Heila Lotz-Sisitka, Karen Ellery, Lausanne Olvitt, Ingrid Schudel & Rob O'Donoghue

Cultivating a scholarly community of practice

First submission: 6 August 2009 Acceptance: 19 May 2010

In the field of Environment and Sustainability Education we are seeking ways of developing our teaching and supervision practices to enable social changes in a rapidly transforming field of practice where global issues of truth, judgement, justice and sustainability define our engagements with the public good. This article explores the process of cultivating a scholarly community of practice as a model of supervision that not only engages scholars in an intellectual community oriented towards socioecological transformation, but also extends and enhances dialogue with individuals on the technical and theoretical aspects of their postgraduate studies.

Die kweek van 'n wetenskapspraktykgemeenskap

Ons poog om op die gebied van Omgewings- en Volhoubaarheidsonderwys maniere te vind om onderrig- en leerpraktyke te ontwikkel wat maatskaplike veranderinge op 'n vinnig-veranderende terrein moontlik maak waar globale kwessies rakende waarheid, oordeel, geregtigheid en volhoubaarheid ons betrokkenheid by openbare belang definieer. Hierdie artikel ondersoek die kweekproses van 'n wetenskapspraktykgemeenskap om as 'n model vir studieleiding te dien waardeur akademici betrokke sal kan raak by 'n intellektuele gemeenskap gerig op sosioekologiese transformasie en waardeur dialoog met individue uitgebou en verbeter kan word ter bevordering van die tegniese en teoretiese aspekte van hul nagraadse studie.

Prof H Lotz-Sisitka, Ms K Ellery, Ms L Olvitt, Ms I Schudel & Prof R O'Donoghue, Environment and Sustainability Education Research Programme, Rhodes University, Grahamstown, South Africa; E-mail: h.lotz@ru.ac.za, k.ellery@ru.ac.za





uredi (2004) explains that intellectuals¹ are critical for initiating dialogue and engaging the curiosity and passion of the public. At the start of the twenty-first century many issues require such engagement, the recent economic crisis and its roots being a clear example. Climate change and its origins (which are not dissimilar to those of the economic crisis) provide another topic for such dialogue, curiosity and passion (cf for example Worth 2009, UNEP 2006, IPCC 2007). In a southern African context, numerous and varied issues require dialogue and the passion of the public. Many opportunities for engaged dialogue and engagement of the public exist in the field of environmental education, which is historically constituted at the interface of the field of education (a well-settled, established, older field) and the more dynamic, new and still being tried out field of environmental sciences (which is increasingly being recognised as a "hybrid", interdisciplinary or transdisciplinary science). Bauman (1995) argues that intellectuals need to rise above the pre-occupation of their own profession or artistic *genre* and engage with the global issues of truth, judgement and taste of the time. The socio-ecological condition of late modernity, currently characterised by fragmentation, individualisation, risk, overconsumption and greed (Beck 1992 & 1999, Bauman 2007, Giddens 1999 & 2009), requires an intellectual community that is oriented towards the public good, and prepared to put people first, before profit and pollution (Sen 2010). It is increasingly clear that humanity is realising that capitalism, socialism, fundamentalism, nationalism – in short 'isms and 'ists' of all kinds – have failed us, and there is an increasing global consensus that we have little choice but to recognise the failures of modernist development thinking, and

In this article the term intellectuals is used in the spirit of its original use — a "militant, mobilising concept, with its fighting edge turned against two adversary tendencies: the growing fragmentation of the knowledge classes caused by the occupational specialisation, and the declining political significance of the learned professions at a time when politics was itself becoming a separate, full-time occupation confined to its own full-time practitioners". Intellectuals function through the activity of *critique* of the officially sanctioned or dominant/dominating order (Bauman 1995: 227-8), with a role to play in articulating a "collective conscience of society".

to consider the remaining options for a more humane, socially just and sustainable future afresh (Sen 2010).

Environment and Sustainability Education is seeking ways of developing teaching and supervision practices to enable social changes in a rapidly transforming field of practice where global issues of truth, judgement, justice and sustainability define engagements with the public good.² In this context, individualised models of supervision were found to be wanting, since they fail to adequately engage scholars in an intellectual community oriented to the public good – they fail to create the spaces for dialogue and engaging the curiosity of the public. This article explores the process of cultivating a scholarly community of practice as a model of supervision that extends and enhances engagement with individuals on the technical and theoretical aspects of their postgraduate studies.

The changing role of scholarship is currently debated in the South African press, with tensions arising within and between varied interpretations of state-university relations.³ The development university, supporting a development state, has been mooted as an important proposal in society. Contestations arise, however, at the level of "academic freedom" and what this means, particularly in relation to the notion of the "public good". For some this means serving the public good by "preparing people for work", and for others this means creating the means and mechanisms for engaging in critical dialogue, research and teaching activities that are not reducible to industrial/technical/work-related skills, goods and services,

- 2 The authors of this article collaborate in a research programme focusing on Environment and Sustainability Education Research in the Faculty of Education at Rhodes University. This research programme involves some 30 Masters scholars (course work and full thesis) and some 10 PhD scholars. Some of our postgraduate scholars are resident (on average approximately 30% of our cohort of scholars) and the rest are part-time, and come to Rhodes University for a number of "block" sessions over the course of their degree programmes. This allows for the design and development of "research weeks" which typically constitute a mix of formal research teaching activities and individual research-based activities or group tasks and seminars.
- 3 Cf, for example, the discussions regarding the 2010 Summit on Higher Education Transformation, <www.doe.gov.za> or <www.cepd.org.za>

but which can innovate, critique and re-imagine these and other practices and values in society (Morrow 2010, Jacklin & Vale 2009). The latter is a less functionalist interpretation of university contributions to the public good, and is supported more actively in our community of practice, even though we have an interest in research outcomes that are "community-oriented and real world-connected" and performative or catalytic in social change terms. This does not preclude engagement with higher education knowledge as discussed by Morrow (2009) who warns against a decline into "epistemological populism" and inadequate understanding of the nature of higher knowledge being constituted though extensive systematic learning. Morrow (2009) warns that inadequate understanding of the nature and value of higher learning in society can significantly and paradoxically undermine development initiatives.

Histories of the university being appropriated by the development state abound in Africa, partly because universities themselves have failed to re-imagine their role and responsibility in society in ways that can contribute to society, the priorities of the development state, while pursuing scholarship and intellectual community. Many universities find it difficult to maintain a strong relationship with the objectives of a development state, and intellectual independence, spaces for innovation, and social critique. In a recent Mail and Guardian newspaper one article argued that universities need to be able to better describe and explain how their research and teaching is and can become community-oriented without losing rigour or the endeavour of universities, which is knowledge creation (Hall 2009). Morrow (2009) argues that to regard universities as places of teaching, learning and community engagement is to mis-interpret their role in society, and to undervalue the role of knowledge development and of sharing it in society. In our view, changed supervision practices have a contribution to make to re-situating the university in society in ways that value higher learning and knowledge development, while sharing and working with knowledge in society. In this instance, it should be acknowledged that education is to a large extent an applied research discipline, which in many ways also enables such experiments in practice-knowledge relations.

1. Extending existing models of scholar supervision

1.1 Cultivating communities of practice

The traditional model of scholar supervision in higher education is based on the traditional notion of apprenticeship where a novice apprentices to a "master", thus learning the skills necessary to perform as a "master" in a specific field. This emerged from a particular historical context with the emergence of the university in European society. This article challenges this individualised and liberal notion of supervision, by examining the possibilities for establishing intellectual community, through an extended model of scholar support that involves situating research in a field and within a scholarly community of practice⁴ (Wenger 1998). In particular, we draw on Wenger's more recent work, in which he collaborates with organisational change theorists to develop a concept of "cultivating" communities of practice, and this notion is applied to the process of supporting scholarship in an intellectual community with an interest in the public good. Wenger et al (2002: 12) argue that communities of practice have the "ability to steward knowledge as

In using the concept of community of practice in this article, we draw on Wenger et al (2002: 4) who explain that: "Communities of practice are groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area on an ongoing basis [...]. These people do not necessarily work together every day, but they meet because they find value in their interactions. As they spend time together, they typically share information, insight and advice. They help each other solve problems. They discuss their situations, their aspirations, their needs. They ponder common issues, explore ideas, and act as sounding boards. They may create tools, standards, generic designs, manuals and other documents or they may simply develop a tacit understanding that they share. However they accumulate knowledge, they become informally bound by the value that they find in learning together. This value is not merely instrumental for their work. It also accrues in the personal satisfaction of knowing colleagues who understand each other's perspectives and of belonging to an interesting group of people. Over time, they develop a unique perspective on their topic as well as a body of common knowledge, practices, and approaches. They also develop personal relationships and established ways of interacting. They may even develop a common sense of identity. They become a community of practice."

a living process", and that it is possible to cultivate communities of practice actively and systematically. They explain their analogy of cultivation as follows:

Cultivate is an apt analogy. A plant does its own growing, whether its seed was carefully planted or blown into place by the wind. You cannot pull the stem, leaves or petals to make a plant grow faster or taller. However, you can do much to encourage healthy plants: till the soil, ensure they have enough nutrients, supply water, secure the right amount of sun exposure, and protect them from pests and weeds [...] Similarly, some communities of practice grow spontaneously while others may require careful seeding [...] communities of practice may exist, but [without cultivation] may not reach their full potential ... (Wenger et al 2002: 13).

Wenger et al (2002: 13) explain that one cannot cultivate communities of practice in the same way that one develops traditional organisational structures as cultivating communities of practice is more about "eliciting and fostering participation than planning, directing and organising their activities" (our emphasis). How can we think about research that elicits and fosters participation in a scholarly community of practice?

1.2 Contextual, identity-centred and field-based co-defining of research questions

Thinking about research and research supervision within a community of practice frame requires reflection across the relational mix of the individual scholar seeking supervision, what a wider field or community of practice may deem worthwhile and scholarly as research in the field, the focal concern of the scholar, and what might be deemed scholarly.

Vignette 1: A scholar arrives at a university seeking supervision in a particular area in which he/she has experience (e.g. sustainable agriculture and NGO support). The wider field and intellectual community of practice may deem it worthwhile that studies be conducted into workplace learning in the field at the time. For such research to be deemed scholarly, the research would need to be 'at the cutting edge' of theory and practice, which would require the scholar – and the community of practice which he/she begins to participate in – to define what has been done before, what is already known, and what the areas of potential innovation might be. This requires deliberation between the individual scholar, his or her interests, the

interests of the wider field and broader community of practice, and the knowledge-practice histories that exist and are open to scrutiny. Through this deliberative process, the scholar begins to arrive at a 'negotiated space of focal concern' in which to articulate and further a project which is both field-related and scholarly.

This example highlights the question of differentiating what should be at the centre of a proposed research enterprise. It asks both supervisors and researchers to examine the blend of propositions that shed most light on the "supervision" role that academic institutions inscribe for university staff. In our community of practice we commonly find that scholars regard research as a purposeful activity whereby to achieve a desired change, a careful goal-directed blend of finding out and getting something beneficial done. Who the scholar is (background and identity) and what might be deemed scholarly (conventions and skills) tend to recede against the search for what is researchable (relevant focus and do-ability). This redirects the research gaze to the emergence of what is at the centre of interest of the researcher, what has been done (existing models of practice in the field), what is already known (existing literature) but most importantly co-defining what is considered worthwhile in Environment and Sustainability Education scholarship and what makes it interesting and worthwhile. In this instance supervision of the individual and scholarly practice recede against trying to understand the phenomenon that is worthy of research attention. This shifts the conventional view of supervising a scholar to co-working with a scholar to contextually situate and clarify a focus that when probed gives rise to a question that begins to beg research attention. This requires careful listening to what the scholar has in mind but representing field-based and historically informed readings of this back to them and trying to help ring-fence a research focus that gives rise to a question that might be researched. This deliberative approach seems to bring into focus what might be relevant opening questions and some possibilities for a research engagement with these. What is central in this instance is discursive co-engagement towards deriving orientation to a researchable concern and differentiating this within the emergent field of Environment and Sustainability Education. This, in our view, lies at the heart of research rigour and quality,

as it provides the foundation for constituting field-based reflexivity (Bourdieu 2004), which can save a research project from positivism, narcissistic reflexivity and over-individualisation of the research enterprise. This process of field-based deliberation and contextualisation of the research question is therefore the first important feature or dimension of cultivating a scholarly community of practice.

Vignette 2: We have often been faced with scholars wishing to research indigenous knowledge. In the first round of this research interest we got to working on indigenous knowledge processes like collecting water and edible wild foods but this proved to be too orientated to novel difference or interpreting these practices with the knowledge capital available to us in the sciences today. In the next round we made a rapid shift into the idea of 'indigenous knowledge practices' and this not only allowed better work in Mother Tongue but enabled an onto-epistemological modelling of situated practice, change and sustainability challenges, and raised axes of tension that exemplified the re-imagining of changed/new practices and choices. Now when faced with a scholar with a scholarly research interest in indigenous knowledge, there is a focus of interest to be differentiated by reflection and in research stories within the emergent field of practice. The latter serve as sounding boards with which to derive a focussing question of research interest that might contribute to more coherent ways of working with situated, intergenerational knowledge practices and associated issues of sustainability. These processes of research supervision involve a collaborative induction into a shared enterprise of illuminative co-engagement within the emergent field of environment and sustainability education research.

The vignette illustrates that some of the ways to enhance our research endeavours might be to make emergent practices and research perspectives more explicit. In the field of Environment and Sustainability Education, two examples of this include a shift from getting the message across (through behavioural, positivist and social marketing approaches to education and research) to making choices more explicit in order to enable more deliberative, participatory and capability-centred approaches to education and research. A second shift of significance in the field is from awareness creation to a situated engagement with widening risk and changing sustainability practices. Both of these further the scholarship objective articulated in the opening of this article — to engage the public in dialogue and discussion on issues that concern the public good. Both

require deliberation and contextual field-based co-defining of research questions that are also located in the history and identities of the researcher and his/her experiences.

2. Supervision practices in a community of practiceapproach to scholarship development

As indicated in the vignette above, the supervision practice of fostering field-based deliberation and contextual analysis in order to establish a research question that is worthwhile researching locates and frames the research project within a wider community of practice. It situates the research in the field, and provides the researcher with avenues for collaboration and co-engagement with the research question.

In our experience, simply situating the research within a wider community of practice, however, does not suffice for cultivating a scholarly community of practice. To use the Wenger et al (2002) analogy, the plant may have been seeded, but there are many different ways to encourage healthy plants, or good-quality research projects that will be meaningful and of a quality that they carry validity and catalytic value in the field in which they are constituted. An analysis of activities in which we have engaged over the past three years in the processes of cultivating a scholarly community of practice oriented towards intellectual community has enabled us to identify a number of different interrelated processes that build learning capabilities for scholarly activity in this field. These include, for example, seminars, reading deliberations, peer review conversations, scholarly meetings with others outside the field of practice, participation in conferences, establishment of research programmes, and making (catalytic) scholarly contributions to a field of practice. The majority of these are relatively traditional supervision extension practices. Most scholars in the life of their postgraduate studies would be encouraged to present a conference paper on their work, while others would be asked to present seminars on their work, or to engage in some kind of peer review during the life of the project. In our reflections on these practices, we have tried to identify three practices that contribute most usefully to enhancing intellectual community:

- Research programming and working within a research programme framework.
- Engaging a diversity of opportunities for development of independent learning capabilities.
- Enabling catalytic scholarly contributions to a field of practice.

3. Research programming and working within a research programme framework

A significant research practice that we have been exploring over the past few years as a key mechanism for enabling a community of practice-approach to research supervision is research programming. A key feature of the research programming work has been its emergent orientation; in other words, the research programming has been based on an historically constituted body of studies that have emerged through diverse individual/field-based interests over the past 20 years. A key starting-point for the research programming has therefore been extensive critical and historical reviews of previous research undertaken in the Environment and Sustainability Education research programme. This has helped us to identify shifts in focus, scope, theory and methodology which, in turn, has helped us to develop the necessary capital for the deliberative "locating" of new research questions, and for partnership establishment to allow our researchers opportunities for engagement with other researchers not directly involved in our dayto-day community of practice. Developing the substance and capacity for partnership formation is particularly important since communities of practice can become self-referential.

Vignette 3: Since 1992, a loosely-constituted research programme focussing on occupationally-directed education and training has been developing in our community of practice and has produced a small collection of postgraduate studies and various academic publications. A 2007 review of this work revealed a corpus of some 20 MEd studies and 3 PhD studies in this area, and a tendency for this work to be 'education institution focussed and curriculum design centred' with less emphasis on 'workplace learning and sustainability practices'. This review led to the establishment of a research programme framework with a renewed vigour and interest in workplace learning, advancing earlier foundational work. Through defining the renewed focus, a partnership for formal

collaboration within an externally funded, government-led, multi-institutional research programme has been set up to provide for wider context and impact for the research, as well as fundraising for new studies to take earlier work further in the field. Current researchers (3 PhD and 3 MEd) working in the research programme have the benefit not only of building on the work produced by earlier researchers (most of whom remain active in our community of practice), but are now supported by the more structured and strategic direction that the research programme offers. This broad, collaborative 3-year research programme focussing on 'Researching Work and Learning' involves four South African universities, all engaged in researching various aspects relevant at the work and learning interface. Our institution's particular focus is to research 'change-oriented workplace learning and sustainable development practices' in various workplaces. This complements other research undertaken by the collaborating universities. The formalised research programme has provided mechanisms that have helped to cultivate and extend our scholarly community of practice. Over and above the regular interactions within the department (such as weekly MEd research seminars and the PhD forum), the scholars involved in the research programme benefit from the collective momentum that is stimulated by the research programme's requirement for regular reporting, the submission of annual publications and opportunities to present and report more widely on research progress through national and international seminars and conferences. The wider partnership framework also provides opportunities for reflexivity and review of the work undertaken within our community of practice. Beyond its goal of contributing to new knowledge within the South African education and training sector, this model of situating research within an externally driven, multi-institutional, collaborative research programme helps to extend the rigor of research undertaken in a community of practice research framework, and thus to enable catalytic validity of the research programme and its outcomes in the longer term.

4. Scholarly activities

Engaging with scholars by means of a diverse range of scholarly activities constituted in an evolving formal (but not over-determined) scholarly community of practice appears to make for well-rounded scholars and studies that contribute constructively to a field of practice. In other words, the studies are stewarded in a manner that recognises knowledge as a living process – simultaneously involving informality, experimentation, autonomy, discipline and structure.

This open-ended and diversity-rich orientation to research supervision contrasts with performative supervision models which have come to characterise many postgraduate contexts that have fallen prey to market-related pressures under neo-liberalist influences on higher education.

In a study exploring issues relating to doctoral research supervision within a performance-related neo-liberal agenda, Deuchar (2008: 497) discusses the pressure for supervisors to become more "directive" in their approach in supporting postgraduate learners, particularly within specific time frames. This, however, creates tension or conflict, as the expectation at a postgraduate level is for development of independent, innovative, autonomous and reflexive scholars. To enable an open-ended, reflexive orientation to our scholarship, we have found it useful to consider engaging scholars in a diversity of scholarly activities which, if placed on a continuum, would include interactions that are technical, directed, focused, productrelated, skills-based, and "rules of the game"-based at one end. At the other end of the continuum interactions are open, undirected, dialogic, responsive, exploratory, deliberative, knowledge-generating and process-related. This latter set of interactions (which are mutually constitutive with the former more technical interactions) tend to be less dependent on input from a single supervisor or those who are already more familiar with the "rules of the game", and are more effective if they take place in a larger community of practice of scholars in which there is no single authority but each individual contributes and engages with ideas from his/her own and others' contexts.

Vignette 4: A typical 'research teaching' session might include demonstrations on how to organise and analyse data, or on strategies to manage referencing, or discussions on approaches to ethically conducted fieldwork. These sessions are held regularly, and are planned both a) within the sequence of a 'pedagogy of research' (a formal research teaching programme), and b) responsively as various technicalities in the research process arise in the context of individual studies, or in studies of a group of scholars.

Vignette 5: A typical 'Friday morning session' in our scholarly community of practice would involve research discussions that might focus on a critical research question in our community of practice, feedback on recent conferences attended by staff and postgraduate scholars, discussion of individual research proposals or

'sticking points' in particular studies, and discussion on readings that may be of interest to the group, or to an individual scholarly project. These meetings have no 'annual schedule' beyond a commitment to discuss our research work (individual and collective) in various ways.

In our experience, a community of practice milieu, which is in part dependent upon the diversity of background contexts of the various learners and participants, creates a productive space in which postgraduate scholars can effectively learn and grow. This also means that the academic, social and practical support, all of which are part of the support needs of a postgraduate learner (Bartram 2008), no longer become the sole and onerous responsibility of a single supervisor, but instead is/are met, usually much more effectively, by a broader community of people. Therefore, ideally, scholars will be situated for the most part of their postgraduate degree in the communities of practice space.

Within this community of practice frame, supervisors play different roles at different times — sometimes listening, sometimes guiding, sometimes enq uiring along with scholars, and sometimes supporting specific needs. We have found that at certain critical stages in a study, such as when they are entering a new phase in the research (Deucher 2008), postgraduate scholars may require closer guidance and support. This would then be provided for by the supervisor, perhaps through a close reading and comment on a proposal or a draft of the thesis, or through critical comment at a crucial stage in the analysis of data. This "dipping in and out" function of the supervisor tends to break the supervisor's powerful authoritative role, and serves to avoid a dependency of the learner on the supervisor. The extent, timing and nature of such support is dependent upon the needs of individual learners, which means supervisors need to be responsive and adaptive to individual situations.

As indicated earlier, our intention with developing a scholarly community of practice-approach to supervision is not to displace the important role of the supervisor in providing individual support to scholars for ensuring technical proficiency at the level of the individual study. This forms an integral part of the communities of

practice-approach. While scholars participate actively in the scholarly community of practice, where their knowledge building is regarded as "living process", they are also technically supported to respond to various challenges that arise in the course of conducting research that is oriented towards the public good. Some of these challenges are technical, contextual, and/or individual/social. All require equal attention, and we have found that while the individual supervisor needs to attend to many of these issues at the level of the individual study, the community of practice -pproach provides additional support for addressing many of the issues that arise at the individual study level. In this instance a few technical support processes are highlighted that are critical to the kind of scholarship we wish to develop in building an intellectual community.

One of the issues with which we often deal in this context is the process of "getting the right balance" between independence and ownership, and quality and relevance of the dissertation. At a quick glance one might think that an emphasis on independence and ownership might compromise the quality and relevance of the dissertation. This viewpoint would be one driven by a view of the supervisor as the "master" with the scholar a novice apprentice. But with an alternative viewpoint of both scholar and supervisor as members of an intellectual community of practice, one can perceive opportunities to increase independence, ownership, quality and relevance. Within a community of practice, scholars attend conferences, present at seminars and participate in informal discussions which open up opportunities for the following pedagogical processes whose value is discussed below:

Explain and express

The need to explain ideas to colleagues and try out different ways of expressing these can help a scholar to find his/her own voice. This can help a scholar battling with a tendency to cut and paste chunks of texts without knowing how to make meaning of these in his/her own context.

Structure ideas

Presenting ideas to colleagues often comes with the challenge of representing ideas in a short PowerPoint presentation or verbal summary. Having to *précis* ideas can help a scholar find keywords, organise more logically and present complex ideas succinctly. Using graphical representations is also a good strategy since colleagues cannot be expected to read whole chapters of text to gain access to an idea or set of ideas. Being part of a community of practice means "sharing the floor" with others. A diagrammatic representation of ideas can help re-organise and test ideas in a short and succinct manner.

Relate

In discussion groups a scholar can often short cut a long individual battle with trying to understand a concept when a colleague shares a different understanding of the same concept or a different way of applying a concept or idea. This can contribute both to the quality of understanding a concept, and helping a scholar to perceive the value and relevance of his/her study to the wider community in terms of a collective understanding of concepts and their application.

Take responsibility

If scholars are expected to present their ideas to colleagues they are encouraged to take responsibility for developing their own ideas without waiting for the supervisor to point out the next step. The scholar then has an opportunity to be the "expert" among colleagues who are not that familiar with the study. Both these factors contribute to increased independence and a sense of ownership of the project on the part of the scholar.

The above illustrates how the pedagogical processes at play in a community of practice can ultimately lead to a stronger, more confident scholar with a product that is of good quality and of value to the profession and the intellectual community.

5. Enabling scholarly catalytic and performative contributions to a field of practice

The third aspect of our supervision practices that are significant within the communities of practice-approach is the processes involved

in enabling scholarly catalytic and performative contributions to a field of practice. This involves supporting scholars to "locate" their research projects in "real world" activities and programmes where forms of scholarship are needed to contribute to and develop the projects and programmes. Various approaches to this range from undertaking group-based participatory research projects to inform particular activities in programmes, to individual studies that are located in ways that lead to and result in specific contributions to a wider set of practices in the field. Significant to this process is a research community that is "partnership linked" and actively engaged with the wider activities of the field. Such processes often provide funding for studies, and one of the emerging tensions is the process of maintaining the independence and scholarly framing of the studies, while addressing the needs of the field. A mix of scholarly research outputs (in the form of a thesis or research paper) and popular publications (in the form of teacher workbooks or low-cost educational materials) based on the studies is a useful way of managing this tension.

> Vignette 6: Conducting a review of the Mainstreaming Environment and Sustainability in African Universities Project led to the finding that a systems approach to MESA was needed to strengthen the programme. This led to the emergence of a PhD focussing on systems approaches to MESA. The study was an individual institution case study, but because of the wider context of the MESA programme, a tool developed for the individual case study could also be tested in a wider teaching programme, which enhanced the rigour of the tools' use in the individual case study context. The tool was later re-developed based on feedback from other users, and produced as a separate booklet for use in the MESA programme. In this way wider engagement within a project (the MESA project) provided a context of the study, and also a space for the study to make catalytic contributions, without the MESA activities interfering in the study and its design (as a single case study). The engagement with 'real world' users of the study as it unfolded significantly enhanced the rigour and the impact of the study.

> Vignette 7: In another case, scholars collaborated with more experienced researchers to undertake contextual profiling for a regional programme to understand a particular socio-ecological issue. This contextual profiling research fed into the design of a regional research programme, but also helped each scholar to situate their individual studies more rigorously. The research programme also raised funding to cover the fees of the individual scholars.

These practices enable us to observe how universities can be "community engaged" without losing rigour of their knowledge-generating enterprises, or without losing the focus on teaching and research which is their reason for being. These practices also enable us to perceive that a communities of practice-approach has benefits for both the scholars and the wider field in which their research is located. Such practices enable us to perceive how universities can contribute to the public good as intellectual communities that not only critique society, but also help to re-imagine society by generating new research practices that simultaneously have real-world, catalytic contributions.

6. Impacts and outcomes of cultivating scholarly communities of practice

As indicated earlier, the contemporary intellectual endeavour is faced with, and in the process of confronting, many issues, most notably the process of putting people first before profit and pollution, and ensuring a more humane, just and sustainable future. This involves seeking new directions and choices. We are of the opinion that this process is an important indicator of what constitutes meaningful scholarship in a developmental state in the context of a developing country. We would therefore seek to understand how our model of supervision is contributing to these social processes in society. So far we have anecdotal evidence that this model of supervision and scholar support is not only building a community of practice within the scholarly environment of the university, but also in the community of practice outside of the scholarly environment of the university. In other words, our scholars are working in extended communities of practice at national, sub-regional and international levels.

Another important aspect of our endeavour is the socio-ecological nature of the research enterprise and, as explained earlier, we are developing supervision practices that are oriented towards field-based reflexivity to enhance the validity and value of the studies that scholars undertake.

A second important aspect to research in more depth would therefore be the actual relevance and material contributions/changes resulting from the various studies that are established in this manner (where the scholarly community of practice is linked to and situated in communities of practice "in the wider world" of environmental education practice). There are numerous vignettes or stories to tell about the catalytic validity of the studies that have been undertaken in the research programmes that we have established (as noted in the two vignettes above, for example). However, this area requires more in-depth research.

As mentioned earlier, the move towards research programming is significant to the establishment of a scholarly community of practice, in particular because it enables wider partnership formation that helps to develop reflexivity within the community of practice. Of most interest, however, is the interface between different research programmes within the wider environmental education and sustainability research programme. Tools need to be developed in order to monitor the ways in which engagements with wider research partnerships help our community of practice to remain relevant and contribute to intellectual community in a wider sense.

The variety of research-related activities that take place in cultivating a scholarly community of practice may also warrant further research and monitoring, particularly for their academic development potential and the way in which academic skills are developed outside the direct supervisor-scholar or master-apprentice relation, as this has significant implications for power relations in postgraduate scholarship settings. Similarly, the technical and individual support aspects that are so significant for ensuring studies that are well executed and of a high quality and standard also need to be monitored. As identified in this article, it was found that a community of practice-approach helps to enhance support for the technical aspects of research supervision, but that this cannot be left solely to the community of practice – there is a need for individual supervision, close reading of studies and technical proficiency.

7. Conclusion

This article has opened a discussion that has helped to:

- make our model of research supervision more explicit;
- clarify the purpose or reason why it may be significant to experiment with the process of cultivating scholarly communities of practice that are oriented towards intellectual community and socio-ecological transformation;
- identify some of the characteristics of this approach to supervision most notably the significance of deliberating research questions in relation to scholar identity and experience as well as field-based relevance and contextual histories, and the process of viewing knowledge as a living process;
- articulate the range of activities that provide for a continuum of research engagements during the life of a research project, and which of these appears to provide significant opportunities for intellectual community;
- consider how to support scholars technically, while allowing them to gain further support from a scholarly community of practice.

We have also identified that part of our work is to create enabling conditions in which studies can contribute catalytically and performatively to a field of practice without this process disrupting the quality of scholarship or higher learning — it is not a process of cultivating epistemological populism at the expense of higher learning. We have identified that currently we have to a large extent anecdotal evidence that these processes are indeed significant, but that we need to develop more in-depth monitoring and evaluation mechanisms and processes to fully understand the impact and validity of this approach to supervision.

Bibliography

BARTRAM B

2008. Supporting international scholars in higher education: construction, cultures and clashes. *Teaching in Higher Education* 13(6): 657-68.

BAUMAN Z

1995. *Life in fragments.* Oxford: Blackwell.

2007. Liquid times. Living in an age of uncertainty. Cambridge: Polity.

BECK U

1992. Risk society. Towards a new modernity. London: SAGE.

1999. World risk society. Cambridge: Polity.

BOURDIEU P

2004. The science of science and reflexivity. Cambridge: Polity Press.

DEUCHAR R

2008. Facilitator, director or critical friend? Contradiction and congruence in doctoral supervision styles. *Teaching in Higher Education* 13(4): 489-500.

FUREDI F

2004. Where have all the intellectuals gone? London: Continuum.

GIDDENS A

1999. Runaway world. How globalisation is reshaping our lives. London: Profile Books.

2009. *The politics of climate change.* Cambridge: Polity.

HALL M

2009. Universities do serve communities. *Mail and Guardian* — *Higher Education Supplement* April 2-9: 2-3.

Intergovernmental Panel on Climate Change (IPCC)

2007. Fourth assessment report. Cambridge: Cambridge University Press.

JACKLIN H & P VALE (eds)

2009. Re-imagining the social in South Africa. Critique, theory and post-apartheid society. Scottsville: University of KwaZuluNatal Press.

MORROW W

2009. Bounds of democracy. Epistemological access in higher education. Cape Town: HSRC Press.

United Nations Environment Programme (UNEP)

2006. Africa environment outlook report. Nairobi: UNEP.

WENGER E

1998. Communities of practice: learning, meaning and identity. New York: Cambridge University Press.

WENGER E, R McDermott & W Snyder

2002. Cultivating communities of practice. Boston, MA: Harvard Business School Press.

Acta Academica Supplementum 2010(1)

Worth J

2009. Power politics. New Internationalist. Climate Justice Taking the Power Back Jan/Feb: 4-7.