible because of the multiple methods that were used during the research (Lather, 1986).

When reporting the research story I tried to give a rich contextualised narrative or description ('thick description') so that readers could see on what grounds I was making my conclusions. I have also included some other possible conclusions that could be formulated and given reasons why those were not chosen (Bassey, 1999). Stevenson (2004, p. 48) draws on Stake and Donmoyer to highlight the importance of a 'rich contextualised narrative or description to enable readers to transfer experiential knowledge from the case setting to their own and a theoretically grounded analysis that encourages the transfer of propositional knowledge in the form of analytical constructs that can assist them in theorising about educational practice'.

3.6 ETHICAL CONSIDERATIONS

My explicit power position within the process under investigation has some ethical implications for the research. The following ethical considerations have been important throughout my research:

- Permission was sought from the Ministry of Higher and Tertiary Education and the Principal of Belvedere Technical Teachers College to carry out the research (respect for persons and respect for democracy, as identified by Bassey, 1999).
- I ensured openness about the motives and aims of my research (respect for democracy, as identified by Bassey, 1999).

- I considered my power position throughout the research and negotiated this carefully with the stakeholders involved in the process under study. I was very open and honest about what would happen with the research data and put this in writing (see Appendix 11) where necessary (respect for democracy and respect for truth, as identified by Bassey, 1999).
- Interviews were held on a purely voluntary basis, and interviewees were informed beforehand about the aim of the interview and what would happen with its outcomes. The interviewees were given the opportunity to read the interview report, make amendments if they wished, and gave permission for the report to be included in the case report (respect for persons and respect for democracy, as identified by Bassey, 1999).
- Whenever I wanted to make reference to specific individuals in the report, I would seek permission from the individuals after allowing them to read, and possibly amend, the information (respect for persons and respect for democracy, as identified by Bassey, 1999).

3.7 CONCLUSION

In this chapter I have described the case-study approach adopted for this study. Besides giving the rationale for using this approach, I have also explained why this particular case study contains elements of instrumental, evaluative and critical case-study approaches. I then proceeded to outline the different data-collection methods, which include document analysis, focus group discussions, focus group interviews, and semi-structured face-to-face interviews. The chapter also described the process of data analysis, which follows the constant comparative method of coding and categorising data, as outlined by Strauss and Corbin (1998). Validity and ethical considerations of the study were highlighted in the last part of the chapter.

In the next chapter I present the data that emerged from the coding and categorisation process in relation to participation, capacity development and project sustainability.

CHAPTER 4: PARTICIPATION, CAPACITY DEVELOPMENT AND SUSTAINABILITY IN THE ST²EEP: PRESENTING THE DATA

4.1 INTRODUCTION

This chapter presents the data that were collected from a number of data sources that provide detailed insight into the reality of the St²eep project in order to explore how St²eep's implementation processes and objectives relate to participation, capacity development and project sustainability. The first section of this chapter presents the data that relates to participation and explores this issue in terms of broad versus narrow participation, ownership, power, motivational factors and the role of participation in the learning process. The second part reviews the data that relate to capacity development and provides insight into the role of individual and institutional capacity development in St²eep and the relationship between these two concepts. In the third section I describe the process of self-evaluation and critical reflection that has emerged among St²eep stakeholders to learn about and plan for project sustainability. The last section also explores how project sustainability is understood within St²eep.

This chapter draws on the categorised data as reported in Chapter 3. To reduce the data, and to facilitate the coding and categorisation process, data was synthesised into a number of 'analytic memos'. These are included as appendices and are referred to throughout the chapter.

4.2. PARTICIPATION

St²eep is assumed to follow a participatory approach. The extract from a paper on the development of St²eep's environmental education orientation programme illustrates this assumption:

'One of the key features of the programme is the participation and the involvement of all stakeholders in order to stimulate ownership of the programme. Sustainability is a key word in the development processes we are involved in, especially since St²eep is operating in a donor funded environment. To respond to this issue, the donor (VVOB) takes a facilitatory role within the process of curriculum change through support of the organisational set-up, financial support, liaising with stakeholders in and outside Zimbabwe and continuous reflection and evaluation. St²eep aims towards stakeholder ownership in the identification of the problem and needs, the propounding of solutions, programme implementation, evaluation and accountability. This is achieved through ongoing dialogue, consensus and capacity development on shared objectives. The development of the syllabus review process

and the EE training program therefore illustrates a participatory process in the programme's activities, both at administrative level and the implementation level' (Deprez & Shava, 2004, p. 59).

The following section provides a deeper analysis of what participation means within St²eep. Outcomes from a needs analysis workshop during the first year of the project, two end-of-year evaluation workshops, focus group interviews on the implementation of environmental education at BTTC, and face-to-face interviews provide information on the issue of participation in St²eep processes.

4.2.1 Narrow versus broad-based participation

During the first evaluation workshop (Dec. 2003, Appendix 5, Table App. 5.1) it was noted that the participatory approach in St²eep was ensuring ownership and motivation, resulting in active involvement in St²eep, which was evident through the good representation of college departments in the environmental education steering teams which are open to all staff. A high level of interest, motivation and commitment was noted in the steering teams, resulting in more visible environmental education action in the three secondary teachers' colleges. Important stakeholders such as the Ministry of Education, the Ministry of Higher Education, the Ministry of Environment and Tourism, and the Department of Teacher Education at the University of Zimbabwe were also involved in St²eep.

However, there was also a feeling that a high number of lecturers were not interested in environmental education. Active involvement seemed to come from only a small number of people. Linked to this narrow involvement was the observation that environmental education activities remained confined to St²eep members and that many people did not have a clear picture about what St²eep and environmental education was all about. Also the fact that there were limited beneficiaries within colleges was seen as a weakness in St²eep. Some stakeholders felt that some staff members concealed their resistance towards environmental education by claiming that the project is owned by only a few lecturers. The workshop identified the main challenges for the St²eep project as being St²eep's association with only a few people within the colleges and the fact that many people do not have a clear picture about St²eep and environmental education. Staff-development sessions on environmental education and better communication about St²eep to all staff in the colleges, together with the institutionalisation of environmental education as a requirement in the college curricula, were seen as possible strategies to address these challenges.

Similar issues were raised during the second evaluation workshop at the end of the second year of the implementation of St²eep. Discussing the outputs achieved by St²eep in 2004 (Dec. 2004, Appendix 6, Table App. 6.1), workshop participants agreed that there was increased interaction and networking between stakeholders within the colleges, and between the colleges and other environmental-education-related organisations; this had resulted in team-building, improved collegiality, and increased social interaction within and between colleges. It was also noted that St²eep had made some progress towards strategies to promote wider involvement in the project that had been identified during the first year evaluation workshop. The development of individual skills in environmental education, information technology, management, facilitation, research, writing and communication was seen as an important positive output in that regard. Also St²eep's participatory approach and its success in getting the necessary support from college administrations, ministries and the Department of Teacher Education were seen as important achievements to promote active involvement.

However, there was general consensus that, by the end of the second year, there was still only limited participation by lecturers, as illustrated, for example, by their erratic attendance at meetings. Also the fact that there was constant labelling of the lecturers involved in St²eep as 'Mr or Mrs St²eep', and the feeling that colleagues in certain departments did not see participation in St²eep as part of college activities, raised serious questions about the general ownership and interest in St²eep. It was felt that involvement in St²eep sometimes resulted in strained relations with colleagues and an increased workload. Serious concerns were also raised that environmental education clubs in the colleges dominated other clubs, and that St²eep was being exclusive and not doing enough to involve others. The outputs illustrate that, after two years of implementation, St²eep was still struggling with challenges that had already been identified at the end of the first implementation year, the main one being the limited involvement of the majority of lecturers.

The positive outputs that were mentioned about institutional and individual capacity development and the participatory approach are clearly important achievements but they did not seem to have motivated the larger college community to come on board. The fact that the majority of lecturers perceived St²eep as something exclusive might point towards the fact that only a small number of people were benefiting from St²eep's skills development. Of course, other factors might also play a role. Institutional challenges mentioned above – such as increased workload and St²eep activities being perceived as not being part of college work – are examples of such factors. No monetary reward was another factor mentioned, together with the observation that the institutional support for

St²eep and environmental education did not yet translate into financial support or additional personnel.

Outcomes from the face-to-face interviews provide some insight into the possible reasons for the limited involvement of the majority of the college lecturers. There seems to be a remarkable difference between lecturers who have an operational role within the project and the rest of the staff that St²eep hopes to reach through its activities. The interview responses indicated that people who had some kind of operational responsibility within St²eep took up those responsibilities willingly simply out of interest, or in order to support a process that was of interest to them, or because they felt it was rewarding to them, as shown in these citations:

I1: 'I did participate because I was interested in learning what was going on ... I am more interested in strengthening, not only helping, the team ... I know I am capable to encourage other people by doing as well ...'

I2: 'I think designing training programmes also at my former work, those are some of the things that I really enjoy ... I really thought here I can really bring in some expertise that can be useful ...'

I4: 'From what I learned at Speciss,² I felt I had to use what I acquired during the course ... apart from sharing my ideas I also learned a lot from them ...'

These contrast with the responses from people representing the lecturers who are targeted by St²eep or who are seen as the beneficiaries of St²eep. They indicated that they felt some pressure to become involved. It was rather a requirement of the job for them to take part in certain St²eep processes, but they nevertheless found it relevant for their work, and one even expressed considerable interest in environmental education, as shown by these citations:

L3: 'So for us yes it was a requirement because it came from above, but ... I wanted to see what new stuff there is and how it is different from what we are doing ... we always want to come up with something new and different ...'

² Speciss College in Harare offers an environmental education course certified by Rhodes University. St²eep offers a limited number of scholarships for this course.

L5: 'In fact there was no choice as it was part of the job ... Well, it was perhaps relevant to my lecturing, relevant to professional development. The ideas are wide and pertinent to practising teachers ...'

The interview data point towards the reality that environmental education is not a priority for lecturers who are not operationally involved and raise some questions about the ownership of the idea of integrating environmental education in the curriculum. This observation can be seen as another important reason for the limited involvement in St²eep of the majority of college lecturers, as was observed in the evaluation workshop. The issue of ownership is further analysed in the next section.

4.2.2 Ownership

During a SWOT analysis of St²eep's intended syllabus review process at the needs analysis workshop of October 2003 (see Appendix 4, Table App. 4.1), imposition by the foreign donor and a lack of ownership resulting in the absence of co-operation were identified as possible threats to the project. At that time, the project was about to start an environmental education training programme and a national syllabus review process to integrate environmental education. Some strategies were suggested to address these threats. These included consideration of the Zimbabwean reality and local expertise, the involvement of all the stakeholders, and the encouragement of participation. The national environmental education policy was recognised as an important document which provided a home-grown framework through which the project could operate.

In this section I explore the issue of ownership as it emerges from data collected from different sources, which include the end-of-year evaluation workshops of December 2003 and 2004 and face-to-face interviews. The data show that the role of the donor, the relevance of environmental education for the lecturers, and the external context are perceived as important factors influencing the issue of ownership in St²eep.

4.2.2.1 Role of the donor

Outcomes from discussions about critical statements on the role of the donor in a St²eep self-assessment workshop (Dec. 2004, Appendix 6, Table App. 6.6) provide interesting information about the ownership issue in St²eep:

Critical statement: 'Sometimes I have the impression that the donors are much more excited about "their" programme than we are.'

From the discussions on this critical statement, insight was obtained on who would be held accountable for the success or failure of St²eep. VVOB facilitators were considered to be accountable if St²eep were to fail, but both the facilitators and the lecturers would be accountable if St²eep were to succeed. It was explained that the VVOB staff get credit for their performance, giving them more opportunities to get better jobs later on if the project went well. The lecturers would also get credit in the case of success, but not as individuals but rather as a team. Participants actually indicated that this situation could be different if individual lecturers were acknowledged for their involvement by the inclusion of testimonial evidence in their personal files, which does not happen at the moment. This could therefore be a possible explanation as to why there is a feeling that the donor is more excited by St²eep than the local partners. It is also an indication that the project is not fully owned by the local partner. Possible reasons why the project might fail include staff turnover, low interest because of the lack of incentives, and the loss of team spirit. Stronger implementation of environmental education in tangible ways was seen as a strategy to avoid failure. It was also believed that staff development and induction training would help raise interest, increase ownership and avoid failure.

Critical statement: 'Sustainability is a typical concept of donor organisations. If we are honest, we do not care too much about sustainability.'

While it was acknowledged that ownership was not yet developed widely, there was strong disagreement with this critical statement, indicating that the local partner was indeed concerned about the sustainability of St²eep. At the same time it was acknowledged that, while St²eep is working closely with beneficiaries, there is an over-reliance on the VVOB facilitators, and the need was expressed to find ways to 'unzip' the facilitators from the project in order to ensure the survival of St²eep or the implementation of environmental education. This is an indication that the presence of the donor in a strong operational position is actually regarded as a threat to the sustainability of the project. This concern about project sustainability also implies a degree of ownership of the project.

Outcomes from discussions on external factors influencing St²eep during the self-assessment workshop (Dec. 2004, see Appendix 6, Table App. 6.2) highlight the observation that the donor's policy of paying lower allowances than the government allowance, and the fact that people get involved in the most attractive programme that might be on offer, impact adversely on the project. This observation again raises questions about the ownership and people's interest in the project.

4.2.2.2 *Relevance*

Outcomes from the face-to face-interviews reveal that there is an initial period of resistance when lecturers feel that they are pressured to engage with the ideas of environmental education during the EEOP that they are obliged to attend. The learning process that occurs during that engagement then shapes their understanding and sentiment towards environmental education. If they see environmental education as a relevant or a worthwhile concept for their professional practice, then there is a chance that lecturers will take up the idea, as shown in these citations:

I1: ‘... the hardest part is to come to a consensus with the group that this thing [environmental education] is worthwhile ... When they are convinced it’s worthwhile then you can relax and they will take over ...’

I4: ‘I remember pointing out from the start, with our subject Geo, being the study of the environment, so we thought we knew it all, there is no need for us as geographers to worry about EE ... but later I proved myself wrong, that what I thought I knew about the environment was very little ...’

I3: ‘... then [in health education] we were talking about ‘redding’ the syllabus because of the red ribbon, and with St²eep we are greening the syllabus and later someone might come saying we have to yellow the syllabus, ... so that feeling of being a requirement was there, it was very strong ... But for me it made a lot of sense, you can’t have world leaders who sit down and discuss issues, and then you say it’s coming from above ... we had some freedom because we were not forced to accept everything, ... when we look at our syllabus if we don’t want this stuff then ok we don’t want it ... if you think the syllabus is green enough, that’s fair and fine , that option was there, but at the same time you had the feeling that you had to do it.

These data point towards a situation in which lecturers, representing the target group of the project, are forced to attend an initial environmental education training workshop, and then might take up environmental education voluntarily only if they discover it is relevant to their work. A similar situation was described by the donor representative of lecturers who are operationally active in St²eep. He illustrated the importance of his reality and his steering function at the start of the development of the EEOP, which was then gradually taken on by the other operational members in St²eep:

I2: 'I think in the very beginning it was our [VVOB facilitators] reality ... In the beginning people were not clear about which process they were going to start on. I think the guiding factor which I thought I had to take especially in the first parts of the development was very much inspired about my idea of how to develop a training programme. And that's where my or our reality counted ... However its probably a mixture, we tried to do it as much as participatory as possible ... I think somewhere near May and June, the process was very intensive but it was really a shared thing. People were really working on their things, they came for assistance in typing for example but they compiled the content themselves, then bringing it, then it was shared and discussed.'

It might raise frustrations if the relevance of environmental education can not be fully exploited, as was indicated by one respondent who seemed to relate strongly to environmental education's political dimension. She expressed concern that teachers would not be able to implement environmental education fully because of its political context, which is difficult to explore openly in the current political situation in Zimbabwe.

I5: 'More the reality of the presenters during the EEOP than my environment ... I felt that the political environment [in Zimbabwe] would not allow to let all issues of EE to come out ... not sure if you could apply all aspects of EE everywhere. ... This disturbs me ... Ideas in S²EEP are relevant but cannot be fully implemented, maybe only some aspects can ...'

Results from focus group interviews on the implementation of environmental education at BTTC (see Appendix 8, Table App. 8.1) also confirm the importance of relevance if lecturers are to be willing to implement it. Lecturers from the subjects that had integrated environmental education pointed out that the holistic approach towards environmental education had helped in making it relevant in those subjects that do not immediately relate to the natural environment. It was explained that for Professional Studies, for example, lecturers were able to apply environmental education in methodology and in the analysis of issues at the social, political and economic levels besides the biophysical level. Both the Professional Studies and Geography sections were also able to experiment with some new ideas on assessment which were being brought in through environmental education. Lecturers saw this recognition of the relevance of environmental education by the practitioners as essential in the promotion of ownership of the whole idea of environmental education and in the achievement of its sustained implementation in the colleges.

Closely related to the issue of ownership is the issue of power, which is explored in the next section.

4.2.3 Power

4.2.3.1 The issue of power

Discussions on the structures, procedures and processes within St²eeep during the self-assessment workshop (Dec. 2004, see Appendix 6, Table App. 6.3) provide useful insight into the issue of power within St²eeep.

Participants' responses indicate that St²eeep facilitators (donor) and co-ordinators do not always make arrangements when leaving the colleges to make sure that St²eeep business can continue when they are out of station. This situation was felt to enhance the feeling of the rest of staff that St²eeep belongs to a small number of people, and this was felt to discourage their involvement in the project. Some ambiguity seems to exist in view of VVOB's influence in the decision-making process. While there was some indication that important decisions are made by Zimbabweans, there was also a response that points towards an inability to challenge donor policies. This was illustrated by the acceptance of the fact that every donor has policies that must be followed in a donor-funded project. This response indirectly refers to the power relationship between the donor and the local partners. The response also indicates that this power relationship is skewed in favour of the donor. The mere acceptance of this unbalanced relationship could point to a lack of ownership of the project by the local partner. On the other hand, it might also point towards a situation where the local partner wants to go ahead with the integration of environmental education and is not very concerned about the donor's policies. In this case, the actual process can still be owned by the local partner while the donor is seen as a temporary entity which supports the process. This thought is supported by the outcomes from discussions on critical statements pertaining the role of the donor during the Dec. 2004 self-assessment workshop (see Appendix 6, Table App. 6.6):

Critical statement: 'Often people are dragged into operations of donors with no particular interest to them, in the name of participation.'

Respondents indicated that participation had improved as the project progressed, with people being able to participate fully even in the decision-making process. There was some feeling that people were able to shape the flow of St²eeep, despite the fact that the donor had a steering role in setting time-frames and budgets.

Critical statement: 'Creating ownership ... is when we do what donors want us to do, but we do so voluntarily.'

Workshop participants strongly disagreed with the idea that the donor would have enforced its ideas on St²eep. Respondents pointed towards strong consultation throughout the project and the openness of the project to critical analysis and to participants' recommendations. Here we see again that a feeling of ownership of a process can be enhanced through participatory processes such as consultation and critical reflection by participants. So the participatory approach recognised above is again identified as an important factor for ownership by the local partner.

Critical statement: 'Sometimes donors are very eager to get things done (push) while partners tend to say yes but then often resist.'

On the eagerness to get things done, workshop participants indicated that the VVOB facilitators are often moving faster than the local partners and that there is a lack of shared vision on the integration of environmental education between VVOB and the Ministry of Higher Education. At the same time participants also pointed out that St²eep activities were guided by local policy documents and the local partners were involved in the action planning. What is coming out here again is the idea of the donor being the engine in the process, driving the process further, and sometimes going faster than the local partners. There is also the element of participation, where people do become involved at important stages of the process, such as planning, decision making, and directing the flow of the process. The participation of the local partners seems to emerge as an important factor that helps to bring into balance the skewed power relationship mentioned earlier in this chapter between the donor and local partner, and enhances the ownership of the project.

4.2.3.2 The relational nature of power

The relational nature of power is illustrated by the outcomes from the face-to-face interviews. All five respondents agreed that decision making in the context of St²eep was based mainly on common agreement or consensus and not on a few people imposing their ideas. Interviewees seemed to acknowledge that participants had the power to have an input into important decisions. This is clearly illustrated by respondents indicating that they were able to decide on what to infuse and what not to infuse into their syllabus. However, one lecturer also indicated that, while they have the power to decide on the final product (the syllabus), they don't have much of a say in the training programme. Another respondent even expressed her doubts about the follow-up to the environmental education implementation process and actually hinted that, if one of her colleagues was involved in St²eep, this might result in more work for the rest of the section. So the respondent actually refers to a possibility that the implementation of environmental education might be difficult

even if people have a say in how far they want to infuse it into their syllabus. The relational nature of power is illustrated in these citations:

I1: 'We brainstorm, we argue, we present pros and cons, and finally as a team not just one person we have to come to a consensus ...'

I2: 'The character of St²eeep is that we are, with all those different people, going to decisions as a shared thing.'

I3: The activities were decided for you ... But the decision which mattered the most which was the product being the syllabus, we had the power to decide what to put in the syllabus ...

I4: '... it's not that someone would impose, do this or do that, these decisions they come from the group and we agree on those decisions ... so people debate on issues, and then finally agree on something.'

I5: For me there was no sense of urgency in view of the syllabus review ... Not sure about any follow up on the implementation stage ... The [Professional Studies] section is stretched ... colleague is involved in St²eeep and it takes him out of college and this gives more work to other lecturers ... [Lecturer-in-Charge] has not the capacity to see if the methodology is implemented. However, as a team we were able to make decisions on what was put in the syllabus.'

While the donor and lecturers with operational responsibilities in the project might exercise power in processes of determining time-frames and budgets, the final implementation of environmental education is in the hands of the lecturers and how they choose to relate to, and respond to, the processes introduced and supported by the donors. From this discussion it would seem that the power relationships between the different power 'positions' and actions are important for the success and sustainability of the project.

4.2.4 Motivation and incentives

So far, I have suggested that ownership and power are important factors in the participation process that determine the involvement of stakeholders in St²eeep. These factors are again influenced by motivational factors or incentives that entice people to become actively involved in the project. This

section explores stakeholders' motivations and possible incentives that are believed to enhance wide participation in St²eep.

4.2.4.1 Communication

Outcomes from the SWOT analysis at the December 2003 evaluation workshop (see Appendix 5, Table App. 5.3) illustrate that St²eep's attempt towards a participatory approach, characterised by a high level of communication between co-ordinators and other members of the team and greater inter-college interaction between lecturers and students, was observed as a strength. This participatory approach was also believed to promote team work, which was considered as a possible strategy to address the brain drain.³

However, the SWOT analysis exposed some challenges with regard to communication in the project. The lack of communication between steering teams and the wider college community, the poor report back on St²eep activities to the whole staff, and the generally poor public relations or visibility of St²eep in the colleges were seen as serious threats to the project. It was suggested that poor communication could be a reason why the majority of the staff perceived the project to belong to a few lecturers only. In this case, better communication from St²eep to the rest of the staff was assumed to strengthen people's awareness about environmental education and St²eep and to promote their active involvement in the project.

A similar picture emerges from the focus group discussions on structures, procedures and processes at the December 2004 self-assessment workshop (see Appendix 6, Table App. 6.3). At the end of the second year of the St²eep there was still a need for better communication within the project. It was indicated that criteria to participate in workshops and meetings were not always very clear to the majority of the people but remained reserved knowledge for the members of St²eep's operational and national management teams. The need for better internal college communication and better public relations through a regularly updated Web site was also mentioned. These are all indications that St²eep had been weak in communicating with the wider college communities, and this was believed to contribute to St²eep's major challenge of limited involvement and the association of St²eep with only a few people.

³ Brain drain here refers to the high turnover of staff in the colleges. Teamwork is seen as a strategy to fill the gaps left by lecturers who play an operational role in St²eep and who leave the colleges for other jobs.

Related to this issue of communication was the recognition that there is a need for transparency when selecting people to participate in international training or conferences because of the competition between colleagues to participate in attractive activities (see Appendix 6, Table App. 6.5). This competition can result in frustration if, for example, someone does not manage to be part of a team that participates in an international conference. A transparent selection system that is part of an open communication structure is a way to avoid such frustrations and can therefore be seen as a factor that indirectly promotes motivation.

4.2.4.2 Individual capacity development

During the training needs analysis workshop early in the St²eep project (October 2003, see Appendix 4, SWOT analysis outcomes, Table App. 4.1), it was learned that the development of individual capacities was believed to be an important strategy in motivating people to become involved in environmental education. It was believed that this would address the lack of knowledge of environmental education, which was seen as a possible reason for lecturers' resistance towards it.

Outcomes from the December 2003 evaluation workshop at the end of St²eep's first implementation year (see Appendix 5, Table App. 5.2) again emphasised that staff development was a powerful strategy in motivating people to get involved in the project, and to address jealousy among team members and other college staff and resistance to change by lecturers, which were seen as major threats to the project. While it was observed that St²eep had been successful in the development of different skills in individuals during the first year of the project, there was also concern about the lack of support from these skilled members towards new members, resulting in St²eep being identified with a small number of people.

Deliberations on motivation and incentives during the December 2004 self-assessment workshop (see Appendix 6, Table App. 6.4), revealed that the availability of courses, support for degree programmes, training programmes, and skills development opportunities were motivational factors. The same applies to ongoing staff development for lecturers who were already trained and for new staff, as well as the provision of opportunities for personal growth, self-actualisation, the drive to be part of something new, and a passion for the environment. Also the feeling of being useful and being able to accomplish something were mentioned. Deliberations on St²eep's achievements (see Appendix 6, Table App. 6.1) provide insights into the kind of individual skills that are enhanced by St²eep. These include knowledge about environmental education, management, facilitation, research, writing and communication, raised awareness of environmental education, increased self-confidence and leadership skills.

The issue of individual capacity development will be analysed in more detail in the section on capacity development later in this chapter.

4.2.4.3 Institutional capacity development

Data from all sources refer to the importance of a certain level of institutional capacity that can motivate college staff to get involved in St²eeep and the implementation of environmental education. Motivational factors related to institutional capacity include the availability of supportive resources such as books, equipment and access to IT, as well as recognition by the administration that involvement in environmental education is part of college work. Respondents assumed that the college administrations had a role to play in making sure that environmental education is seen as college business. Responses refer to the need for institutionalising environmental education in the colleges. In other words, there is a need for the support structures and accountability system in environmental education to be fully handled by the institutions themselves, hence the importance of Institutional capacity development. The issue of institutional capacity development will be analysed in greater detail in the section on capacity development later in this chapter.

4.2.4.4 External factors

Outcomes from the SWOT analysis at the December 2003 evaluation workshop (see Appendix 5, Table App. 5.2) reveal that stakeholders recognised the importance of the national context in which the project operates. The current economic situation was mentioned as one reason why it was difficult for lecturers and students to fully commit themselves. While St²eeep has little control over this context, the external context was believed to have had a direct impact on people's motivation to get involved, and might have affected people's feelings about the ownership of the project.

Discussions on the external factors that affected the integration of environmental education during the December 2004 self-assessment workshop (see Appendix 6, Table App. 6.2) resulted in the identification of both enabling and negative external factors. Enabling external factors for St²eeep and environmental education included general global trends in environmental education, supportive national ministerial policies in Zimbabwe, the existence of national and international forums where environmental education experiences can be shared, and the availability of local and international courses, together with the general expertise that already existed in the colleges, which provide opportunities for individual capacity development. Also the availability of funding from VVOB and SADC REEP was seen as an important enabling external factor. The poor economic situation at the moment in Zimbabwe, with high inflation, transport problems and lack of funding, seems to be a

strong limiting factor. Other negative factors included low morale because of a lack of incentives, resistance to change, and bad experiences with other programmes. Institutional procedures, such as the fragmentation of subject areas and secondary schools not having the power to change their own syllabuses, were also seen as negative factors.

Outcomes from the face-to-face interviews also reveal that the current economic crisis acts as a serious limitation to change, hampering the organisation of activities, and making it a challenge to motivate people who are working in very difficult conditions with low salaries:

I1: 'Some personalities can remain resistant to change and we sometimes have little effect on that. ... in view of the economic hardships ... the transport problem ... travelling nowadays can be a demotivating factor. ... And financial aspects whereby we are working with a reduced budget on which we can't do much about since it is determined elsewhere.'

I2: 'I think there are many. The economic situation now in Zimbabwe ... I think people now have the right to be demotivated, they are not supported, they don't get materials they don't have a good salary, ... there is no special incentives, I think that's an obstacle, you rely on motivation and commitment and engagement of people and the environment around is not conducive to stimulate this so we have to build it in other ways ...'

I4: '... people are really stressed up ... because of the current economic situation ... so even if you want to involve yourself in this [St²eep] you also need to do things that you are doing for survival purposes. ... people are interested, they want to do this, ... but people are not happy.'

I5: 'There is need for some allowances to motivate people to do extra things. ... To me the allowance system during St²eep's EEOP was ridiculous. There is also need to explain the background to the stinginess in the St²eep project. To me it was demotivating factor.'

The current economic crisis in Zimbabwe, as referred to in the above extracts, helps to explain why the allowance system in St²eep was seen as an important motivational issue. The observation during the 2003 evaluation workshop, that some people join the project for immediate personal gains (see Appendix 5, Table App. 5.1), may partly refer to this motivational aspect of allowances that are paid during some of the St²eep workshops. The complaint by one of the respondents (see interview citations above) that St²eep is too stingy, and complaints during the December 2004 workshop

about the absence of monetary awards in St²eep (see Appendix 6, Table App. 6.1), together with the fact that the St²eep allowances are lower than government allowances, with people choosing for the most attractive project that is operating in the colleges (see Appendix 6, Table App. 6.2), confirm that some lecturers consider allowances to be an important motivational factor. Outcomes from the December 2004 evaluation workshop provide more information about the meaning of personal gains that can attract lecturers to become involved in St²eep. These refer to experiences that the majority of college lecturers find hard to enjoy because of the current economic hardships. Such experiences include travel opportunities inside and sometimes outside the country, the adventure of enjoying visiting different places, and access to good food and accommodation (see Appendix 6, Table App. 6.5).

The fact that St²eep takes its external context into consideration is important because it characterises a holistic approach, taking in account a variety of factors that influence its success in the colleges and the involvement of college staff in its activities.

4.2.5 Participation and learning in St²eep

During the discussions on motivation and incentives at the December 2004 self-assessment workshop (see Appendix 6, Table App. 6.5), St²eep's participatory approach, the flexibility of the project, networking with other institutions and organisations, and the social interaction with colleagues were mentioned as important incentives for people to get involved in St²eep or environmental education. These incentives point towards a learning process that emerges from the data as an important characteristic within St²eep. This section explores this participatory learning process.

Outcomes from the face-to-face interviews illustrated below provide some insight into how stakeholders perceive the role of participation in the learning process within St²eep.

4.2.5.1 Learning through participation in a relevant exchange process

Asked about their views on the role and value of their participation within the learning process, all respondents agreed that participation is important for learning. Different 'learnings' were mentioned by the different participants. These included the shifting of one's attitude and mindset, learning how to do things better within St²eep, learning how to listen to other people, increasing awareness about the environment, learning about environmental education itself, about new methodologies and teaching approaches. Interestingly some respondents also provided some information on how participating with other people within the St²eep processes enhanced their

learning. There is a strong appreciation of an exchange process whereby ideas are shared: you receive and you give, you learn from each others' experiences, not only academically but socially (I1); you learn from people's reactions and try to improve your own performance (I2); listening and sharing your ideas with others allows you to recognise different options (I3). The following statements illustrate this:

I1: Participation creates a learning environment where as an individual you are learning, you are trying out things, you are receiving from others and you are able to give what you know or what you experience to others. It also provides an environment where you find your attitude and mindset is shifting according to what you learn from the others, professionally and even socially.

I2: Learning is embedded in the experiences and interactions you have with people, that's participation ... For example ... the words that I used and the intervention I made was not proper at that time because I could feel the people becoming emotional as well or agitated or they shut down. You can feel the mood of people, you can see the expression of the face of some people because you know them and that's how I got my information ...'

I3: 'One of the things that I have learned is to listen ... to other people's views, you learn to share your ideas, there are options, you look at all options ...'

It is also interesting to note here that the respondent who was assumed to be rather resistant towards environmental education indicated that through her participation in St²eep she was able to draw on the methodology and teaching approaches used and that environmental education had helped to broaden her mind:

I5. 'I could draw on methodology and teaching approaches. You become broader in your thinking. It broadens your mind and it gives you the global perspective about life, even in your own profession you start looking at the world holistically ...'

This confirms my argument earlier that participation in a process that is considered relevant to the learner seems to guarantee some kind of learning, even if the participant feels pressurised to participate (see discussion on ownership in section 4.2.2.2 above).

When asked about how they view the importance of their participation in the overall St²eep process, all respondents clearly indicated that their participation played a specific role, but each respondent gives a different purpose for it:

- I1: persuasive role in bringing other people on board;
- I2: role in providing technical support in the development and implementation of the EEOP;
- I3: role as lecturer in charge to ensure that the section reviewed the syllabus, and input as a peer in discussions with colleagues about how to improve the teaching of the subject;
- I4: felt she left a landmark in the processes she was involved in resource development and syllabus review, for example, in the section;
- I5: role through input in the discussions by emphasising the political dimension of environmental education.

The responses indicated that learning involved a sharing of ideas between participants in the process, and gave some idea as to what the interviewees considered that they were contributing in this exchange process. The fact that all interviewees felt that they were able to offer something, and since they all indicated in previous questions that they had learned something, indicates that some meaningful learning was going on and that participation did indeed play an important role.

An interesting aspect that emerges from the representatives of the St²eep management (I1, I2) is the importance of relationships within St²eep. I1 refers to ‘openness, importance of team work, learning together, interaction with superiors’; I2 talks about ‘a process of giving and taking all the time and feeling dynamics and anticipating from those things’.

4.2.5.2 Team learning through dialogue

The end-of-year evaluation workshops (see Appendices 5 and 6 for the outcomes, respectively, of the 2003 and 2004 workshops) have been important steps towards a more reflexive approach within St²eep, resulting in a more balanced view of what is happening within the programme. By brainstorming different project issues, stakeholders were given an opportunity to express their views, negotiate meaning and plan for the future. The approach used during the evaluation workshops was based on negotiation, incorporating various stakeholders more centrally into the evaluation process. The workshops allowed participants to negotiate meaning about the experiences and issues that were expressed, and hence helped to come up with suggestions for further action. During the many discussions and conversations, some of the more hidden dimensions of the programme were revealed, which contributed to a shared meaning of the programme and challenges

such as its sustainability. This is illustrated in the data that exposed both positive aspects and negative aspects of the project. The evaluation workshops provided a space for dialogue, where opinions and assumptions could be shared in order to achieve shared meaning about the programme, which was essential to draw up plans towards the future and address challenges such as project sustainability.

The importance of participation and dialogue in the learning process can be illustrated by in the three-monthly monitoring process in St²eep, which is characterised by little involvement of stakeholders and limited learning opportunities. The monitoring of St²eep is done mainly by the VVOB facilitators, who compile a monitoring report after every three months (see Appendix 9). These monitoring reports are based on the key result areas of the project, as indicated in St²eep's logical framework in the project document. The more balanced reality, which became apparent through the evaluation workshop, is not evident in the three-monthly monitoring reports. The current monitoring system does not involve many stakeholders, and the VVOB facilitators who compile the reports may not be fully aware of what is going on in the field, where some underlying tensions and problems within the programme are left out of the picture. This could then give the wrong impression that things are going well. There is also no system in place to use these monitoring reports during St²eep meetings. Opportunities for a larger number of stakeholders to learn more about the programme during the monitoring might therefore be missed.

4.3 CAPACITY DEVELOPMENT

Capacity development at individual and institutional level have already been identified earlier in this chapter as important motivational factors for lecturers to become involved in St²eep and to implement environmental education in their work (see section 4.2.4 above). In this section I will further explore these two levels of capacity development.

4.3.1 Individual capacity development

Outcomes from discussions on outputs, motivation and incentives during the December 2004 self-assessment workshop (see Appendix 6, Tables App. 6.1 and 6.4) give an idea about St²eep's achievements in view of capacity development at the individual level.

4.3.1.1 Opportunities for skills development

St²eep managed to provide the following opportunities for skills development:

- *Environmental education*: EEOP, Rhodes University environmental education course offered at Speciss College, Harare, ongoing environmental education activities in colleges and pilot schools.
- *Information technology*: Basic IT skills, PowerPoint presentations, Web site maintenance and day-to-day practice with IT on the job.
- *Facilitation*: lecturers facilitate sessions during St²eep workshops.
- *Training*: St²eep members develop specific training sessions for the EEOP and other environmental education-related staff-development workshops.
- *Research*: Rhodes University research course, presentation of papers during Environmental Education Association of Southern Africa (EEASA) conferences, action research within St²eep.
- *Communication*: different forms of communication within St²eep and with other project stakeholders.
- *Writing*: writing of training manuals for the EEOP, writing of resource development manual by members of the resource development team, SADC REEP resource development course.
- Raised awareness of and commitment to environmental education through involvement in St²eep activities
- Development of leadership skills in Co-ordinators.

4.3.1.2 Opportunities for personal growth

St²eep facilitated a number of opportunities for personal growth. It has been mentioned that St²eep allows people to discover their talents and take on different roles resulting in self-actualisation. To be updated with new ideas and new approaches, and to be part of something which is 'in' and 'modern', was believed to give people an opportunity to feel useful and to accomplish something.

4.3.1.3 Knowledge, skills and changed practice

Responses from the face-to-face interviews and the focus group interviews to the questions related to capacity development provide further information about the role of St²eep with regard to individual capacity development as it relates to knowledge and skills gained, as well as to changes in practice.

All the respondents in the face-to-face interviews refer to some kind of development in their skills or knowledge. These include: dealing with superiors (I1); understanding the general concept of environmental education and organising workshops and meetings (I2); learning and trying out new ways of assessment (I3); IT, facilitation and presentation skills (I4); and an increase in awareness of environmental education (I5).

When reflecting on changes in their practice, respondents referred to a clear change in their professional practice: I1 indicated that she became more critical, more adventurous and not easily disappointed by failure; I3 referred to innovations in assessment, being aware of the environment during the teaching, and being able to listen and to look at different options; I4 gave specific examples of new teaching approaches that she is now using, while I5 indicated that St²EEP had reinforced the interaction and participation within her section rather than creating a new idea; I2, as a donor representative, indicated that he had developed his skills and ways of doing things, although there hadn't been a major change in the way he looks at the world.

Results from the focus group interviews on the implementation of environmental education at BTTC (see Appendix 8) indicate that individual capacity development in the form of IT training, ongoing staff development, environmental education courses, and writing skills for resource material development was identified by the lecturers as an important way of sustaining the implementation of environmental education, as was the strengthening of organisational practices such as networking with other institutions.

It needs to be noted, however, that some lecturers who took part in environmental education courses through St²EEP scholarships have not become involved in St²EEP or in environmental education after the course. This has been the case with lecturers who participated in attachment programmes outside Zimbabwe and in the Rhodes University environmental education course at Speciss College. This situation is in line with the observation mentioned earlier (see 4.2.4.4) that some people get involved in St²EEP for personal gain, such as better job opportunities in this case, rather than because of a genuine interest in St²EEP or environmental education.

4.3.1.4 Hard and soft capacities

The data show that St²EEP is providing some form of skill or knowledge development, which it is believed is an important motive for people to get involved in St²EEP and therefore for the sustainability of the project. However, the individual capacity development that is taking place seems to be more than simply the acquisition of technical skills and knowledge. The data reveal a change in attitudes and outlook on life, social interactions resulting from improved listening skills, learning from others (even students), team work, learning together, and appreciating the importance of relationships as a process of giving and taking.

This observation illustrates the fact that individual capacity development in St²eep involves the development of both ‘hard’ and ‘soft’ capacities.

- Hard capacities include technical and operational skills that allow people to carry out specific operational activities (e.g. IT skills, skills in organising workshops and meetings, knowledge about environmental education, see 4.3.1.3).
- Soft capacities include those skills that allow people to function in a social system, to adapt to new situations, and to identify and explore new opportunities (e.g. team work, learning together and appreciating the importance of relationships as a process of giving and taking, leadership skills, skills in learning and trying out new ways, see 4.3.1.3).

Appendix 1 illustrates, with examples of St²eep, possible operational (hard) and adaptive (soft) capacities for different capacity areas.

4.3.1.5 Individual capacity development alone won't do the trick

At this point it is important to note that during the December 2004 self-assessment workshop, the lack of wide involvement of college lecturers in St²eep was identified as one of the main challenges of the project (see section 4.2.1). This means that the individual capacity-development initiatives at the end of the second implementation year of St²eep had not managed to motivate the majority of the lecturers to become involved in St²eep. Looking at St²eep in a holistic way helps to analyse this challenge, which poses a major threat to the future sustainability of the project.

I have already explored the importance of ownership and power relations with regard to the involvement of stakeholders (see sections 4.2.2 and 4.2.3) and the importance of a participatory approach, communication, external factors and individual capacity-development initiatives (see sections 4.2.4 and 4.2.5). Recognising that St²eep is a complex system that is influenced by different factors helps to understand why St²eep's efforts in terms of individual capacity development does not immediately result in the active participation of a majority of college lecturers. A combination of different factors lies at the basis of such challenges. In the next section I explore the issue of institutional capacity development, another crucial factor that can help to translate the achievements in individual capacity development into visible activities and the sustained implementation of environmental education within the colleges.

4.3.2 Institutional capacity development

4.3.2.1 *Identification of key institutional capacities*

The importance of institutional capacity development for the successful implementation of St²eeep and environmental education was acknowledged during the training needs analysis workshop of October 2003 (see Appendix 4, Table App. 4.1). At this workshop some key institutional capacities were identified as being necessary to support the St²eeep project and the sustained implementation of environmental education. These include the following:

- *Infrastructure and resources:* availability and accessibility of resource materials; sources of resource materials for either students or lecturers; provision of resource material (human, structural, material, financial, etc.), resources and management (e.g. libraries, IT); a variety of library books; infrastructural development; buying resources; resource maintenance; access to networking and information; and decentralisation of head office funds.
- *Management support for staff:* recognition and acknowledgement of efforts; need to address understaffing and over-enrolment to adjust workload; improvement of timetabling to incorporate large groups; involving all lecturers; improvement of support services (e.g. transport, funds, photocopying); motivation; and IT for lecturers and students.
- *Structural capacity:* establishment of environmental education committees and clubs; prioritising the infusion of environmental education into the syllabuses; and overall ownership of the programme by the whole institutional community (from administration to implementers).
- *Flexibility of the curriculum:* shifts in educational approaches; exploration and application of different assessment techniques; open classroom curriculum.
- *Institutional staff development:* built-in continuous training programmes; resource persons from outside; workshops at local level.

The outcomes from the December 2004 self-assessment workshop provide insight into the issue of institutional capacity development relevant to St²eeep in its second year of implementation (see Appendix 6, Table App. 6.1 and App. 6.4):

- *Support from relevant authorities:* St²eeep had been able to get the necessary support from the relevant authorities, such as the ministries of education, the Department of Teacher Education and the college administrations. They support St²eeep's activities and are even participating at different levels. This support, however, does not seem to be translated into financial support or extra personnel because participants still complain about the inadequate funding and lack of monetary awards. This indicates that institutional support might be limited to approval or acceptance of the project without a strong input from this level. The

poor economic situation in the country is an important external factor that needs to be considered in contextualising this situation of limited institutional support.

- *Institutionalisation of environmental education and visible implementation in the colleges:* Through the environmental education orientation programmes (EEOPs) and the syllabus review process, environmental education is being integrated into the syllabuses of different subjects. This has resulted in increased awareness of environmental education among lecturers and more visible environmental education activities in the colleges. It was also revealed, however, that lecturers who are involved in St²EEP are often away from college duties. At the same time most lecturers do not see participation in St²EEP as part of college activities. These observations explain why active involvement in St²EEP can cause an increased workload and strained relations among colleagues.
- *Supportive structures for St²EEP and the implementation of environmental education:* Specific structures such as environmental education steering teams in each college, national project task teams, including the Operational Management Team and National Management Teams, and environmental education clubs have been established to support implementation at the colleges. At the same time it was revealed that local participation from the college staff in environmental education and St²EEP is limited, with St²EEP being seen as exclusive to St²EEP members and the environmental education clubs dominating other clubs.
- *Infrastructure and resources:* Fully equipped resource centres are available, with access to computers and the Internet, office equipment and stationery, which can be accessed by any lecturers who need support for the environmental education activities that they intend to carry out. However, as was revealed during the December 2003 evaluation workshop (see Appendix 5, Table App. 5.1), the resource centres are underutilised.

4.3.2.2 Visible support from the institution and change

Outcomes from the face-to-face interviews with regard to the issue of institutional capacity development reveal that the respondents with an operational responsibility receive more support from the college administrations for St²EEP activities and the implementation of environmental education, resulting in a visible effect in the colleges. The following extracts from the interview transcripts illustrate this.

II: 'Sections, especially those who went through EEOP, they are communicating more openly. Relationships have mended at institutional level. Some sections used not to talk to each other. Now they talk about how far have you gone with your syllabus. Interpersonal relationships I think have improved. People are now ready to listen to each other. At the level of administration they have become very supportive. ... In the past principals were up

there where people could not go but ... they have learned a few things from St²eep, for example delegation; they have become more humane.'

I2: '... what people also tell me, is that the syllabus review process was the first time that subjects really sat together to really look in depth at the syllabus and maybe reflect on what we are actually doing here. ... they say it after they have found out that there are certain parts in the syllabus that are never covered. Some parts are already there for more than eight years and nobody ever noticed. For example in one syllabus they were still talking about the USSR, so that's one of the things. ... On the level of college admin, I think, the Principal and VP are now believing that EE is something positive and that's because of St²eep. Inter-college exchange that's something as well that people appreciate. From time to time you see things happening that you never saw before, for example, it was PS, music, arts, they have used the video and PowerPoints to do something in their lessons, maybe that were doing it before as well but now they are doing it in the resource centre, and its very nice to see that happen.'

I4: '... like with the students, there was already an environment club in the past, but there were no visible activities like they are now doing ... At the level of college administration, they have been quite co-operative. Just the fact that they have accepted that EE would be integrated is quite important, without their approval nothing would have happened, and they allow members of staff to attend workshops and they provide college facilities for workshops. Even at the level of DTE, they attend workshops and they have agreed that we infuse EE in the syllabus ...'

The responses above indicate that all respondents who have some kind of operational responsibility in St²eep (I1, I2 & I4) mention some clear positive changes that they have observed at the college level. Positive changes that were mentioned include: better communication and relationships between colleagues within the college; more support from the administration (I1, I2, I4) and DTE (I4); sections sat together to review syllabuses and to reflect on what they are doing within their sections (I2); lecturers involved in St²eep are gaining some authority in the college (I1); certain lecturers do things that you wouldn't have seen before (I2); students are involved and there is an active environment club (I4).

Respondents who represent the target group of St²eep have a less positive view about institutional support. Apart from indicating that the establishment of the environmental education resource

centre is ‘the best thing that ever happened’ (I3), they do not mention anything that has changed in a visible way in the college. At the contrary, one respondent (I3) actually indicates that she feels that the biophysical environment in the college has declined, with more litter being around than before. I3 actually states that she has not seen any impact from the environment club. This is the opposite from the observation of I4, who indicated that there is an active environment club in the college. Both respondents also indicate that they have not observed any change at the level of the college administration (I3, I5). While the Department of Teacher Education (DTE) is seen to allow sections to come up with new ideas, they don’t seem to have explicitly asked about environmental education during external assessment (I5). This could be a threat to the future sustained implementation of environmental education, as it might just fall away because of that lack of assessment (I5).

Earlier in this chapter, it was observed that individual capacity-development initiatives in St²eeep had not been able to solve the main challenge of the limited active involvement in St²eeep or environmental education by the majority of the staff. This is in line with the outcomes from the face-to-face interviews, which reveal that there is a clear difference between the views of respondents who have an active operational role in St²eeep and those who represent St²eeep’s target group. The first group draws a much more positive picture about the visible effects in the colleges of the individual capacity development that is promoted in St²eeep. We can ask ourselves if the difference in the observation of changes at college level is the result of wishful thinking on the part of those active in operationalising St²eeep or whether it is because the lecturers who are supposed to be the beneficiaries don’t have a broad picture of what is happening outside their own work. Based on data from other sources – such as reports of environment club activities, minutes of the steering team, St²eeep management team meetings, monitoring reports, and my own personal observations – some changes have definitely been made at those levels. However, these changes might not be visible to the wider college community and might be known only to those who are active in St²eeep and are directly responsible for some of them. This situation confirms again the observation made earlier in this chapter that St²eeep is identified with only a small number of people, while the majority of the college staff do not feel closely involved or don’t experience environmental education or St²eeep as a college issue or development.

When asked about possible limitations of the change process that is facilitated by St²eeep, one respondent indicated that the unavailability of finances causes administrations to have other priorities than introducing environmental education into the curriculum (I2). Another respondent pointed out, on the other hand, that the lack of external funds might influence college administrators to get out of a mindset in which they think assistance should always come from outside (I1).

From the data it emerges that institutional capacity development alone, as was the case with individual capacity development, does not provide the answer for St²eep's challenges. It is only one important factor that needs to be considered along with others within the St²eep context. However, the institutionalisation of environmental education in the colleges – through support structures, the integration of environmental education in the college curricula, and an accountability system that is fully borne by the institutions – is believed to be key for the future sustainability of St²eep and the implementation of environmental education (see Appendix 6, Table App. 6.5). It also provides an enabling framework for the achievements in individual capacity development to be translated into visible environmental education activities within the colleges. Earlier in this chapter, during the exploration of the ownership issue, it emerged that the over-reliance of St²eep on the full-time VVOB facilitators is unsustainable, and the institutionalisation of environmental education, which is related to institutional capacity development, was also suggested as a potential strategy to 'unzip' the VVOB facilitators from St²eep.

4.4 PROJECT SUSTAINABILITY

The majority of stakeholders involved in St²eep are concerned about the sustainability of the project owing to the high involvement of temporary VVOB facilitators in the operational activities and the heavy workload of local lecturers who carry out St²eep activities on top of their normal duties. Long-term visions of support for the environmental education integration process, as well as future roles and commitment of the stakeholders within this process, were not thoroughly discussed during the planning stage. In addition, the project was initiated without an explicit view on the exit strategy of the donor. Furthermore, the opportunity to actively engage the team in the design of a monitoring framework and evaluation plan to promote self-assessment and learning for sustainability was missed at the planning stage of St²eep and is therefore not explicitly incorporated in the project document (Zimbabwe & VVOB, 2002).

In this section I first describe the process of self-evaluation and critical reflection that has emerged among St²eep stakeholders to learn about and plan for project sustainability. This is done through a chronological overview of some key activities supporting the sustainability debate. I then report on the outcomes from the face-to-face interviews to explore the understanding of project sustainability in St²eep.

4.4.1 Planning for different scenario's towards project sustainability

4.4.1.1 Project evaluation workshop, December 2003

Outcomes from the SWOT analysis during the December 2003 evaluation workshop (see Appendix 5, Tables App. 5.2 and App. 5.3) reveal that some people are believed to have joined the project for immediate personal gain, causing concern about whether the enthusiasm for St²eep would continue if the funding from VVOB stopped or if other donors returned to Zimbabwe with other projects that might be more attractive. These data show that some respondents think that the people who are involved in St²eep are involved because of the benefits that are associated with donor-funded programmes and not so much for the purpose of environmental education itself, which suggests a lack of ownership of the project (see section 4.2.2).

The institutionalisation of environmental education was suggested as a possible strategy to ensure that people become involved for environmental education's own sake and not only for personal benefits (see sections 4.2.4.4 and 4.3.1.3 above). The workshop allowed participants to negotiate meaning about the experiences and issues that were expressed, and hence helped to come up with suggestions for further action. This resulted in the identification of three critical areas and possible strategies towards project sustainability: 1) environmental education as a requirement in the curriculum of teacher training; 2) the need to look for other sources of funding; and 3) the integration of environmental education in secondary schools. While the workshop succeeded in bringing the sustainability issue to stakeholders' attention, the process of negotiating meaning also allowed the whole group to learn about the complexity of what is going on in a social process like St²eep and about their role within this process. At this stage though, the proposed strategies to address the critical areas in terms of project sustainability were still vague and did not result in specific sustainability scenarios or succeed in addressing the critical question of 'who is supposed to do what'. The specific role of the donor within the project was also not questioned at this stage.

4.4.1.2 Development and circulation of a 'living' discussion document on project sustainability (June 2004 to August 2005)

The sustainability discussion among project stakeholders during meetings, workshops and informal conversations has been assisted by the development and circulation of a discussion document on programme sustainability. This document was initiated by the VVOB lead facilitator (myself) and reflects critically on the processes within St²eep and the general working approach.

Although all stakeholders were invited to contribute in writing to this ‘living’ document, it is important to mention that most of the input into the document was generated during project meetings and workshops involving discussions and brainstorming. Input from individual stakeholders through written submissions has been limited. This suggests that long documents are not easily read and not acted upon by stakeholders who often don’t have direct access to e-mail or a computer in their personal offices or workplaces. On the other hand, it might also tell us something about the level of participation and ownership of the sustainability discussion. Apart from the technical obstacles, some stakeholders might not have felt the need to contribute. Are stakeholders not concerned with the sustainability of the environmental education integration process? Did people feel that it might not have made any difference if they had contributed? Do people prefer other ways of communicating about or discussing sustainability issues? Whatever the reason, it was clear that the initial document was not owned by stakeholders. The stakeholders were not involved in the development of the first draft of the discussion document which was initiated and developed by a representative of the donor organisation. However, as time went on, the document grew and was used in the discussion and reflection process on sustainability and provided a framework for the development of different sustainability scenarios, as illustrated in Table 4.1.

Table 4.1: Scenarios for sustainability within the St²eep project suggested in the discussion document

Human resources	Option 1: Creating specific positions for the National Co-ordinator (NC) and EE steering team co-ordinators in the colleges.
	Option 2: NC and steering team co-ordinators continue as is, but the other support functions [that VVOB] is currently providing are carefully analysed, and spread across the college infrastructure, roles, responsibilities.
	Option 3: NC and steering team co-ordinators continue as is, but additional logistical/liaison support is brought in.
	Option 4: VVOB facilitators focus their efforts on capacity development of NC and steering team co-ordinators and gradually pass on to them their operational responsibilities (e.g. accounts, report writing, logistics of St ² eep and EE activities)
Financial resources	Option 1: Solicit for continued VVOB support after the first phase of the project and after the pull-out of VVOB staff.

	Option 2: Explore opportunities for increased co-funding by other organizations.
	Option 3: Minimise expenses once the EE has been integrated in the existing curriculum. Support of EE implementation would be college based and would require less national activities.
	Option 4: Enhance fundraising activities.

The development of the discussion document on project sustainability illustrates that giving people an opportunity to participate in a process does not automatically result in their actual participation. People’s involvement seems to be influenced by the level of ownership, interest or motivation. The approach used in the development of the sustainability document did not seem to provide adequate opportunities for people to express their views and negotiate meaning as was the case in the evaluation workshop. Only a small number of people were involved, strongly limiting the learning process.

4.4.1.3 Self-assessment workshop, December 2004

During this workshop, participants analysed different aspects of the programme. They did not focus on ‘What did we achieve?’ against ‘What did we plan to achieve?’ but looked at ‘What did we do?’, ‘How did we do it?’ and ‘Why did we do it?’ (Boesen & Therkildsen, 2003). As such, organisational and process-related issues were incorporated, such as motivation and incentives, co-operation and relation with the donor, strengths and weaknesses of the different stakeholders, programme procedures and decision-making (Deprez, 2005).

As self-assessment is about organisational reflection and learning, in which the motivation for improvement and change comes from the stakeholders themselves, it was hoped that recommendations would less likely be dismissed or perceived as irrelevant or unrealistic (Deprez, 2005). Through the self-assessment workshop, St²eeep managed to bring the sustainability debate to a new level. During the many discussions and conversations, some of the hidden dimensions of the programme unfolded, which contributed to achieving shared meaning and understanding about the programme, which is essential in drawing up plans for sustainability (Horton *et al.*, 2003). The workshop ended with stakeholders identifying specific threats to sustainability and suggesting actions to counter them (see Appendix 6, Table App. 6.7). The suggested actions can be seen as possible scenarios towards project sustainability and can be categorised under institutional and individual capacity development and participatory organisational practices, confirming the

importance of these issues in terms of project sustainability. Table 4.2 provides a summary of different scenarios for project sustainability generated through this process.

Table 4.2: Different scenarios for project sustainability suggested during the self-assessment workshop, December 2004.

Institutional capacity development	College-based monitoring structure to be set up.
	Come up with a workable plan to transfer the responsibilities of the finances to the local partners
	Inclusion of EE activities in key result areas of lecturers.
	Start in-depth discussion on different possible options with regard to human resources to support EE implementation and need for an option that can be incorporated in college structures.
	Integration of EE structures into college structures,
	EE should be seen as part and parcel of core business of the colleges.
	EE Management structure incorporated in ministry of higher and tertiary education system.
Individual capacity development	Ongoing staff development
Participation	Create space and time for sharing experiences on EE activities/lessons among lecturers Networking as a strategy to look for funding

The different scenarios are strongly directed towards the institutionalisation of environmental education in the colleges and ensuring a situation in which the project is less dependent on the donor and is fully part of college business, partly run with local resources. The suggested actions also illustrate that project sustainability is a complex issue. Strategies towards project sustainability are believed by stakeholders to involve different strategies, characterised by a participatory approach and directed at different levels, including the individual, institutional and higher policy-making levels.

At this point, the actions suggested during the workshop, as well as the insights gained about the programme, were to be presented to the St²eep National Management Team for future planning. It is at this level that suggested scenarios can receive the necessary administrative support that is essential for success.

4.4.1.4 National Management Team Meeting, 10 December 2004

The outcomes of the mid-term self-assessment workshop were discussed during a National Management Team (NMT) meeting. The NMT consists of the college Principals from the three colleges involved in St²eep, senior officers from the Ministry of Higher and Tertiary Education, the Ministry of Education, Sport and Culture, and the Ministry of Environment and Tourism. It also includes the chairman of the Zimbabwe Environmental Education Consultative Forum, a representative of the Environmental Liaison Forum (an umbrella forum for environmental NGOs) and the St²eep co-ordinators. The National Management Team is the highest structural level within St²eep, and it plays an important role in the formulation of policy, giving advice, making recommendations and approving annual plans.

Since the NMT contains the managers of the institutions in which St²eep is active, it plays a crucial role in planning towards project sustainability. As most members of the NMT did not attend the self-assessment workshop, it was decided to involve them in a similar reflection exercise and to present the outcomes of the different sessions. The members went through the self-assessment exercises step by step, as well as through the findings formulated by the self-assessment group. These findings 'triggered' discussion among the NMT members. On the one hand, the NMT members got greater insight into the day-to-day reality of the programme and the hidden dimensions of the programme, which in many cases were an eye-opener. On the other hand, this reflection exercise really focused the NMT members on different aspects of the programme, which resulted in valuable additional opinions as well as the endorsement of some of the suggestions made by the self-assessment group. It was the first time since the start of St²eep that the sustainability issue was the only agenda item during an NMT meeting.

The outcomes of the NMT meeting (see Appendix 7, Table App. 7.1) indicate that previous sustainability-planning activities did prepare the ground for fruitful discussions during the NMT. They are more specific and based on consensus among a wide base of stakeholders who were actively involved in the sustainability-planning and learning process. Therefore, they are important guidelines for further strategising towards the sustainability of the programme. Some suggestions on the way forward are especially important and can be summarised as follows:

- Any sustainability scenario should fit within the existing college structures and procedures, especially when it comes to the use of local financial procedures and existing human resources. Financial rewards (such as top-ups) should be avoided, since these would be impossible to sustain by the colleges after VVOB pulls out. The NMT also stressed the fact that St²eep is only a temporary programme and that environmental education should continue after St²eep ends. Full integration and implementation of environmental education in the subjects is therefore necessary.
- Administrators understand the need for St²eep co-ordinators – who are lecturers – to carry out extra activities in terms of environmental education. They suggest a reduction in their current workload and the retaining of local co-ordinators in order to maintain sufficient support for environmental education after the St²eep programme comes to an end.
- Although not explicitly mentioned, the importance of capacity development is acknowledged. This is apparent in the NMT's reference to the importance of professional gains, skills enhancement through the VVOB facilitators, and the improved environmental education expertise of people who were involved in St²eep and who can act as resource people to support the future implementation of environmental education.
- Strategies to increase motivation among lecturers to participate in St²eep or environmental education were also mentioned – such as the recognition of environmental education activities as professional key result areas in the internal performance-appraisal system, and inclusion of evidence or certification of involvement in environmental education activities in the lecturers' files.

The course of action for St²eep suggested during the NMT can be seen as the result of a long and ongoing process in which a good number of stakeholders are more and more involved in critical reflection on how the programme is running, their role within the programme, and how things should be adjusted in response to lessons learned and personal experience.

As a next step, St²eep is now embarking on a strategic re-planning exercise for its second phase, which will take the shared experiences and 'learnings' into another cycle of action and reflection. As an underpinning methodology for this sustainability-planning exercise, St²eep chose the 'outcome mapping' framework developed by the International Development Research Centre (IDRC) in Canada. Outcome mapping offers an alternative model to the logical framework

approach and provides a framework for planning, monitoring and evaluation with an emphasis on building reflection and learning into development programmes (Earl *et al.*, 2001). Analysis of this re-planning process is not part of the research carried out for this thesis, but its narrative report is available on the IDRC evaluation Web site. It is, however, envisaged that the outcomes of this research will feed into the re-planning process.

4.4.2 Understanding project sustainability in St²eep

Outcomes from the face-to-face interviews with regard to sustainability of the St²eep project provide some insight into the stakeholders' understanding of project sustainability.

4.4.2.1 Benefits to be sustained

A variety of benefits that respondents would like to see sustained were mentioned. Most of these are related to lecturers' professional practice, with one respondent (I2) also referring to structural developments around environmental education that he would like to see sustained.

The benefits identified by the respondents can be grouped into those related to individual capacity development and those for the whole college community, which relate to institutional capacity development.

Individual benefits (individual capacity)

- international conferences, scholarships
- Development of skills: IT, writing skills (for development of resource materials)
- Sustain people's motivation (ways of doing this not explicitly given)
- Environmental education courses (e.g. the Speciss College course) and ongoing staff development in environmental education.
- Allowances

Benefits for the whole college community (institutional capacity)

- Activities in subject areas, based on the environmental education that is integrated into the subject's syllabus, e.g. assessment and evaluation in different forms and field trips; development of supporting resource materials (e.g. modules in Professional Studies) by the sections
- Sharing of experiences with the rest of the staff by people attending conferences after they come back
- Continued review of the syllabus done by a team not by one person

- A forum in the college to share experiences and reflective practice within subject areas (talking within the subjects about what we are doing within a particular subject)
- A well-functioning resource centre and continuous promotion of the resource centre, supply of books and access to the Internet.
- An official position of environmental education co-ordinator and, in the long term, an integrated structure for the different college co-ordinators (Environmental Education, Health and IT) (I2).
- Visible activities: commemoration of special environmental days, an active environment club, sharing of ideas between lecturers.

4.4.2.2 Roles in ensuring sustainable implementation of St²eep objectives

The respondents who play an active operational role in St²eep (I1, I2 & I4) saw themselves in a supporting or facilitating role that might help the process of implementation of environmental education move forward. I1 refers to her lobbying role to encourage others to go on, while I2 sees himself playing a role in stimulating reflection among the local partners about future project sustainability, whereby a variety of ideas are considered. I4 identified her role as being a facilitator who can support future staff development programmes for new staff.

The lecturers representing St²eep's target group see their role more in the actual implementation of environmental education by experimenting with it in their teaching (I3) and taking up the ideas of environmental education in specific subjects, e.g. Health Education (I5). It is actually very interesting to see that I5, who was rather negative towards the idea of environmental education, was able to see herself playing a role in the future sustainability of environmental education because she identified a relevant link between her future responsibilities in health education and environmental education (e.g. working with the communities, making people see what they can do).

4.4.2.3 What the project should do to ensure sustainability

Responses provided information on the factors that respondents considered important for the future sustainability of St²eep or implementation of environmental education. These factors can be categorised as relating to individual capacity development, institutional capacity development, and the role of the donor:

Individual capacity development

- capacitating people to have enough who are motivated and have the necessary skills (I1, I2)

- develop a degree programme on environmental education at the colleges, with a need to staff develop the lecturers first so that they are able to deliver it (I3)
- further support-material writing and computer skills development (I3)

Institutional capacity development

- college administrations and the Ministry of Higher Education should become the main players (I2)
- establish clear and transparent positions for St²eep or environmental education (I2, I4)
- environmental education could become broader and perhaps act as a vehicle for staff development, also becoming part of an integrated element that deals with environmental education, health issues and ICT (I2)
- full-time Zimbabwean administrators and the involvement of locals in decision making (I5)

Role of VVOB

- continued support from VVOB (I1, I2, I3, I4). The continued link with VVOB was seen by I1 as necessary to avoid people getting an impression that the project has been abandoned like other projects in the past. I2 noticed that the kind of support from VVOB might change.
- one respondent (I1) made the observation that a good number of the college staff might not know fully what St²eep is all about. While she saw the continued link with the donor organisation as a possible solution to this, it also shows indirectly that the current communication or public relations of St²eep within the colleges is lagging behind and might need improvement in terms of future sustainability.

The responses confirm again the respondents' belief that the development of individual capacity and ongoing staff development, which were mentioned in earlier questions as desirable benefits, are important strategies towards project sustainability. The respondents go a step further this time, some also providing their ideas on developments necessary at the level of the institution. It seems that people are recognising the unsustainable situation of the current set-up in which there are no local environmental education positions in the colleges besides the expatriate staff (VVOB), who are largely responsible for the operational activities in the project. The feeling of I5 that there is need for local Zimbabwean management in St²eep can help to confirm this line of thought.

More information was also given on respondents' feelings about the current and future role of VVOB. One respondent (I1) indicated that 'St²eep still equals VVOB in the mind of many people' and argued for continued support from VVOB so that people do not get the impression that the project has been abandoned. Other respondents I2, I3, I4 also argue for continued VVOB staff

support. All in all, the responses provide further insight in stakeholders' views about possible strategies for the sustainability of the project.

4.4.2.4 Indicators of future sustainability

The following indicators of future sustainability of the implementation of environmental education can be extracted from the interview responses:

- The active implementation of environmental education by the lecturers (I1) is a shared responsibility of many stakeholders, such as lecturers, students, administrations, DTE, Ministries (I4).
- There is need for ongoing support for the implementation of environmental education and the following support strategies were suggested:
- specific features that are currently characteristic of St²eeep should be sustained in order to motivate people to implement environmental education in their teaching: research, attending conferences, workshops for staff development, syllabus review, resource material development, sharing of experiences, outreach programmes, visible environmental activities in colleges;
- motivation through training and certification and through recognition for their work;
- interaction between colleges to brainstorm on progress;
- broaden the idea of environmental education, which could include or evolve into education for sustainable development. Environmental education needs to remain relevant, people are starting to realise that the environment is important;
- financial support: sponsorship is unavoidable;
- structural support: need for a strong steering committee that co-ordinates environmental education activities, with people that are accountable for environmental education.

4.5 CONCLUSION

This chapter has provided insight into the meaning and role of participation, capacity development and project sustainability within St²eeep.

4.5.1 Participation

While the data indicate that St²eeep seeks to use a participatory approach in the implementation of the project, it also emerged that limited involvement by the majority of the staff is one of the main challenges to be faced. This challenge is closely linked to the issue of ownership, power and motivational factors. Possible reasons for the limited involvement, such as the lack of institutional

support in the form of finances or personnel and the fact that EE is not a priority for the majority of the lecturers, raise questions about the local ownership of the project. The concern that only a small number of lecturers are benefiting from St²eeep's skills development is another possible reason for the limited involvement; it is also a demotivating factor that causes the majority of lecturers to feel left out and therefore enforcing a belief that St²eeep is exclusive, belonging to the small number of people who have operational responsibilities in the project.

There is also a concern among stakeholders about the strong operational role of the donor and realisation of a need to 'unzip' the project from over-reliance on the donor to safeguard sustainability of the project. The data also show that ownership is directly linked to lecturers' recognition of the relevance of environmental education. Another important aspect of participation is the issue of the different power relationships that exist between different stakeholders. While It is believed that the power relationship between the donor and the local partner is skewed in favour of the donor, the participatory approach emerges as an important factor that helps to bring this skewed power relationship into balance and enhances ownership. The data also point to the existence of a power relationship between staff with operational responsibilities in the project, who have the power to determine budgets and time-frames, and the rest of the lecturers, who have power over the actual implementation of environmental education in their work, indicating that the project's ultimate success will be determined by the lecturers in the colleges and the way they negotiate these power relations.

A number of motivational factors were identified that influence people's participation in St²eeep or environmental education. These include broad communication from St²eeep to the rest of the staff, individual and institutional capacity development, and external factors such as the existence of the National Environmental Education policy, which provides a home-grown framework for environmental education in Zimbabwe.

Another important issue is the role of participation and learning. The data show that the learning processes in St²eeep are characterised by an exchange process in which the learners share ideas and learn from each others' experiences. This enables them to recognise the relevance of environmental education and enhances their feeling of ownership. The data also indicate that the different learning spaces provided by the evaluation workshops have promoted team learning through dialogue and have resulted in insights about the hidden dimensions of the project, allowing stakeholders to feel part of the process and to plan the way forward.

4.5.2 Capacity development

The data show that both individual and institutional capacity development are strong motivational factors that have the potential to enhance ownership and broaden participation in St²EEP or environmental education. The data also show that both levels of capacity need to be addressed together, not separately, since they enhance each other. The data show that St²EEP has developed both hard and soft capacity in individuals who are involved in project activities. Hard capacities include the technical skills that allow people to carry out specific operational activities. Soft capacities include those skills that allow people to function in a social system, to adapt to new situations, and to identify and explore new opportunities. For individual capacity development to result in visible participation in environmental education in the colleges, there is also need for institutional capacity that can provide a framework for the individual capacities to be used. The data show that St²EEP still faces some challenges in terms of institutional capacity development. While St²EEP managed to gain support from the relevant authorities, this support is not translated into financial support or extra personnel. The strategy of integrating environmental education into the curriculum has helped to institutionalise environmental education in the colleges, but a good number of staff still consider environmental education not to be related to real college work. Supportive environmental education structures, such as steering teams and resource centres, are in place, but engagement by college staff with those structures is rather limited.

4.5.3 Project sustainability

The data show that St²EEP's project-sustainability planning has been characterised by different reflection moments, during which the different stakeholders have been drawn into the debate. Participatory evaluation workshops, focus groups and plenary discussion sessions during planning meetings, and the development of a discussion document have provided opportunities for key stakeholders to express their views, negotiate meaning, and learn and plan towards the future. At this stage several scenarios for project sustainability have emerged and the complexity of the whole sustainability issue seems to become more and more evident. The different scenarios acknowledge the importance of considering existing college structures and procedures, establishing official supportive structures for environmental education, including officially appointed co-ordinators, capacity development to widen the resource base in environmental education and implementation of motivational strategies such as the recognition of environmental education as part of college work.

Project stakeholders refer to active implementation of environmental education in the colleges as an indicator for future sustainability of St²EEP or environmental education. Active environmental education implementation is seen as a shared responsibility of different stakeholders, such as

lecturers, students, college administrations, DTE and ministries, with a number of supportive activities being organised at the colleges and with some financial and structural support in place. Individual and institutional capacity development and a participatory approach are seen as important factors to support this active implementation of environmental education.

In the next chapter I discuss these issues by drawing on the theoretical framework developed in Chapter 2. In particular, I draw on systems thinking to explain the relations between these factors and other aspects that influence St²eep (as a social process and organisational system) operating in a broader system (the colleges in Zimbabwe).

CHAPTER 5: THE COMPLEXITY AND INTERRELATEDNESS OF FACTORS INFLUENCING PARTICIPATION, CAPACITY DEVELOPMENT AND SUSTAINABILITY IN ST²EEP: DISCUSSION OF THE RESULTS

5.1 INTRODUCTION

In this chapter I draw on the theoretical framework presented in Chapter 2 and the data presented in Chapter 4 to discuss the results of the research as regards participation, capacity development and project sustainability from a systems-thinking perspective. Through this I hope to present a more sophisticated synthesis of the data presented in Chapter 4, and to deepen interpretation into the research question, which sought to explore the significance of the participatory orientation for capacity development and programme sustainability within St²EEP.

5.2 PARTICIPATION

5.2.1 Narrow vs. broad-based participation and ownership

From the data it emerged that limited involvement by the majority of the lecturing staff is one of the main challenges of the St²EEP programme. This observation is closely linked to the issue of ownership of the project and the concept of environmental education that St²EEP seeks to integrate into the curriculum of secondary teacher education. Possible explanations for the limited involvement of lecturers in St²EEP activities highlight elements which Anderson *et al.* (2002) identify as characteristics of the ownership process of development projects (see section 2.5.1):

- The reality that environmental education is not a priority for the majority of lecturers who are not operationally involved in St²EEP, and the general feeling that VVOB is the engine driving the St²EEP project. These demonstrate that ‘recipient ownership’ does not develop automatically out of a project that is initially donor-driven.
- The general concern about St²EEP’s future sustainability, the realisation that there is a need to ‘unzip’ the project from the over-reliance on the donor, the existence of home-grown

policy documents on environmental education, and the observation that some lecturers do in fact participate actively in St²eep. These demonstrate that ownership will ebb and flow, stronger at some moments than others, highlighting the need for patience with regard to ownership and the need to foster the ownership process actively.

- Challenges related to institutional and individual capacity, such as the lack of material support and the fact that environmental education activities are not being considered as part of college work, and the observation that only a small number of people are able to develop their skills within St²eep. These highlight the importance of local stakeholders having the necessary capacity to assert ownership and for St²eep to continue to engage in capacity-development initiatives.

5.2.2 Power and renegotiation of partnerships

With regard to power in St²eep, the data point towards a renegotiation of partnerships, as advocated by Anderson *et al.* (2002). This is illustrated by the observation that, as the project progressed, participation improved, with people being able to shape the flow of St²eep. The data also refer to opportunities for consultation throughout the project and an openness of the project to critical analysis and to participants' recommendations. The participatory approach emerges as an important factor that helps to bring the skewed power relationship between the donor and the local partner into balance and enhances ownership.

Besides the power relationship between the donor and the local partner, there are also the power relations between St²eep and the rest of the staff, whereby the lecturing staff have the power to determine whether they will implement environmental education effectively or not at all. Power in St²eep, therefore, is what Foucault (cited in Wilson, 1998) argues to be a relational issue, which produces a variety of responses and reactions among the different stakeholders. For example, St²eep does not have the authority and the power to force lecturers to implement environmental education; rather, there is a process of dialogue and planning with the college authorities to work towards an institutional framework within which it can be implemented. On the other hand, St²eep also interacts with the lecturing staff through training sessions, staff-development initiatives and general college-based environmental education activities in order to give them an opportunity to engage with environmental education, to allow them to have a critical input into St²eep activities, and to discover whether environmental education is relevant for their work. The data show that recognition of the relevance of environmental education is a critical condition before lecturers will take it up in their work. This discussion illustrates that power can be productive (Foucault 1988, cited in Wilson

1998) and that the power relationships between the different power ‘positions’ and actions are important for the success and sustainability of the project.

5.2.3 Motivational factors

A number of motivational factors have been shown to determine stakeholders’ participation in the project. Some of the individual motives for participation identified by Howard *et al.* (2002) apply to St²EEP:

- *Technical motives:* specific individual stakeholders are participating because of their technical input into the project. For example, certain lecturers who have developed specific sections of the environmental education training programme facilitate sessions during the EEOPs, and provide support during the syllabus review process.
- *Pragmatic motives* also draw stakeholders into certain St²EEP activities. This happens, for example, when lecturers are asked to participate in the evaluation workshops because they are known to have useful information about certain St²EEP processes.
- *Educative participation motives:* individual capacity development, which provides opportunities for personal growth and enhanced skills and knowledge in environmental education, is recognised as an important strategy to motivate people to get involved in St²EEP.

The data also illustrate the importance of motivational factors that are directed towards the institutional environment, and the group of people that St²EEP seeks to work with, rather than towards the individual:

- *Good communication* between St²EEP and the wider college community, and networking with other stakeholders, are seen as essential in motivating people to become involved, and to address the problem of associating St²EEP with only a few people.
- *Institutional capacity development* is believed to be important for the institutionalisation of environmental education to enable the colleges to provide a supportive framework for its implementation.
- *Ubuntu and participation because of the group:* The data show that social interaction with colleagues is an important incentive for people to get involved in St²EEP or environmental education.
- *External factors over which St²EEP doesn’t have direct control:* Stimulating factors include the existence of supportive national policies, which provide a home-grown framework for the implementation of environmental education and therefore enhance local ownership.

Demotivating external factors include the bleak economic situation that has resulted in low morale because of poor salaries and a lack of financial incentives. The observation that some people join the project for personal benefits instead of because of a genuine interest in the project or environmental education (see sections 4.2.4.4 and 4.3.1.3) has to be seen within this harsh economic context.

5.2.4 Participation and learning

5.2.4.1 Collaborative learning and communities of practice

The following interview responses illustrate how stakeholders perceive the learning process in St²eep (see section 4.2.5.1):

- ‘An exchange process whereby you share ideas, you receive and you give, you learn from each others experiences not only academic knowledge but also social experiences’;
- ‘You learn from people’s reactions in order to critically reflect on your own actions trying to improve them’;
- ‘Listening and sharing your ideas with others allows you to recognise different options’.

The data indicate that learning in St²eep involves a sharing of ideas between participants during St²eep activities, enhancing their motivation to participate in the project. This is also illustrated by the observation that lecturers initially feel pressured to engage with the ideas of environmental education during the EEOPs since they are obliged to attend. The learning process that occurs during that engagement then shapes people’s understanding and sentiment towards environmental education. In cases where they recognise environmental education as a relevant or worthwhile concept for their professional practice, there appears to be a stronger chance that lecturers will take up the idea.

The learning through collaborative engagement with others in ongoing St²eep processes relates to learning as a process of transformation of participation in ongoing cultural activities, as proposed by Rogoff *et al.* (2003) and Lave and Wenger (1996). This collaborative learning occurs with others in the social world and fits within a social constructivist perspective that emphasises the importance of culture and context in understanding what occurs in society and in constructing knowledge based on this understanding. Further drawing from the social constructivist perspective, the learning process in St²eep also appears to be characterised by elements of Lave and Wenger’s (1996) theory of situated learning and communities of practice. Within St²eep there is evidence that groups of people have organised themselves around particular areas of knowledge or activities, giving them a sense

of ‘joint enterprise and identity’ (see section 4.2.3.2). The facilitation team of the EEOP is an example of such groups, as are the sections that are integrating environmental education into their syllabus; the latter have taken this process upon themselves as a ‘joint enterprise’, working collaboratively and deciding as a group what to include and what to exclude (see section 4.2.3.2). Another example is the group of lecturers with organisational responsibility who sit on the management teams of the project and who grow in this community through their active involvement in project management and St²eep activities (see section 4.2.5.1).

5.2.4.2 Team learning

One can also recognise elements of ‘team learning’, which Senge (1990) argues is best pursued through methods of dialogue that are participatory and characterised by reflective openness. The end-of-year evaluation workshops in St²eep are examples of conducive spaces for team learning. The workshops have been important steps towards a more reflective approach within St²eep, resulting in a more balanced view of what is happening. By brainstorming on different project issues, project stakeholders were given an opportunity to express their views, negotiate meaning and plan towards the future. The evaluation workshops provided a space for dialogue, where opinions and assumptions could be discussed in order to achieve the shared meaning that is essential for drawing up plans for the future and addressing challenges such as project sustainability. This illustrates Senge’s argument that team learning can contribute to scenario planning as a way for people to develop a better understanding of each others’ tacit beliefs as they describe plausible futures. The self-assessment approach adopted during the evaluation workshops reflects a social constructivist perspective, as it can be seen as a way of capturing the useful knowledge that is embedded in the experience of the stakeholders and the organisation. Following Davenport and Prusak (cited in McGrath & King, 2004), this process knowledge can be generated by connecting people within organisations through sharing stories and learning together in teams.

5.2.4.3 Action research

The whole planning process of project sustainability within St²eep is characterised by an action research orientation. Different reflection moments have been used to draw the different stakeholders into the debate. Participatory evaluation workshops, focus groups and plenary discussion sessions during planning meetings, and the development of a discussion document have provided opportunities for key stakeholders to express their views, negotiate meaning, and learn and plan towards the future. Such reflection moments actually form part of a spiral of self-contained cycles of planning, acting and observing, and reflecting, often represented as one of the key features of action research (Kemmis & Wilkinson, 1998). St²eep’s approach towards the sustainability debate

can also be situated within the concept of ‘participatory monitoring and evaluation’ as an experiential learning cycle, where participants learn from experience and gain the ability to evaluate their own needs, analyse their own priorities and objectives, and undertake action-oriented planning (Pfhol, cited in Estrella & Gaventa, 1997).

The project-sustainability debate which arose within St²eep can be seen as a critical reflection on what is happening; as a process, this has helped to explore the ‘underlying layer of meaning’, as Popkewitz (1987) calls it, within the project. It illustrates the general working approach, which is characterised by a strong focus on the processes, open-endedness and flexibility of the programme. This has provided a conducive environment for the growing sustainability debate and allows the necessary space for open and creative dialogue amongst stakeholders, and the opportunity to learn from successes and mistakes.

5.3 CAPACITY DEVELOPMENT

The data show that St²eep is working towards a more holistic approach to capacity development (see sections 4.3.1 and 4.3.2). The following features of this holistic approach identified by Horton *et al.* (2003) can be recognised in St²eep:

5.3.1 Need for continuous learning and change

The previous section on participation and learning illustrates how St²eep promotes capacity development, both of individuals and of St²eep as an organisation, in order to learn from experience and to change in ways that will enhance their performance. This focus on continuous learning and change acknowledges the social and experiential aspect of knowledge and learning where there is greater emphasis on the creation of knowledge and knowledge sharing than on the dissemination of that which is already codified (McGrath & King, 2004).

5.3.2 From individual to organisational capacities

The data show that St²eep engages in capacity development initiatives both at individual and organisational level (see sections 2.3.2, 4.3.1 and 4.3.2):

5.3.2.1 Individual capacity development

Individual capacity development in St²eep involves the development of both hard capacities, which refer to technical and operational skills, and soft capacities, which refer to skills that allow people to function in a broader social system (see section 4.3.1.4). While individual capacity development

was considered to be a strong motivational factor for becoming involved in St²eep or environmental education, it was also noted that individual capacity development alone will not be able to address some of the challenges of the project. One such challenge is the lack of wide involvement of college staff after considerable efforts in capacity development of individual staff (see section 4.3.1.5).

This observation can be analysed further from a systems-thinking perspective, which takes into account the *interconnections* between different levels of social systems via, for example, feedback loops (Galbraith 1999), and which focuses on processes, patterns and relationships with cause and effect separated in time and space (Morgan, 2005). Systems thinking helps to explain the weaknesses of the traditional capacity-development approach, which assumes a linear relationship between the training of individuals, strengthened project-level capacities and improved capacity and performance of the whole organisation. This research clearly shows that other factors – such as institutional capacity development, contextual external factors and motivational factors (see section 5.2.3), ownership (see section 5.2.1), power (see section 5.2.2) and issues of learning and participation (see section 5.2.4) – need to be considered as well.

5.3.2.2 Institutional capacity development

For individual capacity development to result in visible participation in environmental education in the colleges, there is also need for institutional capacity that can provide a framework for the individual capacities to be used. This is in line with the observation of Horton *et al.* (2003) that individual knowledge, skills and attitudes are not sufficient to develop organisational knowledge and promote change. Institutional capacity in St²eep refers to the institutionalisation of environmental education in the colleges through support structures such as steering teams and resource centres, the integration of environmental education in the college curricula, and an accountability system that is fully carried by the institutions, making sure that environmental education is seen as an integral part of college business. This is believed to be key for the future sustainability of St²eep and the implementation of environmental education (see section 4.3.2.2). However, actual support from the relevant authorities seems to be limited to approval or acceptance of the project, and there is not a strong input from this level in the provision of finances, human resources and the recognition of environmental education as college business (see section 4.3.2.1).

A systems-thinking perspective helps to analyse this observation further. Different factors seem to be playing a role in terms of institutional capacity development in St²eep. The poor economic situation in the country is an important external factor that needs to be considered in contextualising this situation of limited institutional support. Limited government budgets and personnel quota give

college administrations very little room to support a cross-curricular environmental education programme that is not recognised as core college business. The donor has also a considerable impact. The availability of donor funds and expatriate personnel provides a temporary alternative for local institutional capacity support in terms of finances and human resources (see section 4.2.2.1). This also contributes to the low priority given to environmental education by college administrations, which results in limited feedback from the administrators towards the lecturers who are involved in St²eep. The role of the donor contributes to St²eep's operating as a parallel system to the normal college system, and therefore it has had little impact on the normal way of working within the colleges that is inherently resistant to change (Chapman, 2003). The fact that the donor is kept accountable for both the success and the failure of the project (see section 4.2.2.1) supports this line of thought.

The absence of organisational support from the local college administrations has also had an impact on the triangular relationship between 'challenge, confidence and support' proposed by Eraut (2003) (see section 2.3.2). While St²eep has succeeded in offering some challenging tasks, the lack of strong appreciation by the college administration of the value of the work done in St²eep helps to explain why the commitment from the majority of the lecturers is still low. However, the establishment of specific project-implementing structures, which constitute teams of staff who work towards a shared purpose, has resulted in a small number of committed lecturers becoming actively involved in St²eep (see section 5.2.4.1 on collaborative learning). These lecturers are willing to take up the challenges provided through the project, and feel supported by the broader St²eep teams (see section 4.2.5.1) in the learning process.

5.3.3 Maintaining relevance in changing times

The need for organisations to shift beyond efficiency and effectiveness to relevance so that they can provide services that meet rapidly changing needs is also a concern for St²eep. As already pointed out in the section on ownership (section 4.2.2), environmental education seems not to be a priority for the majority of the college lecturers. The data clearly show that lecturers need to recognise the relevance of St²eep and environmental education before they are likely to be willing to implement environmental education in their work. So there will be need for St²eep to explore closely what it is that makes environmental education relevant for lecturers, and to focus on those characteristics in order to get more lecturers on board.

The previous chapter provided information on what lecturers consider to be relevant in environmental education. Lecturers from the subjects that had integrated environmental education

pointed out that the holistic approach towards it had helped in making it relevant for those subjects which do not immediately relate to the natural environment. It was explained that in Professional Studies, for example, lecturers were able to apply environmental education in methodology and in the analysis of issues at the social, political and economic levels besides the biophysical level. Both Professional Studies and Geography sections were also able to experiment with new ideas on assessment that were brought in through environmental education. Lecturers saw this recognition of the relevance of environmental education by the practitioners as essential in promoting ownership of the whole idea of environmental education and to achieve its sustained implementation in the colleges. Horton *et al.* (2003) suggest that both operational (hard) capacities and adaptive (soft) capacities are needed to improve efficiency and relevance. Appendix 1 illustrates possible operational and adaptive capacities for different capacity areas within St²EEP.

5.3.4 From operational to strategic management

While this research does not provide an in-depth analysis of strategic management within St²EEP, the data show that there is a realisation in St²EEP about the need to go beyond managing the organisation as an isolated entity. I have already mentioned earlier in this chapter (under motivational factors for participation, section 5.2.3) that networking with stakeholders outside St²EEP is seen as an important organisational practice which is recognised as a strategy towards project sustainability and for enhancing people's motivation and interest in the objectives of the project.

5.4 PROJECT SUSTAINABILITY

5.4.1 Planning for project sustainability

Earlier in this chapter, under participation and learning, I explained that St²EEP has followed an action-research approach to planning for project sustainability (see section 5.2.4.3). I also pointed out that the sustainability debate has helped to explore the 'underlying layer of meaning' (Popkewitz, 1987) within the project. The current operational role of the donor was recognised as a major threat towards project sustainability. VVOB's position in the project actually points towards what Lavergne (2002) refers to as the classic strategy of donor-funded projects. Characteristics of this classic strategy can be observed in St²EEP, in which VVOB creates a protected and artificial environment in which the project operates through the provision of funds and full-time facilitators. This has resulted in the absence of ownership, local commitment and unsustainability, as was described in the first part of this chapter (under ownership, section 5.2.1, and institutional capacity

development, section 5.3). This situation is very much in line with Fukuyama's (2004) reference to capacity destruction by donor organisations (see section 2.6). Related to donor funding being a threat to project sustainability was the belief that some people join the project for immediate personal gains, and this raised questions as to whether the enthusiasm for St²eep would continue if the funding from VVOB stopped.

Besides the issue of donor funding and the role of the donor in the project, there are also a number of other factors mentioned earlier in this chapter that present challenges towards the interest and commitment of lecturers towards St²eep or environmental education and the eventual sustainability of the project. These include the realisation that environmental education is not a priority for the majority of the lecturers and the limited individual and institutional capacity to assert local ownership of the project (see sections 4.2.2, 4.3.1 and 4.3.2).

At this stage several scenarios for project sustainability have emerged, and the complexity of the whole sustainability issue seems to become more evident. The different scenarios acknowledge the importance of considering existing college structures and procedures, establishing official supportive structures for environmental education, including officially appointed environmental education co-ordinators, scaling down the operational role of the donor, capacity development to widen the resource base in environmental education, and the implementation of motivational strategies, such as the recognition of environmental education as part of college work.

Certain criteria for project sustainability identified by Mog (2004) seem to underpin the planning towards project sustainability in St²eep:

1. Character of participation

The three principles of successful and sustainable community involvement, as advocated by Mog (see section 2.6), seem to apply in the sustainability planning process: stakeholders can make their voices heard during the different reflection moments; they have control over drafting the way forward during project steering-team meetings such as the NMT; and they develop capacity to evaluate and solve the problem of future project sustainability through self-assessment and analysis of different sustainability scenarios. Another important observation in terms of participation and sustainability is the fact that a renegotiation of the partnership between the donor and the local partner, proposed by Horton *et al.* (2003) and Anderson *et al.* (2002), is taking place in St²eep, as discussed earlier in the section on

ownership (see section 5.2.1). However, the limited participation by the majority of the lecturers is still a major challenge for St²eep.

2. Success and nature of institution- and capacity-building efforts

As discussed earlier, St²eep engages in capacity-development initiatives at both individual and organisational level. It was also explained earlier in this chapter that St²eep is still facing some challenges in this area. The feeling that the development of individual skills does not reach a wide number of beneficiaries and the lack of strong support at institutional level are examples of these challenges.

3. Diversity, multiplicity and adaptability of ideas promoted by the programme

The scenario planning that characterises the project sustainability planning process, which is based on action research, collaborative learning and team learning, has helped St²eep to provide a full variety of options or sustainability scenarios, which helps to ensure that the project's recommendations are likely to be more adoptable, adaptable and locally appropriate.

4. Accounting for heterogeneity, diversity and dynamism

Mog (2004) argues that a programme's ability to interact with and influence a community depends upon the fact that the target population, and the context it operates in, is diverse, heterogeneous and changes over time. The target population in St²eep involves mainly college lecturers, but the heterogeneity is assured by working with all the lecturers of all the different subjects within those colleges. All the lecturers from all the different subject areas are targeted during the environmental education orientation workshops, and all lecturers are free to join the environmental education steering teams in the colleges. However, this has not resulted in all the lecturers implementing environmental education or being involved in St²eep. As was outlined earlier, limited involvement by the college staff in environmental education or St²eep is one of the main challenges of the project.

5. Understanding and use of local knowledge, skills, initiative and constraints

While the donor representatives are still doing a considerable part of the operational work, the project activities are fully carried out through attempts to draw on the knowledge, skills, initiative and constraints of the local partners. Data from the discussions on the role of the donor and power described earlier in this chapter and in Chapter 4 illustrate this observation.

However, as also noted, the project is still not able to draw fully on the knowledge, skills and initiative of all the lecturers in the colleges.

6. Recognising the influence of external conditions, markets and policies

Earlier in this chapter, under motivational factors affecting the participation process, I indicated that St²eep is indeed recognising the influence of external factors that can have either a motivating or demotivating influence on people's desire to participate in the project or in environmental education. The possibility of people joining St²eep for direct personal benefits such as allowances is related to the current economic crisis in Zimbabwe. While St²eep has no influence on the economic situation, it engages in ongoing renegotiation exercises between the donor and the local environmental education implementation teams about the allowance system and criteria for scholarship applications. While this has sometimes resulted in complaints from college lecturers about low allowances, it has also contributed to assuring that most lecturers who are involved in St²eep are doing so because of a genuine interest in the project or environmental education. The fact that St²eep takes its external context into consideration is important because it characterises a holistic approach that takes into account a variety of factors that influence its success in the colleges and the involvement of college staff in its activities.

5.4.2 Understanding of project sustainability

Ward (2002b) argues that it is important to interpret and evaluate the benefits of development programmes that need to be sustained. Benefits referred to by stakeholders in St²eep that they would like to see sustained include both those for individuals and those for the institutions. Individual benefits include scholarships, staff development and attendance at conferences. Institutional benefits refer to institutional capacity and include well-functioning resource centres, transparent structures responsible for environmental education in the colleges, team work, visible environmental education activities, development of resource materials, and more reflective practice in the colleges.

Active implementation of environmental education in the colleges is seen as an indicator for the future sustainability of environmental education or St²eep. This active implementation is seen as a shared responsibility of different stakeholders, such as lecturers, students, college administrations, the Department of Teacher Education and ministries, with a number of supportive activities being organised at the colleges and with some financial and structural support in place. Individual and

institutional capacity development and a participatory approach are seen as important factors to support this active implementation of environmental education.

5.5 COMPLEX, INTERRELATED FACTORS INFLUENCING PARTICIPATION, CAPACITY BUILDING AND SUSTAINABILITY: SYSTEMS THINKING IN ACTION

Systems thinking, being holistic and dealing with complexity by increasing the level of abstraction, rather than seeking to divide the problem into manageable but separate units (Chapman, 2002), provides a useful theoretical perspective for bringing the different interconnections between different levels within St²eep, and between St²eep and the broader system in which it operates, into the picture.

This research has shown that participation processes in St²eep evolve around the interactions between a political dimension and a learning dimension. The political dimension relates to giving the project stakeholders a critical voice and allowing them to shape the project and involving them in the decision-making process. This approach has fostered an ongoing learning process by a small team of committed stakeholders, based on the principles of collaborative learning, team learning and action research. This has resulted in a better understanding of some important challenges of St²eep. Limited involvement of the majority of the lecturing staff and weak institutional support were shown to be related to the lack of local ownership of the project, the low priority of environmental education in the colleges, skewed power relations in favour of the donor and project staff, certain organisational practices such as inadequate communication, and the poor economic situation in the country. These learnings have allowed the project to reflect on possible strategies to respond to the above-mentioned challenges. This has resulted in a better understanding of the importance and complexity of individual and institutional capacity development, which emerged as crucial strategies towards the successful and sustainable implementation of St²eep and environmental education.

The research has shown that the development of individual capacity has strong potential to motivate lecturers to become involved in the project and to implement environmental education. The success of individual capacity-development efforts, on the other hand, is shown to depend strongly on the development of institutional capacity that provides a supportive framework for the individual capacity to be used. The role of the donor also emerged as an important factor influencing capacity-development processes. The strong operational role of the donor organisation was seen as a serious threat to individual and institutional capacity development since it creates a functional but artificial

and independent project system within the college system, and takes the place of any local institutional support structure that it might seek to develop. Participation was shown to enhance capacity-development processes through the provision of support through learning teams, and through renegotiations of responsibilities and power relations between lecturers involved in St²eep, the donor representatives, and college administrations.

Fostering continuous learning and capacity development, St²eep's participatory approach has also contributed to a better understanding of the interconnectedness of factors that influence the future sustainability of the project and the implementation of environmental education. This has in turn assisted in the development of different scenarios towards project sustainability. The research shows that the project sustainability planning process draws directly from St²eep's ongoing learning process, with individual and institutional capacity development featuring strongly in the different scenarios, and with the external context, such as the economic situation and low priority of environmental education, being recognised as important factors that need to be considered.

Figure 5.1 illustrates the relationship between participation, capacity development and project sustainability in St²eep. The figure shows that participatory processes strengthen capacity-development processes, which in turn enhance project sustainability within the broader context of a poor economic situation in the country and a rather low priority towards environmental education for the majority of the stakeholders.

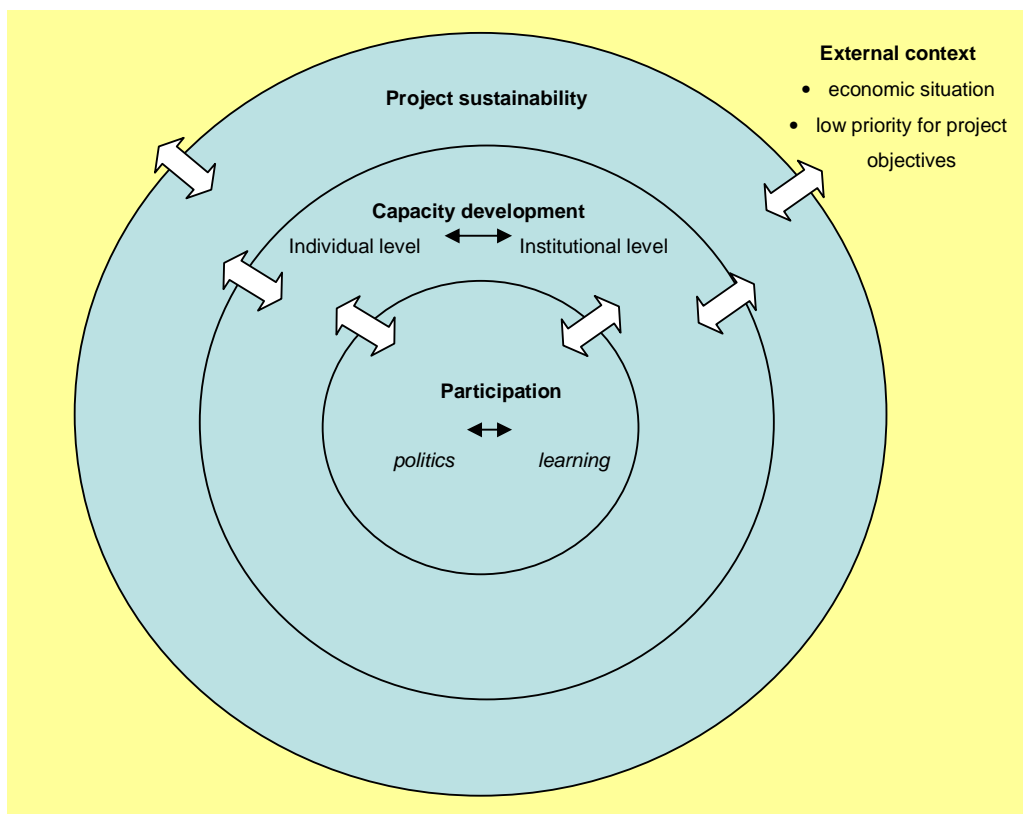


Fig. 5.1: Relationship between participation, capacity development and project sustainability in St²EEP.

The systems-thinking model of the St²EEP project, which explores the interconnectedness of different factors that affect the project, presented in this research, needs critical consideration. This is necessary in view of Ward's (2002a) critique that one cannot consider all factors that affect a system and that we make political decisions of inclusion and exclusion in selecting the boundaries around our areas of study. Such decisions have been made during this research as well. A number of important factors that have an impact on the St²EEP system, or on the larger educational system in which St²EEP operates, have not been considered. Such factors include the current political situation in Zimbabwe in which there is a suspicion that donor-funded projects have hidden agendas; a more thorough analysis of the socio-economic environment which has a strong impact on the social well-being of project stakeholders; a review of the organisational culture in teacher training colleges; and the historical perspective in terms of inherited structured syllabuses and the process of syllabus review. Human dynamics and cross-cultural issues affecting capacity-development processes were also not considered. While the scope and timing of this research did not allow for a closer analysis of these factors, they are certainly playing an important role in the functioning of St²EEP as a system, and this research can therefore not claim to have carried out a complete systems analysis of

the St²eep project. However, the systems approach used in this research has helped to bring out a better understanding of complex processes such as participation, capacity development and project sustainability, and the interactions between them.

5.6 CONCLUSION

In this chapter I have drawn on a systems-thinking perspective (as discussed in Chapter 2) to explore the complexity and interrelatedness of different factors and processes that play an important role with regard to participation, capacity development and project sustainability within St²eep. The literature that brings these issues into a systems perspective helped a great deal. A number of authors refer to participation as an essential component of a systemic perspective to understand and manage organisational change (Cao *et al.*, 2003), to foster learning (Horton *et al.*, 2003; Simons, 2004; Senge, 1994; Morgan, 2005; Crawford, 2004) to enhance capacity development (Horton *et al.*, 2003; Morgan, 2005) and to foster sustainability of development projects (Mog, 2004).

The chapter has shown that participation in St²eep is not a clearly defined variable that can be easily controlled but is a complex social process that one can only attempt to explore by considering the different factors and processes that are involved in the participation process within the social context of the project. The chapter looked both at the political aspect of participation, by exploring the issue of broad vs. narrow participation, ownership, power, motivational factors, and at the role of participation in learning processes that feature within St²eep, such as collaborative learning, team learning and action research. The chapter also identified St²eep's movement towards a holistic approach in terms of capacity development, and recognised the complexity of these processes. As a result, insight was obtained into the different aspects of individual and institutional capacity development, their interrelationships, the development of soft and hard capacities, and how capacity development impacts on the participation process and project sustainability. The chapter also illustrates how the systems perspective has helped to clarify the importance of participation and capacity development in planning towards project sustainability.

These new insights inform the recommendations described in chapter 6.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1 INTRODUCTION

This chapter provides a summary of the study and draws upon the research findings to suggest a number of recommendations. Besides specific recommendations for St²eep on participation, capacity development and project sustainability, the chapter also provides a broad recommendation based on a ‘fuzzy generalisation’ (Bassey, 1999) concerning the need for a less prominent, dominant and directive operational role for donor organisations in donor-funded projects (which by implication requires donors to be more flexible, responsive, integral to, and supportive of existing institutional structures and operations). A number of recommendations for further research are also stated. The final part of the chapter gives a reflexive overview of the research process.

6.2 SUMMARY OF THE STUDY

A systems perspective has assisted this case study to explore the complexity and interrelatedness of participation, capacity development and project sustainability in St²eep. The research clearly shows that these issues should not be seen in isolation but explored in relation to each other in order to get a deeper insight in the reality of St²eep. Looking at St²eep as an open social system within a broader system of secondary teacher education in Zimbabwe, participation of the stakeholders has played a determining role in the shaping and functioning of the project and its interaction with its broader college environment. Throughout the research, participation emerges as an essential component in fostering learning in St²eep. Participation has resulted in people being able to influence the project through opportunities for consultation and the project’s openness to critical analysis and to participants’ recommendations. Two important factors learned were that environmental education is not a priority for the majority of college staff and that the donor organisation, VVOB, was seen to be the engine of the project. This resulted in the realisation that local ownership does not develop automatically out of a project that is initially donor-driven but is a process that needs active fostering and is influenced by a number of motivational factors and external factors, such as the economic situation, over which the project has no direct influence.

The research shows, too, that participation plays a crucial role in the process of fostering ownership. Participation has helped in a renegotiation of productive power relationships between the donor and the local partners and between St²eep and the rest of the college staff and college administrations.

A holistic approach towards capacity development has been particularly instrumental within this process of renegotiation of power relations in order to promote ownership. The need for continuous learning and change at individual and organisational level has emerged as a prominent feature of this holistic approach towards capacity development. Learning through collaborative engagement with others in ongoing St²eep processes and team learning during the end-of-year evaluation workshops and management team meetings has been shown to motivate a limited number of lecturers to become actively involved because they feel supported by the broader St²eep teams in their learning process. By being engaged in staff-development initiatives and general college-based environmental education activities, lecturers were given an opportunity to have critical input into St²eep and to discover whether environmental education was relevant in their work.

While these individual capacity-development initiatives emerge as strong motivational factors, they are not able to motivate a large number of lecturers to become actively involved in St²eep or environmental education. Institutional capacity development and the role of the donor are other crucial factors that need to be considered. The donor, through its strong operational role and its input of financial and human resources, contributes to St²eep's operating as an artificial system parallel to that of the college administrations, which are already burdened by low budgets because of the depressed economic situation in the country. This has resulted in limited support from college administrations towards the project. This lack of strong institutional support, together with the lack of recognition of the value of the work done in St²eep or environmental education, impacts unfavourably on lecturers' commitment to become involved and take up the challenges provided by St²eep. However, the establishment of specific project-implementing structures, which constitute teams of staff who work towards a shared purpose, has resulted in a small number of committed lecturers who are actively involved in St²eep. These lecturers are willing to take up challenges provided through the project and feel supported by the broader St²eep teams in the learning process.

The strong focus on continuous learning has allowed the project to respond to the challenge of limited ownership and commitment, and has promoted an extended participatory learning and planning process towards future project sustainability. This process has resulted in deeper understanding of the complexity of the issue of project sustainability. It has also facilitated the development of different scenarios for project sustainability and has helped to clarify the roles of the different stakeholders to make sure that St²eep and the implementation of environmental education can be sustained in the colleges. This sustainability planning and learning process is characterised by an action-research orientation which has been able to involve different

stakeholders in the debate in order to draw on the deeper knowledge obtained about the complexity of the project to plan for the future. Participatory evaluation workshops, focus groups and plenary discussion sessions during planning meetings and the development of a discussion document have provided opportunities for key stakeholders to express their views, negotiate meaning, and learn and plan towards the future.

6.3 RECOMMENDATIONS

The outcomes of this research illustrate that St²eep's focus on participation, capacity development and planning towards project sustainability enhances the development and ownership of a sound framework in which engagement with environmental-education processes can be sustained within secondary teacher training in Zimbabwe. At the same time, the study has also identified limited involvement by the majority of college lecturers as one of the major challenges of the St²eep project. This challenge is clearly linked to some of the issues that have been described above. The findings of this study give rise to the following recommendations.

6.3.1 Recommendations on participation

The research shows that, within St²eep, there is need to approach participation as a complex process characterised by a political dimension and a learning dimension which are interrelated. The research outcomes illustrate that collaborative learning and learning in teams during various project activities has provided opportunities for stakeholders to negotiate meaning through dialogue with other stakeholders and critically reflect upon experiences and develop shared meaning and shape the flow of the project. This has resulted in the start of a renegotiation of partnerships that are less unequal with regard to bargaining power, more tolerant of differences in views, and based upon the local partners and stakeholders driving the development process, as well as on a critical reflection upon the operational role of the donor in the project. Continuous learning through collaborative engagement with others in ongoing St²eep processes has been shown to motivate lecturers to become actively involved because they feel supported by the broader St²eep teams in their learning processes. This illustrates that the learning aspect and the political dimension within the participation process can enhance each other and promote ownership by the local stakeholders. The research therefore recommends that there is need for a deliberate focus on both dimensions of the participation process in order to foster local ownership. Placing the learning aspect of participation more centrally in St²eep can be a possible strategy in motivating a larger number of college lecturers to become involved in the project and in the implementation of environmental education. Activities that strengthen team learning therefore need to be explored and made an integral part of future project plans.

The study also shows that ownership cannot be seen as analogous to its meaning in exchanges involving property rights (Anderson et al., 2002) but is a process that is negotiated through dialogue between the project stakeholders. This observation supports the recommendation that there is need for the donor organisation and the St²EEP implementation team to be patient with regard to ownership, and that they should actively foster this process. Participatory processes in St²EEP have resulted in a deeper understanding of possible strategies to foster this ownership process, which impacts on stakeholders' active involvement in the project. Such strategies include capacity development at the individual and institutional level, renegotiation of responsibilities, and a critical reflection on the role of the donor. The next sections provides some specific recommendations pertaining to those strategies.

6.3.2 Recommendations on capacity development

6.3.2.1 Capacity development at both individual and institutional level

This research has shown that there is a need for St²EEP to strengthen its holistic approach towards capacity development. While there has been considerable focus on capacity-development initiatives at the individual level, through training courses and collaborative learning in the different St²EEP teams and St²EEP activities, and at the institutional level, through the setting up of operational St²EEP structures, these have not yet resulted in a wide involvement of college lecturers in environmental education. More needs to be done at the individual level to explore how environmental education can become relevant for the college lecturers, hence there is a need to focus much more strongly on activities that can support the implementation of environmental education within the colleges. St²EEP can provide challenges concerning environmental education that lecturers can take up. However, St²EEP also has to work towards a situation where there is the necessary support for lecturers to be confident of taking up those challenges successfully.

Besides individual capacity-development activities, St²EEP also needs to strengthen its effort to develop capacity at the institutional level so that there is sufficient institutional support for lecturers who take up environmental education challenges. The research has shown that meaningful institutional support does not only involve the provision of financial and human resources but also relates to the recognition that environmental education is part of normal college business, and that the necessary recognition is given to lecturers who implement environmental education in their work. These considerations therefore need to guide any future sustainability planning process. Capacity-development processes at the level of St²EEP as an organisation also need to focus on

networking with stakeholders outside St²eep, and on better communication between St²eep and the rest of the college staff. These are important organisational practices that are recognised as strategies towards project sustainability and can be used to enhance people's motivation and interest in becoming involved in environmental education processes.

6.3.2.2 *Rethinking the role of the donor*

A major observation from this research is the importance of the current operational role of the donor organisation in St²eep and its negative impact on capacity-development processes. Based on these observations, I strongly recommend the downscaling of the operational role of VVOB in St²eep through a renegotiation of the responsibilities of the donor and the local stakeholders in the project. This should also become an important priority in the project sustainability planning process. Renegotiation of the prominent, dominant and directive operational role of the donor is shown to be crucial in enhancing local capacity development.

The research clearly shows that the donor has a role to play in fostering the participation process and strengthening learning within the St²eep project, and should therefore still be involved in the planning, monitoring and evaluation activities of St²eep. Moving away from operational tasks, VVOB will be able to invest more time in capacity-development activities at the individual and institutional levels. A problem associated with the renegotiation of the role of the donor is the issue of achieving measurable outputs and outcomes, which are currently the main indicators that the donor organisation uses to measure success. By moving away from a dominant operational role, the donor will have less control over the achievement of the project's objectives, as they are outlined in the current project document. Renegotiation of the role of the donor at the level of St²eep will therefore also have to take place at the level of the donor organisation itself. A revised role in terms of capacity development will necessarily have to result in a revised project document, with corresponding monitoring and evaluation frameworks.

The need for donor organisations to move away from dominant, prominent and directive operational roles in order to be able to support capacity-development processes, as shown in the St²eep project through this research, can be seen as a 'fuzzy generalisation' that is applicable for VVOB as a whole as well as for other development organisations. The research has shown that there may well be a need for such organisations to take a step back and to create the space for capacity development that is not limited by time constraints and the need for short-term results. This 'space' is seemingly required for genuine processes of capacity development. This research has indicated that donor organisations may not be able to expect that they can realise predefined

long-term outcomes simply by putting in specific inputs. It would seem that the actual stakeholders should have a say about those inputs, and they should be in charge of how they are used and integrated into local institutional contexts in order to support the processes they are engaged in. To look for specific tangible or measurable outcomes may well be a tricky business. It would seem that there may be a need for donor organisations like VVOB to focus much more on the actual work of capacity-development initiatives and avoid taking a strong operational role in project activities. This would allow the donor organisation to foster the ownership process and step into a process of renegotiation of partnerships, or to establish different 'start-up' frameworks for partnerships.

6.3.3 Recommendations on project sustainability

6.3.3.1 The project sustainability planning process in St²eep

The research recommends that the different scenarios that have emerged during the project sustainability planning process should not be considered as a number of separate options from which the best one needs to be chosen. Each scenario refers to only one aspect of the St²eep system, and all scenarios need to be considered together in order to map out a more sustainable future for the project. The current scenarios focus on institutional capacity development through the establishment of institutionalised local project support structures using normal college procedures and individual capacity development in order to widen the resource base in environmental education. When pursuing the combined scenarios, this research also recommends that St²eep works specifically towards the benefits that stakeholders want to see sustained. These benefits include the provision of opportunities for professional development in environmental education through scholarships and targeted staff-development initiatives, operational resource centres, the organisation of visible environmental education activities in the colleges, and the development of supportive learning resource materials. Recommendations stated earlier in terms of participation and the role of the donor will also need very close consideration when applying the different sustainability scenarios in order to foster local ownership and broader participation of the college lecturers.

6.3.3.2 Recommendation on sustainability planning in donor funded projects

The research shows that the project sustainability planning process has helped to bring St²eep into a learning mode. An action-research process characterised by the creation of different learning spaces, such as the self-assessment workshops and the various opportunities for team learning, has led to a deeper insight into the challenges of the project and the importance of participation in terms of capacity development and project sustainability within the broader context of St²eep. These

insights are helpful in guiding the project to foster local ownership, strengthen wider participation and become more sustainable. Because of the unsustainable nature of most donor-funded projects, this research recommends that it is important to integrate a strategy towards project sustainability planning at the start of any project that involves donor funding, and to make project sustainability a key result area and planning towards it an integral part of normal project activities. This would help to avoid project sustainability becoming a small paragraph at the end of the project document, only to be considered when the project is about to end.

6.3.4 Recommendations for further research

Recommendation 1: Further exploration of the participation process

Through its systems-thinking perspective, this research has illustrated a number of important interconnections that determine St²eep as an open social system. Examples include the relationship between the political and learning dimensions of the participation process in St²eep, and the interaction between capacity-development processes at the individual and institutional levels. This research has provided a possible framework for the investigation of these relationships and has initiated their exploration. More research is needed, however, to explore them more rigorously. Certain aspects of the participation process, such as the levels and channels of participation and the participation cycle (see section 2.5), were not well covered in this research and need further analysis because they might have an important impact on the learning aspect of the participation process in St²eep.

Recommendation 2: Exploration of factors that impact on the learning process

This research has shown that continuous learning through collaborative engagement with others in ongoing St²eep processes can motivate lecturers to take up challenges provided by the project because they feel supported by the broader St²eep teams in their learning processes. At the same time the research also indicates that there is a need for capacity-development initiatives directed at the individual level as well as at the institutional level in order to provide support for the environmental education implementation process, and to make sure that challenges taken up by the lecturers in terms of environmental education are valued as professional achievements by the college administrations. This triangular relationship (similar to Eraut's triangle of important learning factors, see section 2.3.2.) – between the challenges provided by St²eep, the commitment and confidence of lecturers taking up those challenges, and the available support – provides a useful framework for further research. This framework can help in investigating the effectiveness of different support strategies related to capacity development at the individual and institutional levels,

as suggested by this research. It could also be used to explore different activities that St²eeep might want to experiment with in terms of strengthening learning processes. This is important because learning processes are shown to be crucial in strengthening capacity development, local ownership and project sustainability.

Recommendation 3: Further exploration of the role of the donor

It will be necessary to investigate how a new, less dominant, prominent and directive operational role of the donor, as suggested by this research, could materialise in the future, and how this could impact on the project in terms of environmental education implementation and project sustainability. Such research will not only inform the new positioning of the donor in St²eeep but could also inform VVOB and other development organisations on alternative ways of assisting educational programmes through a participatory approach that focuses on capacity development, local ownership, learning, and project sustainability. Such an approach could result in the donor organisation having a smaller operational role and less control over the project's outputs and outcomes, which are common indicators for success in the traditional results-based, project-cycle management systems. An exploration of alternative project-cycle management systems to guide such alternative approach could therefore be another interesting research option.

Recommendation 4: Translating the sustainability planning process into action through continued action research

The action-research process towards project sustainability needs to continue. This is necessary to allow the outcomes of this research to feed into St²eeep's sustainability planning process. It could also assist project stakeholders in reflecting critically on the implementation of the various scenarios that emerged from the sustainability planning process and in making any necessary adjustments.

Recommendation 5: Examination of other factors affecting St²eeep

While the systems-thinking perspective used in this study has helped to bring some complex processes into relationship with each other, other processes or factors have been left out and need to be explored through further research. For example, an examination of the organisational culture of Zimbabwe's teachers' colleges could provide a host more insights into issues of participation, capacity development and project sustainability. An in-depth review of the socio-economic and political context, and its relationship to curriculum traditions in Zimbabwe, could provide more insights into issues of 'perceived relevance' and 'real relevance'. Further exploration of the human

dynamics and cross-cultural issues affecting capacity-development processes might widen our understanding of the ‘political’ and ‘learning’ dimensions of the participation process.

6.4 A REFLEXIVE REVIEW OF THE RESEARCH PROCESS

Conducting any research process always poses a number of challenges to the researcher. Research processes are by their very nature contextually bound, and are also shaped by social relationships, power relations and institutional frameworks. Lather (1986) notes that self-reflexivity is a key concern in ensuring that post-positivist studies are trustworthy. Bourdieu (2000) comments further on reflexivity in research, and notes that researchers should not only consider their own roles in the research reflexively (reflect on their position and power in the context of the research undertaking), but also reflexively review the research from within its context (i.e. the relevance, value and difficulties associated with the research context itself). He recommends this strategy to avoid what he calls ‘narcissistic reflexivity’ in research. In reviewing this research reflexively, I take both Lather’s (1986) and Bourdieu’s (2000) recommendations into account.

A major problem I faced during the research was to move myself out of the data and produce a focused discussion on the key issues of the thesis, being participation, capacity development and project sustainability. At first I didn’t manage to get further in the data-analysis process than a presentation of a large number of data lists with an overview of my thinking process as I worked with each of the data sources. My closeness to the data, because of my position as lead facilitator in St²eep, made it very difficult to detach myself from the project and create the necessary distance to allow a focused and critical reflection on the data at hand. This problem was compounded by the fact that my theoretical basis was insufficiently developed to provide me with adequate tools to interpret the data. After discussing this problem with my tutor and colleagues, I began to realise that my initial draft of Chapter 2 was simply a compilation of different bits and pieces of information about participation, capacity development and project sustainability without a central narrative or a ‘developing story’ to bind the different pieces together. I was missing a strong theoretical framework to guide the data analysis and that I could draw upon to interpret the data and bring together the insights from the data and the insights from the theory. I managed to get out of this impasse by going back to the reading and by furthering my study of the relevant theory. This helped me to come up with clear analytical frameworks with which to study the key issues of the thesis, and to develop a central narrative by framing the research within a systems-thinking perspective. Only with the theory in place was I able to create the necessary distance from the data and to proceed meaningfully with the data analysis and discussion of the results.

Another challenge I experienced during this research was the difficulty of looking ‘outside the box’ once I had gathered all the relational elements into the St²eep system following a systems-thinking approach. While systems thinking provided me with the means to bring complex processes into relationship with each other, I need to acknowledge that I was not able to examine all aspects of the system. A deeper analysis of contextual issues – such as the organisational culture of Zimbabwe’s teachers colleges or an in-depth review of the socio-economic context and its relationship to curriculum traditions (syllabuses) in Zimbabwe – would have provided more insights into participation, capacity development and project sustainability, and into issues of ‘perceived relevance’ and ‘real relevance’ pertaining to environmental education and St²eep. This also allowed me to develop a reflective stance to systems thinking as guiding theoretical framework, as I realised that, although it was useful to the study, there was much that could not be included even though it was framed within a systems-thinking approach. I was able to gain real, practical insight into the limitations of systems-thinking approaches, as articulated by Ward (2002a).

My position as lead facilitator representing the main donor organisation has also been a challenge in conducting this research. I was aware that the human dynamics (including hidden or obvious power relations) and cross-cultural issues related to my presence as a donor representative might have a considerable impact on the key issues under study and on the way that St²eep stakeholders related to me as researcher. I realised that my position in the project could affect people’s responses when I was conducting face-to-face interviews and in my interpretations of the data. I therefore adopted a variety of data-collection methods in order to obtain a more balanced view of people’s perceptions about St²eep. I also consciously adopted a critical perspective on the data, and tried to self-consciously review the role and position of the donor organisation in the context of the project. I did not shy away from being critical of the project and of its design and implementation strategy, and have shared all critical perspectives that I have been able to derive in the study, within the limitations of its theoretical and methodological framework.

With many environmental education initiatives in a developing country context being donor-funded, this study provides a relevant case study of such an initiative. The study provides deeper insights into the importance of participation, capacity development and project sustainability in the implementation of a donor-funded environmental education initiative. The research process has been able to unpack these complex concepts within the St²eep context, and provides an in-depth examination of their components and their importance in the implementation of the St²eep initiative. This has allowed the research to propose a critical relationship between the political and

learning dimensions of the participation process, which provides a basis for a holistic capacity-development process directed at the individual and institutional level in order to achieve a sustainable environmental education initiative within a context of poor economic conditions and a general lack of interest in environmental education. Highlighting the importance of stakeholders' learning in teams, and discovering the relevance of environmental education within the context of their work and their personal experience, have also resulted in the questioning of the role of the project implementers and the donor. Rather than being in control of project inputs and planned outputs, the research indicates that the donors have an important role to play in facilitating the learning process among the project implementers and targeted stakeholders by providing opportunities for supported engagement with environmental education in the St2eep initiative. More research is needed, however, to explore these propositions further, and to examine how they can be translated into visible and sustained environmental education implementation within the St2eep context.

6.5 CONCLUSION

This study has provided a critical examination of a donor-funded environmental education initiative, St²eep, in a developing country context. While words like participation, capacity development and project sustainability are often used as slogans, with no specific meaning within a 'politically correct' donor discourse, this study provides an in-depth investigation of the meaning and the role of these concepts in St²eep.

Throughout the research, participation emerges as an essential component for fostering learning in St²eep, and resulted in people being able to influence the project through opportunities for consultation and the openness of the project to critical analysis and to participants' recommendations.

Participatory evaluation workshops, focus groups and plenary discussion sessions during planning meetings and the development of a discussion document have provided opportunities for key stakeholders to express their views, negotiate meaning, learn, and plan towards the future. As a result, project stakeholders were able to deal with the political issues of the participation process which were often hidden and which include ownership, motivation, power relations and organisational practices. The research therefore proposes an important relationship between the political and learning dimensions of the participation processes in St²eep, which has allowed the project implementers and stakeholders to gain important insights into participation, capacity

development and project sustainability, which in turn have informed the project. This research has tried to translate these insights in practical recommendations that can help St²eep and other donor-funded environmental education initiatives to address some important challenges, such as the lack of ownership, motivation of people to become involved in environmental education activities, the unsustainability of the project, and capacity development being experienced as merely the training of individuals.

These recommendations include:

- the strengthening of team learning activities in future project plans;
- capacity development at both the individual and institutional level;
- a renegotiation of the role of the donor towards a stronger focus on the facilitation of learning and capacity-development processes; and
- making project sustainability a key result area, and planning towards it an integral part of the normal project activities.

Digging beneath the surface layer of meaning in St²eep, and being confronted with the hidden challenges in the project, has been refreshing. It has enabled project stakeholders to learn about their challenges and to address them instead of struggling forward on the assumption that things are moving as planned. The relationship between participation, capacity development and project sustainability within St²eep has been a source of energy that has kept project stakeholders moving forward, reflecting on what they are doing and learning, and getting others involved. It has provided us with a strong antidote against the usual frustration and cynicism that is often associated with donor-funded environmental education initiatives.

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APPENDICES

Introductory note:

The following abbreviations/acronyms occur in the documents that appear in the Appendices":

BTTC	Belvedere Technical Teachers College
CDU	Curriculum Development Unit
EE	Environmental Education
EEASA	Environmental Education Association of Southern Africa
ELF	Environmental Liaison Forum
ENDA	Environment
EEOP	Environmental Education Orientation Programme
Geo	Geography
KRA	Key result areas
M & E	Monitoring and evaluation
MoESC	Ministry of Education, Sport and Culture
MoET	Ministry of Environment and Tourism
MoHTE	Ministry of Higher and tertiary education
NMT	National Management Team Meeting
OM	Outcome mapping
OMT	Operational Management Team
PS	Professional studies
TTT	Training Task Team
WOB	Flemish Office for Development Cooperation and Technical Assistance

Appendix 1: Examples of some capacity areas within St²eep (identified during the St²eep outcome mapping workshop, September 2005) and examples of operational and adaptive capacities (adapted from Horton *et al.*, 2003, p. 40).

Capacity area	Operational capacities	Adaptive capacities	Example of St²eep
Human resources	<ul style="list-style-type: none"> ▪ Training ▪ Levels ▪ Recruitment & hiring ▪ Performance Appraisal ▪ Systems 	<ul style="list-style-type: none"> ▪ Staff development planning that responds to emerging issues ▪ Staff staying current in their field of expertise ▪ Ability of staff to reflect, learn and innovate 	<ul style="list-style-type: none"> ▪ EEOP, Website training, Research Course, ▪ Job description & job profile – will assist in need for training ▪ Self-assessment & OM ▪ Workshops - opportunities for reflection & learning
Infrastructure, technology and financial resources	<ul style="list-style-type: none"> ▪ Financial resources ▪ Accounting ▪ Facilities & Maintenance ▪ Availability of technology ▪ Planning and management of facilities, technology and finances 	<ul style="list-style-type: none"> ▪ Seeking new funding ▪ Assessing and redesigning systems to adapt to weak infrastructure ▪ Obtaining support from higher authorities for infrastructure, technology and finances 	<ul style="list-style-type: none"> ▪ Management of EE ▪ Resource Centres ▪ Management of office & IT equipment ▪ Fundraising efforts ▪ Lobby and advocacy for College Admin for office space and equipment
Strategic leadership	<ul style="list-style-type: none"> ▪ Strategic planning ▪ Performance oriented policies and procedures ▪ Clear division of roles, responsibilities and authority ▪ Governance structures ▪ Guidelines and incentives for performance in relation to organisational objectives 	<ul style="list-style-type: none"> ▪ Strategic management ▪ Leading organisational learning ▪ Seeking new ideas, opportunities and resources ▪ Scanning and monitoring the external environment ▪ Managing change 	<ul style="list-style-type: none"> ▪ OMT & NMT ▪ Yearly Evaluation ▪ OM workshops ▪ Job descriptions ▪ M & E tools
Programme and process management	<ul style="list-style-type: none"> ▪ Project Cycle Management ▪ Project planning and formulation ▪ Monitoring and evaluation procedures ▪ Reporting ▪ Communications 	<ul style="list-style-type: none"> ▪ Assessing and redesigning policies, systems & procedures ▪ Learning from both successes and mistakes ▪ Obtaining support from higher authorities ▪ Changing processes to respond to new needs and opportunities 	<ul style="list-style-type: none"> ▪ OM workshop ▪ M & E tools ▪ Steering teams, OMT and NMT
Networking and linking to other organisations and stakeholders	<ul style="list-style-type: none"> ▪ Assessing potential partners ▪ Establishing viable partnerships ▪ Outsourcing ▪ Negotiating 	<ul style="list-style-type: none"> ▪ Involving stakeholders in planning and review activities to get their inputs in decision making ▪ Finding common ground between the organisation's goal and those of others ▪ Developing links with new groups to address changing needs and opportunities 	<ul style="list-style-type: none"> ▪ OMT and NMT ▪ High attendance of stakeholders to all St²eep activities ▪ ELF, EEASA, ...

Appendix 2: Guiding questions for focus group interviews

Dear lecturer,

St²eeep is currently investigating how we can best support the EE implementation process for those subjects which syllabi have been reviewed last year.

We would like to invite all subject lecturers for a meeting at college to discuss and identify areas for support.

This will allow St²eeep to come up with support strategies which will better match the needs of your subject.

We came up with 10 questions (see below) which can guide the discussion. We would like to ask to reflect already on these questions before you come to the meeting.

Details meeting:

Many thanks for your cooperation!

Best regards,
The St²eeep Team

GUIDING QUESTIONS

1. Now that you have been using your reviewed syllabus into which EE has been integrated since the beginning of the year, what progress have you made with regard to the implementing of:
 - a. Environmental (Education) issues into the content?
 - b. Additional participatory approaches?
 - c. Additional assessment techniques?
 - d. Has your section a way to capture or file the new ideas, materials, handouts, activities, lessons, ... with regard to EE.
2. What have these changes meant in terms of your preparation for teaching?
3. How have your students responded?
4. What has worked well so far?
5. What has not worked well?
6. What obstacles have you encountered?
7. What else would you like to do?
8. What type of support would you require from St²eeep?
9. How have you made use of the St²eeep Resource Centre at your college?
10. What additions to the Resource Centre would be helpful to you in implementing EE in your teaching?

Appendix 3: Guiding questions for face-to-face interviews

Guiding questions on participation:

1. What do you understand by participation?
2. What St²eep activities/processes have you participated in? (at what level?)
3. What degree of freedom did you have to participate or not to participate. (What are the criteria for being a participant? Why did you participate?)
4. I would like to ask about your feelings/views concerning your participation in St²eep.
5. Whose reality counts in the process of participation.?
6. How is the process of decision making organised?
7. What are your views on the role and value of your participation within the learning process e.g. environmental education, professional practice,....?
8. How important do you think is your participation within the complete process?

Capacity development guiding questions:

9. Is there anything that you think you learned through St²eep?
10. Through your engagement within St²eep, is there anything that you do differently now?
11. Have you experienced any changes through St²eep at the level of college (& Ministry, DTE?)
12. What are your views about possible limitations for the change process which is facilitated by St²eep.

Project Sustainability planning:

13. Are there any benefits from the St²eep programme that you would like to see sustained?
14. How do you see your role in assuring the future sustainability of
 - a. those benefits
 - b. St²eep/EE implementation.
15. How do you think St²eep can make sure it becomes sustainable in the future?
16. What do you understand by future sustainability of EE implementation/St²eep?

Appendix 4: Outcomes from St²eep training needs analysis workshop, 7–9 October 2003

Table App. 4.1: Outcomes of SWOT analysis during training needs analysis workshop

Weaknesses and threats	Opportunities and strengths
Individual capacities:	
<ul style="list-style-type: none"> ▪ No adequate assessment skills, Evaluation of the review process is difficult, Appropriate monitoring often lacks ▪ Inadequate knowledge, skills and appreciation of EE (methodologies) ▪ EE content is diluted or neutralized, ▪ Danger of overlap, difficult to supervise overlap ▪ Content depth will be sacrificed, Minimal coverage ▪ Scepticism on whether EE will bring about significant improvement to present review process ▪ Resistance from certain lecturers (because of not knowing what EE is) ▪ Attitude of stakeholders ▪ Resistance to change ▪ Ignorance ▪ 	<ul style="list-style-type: none"> ▪ Enhancing teacher competencies ▪ Enrichment as lecturer, Skills improvement ▪ EE as excuse to experiment with new methods for teaching and learning, Will stimulate participatory learning approaches, Chances for innovative approaches to education ▪ Develop critical analysis skills ▪ Capacity building ▪ Environmental literacy ▪ More environment awareness ▪ Changes for sustainable development ▪ Infusion gives less resistance than new invention ▪ Encourages creativity in teaching ▪ Social awareness & Widening of horizon ▪ EE can be used as a change agent ▪ To think and reflect critically, Become innovative ▪ Opportunity to reflect on what is possible or not
Institutional capacities:	
<ul style="list-style-type: none"> ▪ Lack of resource(s): financial, materials, expertise ▪ Curriculum: syllabi overload, Time consuming process, Rigid syllabus structure, Increased workload, Being overshadowed by existing subjects, May not be examined - it will lose its importance, Congestion, Derail focus on original syllabi content ▪ Train staff who will then disappear 	<ul style="list-style-type: none"> ▪ Availability of resources: Funding support ▪ Full-time staff available (facilitators) ▪ Curriculum: Relative autonomy of the syllabi, Subject enhancement, Integration of subjects, broadens curriculum, Enrichment of syllabi content, Integration skills, Making curriculum relevant and learner centred, develop flexible curriculum / syllabi, ▪ College autonomy in development and review of syllabi, Opportunity to include new and relevant EE content ▪ Time can be made, it is available during normal lessons ▪ Staff development, In-service training for lecturers, ▪ Sound environmental management
Participation	
<ul style="list-style-type: none"> ▪ Foreign imposition / donor ▪ Lack of ownership ▪ No cooperation 	<ul style="list-style-type: none"> ▪ Zimbabwean reality & Local expertise ▪ Involvement of nearly all the stakeholders ▪ Involves everyone ▪ Encourages conservation and real life participation ▪ Lecturers know where EE can fit in their syllabi ▪ Already acceptable to students and lecturers ▪ Willingness of the colleges to take the process ▪ Build professional teamwork and accountability ▪ Curriculum developers and implementers can work together ▪ Bring external EE expertise into the colleges, sharing platform available
External (national) context	
<ul style="list-style-type: none"> ▪ Political interference 	<ul style="list-style-type: none"> ▪ Employment opportunities ▪ Minimize land abuse ▪ EE policy to back the whole process
Project sustainability	
<ul style="list-style-type: none"> ▪ One training / review action is not sufficient – sustainability ▪ Lack of sustainability/ Sustainability beyond 2006? ▪ Temporary addition to the curriculum 	<ul style="list-style-type: none"> ▪ EE is not as new concept, it probably exist already, it just need to be strengthened ▪ If successful the training program can be offered to secondary teachers

Table App. 4.2: Participant stakeholders during the training needs analysis workshop

- College lecturers (35) from the 3 colleges (15 different subjects);

- University of Zimbabwe Department of Teacher Education (2);
- Ministry of Higher Education (1);
- Ministry of Education (1);
- Ministry of Environment (1);
- ZWEECF (facilitators of the national EE Policy) (2);
- EE experts (3);
- NGO's (EE officer of Botanical Gardens, Action & ENDA) (3);
- Secondary School Teachers (2);
- St2eep management (6)
- VVOB (donor) (4).

Appendix 5: Outcomes from the St²eep evaluation and planning workshop, 1–2 December 2003, Harare.

Table App. 5.1: Categorised strengths/opportunities and weaknesses/threats of the St²eep project

Strengths & opportunities	Weaknesses & threats
Individual capacities	
<ul style="list-style-type: none"> ▪ successful in provision of different skills and in the empowerment of stakeholders ▪ Project is empowering equipping members with new skills, knowledge and sense of responsibility ▪ Project has huge potential for staff development in EE, IT for all staff. ▪ a lot of enthusiasm and initiative shown by students in environment club ▪ Staff development of all staff in EE could address the jealousy problem 	<ul style="list-style-type: none"> ▪ Lack of support from skilled members towards new members in terms of EE. ▪ Lack or absence of experts or advisors in terms of qualifications and experience to draw upon when need arises ▪ Misconception on EE within colleges. There is tendency to concentrate too much on biophysical. ▪ Resistance to change by lecturers and the college community ▪ Jealousy among team members and other college staff.
Institutional capacities	
<ul style="list-style-type: none"> ▪ Well stocked resource centres support EE activities ▪ Institutionalisation of EE ▪ infusion of EE in all the subjects has potential for sustainability. ▪ Successful integration and implementation of EE and approval by DTE and support from sister Ministry can assure sustainability. ▪ Programme can continue if EE is assessed in the subjects. 	<ul style="list-style-type: none"> ▪ Under-utilisation of resource centres at the moment ▪ Theft and abuse of equipment in resource centres. Equipment should be audited and guarded like any other college equipment. ▪ Steering team responsibilities often come as an extra duty to normal activities ▪ Lecturers have to find extra time.
Participation	
<ul style="list-style-type: none"> ▪ active involvement in St2eep ovr EE (broad or narrow participation) ▪ Steering teams are a good representation of college departments ▪ The teams are open to all staff and most subject areas are represented ▪ The project managed to reach all staff in college ▪ The project has managed to involve both MoESC, MoET and MoHTE 	<ul style="list-style-type: none"> ▪ Project only identified with a few members ▪ Responsibilities for EE activities remain confined to members of St2eep ▪ St2eep's absence in academic board meetings needs to be addressed. ▪ Many people do not have a clear picture about what St2eep and EE is.
Motivation (ownership)	
<ul style="list-style-type: none"> ▪ There seems to be a collective ownership of the project with a unity of purpose by all stakeholders. ▪ high level of interest, motivation and commitment in steering teams ▪ Participatory approach seems to ensure ownership and motivation. ▪ more action in view of EE in the three colleges 	<ul style="list-style-type: none"> ▪ Limited beneficiaries within college. ▪ Some staff members hide the fact that they are not interested in EE by saying the whole EE project is owned by those few lecturers that are involved in EE.
Organisational practices (e.g. communication)	
<ul style="list-style-type: none"> ▪ High level of communication between coordinators and other members of the team. ▪ greater inter college interaction amongst lecturers and students ▪ Participatory approach used seems to promote team work ▪ Braindrain. Working in a team and massive human resources development could address this. 	<ul style="list-style-type: none"> ▪ Lack of communication between steering teams and college community. This may result in non steering team members to perceive the programme as belonging to the steering team only. ▪ Lack of effective report back to rest of the staff after attending courses/workshops ▪ Inadequate information dissemination in the colleges. ▪ Lack of coordination because some St2eep activities clash with other college activities. ▪ No St2eep brochure yet. ▪ Insufficient communication between the Ministry of Education and the Ministry of Higher Education.
External context	
	<ul style="list-style-type: none"> ▪ Economic situation makes it difficult for lecturers and students to be fully committed.
Project sustainability	
Role of the donor	
<ul style="list-style-type: none"> ▪ Adequate funding at present 	<ul style="list-style-type: none"> ▪ If other donors return to Zimbabwe, will the enthusiasm for St2eep continue? ▪ Some people join project for immediate personal gains

	<ul style="list-style-type: none"> Is the enthusiasm going to remain after the funding from VVOB has gone? Successful integration of EE and the involvement of other donor organisations could address this.
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Table App. 5.2: Main challenges for St²eep

Challenge 1: Associating St²eep with only a few people within the college and many people do not have a clear picture about what St²eep and EE is.	
Suggested strategies to address challenge 1:	
<ul style="list-style-type: none"> Maybe it is still too early at this stage because the project is still at the stage of training lecturers within the colleges. Dissemination of information to all staff. Everyone in college should become aware that EE will be infused and will be examinable in the subject. There should be more commitment than only interest because EE is supposed to go in to the curriculum and St²eep should be represented in the academic boards. Staff development sessions to be organised on EE and St²eep. Because other projects have failed in the past, some people expect this project to fail as well and refuse to do anything or ignore the project as away to kill it. There is therefore need to analyse what made other projects fail. 	
Challenge 2: Acceptability of the project	
Suggested strategies to address challenge 2:	
<ul style="list-style-type: none"> Produce promotional materials like flyers to give consistent information about the project to a wide public, including all students and lecturers. Continued marketing of St²eep to both old and new members who joined the colleges by constant information dissemination; 	
Challenge 3: dissemination of information	
Suggested strategies to address challenge 3:	
<ul style="list-style-type: none"> Organise/strategise the information flow. Clarity what programme is all about is very critical to be understood by everyone. Clear definition of St²eep and EE for everybody in college. Flyers on St²eep could be produced. This could help the consistency of the idea on what St²eep is all about. 	
Challenge 4: How to infuse EE into the subjects?	
Suggested strategies to address challenge 4:	
<ul style="list-style-type: none"> Greening the curriculum was identified as a favourable integration method,... EE might not be integrated in all subjects. Lecturers who are already involved should already apply EE in their subject so that other educators see that EE can be applied in their subjects. Project might have to focus on the student teachers as the target group who will then enter the schools and implement EE there, instead of focusing on teachers that are already in the field. This might be needed because of limited means and time. Approaches of EE integration should be determined in liaison with the subject lecturers. It was also noted that there is still no clarity for many people about what EE really is, or the theoretical conception of EE. A flyer could therefore be very useful. 	

Table App. 5.3: Strategies towards project sustainability, suggested during evaluation workshop

Critical areas for project sustainability	Responses from focus group discussions in view of critical areas.
1. EE as a requirement in the curriculum	<ul style="list-style-type: none"> Integration and implementation of EE and approval by Department of Teacher Education (DTE) and support from Ministry of Education can assure sustainability. Programme can continue if EE is assessed in the subjects. Aim to complete the integration process by the time the programme is finished. (Donor would become redundant). EE will then be implemented by the academic board and not by the EE steering teams any more.
2. Funding	<ul style="list-style-type: none"> Is the enthusiasm going to remain after the funding from VVOB has gone? VVOB might not be the only source of funding. Other donors could be identified (e.g. SADC, Unesco) and this identification should start now. Also income generating strategies could start. Need for staff development on how to write proposals to access funds and how to budget and manage funds. Money is needed for continuous support, evaluation and follow up of the project, self-sustaining of the project (e.g. repairing of resources, etc...).
3. Integration of EE in secondary schools.	<ul style="list-style-type: none"> For St²eep to make changes to school curricula, St²eep has to be expanded since Ministry of Education will have to change its curricula for teachers to be able to implement their EE knowledge. If the curriculum development unit (CDU) does not follow the EE initiatives then EE will not get into the school curriculum. There is need to do some work on this in

	cooperation with Ministry of Education. It was felt that there is also need for a closer link between Ministry of higher education, Ministry of Education and the Examination Council for secondary schools to make this project going very far.
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Table App. 5.4: Organisations represented during evaluation workshop

- | |
|---|
| <ul style="list-style-type: none">• Ministry of Higher and Tertiary Education.• Ministry of Education, Sport and Culture.• Ministry of Environment and Tourism through the Department of Natural Resources.• Department of Teacher Education, University of Zimbabwe• Belvedere Technical Teachers College.• Mutare Teachers College• Seke Primary Teachers College• VVOB (donor)• Bulawayo Hillside Teachers College• National Botanic Gardens• Zimbabwe Open University• Zimbabwe Environmental Education Consultative Forum• Environmental Liaison Forum |
|---|

Appendix 6: Outcomes from the mid-term self-assessment workshop, 1–2 December 2004, Harare.

Table App. 6.1: Outputs achieved by St²eep during 2004

Positive outputs	Negative outputs
<i>Institutional capacity</i>	
<ul style="list-style-type: none"> ▪ College admin. supports participation in St²eep. ▪ Support from two ministries of education – approval of programme and participation at several levels. ▪ Involvement DTE in curriculum review and attending meetings. ▪ Establishment of project structures at national and college level (various task teams, EE steering teams, resource centres, EE clubs) ▪ Establishment of resource centres ▪ Orientation programme and Syllabus review process (EE integrated in various subjects) and establishment of teaching practice syllabus for first time. ▪ Manual on EE resource materials (draft) ▪ Increased EE awareness among lecturers. ▪ Strengthening of the steering teams. ▪ Start of discussion about an institutional EE policy. ▪ EE activities within colleges (Commemoration of national env. Days, ...). 	<ul style="list-style-type: none"> ▪ Lecturers away from college duties ▪ Increased work load ▪ Time-consuming activities ▪ Strained relations with colleagues,
<i>Individual capacity</i>	
<ul style="list-style-type: none"> ▪ Professional development through courses ▪ Skills development (EE, IT, management, facilitation, training, research, communication, writing) ▪ Raised awareness and commitment in EE ▪ Growing self-confidence ▪ Coordinators developed leadership skills 	<ul style="list-style-type: none"> ▪ Reduced time for families (key members are often on the road) ▪ No monetary rewards ▪ Lack of certificates of attendance of the OP
<i>Participation</i>	
<p><i>Organisational practice</i></p> <ul style="list-style-type: none"> ▪ Collaboration between college departments and between different colleges (team building between colleges) ▪ International exposure at conferences and participation in book fair. ▪ Cooperation with environmental organisations. Networking between colleges and other organisations) ▪ Networking among individuals ▪ Improved collegiality, Partnering with persons who have the appropriate expertise. ▪ Increased social interaction in and between colleges 	<p><i>Organisational practice</i></p> <ul style="list-style-type: none"> ▪ EE club pushes out other clubs, <p><i>Active involvement in St²eep</i></p> <ul style="list-style-type: none"> ▪ Limited participation of lecturers ▪ St²eep is exclusive, not enough involvement of others ▪ Attendance of meetings erratic <p><i>Ownership & interest in St²eep.</i></p> <ul style="list-style-type: none"> ▪ Being labelled (e.g. Mr. St²eep) ▪ Colleagues in department do not see participation in St²eep activities as part of college activities.

Table App. 6.2: External factors affecting the EE integration process

Positive/enabling factors	Negative factors
<i>External context</i>	
<ul style="list-style-type: none"> ▪ Ministerial policies and EE policy of MoET providing national framework for EE. ▪ Global trends in EE ▪ Existence of variety of local and regional organisations active in EE related activities. ▪ Appropriate functions and fora at which to exhibit St²eep (e.g. agric shows, EEASA) and to present papers. ▪ Existence of local and international EE courses create possibilities for training and staff development. ▪ Existence of highly developed general professional expertise at colleges and in other institutions. 	<ul style="list-style-type: none"> ▪ Inflation, rising costs. ▪ Transport problems, mode of transport unreliable. ▪ Negative publicity on Zimbabwe which can result in problematic government to government relationships ▪ Inter ministerial politics and problems ▪ People are stressed by socio-economic situation in Zim ▪ High staff turn-over & Low staff level ▪ Inadequacy of funding ▪ Low morale – lack of incentives ▪ Resistance to anything new (innovations) – people feel threatened – people entrenched in old ways ▪ Inadequacy of funding ▪ Fragmentation of subject areas within colleges instead of collaboration ▪ Secondary Schools don't have power to change syllabi on their own. ▪ Many programmes are being introduced in schools and colleges– there is competition. Some might be more attractive than others

<ul style="list-style-type: none"> ▪ Availability of donor funding (VVOB) 	<ul style="list-style-type: none"> ▪ Previous negative experiences with other programmes ▪ VVOB policy: lower allowances as government
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Table App. 6.3: Questionnaires and average scores on structures, procedures and processes in St2eep

6.3.1. questionnaire questions on structures, procedures and processes within St²eep.

1. How transparent is the structure of St²eep?
2. How would you rate the efficiency of the St²eep structure (EE coordinator, EE facilitator, OMT and NMT)?
3. How adequate is the communication about St²eep activities?
4. In your opinion, what is the level of lecturers' understanding of what St²eep is about?
5. In your opinion, what is the level of the administration's understanding of what St²eep is about?
6. In your opinion, what is the level of students' understanding of what St²eep is about?
7. How open is St²eep to involve and attract lecturers who are interested?
8. How would you rate the efficiency (cost-effectiveness) of the syllabus review process, so far?
9. How would you rate the effectiveness (relevancy? impact?) of the syllabus review process, so far?
10. How would you rate the level of participation in our overall procedures?
11. How would you rate the operational & logistic support of VVOB within St²eep?
12. How happy are you with the decision making within St²eep?
13. To what extent does VVOB influence the decision making within St²eep?
14. How important is the integration of EE?
15. How likely is it that St²eep will achieve its goal of integrating EE?

Fig. 6.3.2.: Questionnaire average score on structures, procedures and processes

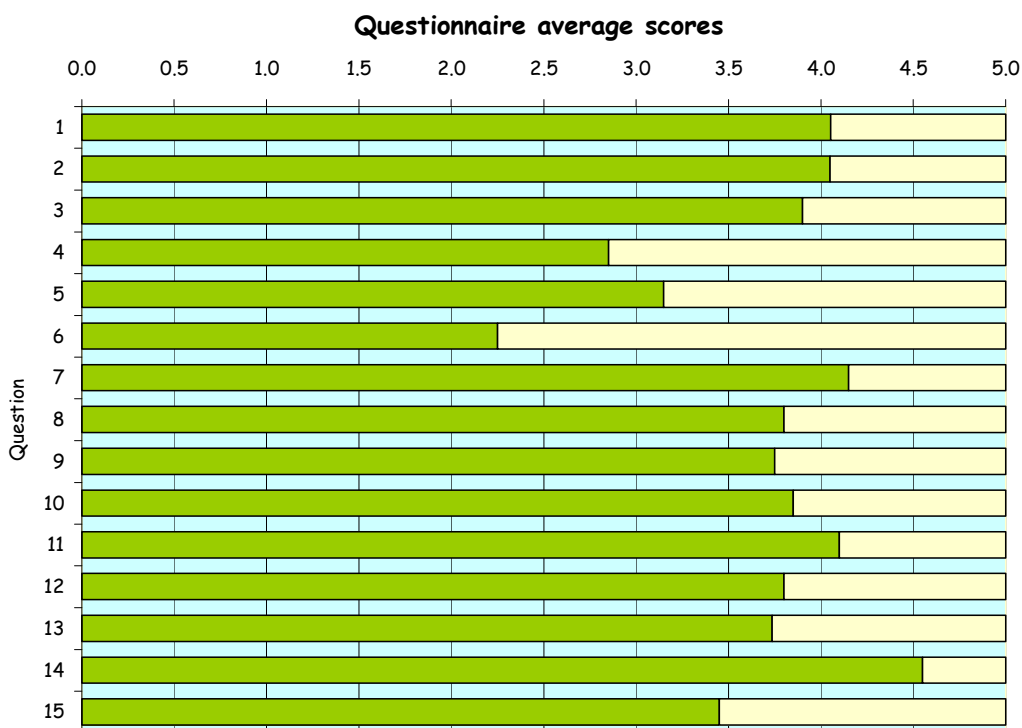


Table App. 6.4. Outcomes from plenary discussions on participants' views about St²eep's structure, procedures and processes

Participation (organisational practices)
<p><i>Communication</i></p> <ul style="list-style-type: none"> ▪ We don't know what the roles and responsibilities of OMT and NMT are. ▪ The criteria used for selection of scholarships and participation in meetings & workshops are not known to all. It is only known to those who attend meetings. ▪ We need to define roles and responsibilities of people involved in St²eep. ▪ Minutes of meetings should be shared. – Don't hide behind meetings. ▪ Communication suffers when people are labelled as Mr. St²eep or Mrs St²eep. Invite labellers to St²eep functions. ▪ St²eep should be involved in activities organised by other clubs and programmes at college – internal networking & communication. ▪ Update the website regularly with current St²eep activities. ▪ Participants felt that college administrations were aware of what is happening in St²eep. (e.g. Principals sit in National Management Team). <p><i>Delegation of tasks, empowerment & decision making</i></p> <ul style="list-style-type: none"> ▪ Very often the facilitator and the coordinator are away from college – then things are scheduled in a rush ▪ try to have someone in charge of the EE office.. ▪ Facilitator and coordinator must make necessary arrangements when leaving the college on St2eep business. ▪ There is need for more delegation – empower others to carry on when the facilitator and the coordinator are away. ▪ Although there might be the perception that VVOB has a serious impact in the decision making, the important decisions within St²eep are made by Zimbabweans. There are times when St2eep has to live with VVOB policies. Every project works within confines of certain policies of the donor.
Project sustainability (Effectiveness, relevance & impact of the syllabus review process so far)
<ul style="list-style-type: none"> ▪ Work with students will really take of when there are revised syllabuses. ▪ The real results of EE will only be visible when the new syllabi are implemented into the classroom practice. ▪ Consultative visits need to be polished up – some members of departments did not attend. ▪ This is a complicated process. It might end up on paper. ▪ Difficult to measure. ▪ There are many things over which we have no control. ▪ We need a second St²eep because it is not likely that all subjects will have gone through the OP and integrated EE by end 2006 and the implementation process as such is a difficult and crucial step for the success of the EE integration.

Table App. 6.5: Motivational factors and incentives for participation in St²eep and for successful continuation of EE in the colleges.

<p>Individual capacities</p> <ul style="list-style-type: none"> ▪ Professional development through courses – Rhodes University ▪ Opportunities for staff development, training, .. ▪ Development of new skills: training skills, facilitators, editor, research, writing, ... ▪ Training programmes should continue (EEOP) for new lecturers and also additional training for lecturers who have already gone through the EEOP ▪ Support in Higher diplomas and Degrees and any other courses ▪ Assistance for further courses related to St²eep, Certificates ▪ Take on a different role, Self actualisation – discover your talents ▪ Passion for the environment, interest in EE, environmental conscious ▪ Drive to be updated with new ideas, new approaches, To be part of something which is in, which is modern ▪ Personal growth ▪ Support for what we have been doing in the past ▪ Opportunity to be useful, to accomplish something
<p>Institutional capacity</p> <ul style="list-style-type: none"> ▪ Opportunity for promotion – Improve your C.V. – career opportunities ▪ Recognition, acknowledgment of efforts through documented and recorded recommendations, certificates, ... in the files of lecturers ▪ EE should be infused in the time table, admin should recognize; Infusion in the KRA's ▪ The logistical support by full time employed VVOB facilitators (donor) helps local partners to participate in St²eep. Facilitators play a big role in these logistical arrangements, actually they are doing everything, because the coordinator has a full-time lecturing load. There is need for appointment of local full-time St²eep coordinator is appointed. A separate local coordinator position has also some dangers since we create a Mr. St²eep in each college. Everything will be centred in one person. ▪ Feasible structures which guarantee sustainability ▪ Access to IT and other learning support material, books, equipment, to really integrate EE ▪ Logistical support to arrange adequate travelling, allowances
<p>Participation (Organisational practices)</p> <ul style="list-style-type: none"> ▪ The participatory approach of St²eep & The flexibility of St²eep agendas ▪ EE is a challenge, it keeps you going, it is new concept, new ideas ▪ We get to know other professionals, academic, CDU, NGO's, ... Can make self known through the Internet., Involvement of community ▪ Social Interaction, team spirit, support of colleagues, interesting contacts, ... ▪ Our backgrounds are helping to be involved, Try out your ideas ▪ It stimulates academic and professional debates ▪ There must be transparency in the selection of participants for international trainings and conferences and preference should be given to regular contributors to EE and St²eep. ▪ Continuation of the inter college exchange (cross-pollination of ideas, ...)
<p>Project sustainability (incentives related to donor funding)</p> <ul style="list-style-type: none"> ▪ Allowances, Monetary numeration – higher allowances, they are too low ▪ To leave the station once in a while, Relieved form usual work load ▪ Funds for publishing own work ▪ Travel opportunity – national and regional, Adventure ▪ Good treatment (food, accommodation, ...) Enjoyment of places where we go ▪ Social aspects – party for all the stakeholders and lecturers ▪ Availability of full time VVOB facilitators (donor) who provide logistical support.

Table App. 6.6: Participants' views on the role of the donor in St²eep

<p>Statement 1: "Sometimes I have the impression that the donors are much more excited about 'their' programmes than we are".</p>
<p>St²eep:</p> <p>While the details of this statement do not apply to St²eep, it will be difficult for them to escape the prevailing atmosphere. Principals are concerned about the sustainability of the programme.</p>
<p>Remarks:</p> <p>Who is St²eep? or ... if this programme fails, who will be accountable?</p> <ul style="list-style-type: none"> ▪ If collapsing tomorrow, VVOB facilitators will be accountable and be responsible for it, not the lecturers and not the ministries.

If the programme is successful, who will get the credits?

- The lecturers and VVOB will get the credits, but not individual lecturers as such unless the credits would be mentioned and acknowledged in personal files (but that is not the case so far). It was felt that such recommendation letters would give lecturers credits and it would be a reward for their job done. At this moment it is only the VVOB facilitators who are gaining something through St²eep. They are getting credits for their performance and will get better jobs later on. Lecturers are more anonymous within St²eep.

Can St²eep fail?

- Yes, it can, for instance through staff turnover, low interest because of lack of incentives, the team spirit might be gone, ...
- We need a deliberate effort to implement EE in tangible ways to ensure sustainability.

Can staff development and induction training of lecturers be used to ensure sustainability?

- Not always true, staff development or induction training can be done in different ways. It often depends on the passion of some lecturers and/or the atmosphere in the college.

Statement 2: "Sustainability is a typical concept of donor-organisations. If we are honest, we do not care too much about sustainability".

St²eep:

- Ownership is not yet developed widely
- St²eep works with beneficiaries
- If there is over-reliance on the VVOB facilitators, St²eep may face sustainability problems.

Remarks:

- We have to be careful that St²eep is not meeting the same failures as other programmes since we rely too much on the VVOB facilitators. We have to find a way to unzip the facilitators to ensure we survive
- It was felt that this argument could be used in the request for an EE coordinator.

Statement 3: "Often people are dragged into operations of donors with no particular interest to them, in the name of participation".

St²eep:

In the beginning it was true but along the way, we were involved and we are fully participants, taking important decisions

Remarks:

- On the surface there is participation, we are there and can take certain decisions, but in the back - behind our back - the donor is steering and deciding the process with regard to the timeframe and budget line.
- There are always strains wherever we work. In a college setting, there are government budgets and timeframes. In this case, it is the donor. It is inherent at this kind of work.
- At least, we can shape the St²eep programme and its flow and that is what I call participation.

Statement 4: "Creating ownership ... is when we do what donors want us to do, but we do so voluntarily".

St²eep:

The statement does not apply at all to St²eep. There was a lot of consultation from the start of the project until now. Programme activities build on participants' recommendations and the project is open to critical analysis by any interested parties.

Statement 5: "Sometimes donors are very eager to get things done (push) while partners tend to say yes but then often resist".

St²eep:

- It was felt that there is no shared vision between VVOB and MoHTE on the integration of EE
- It was felt that the donor has also other targets than we have, which we don't know.

Remark:

- The timetable was developed by many, but also imposed to others, but not only by the donor, because OMT and TTT was responsible for the timeframes and there are also pre-determined time frames (DTE, ...).
- Whose agenda is the EE integration?
 - Not very clear.
 - Planning and formulating was shared but the donor has directed heavily since environment was a priority for them, so their influence was high, but the planning process was shared.
 - On the other hand we are guided and working within the national EE policy and the Report of the Presidential Commission which legitimize what we are doing. It is not only a donor thing.
 - We are doing it because of the donor, but it is our agenda
 - The action plan was formulated by lots of people, not only the donor
- We have to open up and continue the dialogue to avoid separation of visions on EE integration (especially between

Table App. 6.7: Threats towards project sustainability and possible way forward

LEVEL	Sustainability THREATS (within our control)	SHORT-TERM ACTIONS 2005	LONG-TERM ACTIONS 2006 & later
EE syllabi review and implementation	No guarantee that the reviewed syllabi are translated into classroom practice. How do we monitor the implementation process?	St ² EEP to guide implementation of EE in revised subject areas in order to learn the gaps for support	Install permanent national body which does ongoing support and monitoring of the EE implementation. College-based monitoring structure to be set up
		EE reflected in assessed work of students	Ongoing staff development on EE in colleges
		Create space and time for sharing experiences on EE activities/lessons among lecturers	Monitoring by DTE?
		Include EE in the KRA's	
	How to ensure continuity of EE with new incoming lecturers?	Ongoing staff development in college facilitated by key members of St ² EEP	Ongoing staff development on EE in colleges
	Need for specific EE learning support materials (buying & production)	Production of EE materials by college lecturers.	Production of materials by lecturers
Finances	EE integration of EE into secondary education. How??	Develop project for funding to integrate EE into sec. education (proposal writing)	Need for an Education Officer responsible for EE at provincial level in Ministry of education.
	Decreasing VVOB budget to support the project while EE integration activities increase	New partnerships to help financial backing	New partnerships for financial backing & co-funding from MOHTE for EE process
Human resources	Responsibility and accountability of the finances/budget?	Come up with a workable plan to transfer the responsibilities of the finances to the local partners	(Gradual) transfer of responsibilities and accountabilities of finances
	High involvement of VVOB facilitators at this moment	Coordinators understudy the work of VVOB Facilitator and gradual delegation of duties.	College administrations to relieve pressure of work of coordinators.
Motivation/ Incentives	Sufficient human resources supporting the EE process? ▪ National EE Coordinator/ EE College coordinator? ▪ Other ways?	Start in-depth discussion on different possible options with regard to human resources	Incorporation in college structures
	Lack of recognition of participating lecturers in the EE integration process	Written recommendations for st ² EEP activities - include documentation on EE engagement in personal files of lecturers	Inclusion in Key result areas of lecturers.
Operational, Organisational, Administration	De-motivation of lecturers due to heavy workload		Recommendation for staff development in institution of higher learning
	Continuation of National Management? Need for a person/team to be able to take decisions		EE Management structure incorporated in Ministry of higher and tertiary education system?
	College-based EE support structure: organise activities, approve expenses, ...		Integration of EE structures into college structure EE should be seen as part and parcel of core business of the college

Appendix 7: Outcomes from the National Management Team Meeting, 10 December 2004

Table App. 7.1: Outcomes of NMT meeting

Critical factors	Matters of concern	Way forward
Motivation of stakeholders participating in St²EEP/EE	<ul style="list-style-type: none"> ▪ There is the misconception that St²EEP belongs to a few people in the colleges (e.g. Mr. and Mrs. St²EEP) resulting in limited participation in St²EEP activities by other members ▪ Work overload is demotivating 	<ul style="list-style-type: none"> ▪ Principals didn't see any problem to have St²EEP activities listed as key result areas in the work plan for St²EEP coordinators. However there must be caution that St²EEP activities do not become more important than lecturing activities. There is need for balancing. ▪ Principals questioned the need for financial rewards. It was felt that there are a lot of professional rewards. E.g. Participating at EEASA conference, facilitating workshop sessions, research, ... ▪ The core group of St²EEP has to make sure that it brings out the message to the other staff members that there are no monetary gains and that everyone can benefit from the professional gains. ▪ There is need to build teams within the institutions as this allows as much inclusion as you can. Rotating positions can also be a good idea. This also applies for going to conferences and courses.
Human resources	<ul style="list-style-type: none"> ▪ VVOB facilitators are mostly in charge of logistics. ▪ Local college coordinators have to do St²EEP activities on top of full workload. 	<ul style="list-style-type: none"> ▪ There is need to hand over responsibilities of VVOB facilitators to coordinators. ▪ Principals and MoHTE understand the need to relieve the normal college workload from the college coordinators. ▪ Principals show consensus on the fact that there is still need for a local coordinator after 2006. ▪ People trained within St²EEP in academic and professional spheres need to play a role for clusters of subjects after St²EEP in terms of continued EE implementation. Staff development needs to be ongoing.
Financial resources	<ul style="list-style-type: none"> ▪ It was felt that St²EEP is definitely also the agenda of the local partner but it was recognized that St²EEP would not be possible without the help of the donor. 	<ul style="list-style-type: none"> ▪ Donor funds can in the future be accounted for by present financial procedures in colleges? The way UNICEF works by allowing coordinators to write proposals, get the funds, use them to mount their activities and afterwards return the financial reports and receipts. ▪ When fully integrated in curriculum the process of EE implementation should follow normal government funding procedures. Donor funding serves more to kick start the whole process. Programme, if successful can be fully taken on board by institutions and MoHTE. ▪ By 2006 we should be able to carry out major activities with a bit of support here and there from the donor after 2006.
Some general remarks		
<ul style="list-style-type: none"> ▪ While it is difficult to quantify professional growth, the syllabus review process is seen to be professionally very enriching. ▪ Resistance to change is a human characteristic. ▪ Competition among donor programmes needs to be avoided. MoHTE tries to make sure that different organisations work together when doing their programmes. ▪ There is need to transfer EE from college syllabi into the secondary school curriculum. This is food for thought for future projects. ▪ Implementation of EE in college syllabi will have an impact on what is happening in the schools through the work of the EE sensitive teachers. ▪ It was noted that in St²EEP, decision making is done very much in collaboration with Zimbabwe stakeholders and VVOB facilitators. It was also appreciated that the NMT members were drawn in the evaluation exercise. It was also felt that personalities play an important role in how a programme runs. This also affects the way the local partner reacts to the programme facilitator. ▪ St²EEP should not run forever but EE should continue after St²EEP. 		

Appendix 8: Outcomes from focus group interviews on EE implementation at BTTC.

Q1: Now that you have been using your reviewed syllabus into which EE has been integrated since the beginning of the year, what progress have you made with regard to the implementation of:

a. Environmental (Education) issues into the content?

There seems to be more focus on the complexity of certain issues, e.g. investigation of impact of mining practices instead of just giving notes on mining methods in Geo or discussion of political and social issues in view of the clean up campaigns in PS. During external assessment of the PS syllabus at the end of 2004, one of the assessors queried if what the section called new EE content in the syllabus was really new. The section then had to explain that the content had always been EE related and that they just emphasized the EE component which was already there.

b. Additional participatory approaches:

In Geo, students seem to be more involved in the learning process, carrying out tasks and presenting back to the group during lectures. There are instances whereby lecturers use feedback from students to add to their lecture notes. This is an illustration of the lecturers also learning within the process. There was also some reference to cooperation between the science and geography section whereby some geography students accompanied science students on an environmental education study week. PS students seem to take on participatory methods on the condition that the lecturer spearheads it.

c. Additional assessment techniques:

Both in PS and GEO lecturers are experimenting with alternative forms of assessment including peer assessment among students as a form of formative assessment and self assessment. Some informal assessment of the lecturers by the students is carried out in Geo. Both sections underscore the need for peer assessment among lecturers. The need to thoroughly prepare for alternative assessment was acknowledged by both sections.

d. Has your section a way to capture or file the new ideas, materials, handouts, activities. Lessons. ... with regard to EE?

The Geo section compiles a file of the environmental project reports and reports from EE workshops or activities in which section members participated. In the PS section there is no documentation system yet.

Q2: What have these changes meant in terms of your preparation for teaching? How have your students responded?

The Geo section referred to 'rejuvenation' through EE with less rote learning and more involvement by the students in the learning process. Students are now doing more research looking for their own information and lecturers actually learn from students when they present back. Also in the PS section there has been some experimentation with EE related assignments for example on development of resource materials using recycled materials. PS lecturers noted that doing something new can be time consuming and people don't have too much time and the current economic climate is also not very conducive for innovation. The students however in PS are seen to be quite positive about something new such as EE as long as the lecturer is guiding it. Also in Geo, students have responded positively and many students are also member of the environment club.

Q3: What has worked well so far? What has not worked well? What obstacles have you encountered? What else would you like to do?

It was felt that the EE implementation has made a very good start and the students will now write an exam paper which now has questions based on Environmental education.

Geo lecturers indicated that they wanted to organise more fieldtrips, get training in PowerPoint and train students more in the development and use of models. Lecturers mentioned the following things. They also mentioned that they would like to try to implement the EE which was included in the syllabus.

PS lecturers indicated that they wanted to experiment further with self assessment but give it more time, and to allow students evaluate their own programme, such as their experiences during teaching practice. The following extract during the discussion illustrates this “ in one instance students were categorized according to type of school (rich or poor) when reporting back on the TP experience. Problems were discussed as identified in each group of schools. During these discussions, EE issues were coming up: effects of rain on learning eg. Flooding, work on the land,... . Something similar was also happening with students coming from industrial attachment.....” Further involving resource people during the lectures and the inclusion of EE in the college strategic plan were seen as important things that need to be done.

Q4: What type of support would you require from St²eep?

Support for EE courses. Need for staff development on EE for new lecturers and ongoing staff development. Support in writing of resource materials and EE modules. Networking with other colleges and universities. IT training for lecturers.

Q5: How have you made use of the St²eep resource centre at your college?

Books are borrowed from resource centre and current information accessed through the internet in resource centr.

Q6: What additions to the resource centre would be helpful to you in implementing EE in your teaching?

Equipment should be more accessible.

Appendix 9: Extract from St²EEP three-monthly monitoring report of July-September 2004.

Learning experiences with Capacity Building in the project (July-September 2004)

Action learning: reflection & reflexivity in practice

During the last TTT meeting the Ministry official of the MoHTE commended St²EEP for its reflective approach in the planning and evaluation of activities. In this case we were evaluating the follow-up seminars as part of the syllabus review process which was initiated by the 5-day orientation programme.

Facilitated by a St²EEP facilitator, the college-based subject groups are meeting on regular basis to review their syllabus. Each group meets 3 to 4 times. In between the meetings the facilitators, guiding the process in the different colleges, meet to reflect and share their experiences. Although the main focus is centred on the syllabus review, the TTT takes time to discuss and share experiences with regard to the group dynamics, the college culture, challenges within the departments, hidden dimensions of the lecturers' practice, the role of the facilitators, the approaches used, personal difficulties, relational aspects, ... All the comments and difficulties brought up by individual members are taken serious and discussed within the TTT and proposals on the way forward are discussed within the group. These solutions guide the different facilitators for the next follow-up visit after which a similar reflection is done to pave the way forward.

This reflective exercise, which is time and money consuming has been valued positively as it creates space and time for learning about ourselves as facilitators, St²EEP as a programme and the reality within the institutions. It provides opportunities for better and more imbedded future actions with regard to the syllabi review process as well as for any further St²EEP initiatives.

CB on system level:

St²EEP has been involved in three planning meetings of the EEASA (Environmental Education Association of Southern Africa) conference which will be held in Zimbabwe in 2006.

In Cooperation with the Zimbabwe Environmental Education Consultative Forum (ZWECEF) St²EEP has facilitated the printing of the final National EE policy document which is now officially approved by the Minister of Environment and Tourism.

- St²EEP is part of the steering team that is developing a proposal for a programme that seeks to facilitate and monitor the implementation of the National EE policy. This proposal will be presented to the SADC Regional Environmental Education Centre (SADC REEP) and the Canadian Environmental Responsive Fund. This proposal should be finalised during the 4th quarter of this year.

Appendix 10: Examples of recorded observations

Observation 1:

Date: 22-06-05

Place: Belvedere Technical Teachers College (BTTC), Information Technology resource centre

Time: 2 pm

Description: Only two lecturers participated in the powerpoint training session which was requested and organised by the EE steering team and facilitated by the VVOB facilitator at BTTC. One of the participants who is also a member of the EE steering team told me that the course was announced orally in the staff room during tea break and by means of a written notice on the notice board. He also indicated that a good number of lecturers had shown interest in the training and had told him that they would attend.

Observation 2:

Place: BTTC St²eep resource centre

Date: 23-06-05

Time: 11 am.

Description: I (VVOB facilitator) received little support in the preparation for the timeline session for the next EE orientation programme. The EE coordinator however came back from his leave to give some more information on the session which he was used to present. The members of the EE steering team who volunteered to take over the workshop session from the EE coordinator who was on leave needed to be reminded to check their session. They seem to assume things will be in order without them being involved in the preparation of their session.

Appendix 11: Agreement form on interview procedures

Dear interviewee,

This interview seeks to gather in-depth information from relevant stakeholders on the issue of participation, capacity development and project sustainability in the context of the St²eep project.

Before we start the interview I would like you to read and agree on the following interview procedures.

Suggested Interview Procedures:

- As researcher I guarantee to safeguard the anonymity of the interviewee. Letter codes linked to the respondents instead of personal names will be used throughout the research report. Detailed descriptions of the respondents' positions within St²eep or within the college will be avoided.
- I would prefer to record the interview using a digital flash card. However, if you prefer the interview not to be recorded I can make notes during the interview.
- As an interviewee you will be given a copy of the interview transcript for you to be able to make any corrections before the data will be analysed.
- Are there any other procedures that you would like to see considered?

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.....
.....

Signature and date of the interviewee

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Signature and date of the interviewer

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