Underlying Mechanisms Affecting Institutionalisation of Environmental Education Courses in Southern Africa

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Abstract

This paper discusses the underlying causal mechanisms that enabled or constrained institutionalisation of environmental education in 12 institutions in eight countries in southern Africa. The study was carried out in the context of the Southern Africa Development Community Regional Environmental Education Support Programme's Course Development Network (CDN). This paper reports on part of the author's doctoral study and draws on critical realism as the ontological lens. Data analysis was done by means of a retroductive mode of inference, as articulated by Danermark, Ekström, Jakosben and Karlsson (2002). The paper demonstrates that there are a number of underlying causal mechanisms, which may enable or constrain institutionalisation of environmental education. They include factors at play at both national and institutional level; namely, responsiveness to national and institutional needs, recognition and ownership, accreditation and certification, institutional culture and politics, short course support structure and support from colleagues. As part of the discussions of the results of the study, I have advanced some retroductive theories that suggest causal mechanisms beyond the empirical data based on the participants' experiences and events in the CDN.

Introduction

This paper emerges from a doctoral study that I undertook in southern Africa in the context of the Southern Africa Development Community (SADC), an intergovernmental organisation whose major objective is to achieve development and economic growth through regional integration. Figure 1 shows the 14 current member countries of SADC.

The study was informed by a desire among environmental educators in southern Africa to exchange information, share good practice and enable collaboration in course development processes. In trying to strengthen the informal networking that has existed in southern Africa for over 15 years, the SADC Regional Environmental Education Programme (REEP) established a formal SADC Course Development Network (CDN) in 1999 with Swedish International Development Cooperation Agency (Sida) funding. The CDN was strengthened with additional funding from Danish Ministry of Foreign Affairs (Danida) between 2001 and 2004.

The doctoral study (on which this paper is based) researched the CDN by investigating how professional development and institutionalisation of environmental education in 12 institutions in eight countries in southern Africa (Zambia, Botswana, Namibia, South Africa, Lesotho, Swaziland, Mauritius and Malawi) could be enabled through networking (Lupele, 2007).

Figure 1. SADC member states

For the purpose of this paper, I will focus the discussion on the probing of underlying causal mechanisms that enabled or constrained institutionalisation of environmental education courses developed by members of the CDN. This is done by providing a brief background to the CDN, assumptions about institutionalisation, the methodological approach and research findings as they pertained to institutionalisation of environmental education in the CDN partner institutions. The findings based on the empirical data are further enhanced by my own retroductive theories.

Background to the Course Development Network

The SADC Regional Environmental Education Support (REES) project was established under the auspices of the wider SADC REEP, with the aim of strengthening processes and capacity for education and training and promoting public awareness in relation to sustainable environmental management in SADC (Carl Bro, 2001). The project was designed to support the SADC REEP's overall objective. Table 1 provides an overview of the composition of the CDN.

The course development process under the CDN involved networking institutions meeting at course development workshops twice a year over a period of 33 months (after the end of the first 33 months, the project was extended for another 12 months). The workshops were structured around six generic issues associated with course development as identified by the CDN members at the network's inaugural meeting in July 2002, namely:

- Curriculum deliberations.
- Course materials development.
- Course delivery strategies.
- Assessment and accreditation of learning.
- Monitoring and evaluation of courses.
- Electronic learning and web-based course design.

Table 1. Composition of the CDN

Partner Institution	Country	Type
University of Botswana	Botswana	University
University of Malawi	Malawi	University
University of South Africa	South Africa	University
University of Swaziland	Swaziland	University
National University of Lesotho	Lesotho	University
Rhodes University	South Africa	University
Mufulira College of Education	Zambia	Teacher training college
National Education Institute of Namibia	Namibia	Curriculum institution
Polytechnic of Namibia	Namibia	Polytechnic
Swaziland National Trust Commission	Swaziland	Government agency
Mauritian Wildlife Conservation Clubs	Mauritius	NGO
Support for Environmental Education in Namibia Project (SEEN) / Desert Research Foundation of Namibia (DRFN)	Namibia	NGO

The courses developed under the CDN were meant to respond to national, institutional, social and ecological diversity. Through these regional workshops, network members shared skills, experiences and resources. Apart from the regional workshops, participants also met in small interest groups that were formed around three major focal areas (according to the courses that were being developed); namely: environmental education for industry, environmental education in formal educational institutions, and environmental education for informal sector such as community-based organisations and NGOs (REES, 2002).

Assumptions about institutionalisation
Part of the rationale behind the establishment of the CDN was to contribute to the SADC REEP aim by supporting environmental education course development processes in the region and, by implication, strengthening capacities and capabilities of institutions and individuals in environmental education processes. This meant that environmental education was made an integral part of the institutions and countries being supported by SADC REEP. The assumption was that this would enhance sustainability of the processes long after the SADC REEP project was over. It was assumed that institutionalisation of environmental education processes would take place in the region as institutions and countries took over and sustained project benefits and activities. However, Schnack, Parker and Squazzin (2004) warn that institutionalisation is not an easy process and needs to be negotiated and implemented within specific institutions in nationally and institutionally specific ways. They argue that there must

be a clear theoretical framework within a host institution, which should be framed by the institution's policy (structure). They suggest that where such policy does not exist or is unclear, the project needs to develop and articulate its theoretical framework. They contend that a clear framework helps host institutions to understand, evaluate and possibly take on board project activities and/or innovations.

Writing in the context of four Danida-funded projects in southern Africa[1], Schnack *et al.* (2004) suggest some broader points which can be drawn on to enable institutionalisation of environmental education in southern Africa. These include political commitment at all levels in the host institution, a post or person designated to the project, collaboration and synergies, recognition of 'invisible work', capacity development, institutional structure and the role conflict.

Methodology and Research Process

The research process was informed by a stratified ontology or view of reality, drawn from critical realism, which argues for the existence of reality independent of human consciousness (Archer, 2003; Sayer, 1984, 2000). Danermark, Ekström *et al.*, (2002) note that critical realism provides an answer to the nature of reality. They argue that there exists both an external world independent of human consciousness, and at the same time a dimension which includes our socially-determined knowledge about reality. In most studies the empirical (what we can experience) is associated with reality (Sayer, 2000). This is based on a positivist assumption that the world happens to correspond with the range of our senses and is identical to what we experience. The stratified ontology of critical realism views the world not only in terms of empirical and actual (as it relates to human) experience, but includes the real (Bhaskar, 1997; Sayer, 1984). Sayer (2000) observes that critical realism distinguishes not only between the world and human experience of it, but between the real, the actual and empirical. The distinction is summarised by Sayer (2000:11–12) as follows:

- 'Real is whatever exists, be it natural or social. Real is a realm of objects, their structures and power. Objects have certain structures and causal powers, which make them, behave in particular ways. They also have causal liabilities or passive dimensions, i.e. specific susceptibilities to certain kinds of change.
- Whereas the real refers to the structures and powers of objects, the actual refers to what happens if and when those powers are activated.
- The empirical is defined as the domain of experience with respect to either the real or the actual. It is contingent (neither necessary nor impossible) whether we know the real or the actual. Rather than relying purely upon a criterion of observability for making claims about what exists, realists accept causal criterion as well.'

Bhaskar (1997) argues that mechanisms, events and experiences constitute three overlapping domains of reality; i.e. the *real*, the *actual* and the *empirical*. This relationship is presented in Table 2.

Table 2. Mechanisms, events and experiences

	Domain of Real	**Domain of Actual**	**Domain of Empirical**
Mechanisms	✓	✓	
Events	✓	✓	
Experiences	✓	✓	✓

(Source: Adapted from Bhaskar, 1997)

Through abstraction and conceptualisation, the study sought to understand the relational connectedness of institutionalisation as opposed to finding regularities of what the phenomenon is. Realists believe that explanation of the social world requires an attentiveness to emergent powers arising from certain relationships and to the ways in which the operation of causal mechanisms depend on the constraining and enabling effects of contexts (Archer, 2003; Sayer, 2000). Therefore, the study recognises the crucial role that context plays in understanding and probing institutionalisation of environmental education courses in CDN partner institutions. I am, however, aware that all knowledge is fallible (Sayer, 2000) and so are my claims of understanding the underlying structures and mechanism that enabled or constrained institutionalisation.

Data generation
Data generation for this study started in 2003 and was done over a period of two years during the life of the CDN as a funded project. Data was generated from multiple sources through a variety of methods and techniques. These were mainly;
*   Documentary reviews.
*   Focus group discussions.
*   Interviews.
*   Field notes.

During the two-year period of data generation, volumes of data were accumulated. I had a total of 30 in-depth interviews with CDN and SADC REEP members (24) and European environmental education practitioners (6). Besides the in-depth interviews, I carried out a total of five focus group discussions. I also worked with eight latch files of emails from the network members and reviewed SADC REES/REEP documents such as workshop reports (6), evaluation reports of the SADC REEP (3), and inception and operational reports for SADC REES (7). As part of the study, I spent 12 months in the United Kingdom on a Commonwealth Split Site Scholarship tenable at Manchester Metropolitan University. This enabled me to study networks such as the Sustainability Education for European Primary Schools (SEEPS) and Environment and School Initiatives (ENSI), along with other small networks. This process meant that I had to review a total of 12 documents related to the two networks.

The volume of data called for prudent data organisation, as suggested by Burroughs (1975), Stenhouse (1978); and Patton (1990), among others. Drawing on Lotz (1996), I classified the research data into data source folders (DSF) 1 to 6. Each folder was made up of a number of files numerically identified. For example, DSF 1 was for field notes and contained field note files (FN) 1 to 24. To a large extent, the classification of data in folders and data files was a simulation of Microsoft Word computer classification. I found this useful as I could easily relate the hard copies of data to the electronic ones saved on my computer (where these existed).

Data analysis

Traditionally, social science and educational research have relied solely on deductive and inductive methods of data analysis (Ezzy, 2002; Patton, 1990). In the case of this study, I used NVivo computer software to manage inductive analysis of data. NVivo enabled me to reveal the features and relationships in the data in more depth as it allowed me to browse all the data coded at a node, review the data, and return to the context or rethinking the idea (Bazeley & Richards, 2000). Table 3 provides a summary of data analysis by means of NVivo.

Data analysis was further complimented by retroductive inferences. In probing institutionalisation of environmental education courses, I drew more on inductive and retroductive thought operations in line with the critical realist ontology. Categories that emerged from inductive inference, by use of NVivo were subjected to more rigorous examination through retroductive inference. The use of retroductive inference was aimed at 'unearthing' the necessary and contingent mechanisms that presupposed institutionalisation processes. The following question aided the process of retroductive inference: What external and internal conditions enabled or constrained institutionalisation of courses?

In the next sections, I present the results from the participants' diverse views of institutionalisation based on the categories, themes and retroductive inferences that emerged from the analysis of interview scripts, email and members' own reflections as recorded in the regional workshop reports. In this paper, the findings are discussed at two levels – the national and institutional levels.

Table 3. Summary of data analysis process using NVivo

Step	Detailed Analysis
1	Edited transcripts were numerically marked to identity of the interviewees, emails and field notes.
2	Coding of keywords/phrases from each script to get general ideas from the data.
3	Broad-brush coding of each of the scripts
4	Coding by means of main ideas from each of the questions under the broad categories
5	Revising and merging of codes, where appropriate, for consolidation
6	Emerging theory

Institutionalisation of Courses at National Level

Institutionalisation of courses at a national level involves a number of inter–related factors, discussed below. These include a consideration of how the courses address national needs, how responsive the courses are to policy and other national concerns, how stakeholders are involved in the design and development of the courses, and how the courses are recognised within existing national systems. This relates to ownership of the courses, the approval and registration process associated with courses. This, in turn, is linked to the national systems of curriculum development, accreditation and certification.

National needs

This study shows that CDN members set out to develop environmental education courses which responded to national needs. This was evident in the course funding proposals that each member presented to the SADC REES. The national needs included, but were not limited to, environmental policies and environmental education knowledge gaps. Table 4 shows some selected CDN member institutions and excerpts from the course development funding proposals that indicate the national needs to which the courses were responding.

Table 4 also provides evidence that the course developers were conscious of national needs. They aimed to contribute to the changing contexts and needs through the courses they were developing; and took into consideration the policies and needs of their individual countries as far as the role of environmental education was concerned. It would seem that responsiveness to national social ecological needs and priorities played a significant role in the institutionalisation of environmental education courses at national level.

Responsiveness

Institutionalisation at a national level was not much of a problem for members working at university or higher–education institution levels, as they tended to serve national interests. Generally, all they needed in order to achieve the process of institutionalisation was to meet the new course approval systems of their institutions. However, for members who were developing relatively new national courses (such as courses for teachers at national level), often through a government department, they faced additional challenges of meeting national contextual needs. In these cases, responsiveness to national context and needs such as policy and knowledge gaps was said to be key to the acceptability and institutionalisation of the courses.

Policy

Responsiveness to policy reflected the many dimensions of national policy on the environment in the countries. These included responsiveness to the actual legislation on environment, education or environmental education. In some cases, policy included educational curriculum. At policy level, course developers had to carry out a policy review to indicate how the course was responding to policies, as a means of justification. It emerged that government officials in some countries wanted to be satisfied that the course was addressing national policies or that it was making a contribution towards a particular policy. One member recalls what they went through as they were developing their course:

Table 4. Statements from the course proposals that provide evidence that CDN members' courses were responding to national needs

Institution	Statements From the Proposals Indicating the National Needs Being Responded To
Swaziland National Trust Commission (Swaziland)	This proposal seeks to rewrite the course materials in order to incorporate the government priorities in environmental, management, education and conservation. The Swaziland government has developed a Biodiversity Conservation Strategy that focuses on the establishment of conservancies and training of rural communities on how to run these conservancies.
National Institute of Education and Development (Namibia)	Namibia's National Population Policy for Sustainable Development creates an enabling environment framework for environmental education, and declares as one of its strategies: environmental education shall be promoted, with emphasis on efficient management of natural resources at all levels of the educational system as well as in the population at large.
Mufulira College of Education (Zambia)	Zambia Basic Education outcomes-based curriculum integrates cross-cutting issues such as HIV/AIDS, life skills, gender, human rights, reproductive health, good governance, environmental education and water and sanitation. The integration of these issues was done with a view of improving the quality of education in Zambia as defined by the education policy, *Educating Our Future* (1996). In the light of the revised Zambia Basic Education Syllabus, there has been a dire need to incorporate environmental education into the Zambia Teacher Training Curriculum.
University of Swaziland (Swaziland)	Deliberation and consultations leading to the formulation of the National EE Strategy in 2000 raised a fundamental concern that in Swaziland there were no short courses on EE and Environmental Management (EM). Moreover, it was noted that the country lacks a pool of human resource necessary for the implementation of environmental education programmes as well as taking the lead on environmental management issues.
National University of Lesotho (Lesotho)	The government of Lesotho is playing a pivotal role to reorient programmes in various sectors to address environmental concerns. In line with international developments, education has been identified as a key strategy for raising people's awareness about environmental degradation. In this regard, the government is in the process of introducing environmental education in formal education, at both primary and secondary school curricula. This initiative is driven by the Danish supported project, Lesotho Environmental Education Support Project (LEESP). This proposal is intended to enrich teacher education with environmental education by supporting the initiative of the National University of Lesotho to respond to environmental education developments in schools.
University of Botswana (Botswana)	The Government of Botswana has recognised the need for greater emphasis in pre-service and in-service teacher training in environmental education. It has specifically recognised the role that the University of Botswana has in implementing policies relating to environmental education. The Revised National Policy on Education (1964) advocates the introduction of environmental education across the curriculum in the formal education sector.

I remember we had to look at the policy books, etc. Then the process was passed on to Curriculum Development Centre, who are the people charged with the responsibility of assuring that curriculum review can start. What I saw was, if the MoE (Ministry of Education), as far as education is concerned, find that the course has no place in their programme or their policy then they does not accept the course. (Interviewee No. 6)

Some members of the CDN felt that their courses were easily accepted because they were mindful of the question of relevance. They claimed to have always been mindful of the needs of the country as they were articulated in environmental, curriculum and general policy statements, and priorities such as poverty alleviation.

Contribution to addressing the knowledge gap

Besides the policy demands, acceptance of the course as a national programme (as was the case in Zambia and Namibia where courses were developed in government-run institutions) depended on the Ministry of Education or Ministry of Environment's satisfaction that the course was beneficial to the contextual needs and policies of the country. Governments wanted to be clear as to how the course would respond to existing knowledge gaps and capacity building. For example, the knowledge gap and lack of short courses in environmental education, as identified by the National Environmental Education Strategy in Swaziland, seem to have been a justification upon which the course developer drew to have the course institutionalised. Price (2002) confirms that the industry course in Swaziland was identified as a national priority based on the interviews she conducted during the REES consultancy to select CDN partners. She reports that the Director of the Swaziland Environment Authority prioritised the industry course due to Swazi legislation, which classified environmental issues in industry as high priority (Price, 2002).

Another CDN member indicated that only when the government ministries were satisfied that the course met national needs would it be taken as part of the curriculum, as explained below:

Possibilities of having the programme … institutionalised lies in the fact that MoE recognises that the programme is beneficial to the country, then they [MOE] take the responsibility and it becomes part of the curriculum. (Interviewee No. 6)

In cases where the government departments were not clear on the importance or relevance of the course, controlling officers shied away from signing memorandums of understanding (for course development) with SADC REEP. One of the problems of not accepting the course came from a lack of understanding of what the course was about on the part of ministry officials. They were cautious about their involvement and administrative commitments, despite the fact that they had appointed representatives (of their institutions) to the CDN. A number of changes were suggested to the draft course development funding proposals that their officers developed, as this email excerpt indicates:

> *The meeting went fine and it requested that I rework the proposal background and change the target group. The meeting also requested that you come to [country name withheld] and have a chat with the … CEO and Director of Parks.* (Education officer, pers. comm., March 2004).

Stakeholder collaboration

Stakeholder collaboration seemed to have been vital to the process of institutionalisation of the courses at national level. Members of the CDN who worked with stakeholders from other institutions within their countries seemed to have had their courses easily accepted. Involvement of other stakeholders enabled the courses to attain national recognition, as was the case in Mauritius, Swaziland, Lesotho and Zambia. For example, in Mauritius, apart from working with the Ministry of Education, the course developer worked with stakeholders from three parastatal bodies – Mauritius College of the Air, Mauritius Institute of Education and the University of Mauritius. The course developer also involved teachers and other volunteers. This gave the course a national profile, as many institutions knew about it. Involvement of stakeholders in the process of course development seemed to have had a bearing on the institutionalisation of the course at the institutional level. Meetings involving people from outside the institutions gave credibility to the courses under development.

Institutionalisation of Courses at Organisational Level

Although institutionalisation of environmental education courses at organisational level was viewed differently among CDN members, general understanding was expressed in aspects such as owning the courses, recognising the courses, taking responsibility for the courses and enabling continuation. Again this involved issues of approval and registration of courses, consideration of the curriculum development processes and structures at organisational level, and issues of accreditation and certification, all of which are discussed in more detail below.

Recognition and ownership of courses

Recognition and ownership of a course developed under the CDN was seen as key to institutionalisation. Participants understood a course to be institutionalised when a university or institution of learning took it on as an integral part of its own programmes. During a focus group discussion, CDN members seemed to agree that institutionalisation meant that a course (developed under the CDN framework) becomes a property of the institution in which it is run and the institution owns copyright of the materials. The participants seemed to suggest that when a course is said to be institutionalised, it ought to be incorporated in the institutional course programme and lead to some qualification. It was suggested (for example, by interviewees 8, 12 and 22) that recognition and ownership is exhibited by the institutions' willingness to approve and register, accredit and provide certification for the course, like any other courses run within the institution. While recognition and ownership of courses seem to have been less problematic with universities and tertiary education institutions, they proved very challenging to NGOs and non-traditional institutions of learning such as government departments. This is reflected in the following comment made during a focus group discussion:

Ownership is the major part of it. We are having problems with our course development process because we want the Ministry of Education to have ownership of the course. But they are not really involved in the development process of the course, so it can be very hard to involve the ministry in that aspect and yet that was the assumption at the beginning. It is a lot more difficult for the NGO or project of some sort to start a course and then expect it to be taken over by someone, if this other institution has not been involved from the very start.

Approval and registration

Three of the 13 courses developed through the CDN were approved and registered as components of fully fledged courses or as stand-alone courses within three different CDN member institutions (National University of Lesotho, University of South Africa and the National Polytechnic of Namibia). Three other institutions (Rhodes University, University of Botswana and University of Swaziland) approved and registered the courses developed and revised the courses (in case of Rhodes University) as short courses under the institutional short course policy. Of the five non-university-based courses, three were accepted into the mainstream education systems in Namibia (two courses) and Zambia. It also seemed that approval of courses developed under the CDN were easy and faster in institutions which were already running similar courses or were contemplating developing courses in environmental education, as the following interview excerpt confirms:

… the faculty had already been contemplating, or shall I say, my department was in the process of introducing environmental education. The network and the introduction of the course, and course material, come in this kind of context, which really was favourable for this initiative. (Interviewee No. 11)

Curriculum structure

In institutions where the curriculum was rigidly structured or had several cross-cutting themes, as was the case in courses developed within the departments of education or environment, introduction of new courses became almost impossible. Asked to explain the challenges he was facing in having the new course accepted and owned by the department of education in his country, an interviewee had this to say: *'I don't know, maybe the problem is that there is a fixed structure within the teacher education diploma course … and it seems like they do not want any new programmes at the moment'* (Interviewee No. 18). Other reasons advanced included the fact that government education departments often had several activities/programmes that were competing for space in the teacher training curriculum and introducing new innovations called for long and often frustrating negotiations. Sometimes they just did not bother to respond to new innovations, especially if these came from outside their management framework.

Accreditation and certification

As was the case in the process of approval and recognition of the courses developed under the CDN, the study shows that there were a number of problems associated with accreditation and certification of courses. For example, local universities seemed not to have entertained

the notion of accrediting and certification courses developed by non-traditional institutions of learning. This was mainly due to the fact that the tradition and culture of universities did not provide for such processes. Furthermore, there were no institutional mechanisms for accrediting and certificating courses developed outside the university.

Although the accreditation and certification did not become an issue among most member of higher education institution, one of the biggest challenges was to make a course a credit-bearing course once it was approved by the institution. One interviewee lamented that, though the course is accredited under the short-course policy and carries the name of the university, it does not have credits and so participants cannot use the course to advance their careers.

Institutional Support

Institutional support was said to play an important role in the institutionalisation of courses developed under the CDN. The research data indicates that institutional support ranged from institutional culture and politics of who is mandated to develop courses, availability of a short-course support structure, support from colleagues and superiors, and institutional commitment.

Institutional culture and politics

It emerged that within university culture and politics, courses are usually developed by 'experts'. In many instances, course development is controlled by rigid administrative structures which spell out the qualifications and procedures of how to introduce a new course. As a result of this, courses developed by 'non-designated' course staff, could not even be tendered through the approval committees. Due to the short time in which the CDN was implemented as a project, approval of courses (within the project life) could not have been possible due to the bureaucracy implied with having new courses approved by various bodies and committees in the institutions. This put the CDN members under pressure as they had to adhere to the timeframe in the Memorandum of Understanding (MoU) signed between WESSA (on behalf of the SADC REEP) and their institutions. It is clear that development of the CDN and the requirement for MoUs did not take into consideration the institutional procedures for approving courses. Some members did not even attempt to submit their courses through the approval committees due to the anticipated length of time the course approval process would take. They, therefore, opted to run the courses as short-term courses, which did not seem to be a problem with most of the universities. Most university CDN partners had support structures such as short-course policies whose aim was to enable the development of short-term courses for professional development. Through such structures, members were able to develop and run courses in the universities.

Short-course support structure

Although some courses developed under the CDN could not be taken on at the same level as degree courses in some universities, they were accepted and became institutional courses under short-course policies and other short-course support structures aimed at supporting

professional development. This was the case in the University of Botswana, University of Swaziland and Rhodes University (although the Rhodes University course had long been institutionally situated, and the CDN just helped to strengthen the course). Short-course support structures such as policies and the establishment of in-service centres for running short courses provided an opportunity for speedy approval and acceptability of courses developed under the CDN. It was argued that in cases where universities lacked a policy or structure that supported short courses, ownership and acceptability of CDN-supported courses became difficult. The following interview statement bears this out:

> *If a university lacks a structure or structures, courses may have difficulties to be accepted … we have the Centre for Consultancy and Training whose main responsibility is to administer short-term courses, which are basically relevant to professional development.* (Interviewee No. 10)

The above observation could not be true in all cases, as exemplified through the situation at the National University of Lesotho, where the CDN course was approved as part of a degree module despite the fact that the university had no history of a short-course policy. Similarly, the University of South Africa course was easily integrated into a course development cycle in the university, as the lecturer concerned was involved in redeveloping a full Advanced Certificate in Education qualification (ACE). She strategically positioned her CDN course development process within the broader process that already had approval within the university course development framework.

Inadequate knowledge of the field of environment education
It was also argued that approval of courses became difficult because some members of the approval committees might not have had adequate knowledge of the field of environmental education. Inadequate knowledge of the field by the approval committees might have led to non-approval (or delays in approval) of good courses in environmental education in some institutions. In some instances, the philosophical orientation of the courses (which was participatory in nature) went against the set standards and traditions of what constitutes a quality course. Some institutions faced challenges of how courses developed with outside support would be administered within a more structured tradition. In many cases, these challenges were further enabled or constrained by the existing internal relationships among colleagues and superiors.

Support from colleagues
The level of involvement of colleagues was cardinal to the institutionalisation of the courses. Data from this study reveals that in situations where the CDN representative involved colleagues the course was easily accepted and owned by the institution. The study also reveals that in order to achieve institutionalisation of the course, one had to solicit support from colleagues by orienting and involving them in the course development processes at an early stage. It was argued that one way of ensuring colleagues are brought on board was for the CDN representatives to constantly brief their colleagues about the activities of the CDN at regional

workshops and on the progress on the particular course. Those who constantly engaged their colleagues seemed to have received support and the courses they were working on became institutionally located. However, in some cases, CDN members had to struggle to try and motivate interest and mobilise support among colleagues. Apathy towards participation in the CDN courses was also attributed to what one participant called 'academic short sightedness or academic jealousy' (Interviewee No. 10).

Support from superiors
Nearly all the CDN members whose courses were accepted and institutionalised seemed to have enjoyed the support of their superiors at the head of department and dean level (in the case of the universities). Non-university course developers also seemed to have been supported by their immediate supervisors, directors or principles of institutions. In cases were the superiors understood and were willing to support the process, the bureaucracy of having new courses approved by the various bodies and committees became the hindrance to institutionalisation. This was attributed to the short time that the project approval demanded, as normal degree courses took much longer to be approved. Due to the urgency and the short time available for course development in the context of the CDN, some heads of department or deans (in university situations) went against established procedures to have the courses approved.

In some cases course developers were not able to have their courses institutionally located due to lack of support from their superiors who seemed not to understand fully what the course was all about. There were suggestions from course developers who faced problems of not being supported by their superiors, that perhaps SADC as an intergovernmental organisation should have stepped in to intervene in such situations to make superiors realise or be more aware that their staff members' course development activities had the blessing of SADC and that the work was very important at regional level.

Discussion of the Findings

In this section, I draw on Schnack *et al.*'s (2004) framework, introduced earlier, to reflect on the structural and agential factors that enabled/constrained institutionalisation of courses under this study.

Political commitment at all levels of the host institutions
In this study, political commitment was captured under the theme 'institutional support'. Two sub-themes emerged from the study: institutional culture and politics, and support from colleagues and superiors. The institutional culture and politics enabled and in some cases constrained the process of institutionalisation of courses. Some institutions had strict policies as to who was qualified to develop courses at a given level. Therefore courses developed by those perceived as 'unqualified' members of staff could not easily be recognised and accepted into the mainstream institutional course development framework. In some institutions, MoUs were not signed on time or at all – a sign of rejection (Price, 2002).

It is also clear from the findings of this study that lack of support from superiors in some institutions was more political than professional. Some course developers managed to overcome the hurdle of not being supported by their immediate supervisors through coercing support from a higher authority by invoking the name and power of SADC.

Post or a person in charge of institutionalisation

From the CDN point of view, the assumption was that the course developer would lead the process of institutionalising the course. This study reveals that a number of course developers had little or no authority to influence institutionalisation of courses. Although Schnack *et al*. (2004) suggest making alterations to the structure of host institutions in terms of job descriptions and procedures in order to enable institutionalisation, this study shows changing institutional procedures and structures of approving courses was not possible in the context of the CDN. The process of institutionalisation was left up to the course developers' mobilisation of their own agency. The study also reveals that although all the participating institutions appointed representatives or endorsed those initially approached by the REES officials, time as a cost on the part of course developers was not factored in. The course developers continued with their normal workloads in addition to the CDN activities. This appears to have had caused role conflicts with the individuals who had to attend to many responsibilities. Conflicting roles of individual course developers made the process of institutionalisation more complex.

Collaboration and synergies

The ability to identify and mobilise stakeholders from within and outside the institution seemed to have helped a number of course developers to achieve institutionalisation of courses. This study shows that course developers who collaborated and created synergies with other similar projects within their institutions or at national level had the greatest chance of having their courses accepted and institutionalised. Collaboration with other stakeholders seemed to have given credibility to the courses developed under the CDN and influenced subsequent recognition and registration. Most course developers worked with an array of experts in the environmental field.

Recognition of 'invisible work'

Under this theme, Schnack *et al*. (2004) postulate that relationships need to be built and trust established within host institutions before projects can operate at their full capacity. They call this 'invisible work', which is often not recorded in the project documentation or reporting, but can be amongst the most important work a project engages in, in terms of its sustainability. However, the CDN did not allow much time for such work – except for a recruitment process by a consultant and the few visits made by the REES Chief Technical Adviser and Director to some institutions. These visits focused on marketing the network and selection of members. Other visits were undertaken by the Dean of the Faculty of Education at Rhodes University as the lead university in the network. These visits seemed to have helped a number of CDN members in the process of institutionalisation of environmental education courses they were

working on. Following such visits, CDN members reported receiving recognition and support from their colleagues.

It would have been desirable to visit and discuss the CDN and its progress with heads of institutions more regularly. Planning this into the CDN process could have helped, especially in cases where individuals were approached by the REES and recruited into the CDN without prior knowledge of their supervisors who only endorsed their representation later. It also appears most CDN members did very little 'invisible work' to negotiate the process of institutionalisation.

Institutional structure and role-play

Schnack *et al*. (2004) note that one of the complicating factors in the process of institutionalisation of ideas/activities is fitting into an institutional structure. This observation is true of the CDN, as this study reveals. Due to the factors such as time and demands of the CDN as a funded project with a logical framework to follow in a given timeframe, most course developers could not even attempt to submit their courses to the relevant institutional approval committees, as they tended to operate within a much longer time cycle than that allowed by the CDN. Course approval processes in most of the higher education institutions was very laborious and could take many years. It was not possible for the CDN to imagine that the approval of institutional structures could be changed. The CDN worked with the existing structures and depended on the course developers' agency to navigate and negotiate the institutional structures for institutionalisation of the courses. This study shows that the short-course policy or structure became the alternative to the long procedures of approving courses in higher education institutions.

Given the above research findings, which are mainly based on the empirical data and participants' own experiences, I advance the following retroductive theories about underlying causal mechanisms that affected institutionalisation of environmental education courses in southern Africa[2]:

- It would seem that in countries and institutions undergoing curriculum transformation, new courses and innovations in course development are more likely to be institutionalised. This was the case in the National University of Lesotho and the University of South Africa.
- It would also seem that countries with greater commitment to democratic processes would be more likely to accept a participatory course than countries with a weak democratic governance record. Although results from the empirical data showed support from colleagues, existence of short-course policies and negotiations with superiors enabled institutionalisation of the courses; no amount of these aspects was going to be helpful if the country was undemocratic. Democratic governance at the level of government is a precondition for the institutionalisation of participatory courses, or processes in general in a country.
- Institutions in countries at the top of the power hierarchy in the SADC region (such as those in South Africa) are perceived to 'set the standards', and have a higher probability of accepting unconventional courses than those in the lower power hierarchy. Countries in the latter catagory are likely to be more reticent when it comes to novel courses, largely due to a desire to be seen to be maintaining standards and a lack of confidence.

- The family symbol is one area that would further enhance the institutionalisation of courses – especially in the SADC region which was marred by years of suspicion and conflict along racial lines under the colonial and apartheid segregation. Every member state and institution would want to show the family unity and solidarity by working together on a regional programme.
- In some SADC countries which have conservative educational systems, novel courses (such as those developed under the CDN) are unlikely to be accepted. This is because curricula and institutional forms in such countries are based on reproductive models, and reproduce intellectual and knowledge creation patterns characteristic of former colonial universities and epistemologies.

Conclusion

This study illustrates that the institutionalisation of environmental education courses is influenced and shaped by several underlying internal and external relations. The study demonstrates that we cannot explain the structural and agential factors that influence institutionalisation by solely depending on empirical and actual data (as it relates to human experience), and that we need to include the real (the structure and power of objects that exists outside human experience). In this study, critical realist ontology presented a useful theoretical and analytical framework which probed institutionalisation of environmental education beyond the empirical observations, experience and actions of those involved in the CDN.

Critical realism, as used in this study, enabled me to probe the underlying mechanisms that enabled or constrained institutionalisation of environmental education courses. The critical realist ontology domains of the empirical, actual and real provided an analytical framework for probing ontological depth. The usefulness of probing such causal mechanisms is that they insist on a different level of action to make things better, and they give us greater understanding of our constraints and enablements. We can only do what we can do, with what we have. Therefore, for some course developers operating in undemocratic environments, no amount of institutional rearranging, or negotiation with superiors, or discussion with colleagues, was helpful in the end. Their efforts went to waste and their courses never became part of the institutional course framework. It might also be useful to know that the regional power balance between countries is significant; perhaps this would suggest a strategy in which top administrators in some countries are shown what the trendsetters are doing, which would reassure them that these courses are not out of line with good regional practice.

Notes on the Contributor

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Endnotes

1. The four Danida-funded projects were:
   - Regional Environmental Education Support Project (SADC REES)
   - Supporting Environmental Education in Namibia (SEEN)
   - Lesotho Environmental Education Support Project (LEESP)
   - National Environmental Education Project – General Education and Training phase (NEEP–GET).
2. Critical realism allows a researcher to advance such causal mechanisms, even if there are exceptions, since potentials may exist even if they are not yet actualised. The validity of these assertions comes from their ability to explain certain empirical or actual events.

References

Archer, S. M. (2003). *Structure, agency and the internal conversation*. Cambridge: Cambridge University Press.

Bazeley, P. & Richards, L. (2000). *The NVivo qualitative project book*. London: Sage.

Bhaskar, R. (1997). *A realist theory of science*. London: Verso.

Burroughs, G.E.R. (1975). *Design and analysis in educational research*. Birmingham: University of Birmingham.

Carl Bro (2001). *Regional Environmental Education Support (REES) in southern Africa: Final draft project document*. Copenhagen: Carl Bro Intelligent Solutions.

Danermark, B., Ekström, M., Jakobsen, L. & Karlsson, J. (2002). *Explaining society: Critical realism in the social sciences.* London: Routledge.

Ezzy, D. (2002). *Qualitative analysis: practice and innovation*. London: Routledge.

Lotz, H.B. (1996). The development of environmental education resource materials for junior primary education through teacher participation: the case of the We Care Primary Project. Unpublished PhD thesis, University of Stellenbosch, Stellenbosch.

Lupele, J. (2007). Networking: Enabling professional development and institutionalisation of environmental education courses in southern Africa. Unpublished Phd thesis, Department of Education, Rhodes University, Grahamstown.

Patton, M.Q. (1990). *Qualitative evaluation and research methods* (2nd edn). London: Sage.

Price, L. (2002). *Course development network report*. Howick: Regional Environmental Education Support Project.

REES (Regional Environmental Education Support) (2002). *First progress report*. Howick: Regional Environmental Education Support.

Sayer, A. (1984). *Method in social science.* London: Hutchinson.

Sayer, A. (2000). *Realism and social science*. London: Sage.

Schnack, K., Parker, B. & Squazzin, T. (2004). *Reflecting back ... and looking forward: learnings from four Danish-funded environmental education projects in SADC region*. Howick: SADC Regional Environmental Education Project.

Stenhouse, L. (1978). Case study and case records: Towards a contemporary history of education. *British Education Research Journal,* 4, 21–39.

Personal Communication

Education officer (2004). Swaziland National Trust Commission, 12 March 2004.

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