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Elements of Social Learning Supporting Transformative Change

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Abstract

The body of literature on social learning is enormous, with differently framed ontologies and epistemologies aligned to multiple perspectives of learning in a social context. These have grown out of the many academic disciplines which have seen the value of social learning. This paper highlights the need to be aware of these multiple perspectives, and draws on the work of Lotz-Sisitka, Mukute and Belay (2012) to argue that there is a need to understand, and engage deeply with, the antecedent perspectives on social learning and to avoid ontological collapse in social-learning research in environmental education research and practice. It provides a broad-based understanding of transformative social learning by simply defining social learning with a socially critical orientation, and distilling key elements of social learning important to supporting social change. A recommendation is made for interventionist researchers and practitioners to use a theoretically sound, ontologically congruent methodology to support their social-learning research and implementation.

Introduction

By drawing on a review of the social-learning literature in environmental education from a socially critical orientation, key elements of informal adult learning have been distilled as being important for transformative change interventions. This formed part of a broader literature review for a PhD thesis that I completed on organisational learning and development. As an interventionist researcher, I investigated in my thesis how informal adult learning supports organisational change to strengthen wetland and environmental sustainability practices within a corporate-plantation forestry context (Lindley, 2014). How individual and/or group-based learning interactions translate to the collective, at the level of organisational change, was a key issue probed in this study.

In this paper, the context of transformative learning is provided through highlighting the need to cross the gap between knowing and doing. The theoretical grounding of the paper is explained by defining what social learning is, and the notion of ontological collapse as discussed by Lotz-Sisitka et al. (2012) is introduced to demonstrate how the key elements can support environmental education researchers from falling into this trap. Key elements of transformative social learning that emerged from the literature are described.

These elements strongly supported implementation of the interventionist research project that I was engaged in during the PhD study, which used the emancipatory oriented Expansive Learning Cycle as its methodology, a concept emanating from cultural-historical activity theory research after Engeström (1987, 2000; see, also, Engeström & Sannino, 2010). The elements as discussed in this paper cover the following key dynamics of social learning: how social learning takes place is emphasised as being just as important as its outcomes; the importance of recognising dissonance and contradiction in social learning; possibilities of deliberative democracy; open-process approaches to epistemology and risk engagement; and participation practices.

Transformative Learning Context: Need to Bridge the Gap between Knowing and Doing

Most of the literature on social learning implies, directly or indirectly, that social change is one of the outcomes of social learning (Tilbury, 2007, 2011; Lotz-Sisitka & Le Grange, 2010; Reed, Evely, Cundill, Fazey, Glass, Laing, Newig, Parrish, Prell, Raymond & Stringer, 2010). However, this outcome is often not realised. As Glasser (2007) saliently points out, there is a growing concern with environmental learning that results in a lack of environmental action. He sees a massive gap occurring between the sustainability that many in society are calling for, and what is actually happening in practice. Glasser explains that, despite extensive awareness of our unsustainable lifestyle, ample evidence of the impact of it, and even a concern to do something about it, we still do not see sufficient action being taken to work towards what he terms 'eco-cultural sustainability'. Interestingly, Hungerford and Volk (1990) also reported over 20 years ago that changes in the availability and understanding of environmental knowledge do not necessarily result in changes in environmental attitudes and behaviour. In my experience of supporting social change for improved wetland and environmental management over the past 22 years, I, too, have found this. It provided the impetus for my PhD research – to understand more deeply why wetland and environmental sustainability practices were not integrated into a plantation forestry company's operations, despite over a decade of working with company staff to do this.

Through my reading, it became apparent that the bulk of social-learning literature is particularly weak in explaining theoretically how social change comes about through learning in participation, and that social-learning processes are poorly understood. This, among others, may be the reason for the gap that Glasser describes. What this does highlight is that, as environmental educators, instead of assuming that social change will automatically emerge from social-learning interventions, one needs to carefully consider and understand how people learn in social-learning contexts, how people can meaningfully participate in social learning, the role social learning can play in supporting social change, and how we can better facilitate environmental learning to support social change for improved environmental practices, without social learning becoming another form of behaviour modification through social engineering; that is, there is a need to consider the freedom of people to participate in the co-creation of new activity and practice without coercion. It is from this perspective that Engeström and Sannino (2010) argue that cultural–historical activity theory is a form of formative interventionist research, with the emphasis on collective participation in the formation of new human activity.

Theoretical Grounding of the Paper

Defining 'social learning'

The literature in the field of social learning is vast. It is a meeting place for different perspectives on learning in a social context that has grown out of the disciplines of psychology, sociology, education, management studies and environmental management, among others. As a result, there are many different meanings of 'social learning', meanings that relate both to the social aspects of social learning and the learning aspects of social learning (Wals, 2007a; Pahl-Wostl, Craps, Dewulf, Mostert, Tabara & Taillieu, 2007; Armitage, Marschke & Plummer, 2008; Kilvington, 2010; Reed et al., 2010; Cundill & Rodela, 2012; Lotz-Sisitka et al., 2012). For example, Kilvington (2010) highlights that some consider social learning an end state, while others consider it as a means to the end. Wals (2007b) provides a helpful explanation which can be drawn on in clarifying social learning. He describes his way around the confusion of numerous descriptions of social learning as follows: 'It is safe to say that social learning tends to refer to learning that takes place when divergent interests, norms, values and constructions of reality meet in an environment that is conducive to meaningful interaction' (Wals, 2007b:39). However, the debate about what social learning is has been going on for a while, and will most likely continue for years to come. It was Parson and Clark who, almost 20 years ago, summed up this confusion rather eloquently, describing why the debate still continues to this day:

The term social learning conceals great diversity. That many researchers describe the phenomenon they are examining as 'social learning' does not necessarily indicate a common theoretical perspective, disciplinary heritage, or even language. Rather the contributions employ the language, concepts, and research methods of half a dozen major disciplines; they focus on individuals, groups, formal organisations, professional communities, or entire societies; they use different definitions of learning, of what it means for learning to be 'social', and of theory. The deepest difference is that for some ... social learning ... means learning by individuals that takes place in social settings and/or is socially conditioned; for others it means learning by social aggregates. (Parson & Clarke, as cited in Glasser, 2007:48)

The risk of ontological collapse

When reading the mountain of literature on social learning, many different and conflicting viewpoints emerge, which can be very confusing. I therefore found it extremely important to be aware of the diverging ontological (and epistemological) origins of much of the literature. When reading the wide variety of literature available, it is possible to differentiate between authors' ontological positions, and this can help to develop a coherence in the way of engaging with the vast body of social-learning literature. One danger that emerges when reading the literature is that social learning can be objectified and used as a tool to achieve certain outcomes, rather than seeing it as a learning process with a socially critical orientation where the outcomes are not predetermined. Lotz–Sisitka et al., (2012) believe that this can easily happen when the meanings and the theoretical origins of the 'social' and the 'learning' aspects of social

learning are not well understood, thus leading to ontological collapse of research and practice.

Referring to Sfard, Lotz-Sisitka *et al.* (2012) describe how ontological collapse in social-learning research occurs when insufficient understanding of the social processes of learning and social change gives rise to these social processes being objectified through: (a) *reification*: that is, when the dominant social-learning discourse is about *what* social learning is, its outcomes, and the competencies required for social learning, with far less focus on the *how* – that is, the processes and actions that facilitate and support the occurrence of the social-learning process; and (b) *social alienation*: that is, when explanations of social-learning outcomes such as co-management of natural resources are said to occur virtually on their own, without sufficient consideration given to who is actually undertaking these processes and how they are undertaking them. To avoid the errors of reification and alienation, as argued by Lotz-Sisitka *et al.* (2012), it is therefore critical to illuminate the processes that make up what it is to be social, and to participate socially in learning and change processes. It is with this warning in mind that the following elements of transformative social learning emerged as being important to the formative interventionist research that I undertook in my PhD study.

A Discussion of Key Elements of Transformative Social Learning

While it is important to raise the potential problem of ontological collapse, the aim of this paper is not to trace the genealogy of the approach to social learning that I drew on. Instead, Kilvington's cue has been taken when she concludes from her review of the social-learning literature that 'it is arguably more helpful to regard social learning as a collection of elements critical to understanding and supporting the social and situational factors that underpin complex environmental problem solving' (Kilvington, 2010:65). In the following sections, while being mindful of the notion of ontological collapse in selecting key references, particular elements of social learning are introduced that I have found to be helpful in developing a broad-based understanding of transformative social learning in the field of environmental education. These elements strongly supported implementation of my formative interventionist research project.

Importance of valuing social-learning processes over products

An element of social learning that I identified as being important to my PhD research (Lindley, 2014) was that the processes of *how* social learning takes place are as important as its outcomes. This point is strongly made by Wals and Van der Leij (2007) who emphasise that, regardless of how 'social learning' may be defined, perhaps the most pertinent point is that the crux of social learning is not *what* people need to know, which could be seen in the light of the scientific instrumentalist orientation, but rather *how* people learn and what they want to learn, and how they will be able to challenge and transcend societal norms for a more sustainable future. In support of this, Reed *et al.* (2010) report that there is often confusion in the literature between interpreting social learning as a process of people learning from one another, and seeing it as an outcome of these social interactions. As a result, the social-learning processes and products are often conflated, with primacy being given to the outcomes such as improved environmental management, or enhanced stakeholder capacity and empowerment. Although social learning

is both a process and a product, I have found it is important in formative interventionist research to understand and facilitate the social processes of learning rather than to focus only on the learning outcomes. In my experience, this is reflected in many instances when the senior management of organisations and funders I work with often want to hear more about the outcomes of a social-learning project than the processes. Product/s (outcomes) therefore becomes a major driver for learning that is outcome-driven, creating an axis of tension that continually needs to be balanced.

Changing values, beliefs, ideologies and assumptions

Researchers such as Glasser (2007) believe that it is only through learning that we develop the values, concerns and attitudes which make up our perception of reality. Therefore, it is only through participative learning about new information different from our own that we can test our own values and concerns against our reality and reorient our values and actions. The social change that is required to reorient a change in values, beliefs and ideologies with regard to how society uses and manages its natural environment will therefore require a special type of learning – social learning. Wals and Heymann (2004) consider this approach to learning as needing to take place in rich social contexts where people with a diversity of views, assumptions, values and ideologies are provided with the opportunity to safely discuss their world views without fear of retribution, and that this discussion needs to take place within a facilitated environment of moderate dissonance and divergent views. Since my research was emancipatory in orientation and required the research participants to challenge their existing values and assumptions, this type of learning was considered as paramount in order to support the Expansive Learning Cycle formative interventionist methodology of Engeström (2000) that I used.

Dissonance and contradiction as a precondition for learning

The dissonance aspect of this approach is interesting and not widely recognised by educators and researchers as being important to learning for improved sustainability practices. This is surprising when one considers the quantum changes that are required to address the sustainability challenges that the world currently faces. However, Wals and Heymann (2004) see the conflicts that emerge from discussing divergent views as a prerequisite for the type of learning required, rather than as a barrier to learning. They call for a rethink of the role of conflict in learning: 'Dealing with this complexity and uncertainty, with conflicting norms, values, and interests in a world characterized by ever-expanding globalization requires a re-conceptualization of the role of conflict in transformative learning processes (Wals & Heymann, 2004:129). In discussing the important attributes of meaningful dialogue, both Fischer (2004) and Kadlec and Friedman (2007) also note that exposing conflicts of interest leads to expanded capacity, rather than polarisation – as long as the right conditions and design of the facilitation are put in place. In fact, Kadlec and Friedman (2007) found that a conflict of interests actually legitimised the deliberation process, and Fischer is quite explicit in saying that conflict and disagreement should be seen as a precondition for the development of social understanding. Although these authors state the importance of dissonance in deliberation and learning, none of them explicate it further. Wals and Heymann (2004), on the other hand, open up the idea in more depth through their process of dialogical deconstruction. They point to the importance of providing sufficient 'space' for dialogue on contentious issues, and claim that this learning space needs to be 'safe' and free from reprisal, retribution, ridicule, scorn and contempt if the conflicts and their underlying sources are to be explicated, deconstructed and understood. Dialogue is seen as a crucial component of the learning process in dealing with conflict:

Through dialogue an understanding and appreciation of social learning, the role of conflict and diversity, and an awareness of different norms, values, interests and constructions of reality, their underlying assumptions and their history, may develop between participants. Viewed as such, dialogue becomes both a purpose and a possibility for acting and forms the basis for purposeful action. (Wals & Heymann, 2004:131)

Deconstruction through dialogue is therefore seen to be a crucial process that can help unravel people's preconceptions, assumptions and ideologies that frame their thinking. When this is done in a collaborative and safe learning space, and dissonance is used to catalyse the unravelling of people's divergent views on conflicting issues, and if managed appropriately, Wals and Heymann (2004) believe that people can begin to recognise and review how they see issues and are, in turn, exposed to the deconstructed frames of others:

Participants then confront the way they ascribe meaning to their ideas, interests, values, and knowledge. Rather than focusing on their often persistent frames of reality, attention is immediately shifted to their prior perceptions and process of sense making. This guided self-confrontation usually leads to an increased understanding of the different frames that can be found within the group of involved stakeholders. Participants become aware that people's frames are rooted in different contexts of sense and meaning making. (Wals & Heymann, 2004:135)

Once this deconstruction of their own and one another's views has occurred, participants are challenged to collaboratively reconstruct new lenses and solutions together. It is this emergent awareness and dialogic deconstruction of one's own frames or lenses, and those of others, and the reconstruction of new ones, that Wals and Heymann (2004) see as being critical steps in transformative social learning.

The importance of dissonance being a trigger for the learning process, as Wals and Heymann (2004) describe, was clearly highlighted for me during the formative interventionist research process (Lindley, 2014). However, the Expansive Learning Cycle methodology of Engeström (2000) deepens the notion of dissonance as used by Wals and Heymann (2004), as it focuses on deep-seated structural contradictions. Engeström's (2000) formative interventionist research methodology required that contextual data generated on culturally–historically constituted contradictions prior to or during engaged research with participants be mirrored back to them as a way of creating a discontinuity that catalysed deliberations through critical reflection on and questioning of existing ways of thinking and doing. This took place in safe spaces created

through the Change Laboratory or interventionist workshops recommended by Engeström (2000) in his formative interventionist research approach, which are an important part of the Expansive Learning Cycle. As experienced in my research, these spaces successfully allowed the participants to reflect and deliberate on one another's views, discover the deep-set contradictions inhibiting improved wetland and environmental management, and begin to co-construct solutions to deal with the contradictions (Lindley, 2014).

Dialogical social learning and thought processes

Although dialogue is an important part of social learning, Selby's (2007) concept of dialogical social learning can further strengthen and support the process of deconstruction that Wals and Heymann (2004) discuss, and dealing with contradictions that Engeström (2000) discusses. Drawing on Bohm's concept of dialogue and expanding it, Selby (2007) explains why it is critical to focus on thought processes that are at the core of dialogue, rather than on the thoughts themselves, because thought processes reflect or mirror the origin of the problems we are faced with. He therefore proposes dialogical social learning as a way of 'creating contexts, climates and personal and collective dispositions whereby a "flowing through" (Bohm, 1998:118) can occur, out of which radically new ways of seeing the world may emerge' (Selby, 2007:170). Selby characterises dialogic social learning as having the following fundamental thought processes: empathic and alert listening; participants being aware of their own emotional and somatic responses to what others say; sharing perceptions of what they consider others to be saying as misperceptions; explicitly suspending their assumptions and opinions in the company of others; halting the impulse of necessity to argue on issues that one feels are not negotiable; being open, honest and collaborative in what one thinks and says; and revealing one's tacit thoughts in the open and exploring with others if these thoughts resonate with them. Selby therefore believes that it is these types of thought processes of dialogical social learning that can support deep and meaningful individual and collective learning and potentially catalyse transformation. However, an important point that he highlights is the important role that facilitators play in not merely creating an environment for dialogic social learning to take place, but also in supporting participants to understand and develop these thought processes of dialogical social learning. As a result, when facilitating the formative interventionist workshops in my study, I focused on supporting the research participants to practise the thought processes that Selby describes and discovered how they enabled participants to deal with one another's critical reflections and differences of opinion during the workshops (Lindley, 2014). This allowed for participants to engage with the issues and treat one another with respect, rather than defending their own opinions and positions. The result was an opening of their minds to begin co-constructing solutions that had not been possible beforehand.

The necessity for deliberating democratically

From the discussions above it is clear that social learning is seen as a key component supporting society to move towards a more equitable and just world through a deliberative and democratic approach to social change. Therefore, the theory of deliberative democracy is also of interest to educators working with a social-learning orientation and with formative interventionist

research approaches. As Rodela (2012) has shown, some researchers in the natural-resource management literature have recently turned towards deliberative democracy in an effort to challenge established environmental practices and collaboratively develop new and improved ways of knowing and doing. Although there are many interpretations of deliberative democracy - recently Elstub (2010) has written about the third-generation versions of this theory - the understanding of Benhabib (1996), one of the established writers in the field, has been used for this paper. Benhabib (1996) describes her model of deliberative democracy as providing the possibility for the public to freely deliberate matters of mutual interest and concern, and where the agenda is open and not narrowly restricted. Like Wals and Heymann (2004), and Engeström (2000), Benhabib believes that deliberative democracy acknowledges the conflicting values and interests in social life, and that this conflict is a starting point from which deliberative democracy proceeds. Engeström and Sannino (2010) note that such conflicting values and interests also represent conflicting motives, and that these often reflect the more deep-seated contradictions that form the focus of Expansive Learning potential. Benhabib (1996) views deliberative democracy as a process of reasoning, rather than as a regulative principle, and sees it as applicable to deliberations and reflections at a personal as well as collective level, not unlike Engeström and Sannino (2010) who view this in terms of Expansive Learning potential. Drawing on the discourse model of ethics and politics, which develops a procedure for public deliberations that are free, Benhabib suggests that deliberative democracy processes allow for the emergence of information that is required to overcome problems, because they 'allow the expression of arguments in the light of which opinions and beliefs need to be revised, and because they lead to the formation of conclusions that can be challenged [publicly] for good reasons. Furthermore, such procedures allow self-referential critique of their own uses and abuses' (Benhabib, 1996:87). These broad principles of deliberative democracy are similar to those espoused by the type of social learning discussed so far, indicating the confluence of the two.

Structuring deliberations to take into consideration group dynamics

When engaging in deliberative democracy and dialogical social learning, effective ways of formative intervention research and facilitation will have to strengthen not only the participatory skills of those who struggle to participate equally, but also the skills of facilitators to be able to recognise and cope with these inequities while creating a safe space for dialogue and deliberation. It is in the light of this that Sanders (1997) emphasises that how one structures the group deliberations to take into consideration group dynamics is of vital importance to deliberative democracy if one is to find a way to ensure that everyone participates and their views are considered by all. Kadlec and Friedman (2007) take this further by proposing three important challenges for facilitators to integrate into the deliberation process: (a) the challenges of control, in which the person in control of designing and facilitating the deliberation should not have a large stake in the outcomes of the deliberation process; (b) the challenge of design, in which, for example, marginalised stakeholders are given the voice to enable their participation, and deliberations are begun by first hearing the experiences and viewpoints of these individuals. Instead of seeking consensus, they advise deliberation to rather work towards a confluence of

ideas and possibilities, such as a common problem around which a diversity of opinions can be heard. In this way, participants can learn to cross mental boundaries, explore a diversity of viewpoints, and, through the deliberations, develop mutual respect for each other. The notion of the ideas confluencing therefore induces greater possibilities of participants working together, despite opposing differences in opinion, than attempting to reach static conclusions through consensus and compromise; and (c) the challenge of understanding how deliberative democracy can lead to social change.

The principles of deliberative democracy as outlined above are ones that proved to be important to the expansive social-learning processes I implemented during the formative interventionist workshops for my research project (Lindley, 2014). The methods and *learning actions* that Engeström (2000) outlines to guide the running of these workshops played a critical role in strengthening democratisation of the decision–making of the participants. For example, the process of anonymously presenting the emerging tensions and contradictions during the first interventionist workshops contributed to strengthening the democratisation of decision–making within the racially mixed group that I was working with which was characterised by historical power relations of inequality and marginalisation for the majority of black people under apartheid (Lindley, 2014). This allowed for the ideas of quieter black participants in the group to be noticed and taken up in the discussions by the stronger-voiced participants who were predominantly white, thus helping to address these historical power imbalances.

Learning with an epistemology that takes account of risk and uncertainty

Beck (1992) highlights that we live in a risk society. Therefore, many of the environmental issues and risks that we face today, and will face in the future, are unknown, and, if we do know of them, we may not truly understand the magnitude or implications of the risks. A typical and highly topical example of this is the rapidly growing concerns regarding climate change, and the related risks posed to society. When living in this uncertain and ever-changing world, society will not always have the knowledge it needs to deal with these risks. Beck (1992) therefore calls for education that can play an important role in supporting society to work towards a reflexive society. Lotz-Sisitka and Le Grange (2010) suggest that this introduces a new epistemology into education that is anticipatory, rather than one based on certainty or reproduction of existing knowledge only. In discussing an educational response to climate change, increasingly seen as the greatest risk ever posed to humankind, they point out that, if society is to continually adapt to this changing context, then learning needs to be exploratory and open-ended, rather than being based on what is already known, which has often given rise to the risk in the first place. Therefore, what needs to be learnt cannot always be known beforehand, and this requires a society with an ability to be critically reflexive, to be able to work and learn together to understand the root causes of environmental degradation, and to cultivate new adaption practices together with people who have the ability to develop the capacity for change and reorientation. This was exactly the challenge that I was confronted with in the formative interventionist research that I was engaged in. Nobody knew what was inhibiting the integration of wetland and environmental management into the operations of the forestry company at the start of the process, as there was no one easy answer or one single cause. Therefore, the formative interventionist, open-ended and deliberative approach embedded in the Expansive Learning Cycle methodology of Engeström (2000) was chosen to support diverse research participants in the forestry company to critically reflect and collaboratively understand the structural and cultural context that was inhibiting change, and develop solutions to deal with these barriers.

The importance of reflexivity

The notion of reflexivity is seen as a critical aspect of social learning, especially learning that will need to respond to the growing environmental risks. Drawing on critical realism and cultural-historical activity theory, Lotz-Sisitka et al. (2012) explain reflexivity as being a social conversation occurring within an individual's mind and between people that is essential to the emergence of agency, enabling people to engage with conflict and a range of different opinions of others in order to shape the collaborative learning that is situated within a social, historical and material context. Bolton (2005:7) also describes reflexivity as being an internal process of 'finding strategies for looking at our own thought processes, values, prejudices and habitual action as if we were onlookers'. This is similar to how Wals (2007b) describes reflexivity, namely as a critical property that encourages people to reflect and question and, if necessary, break away from existing paradigms and ways of doing things. Likewise, Dyball, Brown and Keen (2007) value reflexivity due to its potential for exposing institutional, political, cultural and theoretical contexts that influence the way we learn, the values we develop and our resulting actions. In support of this view, my research highlighted that the ability of research participants to develop the skills enabling them to be reflexive through expansive social-learning processes was an essential personal emergent power allowing them to engage and deal with the inhibiting powers of the contextual social structures and cultural systems (Lindley, 2014).

Wals (2007b) sums up reflexivity in social learning as being important to help people move away from seeing learning as being about expert, derived and predetermined solutions and the right way of doing things, towards a process where learning can help develop knowledge, values, and action competence of an individual or group to participate more fully and effectively in making their own choices and taking responsibility for developing solutions and actions to complex and continually changing problems. In this way, Wals believes that social learning is an approach that does not seek to tell people what they should know or be able to do, but rather encourages an understanding of how people learn, and what they want to learn in order to help them recognise, evaluate and think innovatively around existing ways of doing things, preconceptions, social norms and personal biases. It helps people to build on their existing knowledge and skills, and perhaps develop different ways of looking at the world. When viewed in this way, social learning is seen to be a broader, more open-ended approach to learning that is more responsive to a variety of contextual situations, is reflexive in orientation, and is able to support learning in a risk society.

A critical element of the type of social learning that can support people to deal with risk rather than certainty is that participation with others is obviously required. However, it is crucial that participation is seen as an integral aspect of the learning process, rather than as a tool to be used for specific purposes. This will prevent learning from being manipulated for specific

outcomes, resulting in participation as a political process. For this reason, a better understanding of participation in social learning is required.

Understanding the meaning of 'participation' in social learning

Rahnema's (1992) seminal critical review of the concept and practice of participation in the field of social development emphasised how the meaning of participation has a wide variety of understandings for different people. Although his research was in the field of social development, it has significant relevance to participation in social learning. Importantly, he highlighted that there is a history of practice of not meeting the theory of participation, especially when the potential of participatory processes to counter dominant authority is not recognised. After critically examining the literature, Rahnema (1992) points out that the word 'participation' has now morphed into modern jargon and mainstream rhetoric often used for manipulative purposes, especially by politicians and development agencies. Rahnema's (1992) work is useful for developing a more in-depth understanding of the different interpretations of participation in learning and natural-resource management. In a similar vein, Lotz-Sisitka and Burt (2006) also point out the diversity of views on what participation means in their critical review of participatory practice in integrated water resource management in South Africa. This diversity has led to confusion among both the public and the government as to what 'participation' actually means, and has therefore inhibited participatory practices in managing water resources.

The meaning of 'participation' in environmental education and implications for social-learning research

In environmental education, participation is seen to be a key objective and approach for learning; hence the interest in social learning. However, the misinterpretation of it has also led to misleading approaches to education and environmental education. Lotz-Sisitka and O'Donoghue (2008) have found that environmental education in South Africa often does not adequately consider the conceptual and practical difficulties that are characteristic of pedagogies of participation. Their research demonstrates that participatory processes in education for social transformation can become individualised and self-referential, despite its supposed democratic principles, constructivist approach to education and purpose of educating for sustainable development. This, they argue, can give a false impression, and the social processes associated with participatory forms of professional development can lead to 'an illusion of change, even as participants engage in activities with a heavily mediated script, for participatory forms of engagement, such that participatory education becomes an idealised process that is not open to critical scrutiny' (Lotz-Sisitka & O'Donoghue, 2008:112). It is this conclusion that has led Lotz-Sisitka and O'Donoghue (2008) to warn us that the rise in usage of participatory processes in education for improving environmental practices has often led to a twisting of participatory social-learning processes that subtly pass on predetermined sustainability ideals to participants to remould to their own context through collaborative capacity-development activities. Therefore, the participation processes are structured for the emancipation of the participants, but the knowledge, ideology, morals, ethics and standards are based on the ideals of others. Contextualised historical knowledge, experiences, opinions, and existing learning materials are often excluded. A strong parallel is clearly drawn with Eisner's (1985) null or hidden curriculum where he differentiates between what is explicitly taught, and what is neglected and not taught, such as the tacit and covert inherent values, beliefs and ideologies lying behind knowledge, and the reason behind why certain knowledge is privileged above other knowledge.

Lotz-Sisitka and O'Donoghue (2008) further emphasise that the learning in these previously mentioned activities is scaffolded through the careful guidance and mediation of capacity-development trainers or facilitators with their own environment and sustainability ideals, who assume that, once participants are suitably capacitated and empowered, the newly learnt predetermined sustainability ideals will trickle down and become integrated into the participants' contextualised workplace and everyday life. Therefore, in the review of the work that they undertook, they found that principles of participation were instrumentally applied in the name of capacity development. It is with this insight that Lotz-Sisitka and O'Donoghue (2008) critically comment that, in the eager efforts to promote participative democracy in the activities that they were analysing, no opportunity was provided to critique the ideology of the participative practices or their pedagogical assumptions. This twisting of understanding of participatory approaches to learning for capacity development and social change could well be another key factor contributing to what Glasser (2007) terms the 'gap' between people being aware of environmental problems and having the knowledge to deal with them, but not being able to take action to solve them.

In all honesty, my previous ways of working within the forestry plantation context that triggered the PhD research that I undertook were infused with aspects of this misunderstanding of the meaning of 'participation'. This may have contributed to the lack of long-term transformative change that my organisation was working towards at the time. It was therefore important in my research (Lindley, 2014) that I work with orientation and methodology that guarded against the misuse of participation for the transferring of predetermined ideals and solutions. Engeström's (2000) guidance on how to work with formative interventionist research processes as learning actions in an open process of Expansive Learning provided me with a way to engage with research participants in ways that were emergent from the cultural–historical context of activity, and to actively participate in a meaningful way with them, strengthening both their capacity and my capacity to deeply understand the contradictions that were infusing our practice around wetland management and the associated inhibiting factors, and to find ways of co-creating and implementing solutions to them together through exercising our collective agency.

Conclusion and Recommendation

This paper has developed a broad-based understanding of transformative social learning in the field of environmental education. It has moved this body of knowledge forward by drawing from existing literature, and through reflecting on the practice of a formative interventionist-based research project, in order to: (a) describe what transformative social learning within a socially critical orientation might look like; (b) highlight the need to differentiate and select literature from the vast body available, originating from many different fields of research, that

is ontologically congruent with this orientation so as to avoid ontological collapse; and (c) distil key elements of social learning as being important to researchers and practitioners who want to support social change through emancipatory oriented interventions. Although it is important to know these elements, it is recommended that researchers use a theoretically sound, ontologically congruent methodology to support their implementation. One such methodology is the formative, interventionist Expansive Learning Cycle of Engeström (2000), which I discovered through my PhD thesis could provide environmental educators with a platform to scaffold and support open-ended environmental learning processes that are designed to catalyse and strengthen reflexivity for bringing about environmental change (Lindley, 2014).

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