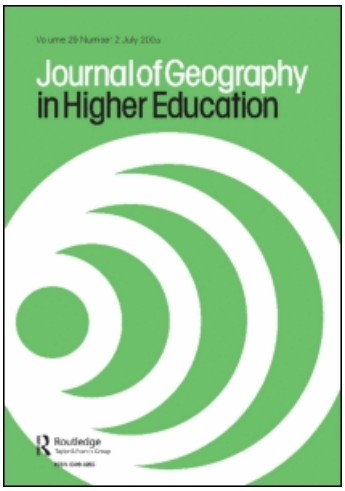

Journal of Geography in Higher Education
Publication details, including instructions for authors and subscription information:
http://www.informaworld.com/smpp/title~content=t713430794

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Online Publication Date: 01 September 2008

To cite this Article Hill, Trevor R., Traynor, Catherine H., Birch-Thomsen, Torben, De Neergaard, Andreas, Bob, Urmilla, Manyatsi, Absalom M. and Sebego, Reuben J.(2008)'Clear the Mind of Pre-conceived Ideas and Get Your Hands Dirty! An Approach to Field-based Courses: The SLUSE-southern Africa Experience',Journal of Geography in Higher Education,32:3,441 — 457
To link to this Article: DOI: 10.1080/03098260701731140
URL: http://dx.doi.org/10.1080/03098260701731140

Journal of Geography in Higher Education,
Vol. 32, No. 3, 441–457, September 2008

Clear the Mind of Pre-conceived Ideas and Get Your Hands Dirty! An Approach to Field-based Courses: The SLUSE-southern Africa Experience

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ABSTRACT *This paper explores an approach to problem-oriented, interdisciplinary field-based courses devised by university consortia in southern Africa and Denmark. The SLUSE (Sustainable Land Use and Natural Resource Management) model has been applied on six three-week field courses within southern Africa and trained over 200 students. Student groups composed of individuals from different academic disciplines that investigated problems specifically devised to integrate social and natural science approaches set the stage for an interdisciplinary approach. The field locations are in rural areas that have a legacy of marginalization, poverty and reliance on natural resources for at least part of their livelihoods thus allowing for environmental and natural resource issues to be investigated. Course evaluations show that students feel they gain invaluable exposure to the innovative field-based learning environment created by the SLUSE approach. The main benefit perceived by hosting local communities was an increase in their self-esteem and to harness the knowledge and experience gained from the courses to further enrich their own communities. On reflection, the students value the opportunity to work cross-culturally, and trying new techniques on 'real' issues. To many students the personal challenges they face adjusting to the demands of the field course are as important as the academic outputs.*

KEY WORDS: Field-based courses, interdisciplinary, problem-based, group work, southern Africa, inter-institutional

Introduction

Institutional Background

Following the United Nations Conference on Environment and Development (also known as UNCED or the Earth Summit) in 1992, one of the broad 'areas of action' identified

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ISSN 0309-8265 Print/1466-1845 Online/08/030441-17 © 2008 Taylor & Francis
DOI: 10.1080/03098260701731140

in Agenda 21 was to achieve sustainable development through the 'means of implementation', within which capacity building, education and institutional frameworks are mentioned as important issues (Gardiner, 2002). In addition, the notion put forward by many case studies and 'development thinkers' that development, and in particular rural development, has 'failed to raise living standards significantly in African rural communities' (Binns, 1995), brings 'environmental destruction' (Pieterse, 2000), and simply 'does not work' (Kothari, 1988) is of grave concern to educators involved in rural development and natural resource management studies, and must provide a contextual framework within which we should be engaging. This perceived inadequacy has often been blamed (Nel & Hill, 1996) on either the setting of inappropriate objectives, strategies and methods, or the inadequate involvement of the host community, the failure to acknowledge local skills and coping strategies as well as the use of conceptually inappropriate processes. Where communities are not fully involved, or committed to the process of development, the results seldom come up to expectations. This last statement leaves the authors in somewhat of a quandary as, depending on who/what you believe and who/what you read, one could be concerned with development, adaptive development, reflexive development or a host of other synonyms which have either a reverence or loathing for the concept of development and all its associated saviours or ills. This is all well and good but where does it leave us (us being university educators who wish to expose their students to the broad and diverse array of rural development issues)? Furthermore, the need to train students effectively and efficiently as development practitioners is pronounced in the southern African context, as society is demanding, and students are clamouring for, university courses that are of a more applied nature; it will be shown that this can be achieved through field-based problem-orientated learning which provides the learners with 'real-life' experiences. Of course, one of the resultant dilemmas is how to achieve this lofty objective whilst at the same time being sensitive to the needs of the students, the ideals of an academic qualification, our social responsibility and the community at large with whom we would need to interact to obtain 'real-life' experiences?

This paper tackles these issues through the description and discussion of an approach that attempts to respond to these demands, within a southern African context, through the implementation of a field-based, problem-orientated course that has developed as a consequence of consortia of southern African and Danish Universities. This course has a focus on sustainable land use and natural resource management (SLUSE). More precisely, it documents the experiences gained within SACUDE-SLUSE[1]—in collaboration with the Danish consortium DUCED-SLUSE[2]—in the course of developing a model of integrated theory and practice. The paper draws on opinions expressed during general discussions and specific course evaluations held during and after six field-based courses in South Africa (2001–2003), Swaziland (2004) and Botswana (2005). Students' perceptions are derived from a written anonymous questionnaire completed after each field-based course where they evaluated different course elements and answered open-ended questions. After the questionnaire, the entire student group participated in a discussion facilitated by a supervisor, who raised different topics for assessment. Additionally, at various times during the field course, students were asked to write an anonymous short paragraph pertaining to a focused issue. Perceptions from the community were gathered by staff as part of the course evaluation process, after completion of the field course once staff and students had departed. Viewpoints from supervisors were obtained from an oral assessment by all staff held at the end of the course when they had departed

from the field site to the host university.[3] This paper seeks to present observations on the SLUSE process and perceptions of stakeholders, rather than a comprehensive, quantitative assessment of the courses.

SLUSE Context and Principles

The SACUDE–SLUSE project was an initiative aimed at developing joint field-based courses (i.e. educational capacity) and research capacity in the area of sustainable land use in rural communities in southern Africa. Crucially, SLUSE seeks to explore the challenges of using interdisciplinary and inter-institutional approaches during field-based courses. The basic premise for the approach implemented by the SLUSE consortia is the acknowledgement that natural resource management cannot be adequately studied and understood from a mono-disciplinary point of view. Rather, specialists from several disciplines within both the natural and social sciences need to contribute their specific knowledge to developing more nuanced understandings of problems that are complex and interdependent.

Furthermore, the practical knowledge obtained from field experiences can both educate and qualify researchers, and benefit recipient communities. The synergy of practical and theoretical knowledge can produce both academic qualifications and practical solutions that will enhance sustainable land use. (This approach is illustrated in Figure 1.) Finally, the project aimed at bringing together students and researchers from different nationalities and cultures to expose students to the differences in working, teaching and learning cultures that exist within the partner institutions. Development work is often undertaken in an international forum; hence an understanding of all the participants' motivations and working culture is a prerequisite in order to achieve the full potential of any project group.

Practical and academic knowledge can, as outlined in Figure 1, in this way synergistically support each other in producing both academic qualifications and applied solutions that will enhance sustainable land use. The basic premise is the acknowledgement that natural resource management cannot be adequately studied and understood

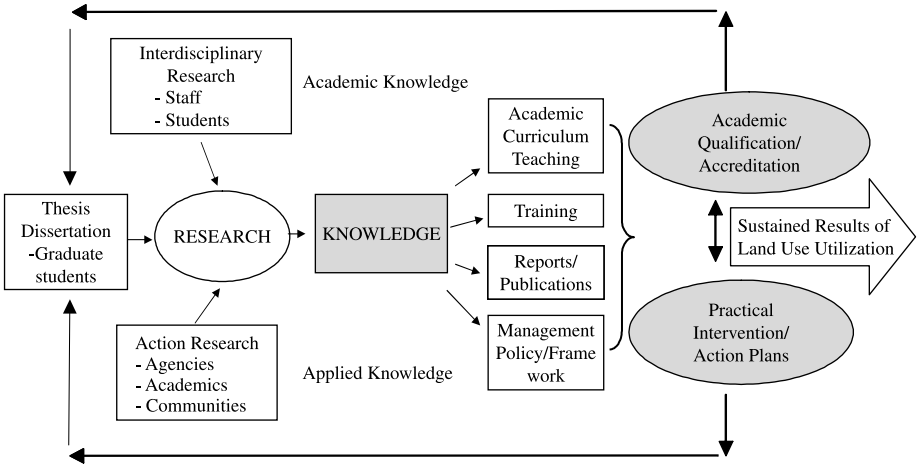

Figure 1. Innovative learning and research. *Source*: Traynor *et al.* (2003)

from a mono-disciplinary point of view. Rather, specialists from several disciplines, from both the natural and social sciences, need to contribute with their specific knowledge and methodologies in developing more nuanced understandings of the complex and inter-dependent character of the problems related to sustainable utilization of natural resources. Furthermore, an inter-disciplinary approach provides a comprehensive understanding that can improve and inform policy.

This form of inter-disciplinarity does not aim to provide students and researchers with new tools from alien disciplines that they have few, or no, qualifications to use, but rather to allow them to use their specialized skills and knowledge on an adequate level in a highly integrated group working on a common problem based on a common perception of the researched question. The inter-disciplinary approach advocated here builds, therefore, on the specialization and knowledge of individual students and researchers, who through close cooperation and sharing of a joint research framework contribute to a common holistic understanding of sustainable natural resource management. Through sharing and interlinking of results, based on a common perception of central concepts, a broader and, hence, more reliable understanding of complex relationships is sought. This is accomplished through interdisciplinary, problem-orientated group work in both teaching and research (Birch-Thomsen *et al.*, 2005).

To date SACUDE–SLUSE has organized field-based courses in a wide range of rural communities in southern Africa. Within South Africa sites include: Ingwavuma in Northern KwaZulu-Natal, a region that has become marginalized as a consequence of the deterioration of a major transport route; Okhombe Valley, KwaZulu-Natal Drakensberg, where a once dispersed community is now settled under a government betterment scheme; the village agglomeration of Madlangala in the Matatiele District of the Eastern Cape Province of South Africa, a former apartheid homeland region; Zombodze South in Swaziland, a remote and isolated region that abuts onto the South Africa border and Lerala village in the Central District of Botswana. All these communities display a desperate legacy of poverty, disempowerment, marginalization, high unemployment, health problems, poor access to service provision and natural resources due to isolation, varying degrees of reliability upon and little management of surrounding natural resources, and inequality.

The Process

The field-based course typically makes up one component of a larger module for most of the universities within the consortia. Although each institution has its own specific module requirements and assessment procedures, the field-based course is devised, implemented and assessed jointly and therefore this paper focuses upon this common component. Students and staff for the field-based courses are drawn from all six participating universities (in both southern Africa and Denmark), approximately 30–40 postgraduate students attend the course each year and they are derived from different disciplinary backgrounds. The number of staff participating varies from year to year depending on site selection and specialized skills required for that particular field course; however, there is a core of three staff that have attended all field trips and thus maintain continuity between courses. To date students have predominantly come from the disciplines of geography, anthropology, sociology, soil science, hydrology, development studies, public administration, grassland science and botany. The students are Master's level—in the case

of Danish students undertaking a taught Master's course, whereas the southern African students come from both a taught or research Master's program, they range in age from 22 to 40 years, all are fluent in the language of instruction which is English, with equal numbers of male and female students and relatively equal (it varies from year to year) numbers from all partaking universities. There are a number of mid-career professionals returning to tertiary education to improve their qualifications, or to shift career direction towards development and environmental issues. There is little difference between the North and South students in terms of training and qualification, although the perceptions and views are often very different—which adds to the inter-cultural exchange and need for tolerance.

The field-based course is split into three stages; initially there is a preparatory stage undertaken at the host university in the country in which the course is to be held. This lasts 4–5 days during which the course is launched, students meet one another, discuss their research plans and gather additional data before departing for the field. During the second stage the fieldwork is conducted in the study area, for a period of 8–11 days, staff and students stay with local families and meals and meeting facilities are organized by a community group. The main student activities are data collection and engaging in community life. Evening meetings are organized where students report on progress and near the end of their stay students present their findings at a community meeting. The third and final stage is the course conclusion, which takes place at the host university and lasts 4–5 days. Students analyse their data and give a preliminary presentation of their research to an academic and non-academic audience. After returning to their home universities, the students complete a written report on their work, either individually or in groups.

Prior to the implementation of the field-based course there are crucial planning activities. Site selection is predominantly guided by the fieldwork agenda, although several criteria have been utilized to ensure appropriate site selection. These criteria, developed by the course staff, include that the site should present problems and issues that lend themselves to research in both natural and social sciences, should be accessible, basic facilities and amenities must be available within the site and there must be a service centre nearby. The local community must be willing to host the course and they should have, or set up, an organization that can implement the required activities. These community-led organizations are typically constituted for the purpose of this visit (as is the case in Botswana), as part of a tourism committee (as in the case of South Africa), or a youth organization (Swaziland). Part of the planning process includes the academic staff working in collaboration with these organizations to ensure that the trips are successful and help capacitate them in their decision-making and financial management of the process. Positive involvement of these local stakeholders is important as they can help identify suitable problems for research, can suggest appropriate key persons, give information about local cultural differences and provide useful inputs to suggestions from the university staff. The development of research questions that focus on problems relevant to the local community in the study area is a core undertaking. The aim is to develop a common understanding of the environmental and development issues that the students can study whilst they are in the community; this has to take into account community perceptions but also the experience, skills and training of the students—the students do need to be able to investigate topics which they are capable of researching. Through discussions with villagers, government officials and non-governmental organizations (NGOs) significant problems and concerns are identified. Problems are

then formulated that can be studied, for example the broad issues of agricultural production (cropping or livestock and grassland management), non-agricultural economic activities (tourism, crafts and marketing), community forestry, service delivery, health and education issues. The research topics must be firmly anchored in village reality so that individual villagers who are interviewed or questioned can recognize the issue, see its relevance and thus are more likely to provide relevant information.

The students taking part in the course are grouped (students decide for themselves which research topic they wish to investigate) several weeks prior to the field-course; there are typically 4–5 topic groups which consist of 6–8 students. Group composition is guided by the research themes and students' interest, but the student's discipline, institution, academic and professional background and gender are also taken into consideration. A website is created (to allow early communication between North–South students prior to meeting each other) containing information relating to the course, background to the study site, research themes, logistics and contact details of all participating students and staff. Once the students have been grouped, they are encouraged to establish and maintain contact with their counterparts via email. Fieldwork personnel such as local guides and interpreters are orientated to the demands of the field course through a preparatory training exercise.

Student Perspectives

For each course students are encouraged to list, within a course evaluation questionnaire form, what they consider were the best and worst aspects of the field-based course—the most commonly occurring themes are listed in Table 1. The results represent the findings from six such field trips involving approximately 200 students from both the Danish and southern African consortia. The verbal group course evaluations are also an important aspect of the course and, on recent trips, were held both in the field towards the middle of the experience and at the end of the course. A staff member chairs the process, minutes are taken of the students' comments and staff do not attempt to defend or argue with students but, rather, listen and learn from the comments. The evaluation can become heated as students air their views, both positive and negative, often after being in unfamiliar circumstances for an extended time period.[4] Sensitivity is required, so prior to commencement of the process students are informed as to why the evaluation is being held and to 'follow the rules' in terms of listening to each other, raising their hands to make

Table 1. Students' 'best' and 'worst' aspects of the field-based courses

Best	Worst
Meeting other cultures	Difficulties working between North and South students
Putting theory into practice	Unmotivated counterparts
Learning and trying out new techniques	Difficult group dynamics
Interdisciplinarity	Tough physical conditions
Hands-on fieldwork	Field component too long
Spirit of unity among students and staff	Racism
Chance to meet and work with local people	Basic living conditions
Overall 'experience'	Hard to adjust to local food, poor quality food

a comment, not interrupting each other, appreciating that not all will agree and what is expressed is perceptions and not necessarily the views of any collective.

The most highly rated aspects of the course were student cooperation between international counterparts, student motivation, appropriate group size, logistics and organization in the field and supervision. Encouragingly the best aspects in the students' opinion also include relating practice to theory and the opportunity to enhance field research techniques. Additionally, the student–staff relations were improved through shared experience. These aspects are similar to the positives of field courses identified by undergraduate students in similar studies (Robson, 2002). The most frequently rated best aspect was meeting with other cultures, but interestingly the cross-cultural dimension of the courses was also a source of some of the worst aspects, particularly with Northern and Southern hemisphere students attempting to work together. However, in the student feedback questionnaire survey cooperation between international counterparts was rated highly, which suggests that only a minority of students encountered difficulties in North–South cooperation, but these difficulties had a large impact on these individuals. Other worst aspects commonly identified by students included working in a group as opposed to individually, and the tough physical conditions, basic living conditions and adjustments to local diet. It is not uncommon for Northern students on field courses to complain about the harsh living conditions of rural Africa (Robson, 2002). Most SLUSE students adjusted well and also reflected that 'local living' added positively to the overall experience, while voicing the opinion that they would like more opportunities to socialize and share meals with their host families.

Despite the course being generally a brief affair, which requires intensive fieldwork, sometimes discomfiting (physically and emotionally) encounters appear to motivate students to attend the course (Robson, 2002). Furthermore, the students all commit themselves to the task and see it as a challenge and almost a 'rite of passage' for some of them, many of the students asking the staff what it was like last year and 'are we working harder than last year's group' and 'was it as hot last year'? This is an encouraging sign, but needs to be correctly managed. Many students consider taking part in a field course to have been the highlight of their entire degree programme. Furthermore, travel to a distant environment and participation in 'real' data-collection procedures, however limited, enhances new graduates' CVs and allows them to interact with each other, students from other universities and staff in a manner that is just not possible within the constraints of a university lecture environment.

Although a few students identified racism as the 'worst' aspect of the course, other comments showed that the opportunity for different races to work together reduced inter-racial tension:

> The best part of the course was that it was very interesting to pursue a common goal and this eliminated differences between whites and blacks. (Female, Swazi student)

Most students responded positively to the cross-cultural aspects of working collaboratively in groups; the reflections below from students taken after the Botswana 2005 field-based course illustrate the acknowledgement of difficulties and the attitude that these can be overcome:

> I think it is not fair to think that there are cultural differences we cannot solve, we just need to develop more tolerance of each other's differences and understand each

> other. (Male, South African student)
> Remember that there can be cultural differences among the students, and if other students work in a different way from you—their ways and ideas could be more valuable than yours. (Male, Danish student)
> It's surprising how different cultures can come together and agree to one decision. (Male, Swazi student)
> It's inspiring to work with people from different cultures. (Female, Danish student)

Intercultural conflict among the students is very common, and to a certain degree fuelled by a high level of commitment and desire to produce a good project. When under time pressure or emotional stress, and working in an unfamiliar environment, the students have difficulties accommodating each other's working styles, disciplinary input or points of view. Similar courses have been undertaken in Thailand and Malaysia (Dohn *et al.*, 2003), and the conflicts and differences between the different cultures are no less in Asia than in Africa. It is understandable, but probably not correct to identify these differences and conflicts as signs of racism. More likely, they are indicative of the stress and problems that the students encounter when working intensively with issues that matter to them, while trying to deal with an unfamiliar group of colleagues in a foreign environment. However, it would be wrong to ignore the strong cultural identity and particulars that we all carry, and students (and researchers) must constantly be challenged in their attempt to categorize colleagues under general headings such as 'busybody', 'dominating', 'lazy', 'technocrat', 'tree-hugger', or even 'racist'.

In particular, the Northern European working habit of lengthy discussions and consensus seeking may conflict with the more results-oriented 'let's do it' approach that we commonly observe in the Southern students. The former is considered ineffective and tiring by its opponents, the latter as unreflective and with a risk of doing 'the wrong thing'. As a consequence, European students tend to dominate discussions, and tire out their African counterparts. This also has implications for the sense of ownership of the project, as certain individuals think: 'If this matters so much for them (that they care to discuss it at this length), they can have it their way.' This was particularly clear one year, when many of the African students complained that European students were dominating and unwilling to take on ideas offered by others, whereas the Europeans considered their counterparts less involved and motivated. Both sides need to understand the points of view of the counterparts in order to resolve these conflicts constructively. This is very challenging, when simultaneously trying to grasp the complexity of one's assignment under time pressure. This exercise is an essential part of the training element of the course, as no textbook can prepare students in how they will respond to this challenge.

As the student comments below demonstrate, a positively critiqued aspect of the field-based course was the opportunity to try out theories learnt in the lecture theatre in a practical field situation:

> After years in a library, it's such a relief to be tested in the field. This should be mandatory! (Male, South African student)
> Having always learnt of theories and concepts in the classroom, I've got into contact with some of them. (Male, South African student)

> Theoretical teaching well linked to field-work. (Female, Botswana student)
> Life in the village gave an idea about development aspects. (Male, Swazi student)

The SLUSE field-based course offers students the chance to problematize theoretical and conceptual frameworks; this is a common component of field courses (McGuiness & Simm, 2005). Students also have the opportunity to develop transferable skills during field exercises that are valued by future employers (Robson, 2002). Furthermore, where students are able to interact with new information and reconcile this with their existing knowledge, the learning process may be deeper and the students more likely to transfer skills to other contexts (Waddington, 2001).

The inter-disciplinarity nature of groups was appreciated by students as a positive aspect, as group report-backs in feedback sessions included the different backgrounds, experiences and focus of individual group members and the exposure to these (Table 2). The negatives of group work largely related to the process of group working, such as decision-making strategies, individual roles and coordination. These concerns indicate that at the start of the field course it is imperative to have a session on group dynamics and suggestions for effective group management.

Many students appreciate that the interdisciplinary group work will provide them with experience and skills that will be useful in their post-university careers:

> Although the group dynamics were difficult and frustrating, they will benefit me in the long run when you enter the business world and work as part of a consultancy team etc. (Female, South African student)
> The course gave me an insight into what is required of an environmental manager which is my main interest. (Male, Botswana student)

The comments suggest that through the researching of a common problem within a group, individuals have constructed new knowledge, and gained intellectual and transferable skills. These are all important philosophies that problem-based learning environments should offer (Spronken-Smith, 2005). Furthermore, active learning is considered to foster a deep approach to learning and students involved in research-based enquiries show more sophisticated levels of intellectual development (Healey, 2005).

Table 2. Student feedback related to working in interdisciplinary groups

Positives	Negatives
Good team cohesiveness	Decision-making can be a long process
People from different areas and backgrounds working together	Confusion as to which group member should respond to queries
More camaraderie than traditional courses	Difficult to coordinate logistics
Group interaction	Stress
Working with the team and coming from a variety of experiences	Overwhelming (have to get to know others as well as focus on the fieldwork)
Dealing with unfamiliar areas	Difficulty of developing group cohesiveness
Developing friendships and contacts	Must rely on all group members
Involved in action learning	

Critical reflection by students upon their experiences has been utilized successfully in long-haul fieldwork (McGuiness & Simm, 2005), problem-oriented learning (Spronken-Smith, 2005) and in interdisciplinary learning (Bradbeer, 1999) and was encouraged in SLUSE students. Those students able to 'step back' and reflect upon the wider aspects of the field-based course and their own reactions to the challenges they faced were better able to recognize their own 'personal development'. The comments below illustrate that a female, South African, political science student who attended the 2004 field course in Swaziland acknowledged that the interactions with the people she encountered on the course impacted upon her perceptions as she describes the positive impacts of diversity:

> Ubuntu is a Zulu word meaning 'a person is a person through other people'. As a Political Science major the opportunity to visit a country with an incredibly interesting but complicated political governance system was the major pulling factor in my decision to participate in the SLUSE course.
>
> The chance to meet people of all nationalities was priceless. The impact different people have on our ideas, beliefs and indeed our lives, is grossly underestimated. This has been proven from the experience of living with over 40 other people from incredibly different backgrounds and realities 24:7 for 3 weeks. In the community we had to learn very quickly to get on with our roommates and the family in whose house we were staying. This was more challenging than I had anticipated, once we had been in the village for a week and were tired of the constant company, wet weather and foreign environment; and especially as our work became more demanding. I know that every person I met out there has brought about a change in me. Ubuntu, that is what the SLUSE trip meant for me.

Other comments from students on the field course in Botswana 2005 further illustrate that some students gain more than merely academic experiences from the course;

> The group work and fieldwork is hard, exciting, difficult, interesting and frustrating and you learn a lot about the culture, methods, each other and most importantly about yourself. (Male, Danish student)
>
> The course makes you aware of your own strengths and weaknesses, both academically and personally, which if you reflect on it can get you a big step further. (Male, Danish student)

Field courses, particularly those that include different cultures, can benefit students' 'personal development' and can challenge their preconceptions (Robson, 2002). Reflection can be a positive tool whereby students are encouraged to reflect on themselves and also their own learning processes. Different disciplines have different epistemologies, discourses and traditions of learning and reflecting on these different learning processes may help to remove some barriers to inter-disciplinarity (Bradbeer, 1999).

The SLUSE field-based courses, particularly for students from the Northern hemisphere, endorse the view that the only way to know a developing country is to visit it (Norwine & Gonzalez, cited in Ite, 2002). SLUSE takes this position further by suggesting the best way to understand and appreciate problems encountered by rural

communities is to experience them first hand and to be proactively engaged with the real issues. These qualities of the field course are appreciated by the external course evaluators—usually from private consultancies or government development workers. These evaluators are brought in by the funders to evaluate the course. The project has an external steering committee made up of organizations and government departments, which students may be employed by once graduated. The external evaluation is to make sure that what is taught is in line with what potential employers would like. The external evaluators consistently maintain that no matter what quality of report the students manage to produce, the experience is extremely valuable for future careers in the development business. The course has a strong academic learning orientation, but we are very conscious of the fact that students often attend more applied-type courses that will help them in their future vocations. The challenge for us as lecturers is to offer such courses, although not to be totally demand- or market-driven.

Supervisor Perspectives

The supervisors are typically experienced researchers who have first-hand knowledge and skills in environments similar to those the students are faced with, are involved within the main disciplines from which the students are drawn, and are able to take the role of facilitators within the student groups which is vital to ensuring that the students are empowered (Spronken-Smith, 2005). Supervision during the field-based course tends to be rotational; generally each day the supervisors swap student groups, so that all groups are exposed to the diversity of disciplines and perspectives that is represented by the supervisor panel. Supervisors with particular knowledge and skills also ensure that they advise the group on specific activities, e.g. a supervisor who is a soil scientist will advise on appropriate techniques to all groups intending to do soil analysis. Supervisor evaluation sessions identified several important management issues relevant to the successful implementation of problem-based, interdisciplinary, inter-institutional field-based courses (Table 3). These issues are acted upon for the next course, for example improvement in communication, logistics or change in orientation program or time frame of the process.

Community Perspectives and Impacts

The involvement of local communities in the field-based courses and the use of real problems can facilitate real learning for students (Rogers, 1983), and can make the work more exciting and students more cooperative (Waddington, 2001). The impacts on the local communities can include material benefits in the form of wages and purchases, the community can develop longer-term links with outsiders and cross-cultural exchange can take place (Robson, 2002). As illustrated below, the impacts of the SLUSE course on the community of Zombodze South, the study site in Swaziland 2004, displayed similar impacts to those listed above but the main benefit was an increase in ‘self-esteem’, particularly for families who hosted visitors in their own homes (Table 4).

The SLUSE approach is to utilize a local community organization to implement the hosting of the field-based course. Within the location, in Zombodze South, Swaziland, this opportunity was given to the local youth organization. As a consequence of the successful hosting of SLUSE the organization was able to raise its profile within the community,

Table 3. Supervisory issues identified during supervisor evaluation sessions

- Staff supervising on the field course should be present on the pre-field preparatory trip so that they can provide relevant, site-specific information and prepare students prior to the course so that student expectations are realistic
- Supervisors' areas of specialist interest must be clearly outlined to students at the start of the course
- The university hosting the course should ensure that its staff are present throughout the course as they can offer valuable local knowledge
- Students tend to respond more positively to advice given by supervisors from their own universities—this tendency needs to be addressed
- Students sought different perspectives from the various supervisors, but then found it difficult to integrate these or appreciate that each has its own merits and there is no 'one way' to approach an issue
- During the field course the emphasis can focus upon the training aspect of the course, allowing students freedom to try new techniques and make mistakes without intense pressure for 'results' or the course can focus upon 'results' and data acquisition and analysis. Whichever focus is selected, it should be clearly outlined to students and supervised accordingly
- Students' supervisory needs are very diverse; some want limited intervention, others want more constructive criticism
- It is important that staff are able to act as mediators when group conflicts arise—an additional role to the supervisor—role within a field of expertise
- Beneficial that at the end of each day supervisors meet so they can discuss issues relevant to the groups they have followed, so that supervisors are always informed on group activities, progress and problems

Table 4. Perceptions of Zombodze South homestead owners after hosting students and staff on the 2004 Swaziland field-based course

- The students and staff were accommodated in 12 host homesteads that provided sleeping and washing facilities. During the field course the students and staff were very active and tended to leave early in the morning and return late at night. Such busy schedules limited interaction with the homestead owners; however, most guests found time to sit, chat and get to know the family
- Homestead heads were very impressed by the behaviour of the students and staff and some felt that the guests were part of the family. The hosts commented that the guests seemed pleased by the hospitality offered. The hosts were initially sceptical of hosting foreign students, particularly Europeans, since to some these people were synonymous with attitudes of superiority. Contrary to their fears, the students were experienced as down to earth and willing to learn about and adapt to life in the Zombodze South community
- On reflection the hosts stated that they felt their main benefit had been an increase in their self-esteem. They also gained recognition and respect in the community through hosting the 'foreigners' in their homesteads. Homesteads owners also appreciated the money they raised. The income was timely as schools were opening and fees needed to be paid. All hosts said that, given the opportunity, they would welcome guests to their homesteads again

to generate income that was utilized to develop further community projects, furthermore the participants realized that outsiders were genuinely interested in their lives and that they valued the 'realness' of village life rather than seeking more 'sophisticated urban experiences' (Table 5).

SLUSE has also achieved the successful implementation of the basic principles of the SLUSE model (see Figure 1) in some of the locations of the field-based courses. The resulting positive impacts and knock-on effects are described for the case of Madlangala, South Africa in Table 6.

Table 5. Perceptions of Zombodze Youth Organization (ZYO) after facilitating the 2004 Swaziland field-based course

• The ZYO was responsible for hosting the 42 students and staff from the southern African and Danish Universities. They organized accommodation and provided three meals a day. Much of the work was done prior to arrival, for example ensuring that the hosting homesteads had adequate firewood, water and sanitation. Where necessary, firewood was collected and pit latrines dug. ZYO requested a loan from the University of Swaziland; this was provided and repaid after the successful completion of the course
• The ZYO is a relatively new organization, having been established for just three years, and hosting the field course was its first major activity. Members gained valuable experience from hosting a large international group. The experience was viewed as beneficial to the entire community. The financial benefits were also important and the money earned was used by the ZYO to develop an income-generating project that involved the growing and selling of beans. The income the ZYO generated was unprecedented and this evoked some jealousy and mistrust among the members. These problems were minimized by the University of Swaziland handling the ZYO's funds in a transparent and accountable manner. There were minor problems within ZYO; some senior members were uncooperative as they expected larger payouts than the younger, more active members
• The main lessons learnt by ZYO were that simplicity (rather than 'fancy' preparations that detracted from the local flavour) gave the guests the most rewarding experience. They also realized that 'outsiders' were interested in and appreciative of locals and their issues

The Madlangala example illustrates how working in partnership with non-academic organizations can extend knowledge-sharing beyond the university, and that correctly orientated research can help address the challenges of sustainable development (Fincham *et al.*, 2005). Field courses to other African countries have also supported the development of sensitive eco-tourist developments such as a field studies centre in Kenya (Robson, 2002).

Discussion and Conclusions

For the past 25 years or more, interdisciplinary project- or problem-orientated teaching and learning has been advocated. This form of curriculum organization and methods of instruction has become the technique of choice in higher education, and it is advocated that these methods promote more efficient and effective teaching, leading to a more imaginative conduit (as an example see Ramsden, 1992). In spite of extensive studies, it has been difficult to show conclusive evidence supporting greater effectiveness of problem-orientated curricula compared with standard curricula even in well-defined situations. Furthermore, from a theoretical point of view, it has been recognized early on that when analysing the interplay between types of curricular organization and student acquisition of subject matter, no simple relationship exists. This means that a curriculum type that can be characterized in behavioural terms as a student motivator, such as a project- or problem-orientated curriculum, should not necessarily be preferred to the 'traditional' model of lecture room delivery (Robson, 2002).

As has been suggested, the choice of interdisciplinary and project-orientated teaching is often motivated by reference to educational considerations. In other cases, future job requirements and the aim to get students to solve professional problems is understood as the prime motivation for preferring this type of curriculum organization. Such programmes also enable students to make a direct contribution to development, acquiring a personal,

Table 6. An example of successful implementation of the SLUSE-model: the case of eco-tourism in Madlangala, South Africa

Step 1: Identification of student research topic for the October 2001 field course:
During the pre-field course visit in August 2001 by university staff, the community and a local NGO suggested that one group of students should focus on the eco-tourism project they had just started (March 2001): 'The Ukhahlamba Tourism Anchor Project'. The broad research question was developed jointly between university staff and the local stakeholders

Step 2: Student research as part of the field course:
October 2001.Students developed their field research based on the following research questions:
- Is community-based eco-tourism a viable alternative and/or supplement to other sources of income, and is it likely to improve the livelihood situation of the residents in Madlangala?
  a. Does the area hold tourism potential?
  b. What are the likely positive and negative impacts on the local community?
  c. How are these impacts distributed within the community?

Step 3: Assisting in the empowerment of communities:
At the de-briefing held at the University of KwaZulu-Natal (UKZN) following the field course, students presented their preliminary findings, and members of the local Community Tourism Organization (CTO) were part of the audience. Based on the information presented by the students (the result of many interviews and discussions with the CTO members) the CTO managed to apply successfully to the Regional Government for further funding to strengthen their eco-tourism project

Step 4: Longer term commitments with the community:
- A second field course was held in Madlangala in January 2003. A continued wish from the community to focus on the eco-tourism project resulted in the formulation of a student research theme focusing on community projects in general
- During 2003–2004 a number of SLUSE students conducted longer term research for their master's projects in the community. Amongst other things various maps of the hiking trail were developed as part of their research. In addition university staff were engaged in the project, both through their supervision and through their own research
- In 2005, the University of KwaZulu-Natal returned to the area to run a five-day honours field course in natural resource management, which utilized the facilities developed by the CTO and as an assignment designed a mountain bike trail to complement the existing hiking trail and helped in training of local personnel to operate the venture

Epilogue:
In a press release from the South African Government on 31 October 2003 it was announced that 'The Adventure Trail was officially handed over to the Mehloding Community Tourism Trust by the Local Economic Development Fund under the Department of Provincial and Local Government'. (Anonymous, 2003)
On 30 November 2004 the *Mail & Guardian* (a South African national newspaper) wrote about the project: 'A community which has managed to turn the tourism wheel in their favour is the Mehloding community .... They offer guests a complete ecotourism experience set in scenic mountain landscapes, with a strong cultural slant ....' (Groenewald, 2004)

Furthermore, a link has been established between the project and a Danish travel agent, and by October 2006 the first group of Danish tourists were hiking the trail. The Danish University consortia have been instrumental in this network being established

practical experience as opposed to mere theoretical understanding. Active, autonomous participation in at least part of the planning is also regarded as critical to the learning experience. Exposure to the environment and people that will be the students' future target if they choose a career within development and environmental management may also form a more solid basis for deciding if they are able to cope with the many frustrations, challenges and emotional disturbances that come with such a vocation. It also provides

an opportunity to test out a number of methods, and reality-check classroom truisms, before students embark on postgraduate thesis work. The exposure to staff and students with different disciplinary background has led to postgraduate projects with a wider disciplinary base, including various other aspects and data-collection methods than the students' core area, and in some cases integration of several disciplines into one thesis. It is our understanding that this proves the value of the interdisciplinary exercise—that students obtain a broader understanding of the issues, and see the benefit of using several approaches to address core questions.

The SLUSE model strives to incorporate local communities at the outset, so that they have an input into problem formulation and the overall field logistics. Local community perspectives show that although the material benefits of hosting a course are valued, the most positive aspect is personal and relates to enhancing an individual's or group's confidence and status within the community. The case of Madlangala illustrates that longer-term linkages with communities and SLUSE university consortia can be established to the benefit of both and that the knowledge and experience gained from the courses can be utilized by the communities for their own enrichment.

Supervisors on the SLUSE courses juggle various roles, they share knowledge, skills and experience with students but also act as facilitators, empowering students and assisting groups to function effectively. The supervisors are also managers, liaising continuously with the local community and particularly the organization responsible for hosting the field course. Supervisors are faced with a trio of perceptions: (i) that of the host community—that, despite one's best intentions will view the experience as an opportunity for, in most instances, economic betterment; (ii) that of the students—eager to learn, meet fellow students from other institutions, experience the 'real world', get into the field and put into practice all that textbook stuff; and finally (iii) the supervisors who want the students to learn from experience, wish to share their own field approach, are learning from colleagues, and, often coming swiftly to the front of one's mind, the fact that we are responsible for this whole process and have to be managers as well. The supervisors play two very distinctive and disjunctive roles within this process: one as educator/researcher and one as manager.

The effective and efficient management of the research process entails the effective and efficient management of the human resources that are engaging in the research processes. The orientation and management of human resources from different cultural, social and economic backgrounds is, hence, an integral part of the research process. This approach provides the space and place for research students and teachers from an array of different backgrounds to come together to research land uses and natural resource management, and its related dynamics. The orientation and management of human resources from different cultural, social and economic backgrounds must not be viewed as exogenous or external to the research project, but rather as an intrinsic, important and necessary aspect. Interestingly, the particular unfolding of the research process will depend on the nature of the orientation and management of research students. The orientation and management space provides for the active participants in the research process to air their views, prejudices, fears, opinions, strengths and weaknesses. This could be viewed as a space for disclosure. The central theme of orientation and management is to help in the creation of research teams of students that function cohesively, coherently and effectively, as well as efficiently.

The authors echo the words of Schuurman (2000) that the challenge for development studies is to re-establish its continued relevance to study and to understand processes

of exclusion, emancipation and development—not particularly by clinging to its once treasured paradigms, but by incorporating creatively. Furthermore, doing nothing comes down to an endorsement of the status quo (Pieterse, 1998, 2000). The strength of this approach has been the interdisciplinary nature of tackling issues identified by both the university staff and local, hosting communities as pertinent, not only to development in the region, but also to ensure sound environmental management (as deemed appropriate, bearing in mind that in many instances it is social factors which tend to dominate the mindset of development organizations). Furthermore, the diversity of participants—both staff and students—in terms of North–South and South–South tertiary institutional relationships has created a strong and healthy bond that bodes well for the future of development and environmental management in the region. This experiential learning process takes place in a field-based setting; the experiences gained and shared will be taken forward by our students into their future careers and, we hope, produce graduates more aware of and sensitive to issues of development and environmental management.

Through these experiences the participating staff have discovered how to take theory and turn it into practice in a meaningful and applied manner. As mentioned in the introduction, our students seek a meaningful and enjoyable learning experience. We feel this has been achieved through the approach adopted and takes the tertiary institutions back into the field, to be more proactive and participatory, and allows us all to get our hands dirty!

Acknowledgements

The authors wish to thank SACUDE-SLUSE (DANIDA) for funding of the project entitled 'Human Capacity in Natural Resource Management' under which the field-based courses were conducted. The communities in which the field courses were based and associated stakeholders are also thanked for their participation. Furthermore, they would like to thank all students and staff that have participated in this experience and have made the project sustainable and continuing. Finally, the suggestions and comments of the reviewers are acknowledged—they have been insightful, questioned issues the authors may have taken for granted and resulted in an improved paper.

Notes

[1] SACUDE-SLUSE (Southern African Consortium of Universities on Development and the Environment—Sustainable Land Use and Natural Resource Management) was established through collaboration between the University of Durban-Westville, the University of Natal-Pietermaritzburg (merged in January 2004 to create the University of KwaZulu-Natal), the University of Botswana and the University of Swaziland.

[2] DUCED-SLUSE (The Danish University Consortium on Environment and Development—Sustainable Land Use and Natural Resource Management) includes The Royal Veterinary and Agricultural University, University of Copenhagen and Roskilde University.

[3] Evaluation is a vital part of a process of course (re)design and the main purpose for the evaluations is not self-congratulatory, but to learn from mistakes for future courses. Many changes are implemented as a consequence of the meetings and written feedback.

[4] The Southern students have tended to be far more vocal and outspoken at evaluation sessions, while their Northern counterparts were generally more 'polite' and unwilling to upset people, thus it took longer to 'extract' their true views.

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