

Education for Sustainable Development: Perpetuating Myths or Bringing about Meaningful Change?

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Abstract

This article challenges conventional wisdom approaches to social change that rely heavily on the communication of messages and ‘deficit development’ orientations. Drawing on the process sociology orientations of Norbert Elias and Pierre Bourdieu as well as a southern African open process framework, a situated and engaged meaning-making orientation has been developed. Here practical and applied work supports a deepening of engagement with the issues and risks faced in contexts of environmental and health risk. The article uses practical examples or mini-case studies to illustrate the points made.

Our vision is a world in which our work and lifestyles contribute to the well-being of all life on Earth (Center for Environmental Education, 2007).

Key words: cholera, communications, conventional wisdom assumptions, deficit development, health risk, open process framework

1. Introduction

At first glance the environmental situation in Africa appears bleak. Wars, famine and other social, political, economic and bio-physical disasters dominate attitudes and feature as headlines in world media. Whilst one cannot contest many of the challenges faced, it is possible to have a more positive view. This article shares stories of change that reflect differing perspectives. These are African stories of how our thinking has changed as we respond to challenging times. The stories demonstrate how our outlook, and the very outcomes we seek to achieve within that outlook, have sometimes been flawed and may even, inadvertently, perpetuate the challenges we face. Through the Regional Centres of Expertise (RCEs), supported by the United Nations University Institute of Advanced Studies (UNU-IAS), a different way of thinking and acting is emerging and this article seeks to share this broader view. Here I explore experiences from the Wildlife and Environmental Society of South Africa (WESSA) and the RCE KwaZulu-Natal in South Africa and reflect them against the background of broader educational processes. The cholera crisis in Zimbabwe, and the RCE’s partnership response to this crisis, is an example of one of the challenges faced as we seek to support and enable change for a more sustainable society. To achieve sustainability we need to draw on theories that strengthen and enhance our work rather than rely on assumptions, or conventional wisdom, that may

mislead us. Our work had previously relied heavily on the communication of messages and the conveying of solutions to environmental problems but such top-down or centre-to-periphery processes have been found wanting (Taylor, 1997).

This article invites comment and reflections from all practitioners who are seeking a broader view on social change. It might also be interesting to those who are finding our conventional ways of working to be inadequate or even frustratingly slow. We hope that the ideas and case stories presented here can give a new vigor and enthusiasm for a brighter, more sustainable future. While communication and social marketing have an important role to play in social change processes, we need to broaden the related educational activities if we are to achieve meaningful and lasting social change. Norbert Elias’ notion of a ‘Triad of Control’ (Elias, 1991), Pierre Bourdieu’s ‘practical reason’ (Robbins, 1991) and an Open Process Learning Framework (O’Donoghue, 2001) are described as more relevant approaches. Practical examples illustrate how, collaboratively, we are able to apply this practice and its theoretical principles in RCE KwaZulu-Natal.

2. Deficit Development and Unintentional Power Gradients

2.1 Problematic assumptions of deficit development

A major challenge faced in a development context, such as in southern Africa, is the unintended effect of 'deficit development.' Deficit development may be described as an outlook that assumes that Africa, by and large, is a continent where people 'lack' resources and skills, and that these inadequacies must be overcome in order to 'develop.' As such it is an outlook on development that tends to have a blind spot towards the inherent potential or opportunities that people in resource-poor contexts have. Research and experience have shown that if one works with people from a deficit perspective one may, inadvertently, perpetuate a 'power-gradient' from those who assume they know (the development agency and facilitators) to those who appear to lack capacity (the intended target group of the development processes). An enduring belief may persist, where 'those who have' are perceived to have a recipe or methodology for sharing or imparting their expertise and apparent competence (Rahnema, 1992). Such an outlook may perpetuate the very inequalities it seeks to address. Instead of an outlook where the development partners are perceived to be 'poor' and lacking skills and competencies, one could rather acknowledge their *economic* poverty while building on their social capital and other strengths. In a development context it is important to recognize mutual strengths, without neglecting weaknesses, and seek to engage with and address both strengths and weaknesses.

From an ecological impact point of view Africa probably has the least impact, per capita, of any continent on the planet. While aiming for greater sustainability, we should build on this strength instead of focusing on the negative lack of skills, technology and over-exploitation of Africa's resources. RCE KwaZulu-Natal is currently seeking to clarify, with our partners at Rhodes University (e.g., O'Donoghue, 2009) as well as with the Centre for Environmental Education in India, the 'hand-print' concept where young people seek to do something positive to alleviate their environmental impact, rather than focusing on their negative impact or environmental 'foot-print.' An example of this is the enormous energy savings young people have achieved through trading low-energy light bulbs (CFLs) in KwaZulu-Natal townships. Audits conducted by the pupils suggest that through exchanging 4,000 cfl bulbs 1.6 million kg of carbon emissions will not be released into the atmosphere in the greater Ladysmith area alone (Wilkinson, 2008).

Also, from a social perspective, Africa appears problematic, especially at first glance. A closer look at the social fabric may reveal a different picture, however. Communities and societies may be economically poor and suffering great hardships but the ability of people to work together and support each other in challenging times is unprecedented. The Nguni tradition where people of a similar age are considered to be brothers and

sisters, the elderly are considered to be the parents of all people younger than they are, and young people are regarded as the children of older people is an example of this. Where such traditions are respected, the social fabric is strengthened since no one would wish harm on others who are considered members of one's family.

Indigenous knowledge and cultural norms, such as in the example above, are often still intact in Africa, whereas in other continents these may have been eroded or even disappeared altogether. The child-headed households near the KwaZulu-Natal RCE, where children who have lost their parents take care of each other, benefit from this powerful knowledge. In many instances such families survive and obtain food and nutrition by exploiting and applying indigenous knowledge while harvesting nourishing *imbiba* (field-mice) and *imifino* (wild spinach) (Kaschula, 2008).

In terms of bio-physical life support systems Africa is probably the world's richest continent. The biodiversity of life, both plants and animals, is probably more intact than in any other part of the world. It is not surprising, therefore, that growing economies, including the Chinese economy, are increasingly relying on Africa to supply much needed resources. One can only hope that this exploitation is done in a more sustainable manner than in previous examples of colonization of people and resources in Africa. Whatever the case, we need to care for and build on the life support systems of Africa. There is a need to recognize their strengths and use them wisely instead of perceiving Africa to be a continent that lacks resources and needs 'development.'

2.2 Beyond communicating solutions

Of most significance to us today, however, are not the misconceptions that are so often perpetuated about Africa. Rather it is about how we are learning to apply teaching and social transformation methodologies that genuinely support change. In many instances technologies are researched and developed in order to solve social and health problems. The assumption is often made, as in the case of cholera outbreaks and the HIV-AIDS pandemic, that one can discover what is going wrong, develop a more informed response and then 'communicate' this response to all concerned.

Unfortunately, meaningful learning and enduring social change does not come about through such simplistic, 'cause and effect' orientations to learning and change. For enduring social change to occur, people need to become actively involved in their own learning. O'Donoghue (2001) proposed an Open Process Framework, in which inter-linking features of 'field-work,' 'information seeking,' 'reporting' and 'action taking' become useful orientations to support learning that is engaging, meaningful and longer lasting. For example, during the cholera outbreak at Eshowe, KwaZulu-Natal in the year 2000, advice on how to avoid the disease was communicated to members of the public. Engaged learning processes during which bacteria could be identified using a simple community health kit proved more

meaningful, however, than simply the communication of clear messages (O'Donoghue, 2005). It is also useful to consider Pierre Bourdieu's notion of "practical reason" (Robbins, 1991), where one starts from current actions and practices and seeks to make these more sustainable, rather than relying on the conventional wisdom and assumption that 'theory or awareness' will lead to more informed actions.

Elias (1991) alludes to a "Triad of Controls" for exploring and helping to understand the relationships between humans and their environment and the social processes that come to shape differing situations. Within a 'Triad of Control,' three shaping perspectives influence the relationships people have with society, each other, the broader environment in which they live and the natural resources they use. The three influences are 'environmental or natural constraints,' 'social constraints' and 'self restraint.' Environmental constraints are largely bio-physical in effect. If people exceed environmental limits or boundaries they suffer the environmental consequences and will run out of resources. The social constraints are the rules or laws which society exerts. People comply because they are afraid of the consequences of not complying, which may include sanctions (the law and legislation) and informal influences (through social and cultural norms). Compliance with social constraints tends to be fear-based. In a process of "self restraint," however, people act in a certain way because they feel it is the right thing to do. An example from a traffic scenario may help clarify what is meant here. In a context of self restraint I choose to drive at 120 kmh, because it is the 'correct thing to do' and I have decided that it is safe for me and my family. I drive at 120 even when I know there is no risk of being killed (environmental constraint) or being caught for speeding (social constraint). This practice of 'self restraint' is precious and enduring. It can be sustained indefinitely and once it begins to 'kick-in,' or rise in ascendancy, the qualities of humanity and environmental responsibility gain in strength.

In this context, 'self restraint' can be regarded as a helpful goal and an important orientation in support of education for sustainable development (ESD). Educators should seek to enable participants to develop and shape the principles of 'self restraint' so that they are able to develop a sense of pride and purpose in their lives and through the lifestyle choices they adopt. However, in order to achieve this, one needs to understand the social contexts in which people live and work and their motivating influences and goals, and to engage with these so that one might come to a better understanding of the shaping effects that our lifestyle choices have. It is more about understanding and engaging with issues and ideas than simply trying to communicate, so as to make people 'aware.'

3. The RCE KwaZulu-Natal Response to the Cholera Crisis in Nearby Zimbabwe

3.1 The Harare cholera outbreak

On Saturday 31 January 2009 it was reported that 3,200 people had died from cholera in Zimbabwe and that at least 60,000 had been infected. On Monday 2 February, in Harare, Sarah Charukwa, from the City Health Department, reported that the figures were probably much higher: on one tragic day in November 2008 a Harare policeman had collected 19 bodies from the high density Harare suburbs of Budiriro and Glen View (Mandikonza *et al.*, *in press*). How is it possible that such a disease was having such a devastating effect in modern times? How could society respond and what theoretical orientations and strategies could best be used in such situations of crisis?

3.2 RCE KwaZulu-Natal response: Harare workshop for teacher trainers

The tragic spread of cholera in Zimbabwe, and even further south in parts of South Africa, in late 2008 led to a multitude of responses, many of which relied on the communication of health messages to people. On 2 February 2009, a workshop was convened in Harare and 26 teacher training lecturers, social workers and health officials gathered to explore issues related to cholera and health risk. The group was well aware that simple awareness messages, beamed at people, were unlikely to meaningfully address the complex issues associated with cholera, sanitation and hygiene (O'Donoghue, 2005) and a carefully thought-out ESD response was jointly explored by the group. Beatrice Musindo (of VVOB, the Flemish Office for Development, Cooperation and Technical Assistance) facilitated the meeting and ensured that all present were able to share their experiences and invest their ideas in the workshop. At times workshop participants challenged each other, sometimes to overturn assumptions, as they grew in understanding about cholera, health and sanitation issues.

During a session on sharing experiences of the disease it became increasingly evident how fearful people were of cholera. As fear rises people's ability to reason may decline as they become agitated and wider explanations for what is going wrong may be sought. From an Elias 'controls' perspective people appeared to be victims of their fears of the disease and were unable to respond from a 'self restraint' perspective, where they could actively engage with and deal with the disease in a meaningful manner. Although there is no known medical antidote to cholera, the realisation began to dawn that with greater understanding of the disease many fears could, in fact, be addressed and alleviated. Participants reported, for example, that there was a commonly held view that touching a dead body could lead to contamination. In response to this observation Caleb Mandikonza of the South African Development Community-Regional Environmental Education Programme (SADC-REEP) carefully took the meeting through how the bacteria spread

and how careful hygienic practices could eradicate the risk. This engaged learning process, which drew on and mobilized the concerns and understandings of the participants, was helpful in strengthening their resolve and understanding of the issues (Mandikonza *et al.*, *in press*).

The workshop in Harare was convened so as to develop a meaningful educational response to the cholera epidemic. The workshop mapped out a framework for further training workshops, which were then conducted in ten districts across Zimbabwe. Facilitators were equipped with information and resources related to cholera, sanitation and health risk issues. Insights from a paper developed during the cholera outbreak in KwaZulu-Natal by Rob O'Donoghue proved invaluable in clarifying appropriate responses to the crisis as well as being critical of many 'conventional wisdom' ideas (O'Donoghue, 2005). O'Donoghue carefully described how efforts to keep messages simple, so as not to confuse people, might be misleading in the context of health risks associated with cholera. As Einstein once noted; things should be made as simple as possible, but no simpler.

3.3 Practical tests at the workshop

At the workshop, Sarah Charukwa, informed participants that practical tests that do not require trained personnel, such as the simple pinch test, can be very helpful and even life-saving. The pinch test is a practical test for dehydration: skin on the forearm is pinched and then one watches to see how quickly it returns to a normal flat state. A dehydrated patient's skin is slow to return to the normal position and urgent re-hydration must follow to avoid possible death. A sugar and salt solution in clean water, administered orally, can help rehydrate a patient suffering from these symptoms.

Following a careful scientific explanation of bacteria and how they multiply, workshop participants were then invited to participate in a simple coliform test. First a control sample of boiled water was prepared. This water was placed in a small sterile bottle, with some 'bacteria food' in the form of Colilert powder, and the bottle was kept in each participants pocket for 24 hours, to provide the warmth needed for the bacteria to grow and develop. All participants hands were then rinsed in saucers of water and samples of this water were added to other identical bottles containing boiled water and the Colilert bacteria food/nutrient medium.

Participants at the workshop also discovered a nearby upwelling of water from a broken water main of ZiNWA (the Harare water provision authority). This water was also subjected to the same test. We all had to wait until the next day to see how the bacteria samples would incubate.

The results of the Colilert test were quite graphic. Any bottles containing samples of e-coli turn a bright yellow, urine-like colour, and those from our fingers and hands did so as did the sample taken from the broken water main. The control sample, which had used boiled water, remained clear, however (Fig. 1).

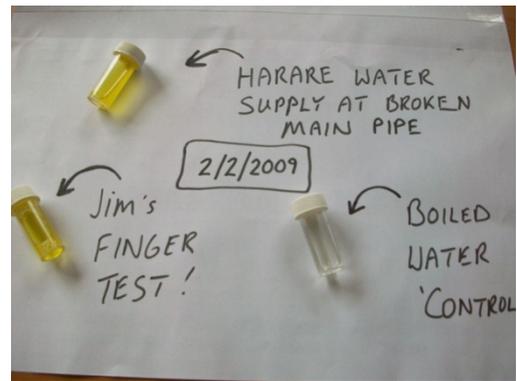


Fig. 1 Outcomes of the Colilert tests.

The simple test clarified, in a practical and engaging way, how bacteria may get onto our hands and how they multiply and develop, even though one cannot see them. We were all astonished at the results and some participants hastily went off to test the water from the drinking water dispenser. Someone even remarked that perhaps we should not test the drinking water source since that was the only source we had, and we always drank it anyway.

Communications after the Harare workshop revealed that some workshop participants had tried the same experiment before and after washing hands with soap. They reported a positive test in both cases, which seemed strange. They were worried because the result caused confusion amongst the team. This outcome pointed to the conclusion that whether you wash hands or not, your hands may still have bacteria on them. It later dawned on them that the water they had used in the experiment was from the same source as the water that had indicated a presence of coliform bacteria when it was tested the day before. This finding indicates that scientific experiments must be undertaken in a careful, systematic and scientific manner. The team should have boiled the water to sterilize (destroy) any coliform bacteria already present before using it in the experiment. The confusion, far from being a negative event, became a source of learning for all members. Participants were prompted to raise questions on the unexpected results but in the end deeper understanding resulted.

3.4 Meaningful learning resulting from the workshop

Wals (2007) states that "the conflicts that emerge in the exploration of sustainable living become prerequisites for, rather than barriers to, learning" (p43). He goes on to say that dissonance is actually the trigger for learning: "put simply: there is no learning without dissonance, and there is no learning with too much dissonance!" (p40). There was a further key learning experience from the simple laboratory experiments at the workshop. Often, in Africa, especially when laboratory equipment is scarce or expensive, teachers and health workers simply explain the experiments to the learners in words. Learners then memorize the information, or experiment and may even be able to answer a knowledge test or exam. Unfortu-

nately, simulated experimentation and knowledge memorizing does not necessarily lead to deeper understanding or meaningful learning the way a well-structured, practical activity does. Through experimentation participants are able to get closer to the issues at hand in an engaged, applied and sometimes challenging manner. It is in these circumstances that engaged, more meaningful learning is likely to occur.

When participants were able to see how the cholera germs grew and developed in the test tube of the 'Colilert test,' the importance of careful hand-washing with soap in order to curb the spread of cholera became apparent. Deeper knowledge about cholera, including developing an understanding that it has an intestinal life cycle, and that it spreads through direct hand contact with fecal matter, is important in developing participants' capabilities.

In this context 'self restraint' becomes an important goal of life. The experience in Zimbabwe mobilized the understanding and knowledge base of the workshop participants and an engaged dialogue ensued. This mutual working together negated the risk of a deficit development orientation where experts seek to educate or 'change' the 'other.' The processes of engaged meaning-making helped shape and develop the principles of 'self restraint' so that the learners' ability to reason strengthened. To achieve this, an understanding of the social contexts in which participants lived and worked, and their motivating reasons and goals was important. Effective learning came from the way in which participants engaged with the issues and the situated dialogue, in context, rather than efforts at communication so as to make others 'aware.'

The workshop in Harare commenced with people sharing their stories or experiences related to the cholera epidemic. These ideas were carefully discussed and probed. The participants tried out and experimented with materials related to the disease, including the simple e-coli test. This led to a rich conversation as people got to grips with the scientific issues and risks, developed meaningful approaches and shared their developing understandings. A period of 'trying out' and 'finding out' led to deeper and more engaging 'deliberative' encounters as people weighed up the options and approaches to learning. The important point is that instead of simply receiving clear messages, workshop participants were "mobilizing" (O'Donoghue, 2001) their prior knowledge and understanding and at times finding their perceptions to be incorrect. At one point in the workshop, for example, Caleb pointed out that coliform bacteria may develop in the stomach of other warm blooded animals, not only those of humans. As Wals (2007) reminds us, knowledge springs from discontinuity, but only if the issue is engaged with and not ignored or masked by fear. O'Donoghue (2001) proposed an Open Process Framework, in which inter-linking features of 'field-work,' 'information seeking,' 'reporting' and 'action taking' become useful orientations to support learning that is engaged, meaningful and longer lasting. The Open Proc-

ess Framework provided a useful guiding orientation for the development of an ESD strategy in response to the cholera outbreak in Harare, Zimbabwe in 2009.

4. Concluding Comments

For several years stakeholders of RCE KwaZulu-Natal have been working in an 'open forum,' becoming aware of needs and possibilities and working together on projects in support of education for sustainable development. In this work Elias' 'Triad of Control' has become a useful concept, elucidating the interplay between 'environmental constraints,' 'social constraints' and the sought after 'self-restraint' through which choices are made on the strength of "doing the right thing" rather than seeking to comply with the law or seeking to act on a simple message.

Conventional wisdom often holds that social change is a simple process of making people aware (attitude change) and thereby changing their behaviour (behaviour modification). Unfortunately, in an environmental context where decision-making is complex, contested, contextual and emergent and involves many different facets, such simplistic assumptions are not realistic and can even be alienating as one group of, supposedly more informed people, seek to influence 'less informed' others.

In developing the notion of 'practical reason,' Pierre Bourdieu (Robbins, 1991) articulates how we should work from what we 'do' rather than from awareness or information about what we should do. We should therefore start from what we are currently doing and work towards better, more sustainable practices. In other words, we should 'do it to get it' rather than assume that if we share the understanding, or the message, we will 'get it' and learn to 'do it' more wisely. These remarkable insights about human behaviour have strengthened our understanding of 'action learning' and RCE KwaZulu-Natal increasingly draws on applied and practical action, rather than only on awareness-raising, to bring about the substantial changes that are needed.

The Open Process Framework (O'Donoghue, 2001) proved useful in helping people "mobilise prior knowledge and understanding" and engage with issues and risks that concern them. As our ideas develop related to these open process frameworks we welcome contributions from any fellow RCEs who are exploring the ideological underpinnings of their work and may be finding some 'conventional wisdom' assumptions about learning and social change to be limiting and even alienating. Africa has as much potential, if not more, than any other continent on earth. It is the place where East meets West and can benefit from the cultural sharing this contact brings. What we really need to change is the way we think about what we do in order to overcome the 'deficit development' mind-set that is so prevalent in our so-called modern times.

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