The 5th World Environmental Education Congress, 2009: A Research Project

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Abstract

This paper contextualizes the 5th World Environmental Education Congress, discusses the theoretical underpinnings of the Congress theme, "Earth our Common Home," and relates this theorizing to the research project that was woven through the Congress. The rationale for this research project was to invite Congress participants to have a say in co-constructing an image of environmental education and a vision for its shared future. The results of the study describe an ever-changing and increasingly complex field. They also suggest converging and diverging pluralities, which can provide critical traction for practitioners who wish to critically reflect on ongoing developments in environmental education.

Résumé

Cet article explique le contexte dans lequel s'est inscrit le 5e Congrès mondial d'éducation relative à l'environnement, présente les fondements théoriques à l'origine du thème du congrès, «Vivre ensemble, sur Terre», et relie ces éléments au projet de recherche qui constituait la trame de fond de l'événement. Ce projet a permis aux participants de contribuer collectivement à la clarification et au développement du champ de l'éducation relative à l'environnement, un domaine d'étude et d'intervention complexe et en constante évolution. Les résultats témoignent d'une pluralité de visions et de significations, qui s'expriment à travers différentes positions, dont certaines sont divergentes et d'autres, convergentes. Ils sont de nature à inspirer les praticiens souhaitant mener une réflexion critique sur les diverses voies de développement de l'éducation relative à l'environnement.

Keywords: environmental education, research, diversity, visions, critical reflection

Introduction

Gatherings of the magnitude of the 5th World Environmental Education Congress need to consider how to strengthen community building at these events. Importantly, this can include engaging Congress delegates in an ongoing process of co-defining, or co-creating, future imperatives in environmental education. To this end, we imagined that Congress delegates could be invited, throughout the Congress, to participate in a research process that examined some fundamental questions important in our field.

The idea of weaving a research project through an entire Congress resonates with some of the questions about responsibility attached to such a large event. We were reminded of this in the opening and welcoming comments made by Haudenosaunee Elder, Henry Lickers. He spoke about the sacrifices made by the human and more-than-human world, and those left at home when delegates attended our Congress. He also reminded us of responsibilities we bear in using what we have learned in a good way and sharing the wisdom gained with those who were unable to travel to the Congress. With his words in mind, we reflect on what we have done together. First, we will frame the historical context of this event and discuss the Congress theme. We will then take up the research project later in the paper.

Historical Context

Environmental education is important. It is a vital, responsive, and growing international movement. We say this with some confidence after 2,200 stakeholders from 106 countries participated in the 5th World Environmental Education Congress hosted in Montreal, Canada. There was a wealth of diversity and quality in the 1,028 presentations (Houle, Brière, & Bastien, 2009). As a political statement, these numbers are significant. In practical terms, such an event provides valuable opportunities to compare experiences, expand networks, and initiate shared projects. On a more personal level, it is encouraging to be a part of a large international community. Environmental educators are caring, supportive people, and it feels good to be amongst them. This nurtures our work.

World Environmental Education Congresses (WEEC) began with a modest but exciting meeting at Espinho, Portugal, in May 2003. About 350 environmental educators from around the world attended. The roots of the World Environmental Congress movement can be traced to the 1992 Earth Summit in Rio de Janeiro and the ensuing recommendation for a regular international meeting on environmental education. However, this movement's emergence is anything but a clear marker of a shift toward sustainable development, as at least one commentator has remarked (Reid, 2009). In our experience, World Environmental Education Congresses emerged as a response to a drought felt by many environmental educators uncomfortable with, in UNESCO terms, the "education for sustainable development" discourse. Many of our own impulses to become involved were derived from seeing the large number of similarly-minded environmental educators who appeared in the initial make-up of the scientific committee.

As a measure of growing interest in this initiative, around 1,500 participants attended the second WEEC at Rio de Janeiro in 2004. The participation in 2005 at Torino, Italy exceeded expectations with around 3,500 participants from 115 countries. Thus, the 3rd WEEC represented perhaps the most important event of its kind—a quantum leap of energy for environmental education. The qualitative

and quantitative leap made by the Torino Congress definitively consolidated the WEEC as the ideal meeting place at an international level between all the players interested in environmental education.

Following the Torino Congress, the WEEC Permanent International Secretariat was established at the Istituto per l'Ambiente e l'Education di Torino. The 4th WEEC was hosted in Durban, South Africa in July 2007, with about 1,000 attendees. Then there was our event in Montreal, with more participant presentations than any previous event.

This history is, we think, sufficient to assuage any concerns that environmental education is on some kind of precipitous "slide" (Reid, 2009). The growth of the World Environmental Education Congresses demonstrates strength and solidarity.

The Congress Theme: Earth Our Common Home

Many readers will recognize the wordplay at work, shifting emphasis from the familiar slogan "Our Common Future" (WCED, 1987) to emphasis on "Home" in our theme, "Earth our Common Home." "Home" here is derived from *oïkos*, our household and the root of our modern word "ecology." Without a healthy household in which all human and more-than-human activities take place, our future can only be bleak.

This shift towards *oïkos* is intended to gently disrupt narratives of the last two decades that have sought to reframe our work in terms of education for sustainable development, often with a focus on the economy, society, and environment. These three concepts have frequently been explained and presented as equal and overlapping circles in a Venn diagram, with sustainable development at its intersecting centre (also referred to as the three-legged stool model).

Figure 1. Common conceptualizations of sustainable development.

This has sometimes led commentators to project a narrow view of environmental education, even positioning it as a subset of education for sustainable development (see, for example, Figure 2).

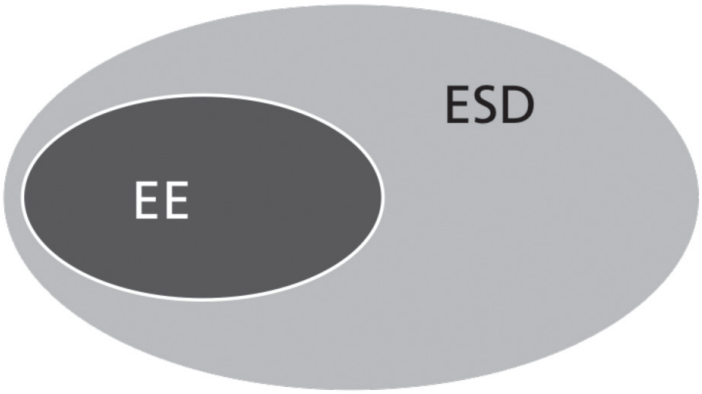

Figure 2. Environmental education as a subset of education for sustainable development (from Wals, 2009, p. 29).

Chet Bowers (2002) reminds us that one problem with cultural metaphors such as those presented above (the Venn diagram of intersecting spheres of economy, society, and environment, and environmental education presented as a subset of education for sustainable development) is that they are context-free. They ignore "how the person is nested in a culture that is, in turn, nested in (and dependent upon) natural systems" (p. 76). Co-chairs of the Congress, Lucie Sauvé and Bob Jickling, sought to reposition us as individuals, societies, and as a field, within specific contexts—in this case, through the metaphors "Earth our Common Home" and *oïkos*.

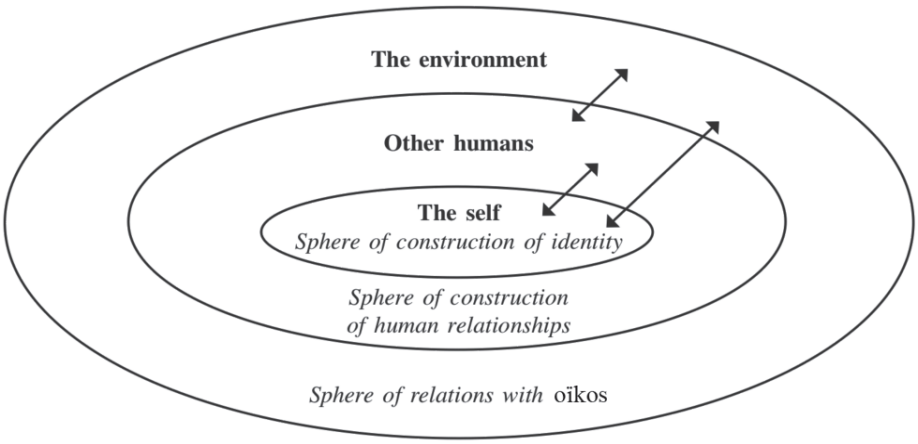

Figure 3. Three interrelated spheres of personal and social development (from Sauvé, 2009, p. 330).

Sauvé (1999, 2009) developed a theoretical basis for this Congress theme in earlier work (see Figure 3). In it, she describes individuals, societies, and the environment—or *oïkos*—as interrelated spheres. For her, education means helping individuals "learn to 'be here together.' If we do not take the relationship to the environment into account, the educational process remains incomplete and we remain unfulfilled beings" (2009, p. 330).

We don't want to suggest that Sauvé's work provides a theoretical "truth." Rather, she has provided an alternate narrative—and metaphor—that can help direct us on a journey towards useful questions and, ultimately, new stories to live by.

Maturing of Environmental Education

It has often been asserted that environmental education narrowly focuses on environmental protection, natural resource management, and the conservation of nature (e.g., reported by Wals, 2009). This, it has been claimed, has been at the expense of socio-economic, political, and cultural dimensions. These claims have never struck us as being true. From the beginning, environmental education has been deeply concerned with relationships between environmental and social issues. For example, the famous Tbilisi Declaration (UNESCO-UNEP, 1978) states, among other things:

> Whereas it is a fact that biological and physical features constitute the natural basis of the human environment, its ethical, social, cultural and economic dimensions also play their part in determining the lines of approach and the instruments whereby people may understand and make better use of natural resources in satisfying their needs.
>
> A further basic aim of environmental education is clearly to show the economic, political and ecological interdependence of the modern world, in which decisions and actions by the different countries can have international repercussions.
>
> Special attention should be paid to understanding the complex relations between socio-economic development and the improvement of the environment. (pp. 1-8)

Environmental education has, from its inception, been a movement with interests in social issues.

More recently, Heila Lotz-Sisitka (2004) indicates that environmental education in Africa is inextricably linked to social issues. Similarly, the 2nd World Environmental Education Congress in September 2004, held in Rio de Janeiro, underscored the vibrancy of environmental education, particularly in Brazil. There it was evident that environmental education exists very much at the junction of environmental and social problems; social justice issues are inextricably linked to environmental issues (Jickling, 2004; see also Gruenewald, 2003).

Still, it is likely true that environmental education, as a field, could have done more along the way. In the end, practitioners and researchers are all individuals who respond in the context of pressing issues in their own lives. Some have had practical orientations, while others have chosen to use contextual and theoretical issues to encourage ever-deeper questions about human relations within social and environmental spheres. Collectively, however, the breadth and depth of presentations at the 5th World Environmental Education Congress suggests development and maturation of the field. Consider different aspects of the 5th Congress.

The Congress was organized around a number of themes, or threads that we chose to present as thematic niches. Through consultation with many Canadians and members of the international socio-scientific committee, we were able to narrow these down to the following: (1) Relationships between ecology and economy: the issue of sustainability; (2) Questions of fairness in socio-ecological issues; (3) Environmental health; (4) Urban challenges; (5) Ecologizing colleges and universities; (6) School and community; (7) Learning in society; (8) Heritage interpretation; (9) Indigenous knowledge and practices; (10) Ethics, environmental thought, and worldviews; (11) Art: imagination, creativity, and meaning; and (12) Ecological identity.

It is evident that environmental education is clearly responding to a broad range of issues, including socio-economic, political, and cultural dimensions within our field. While it will be impossible to identify precise causes for this strong representation of breadth and diversity, we should consider amongst them the World Congress movement itself, and growing awareness of globalization and its resulting impacts (e.g., Jickling & Wals, 2008).

The Congress as a Research Project

International conferences can mark major changes in thinking and set new agendas for action. The Tbilisi Declaration certainly did. However, conference declarations can also be seen as social compromises and pseudo-planetary consensuses, often negotiated by politically influential actors (cf. Sauvé, 2009). Our alternative was to frame the 5th World Environmental Education Congress through several key questions that were posed during our calls for papers, conversations with niche coordinators, and all delegates—and even on the Congress bags. They also formed the basis for a Congress research project that encouraged participation from all delegates. While we realize that Congress delegates still constitute a privileged group, we felt that we could, in this way, increase breadth of participation in co-constructing shared futures in environmental education.

These questions themselves were developed with reference to Sauvé's (2009) spheres of relationships (described in the text above and in Figure 3), as a way to promote dialogue that seeks deeper meanings and questions the implicit

order—often tacit and hidden—that structures the way we think and how we do things. Each question emanates from one of Sauvé's spheres and the associated relationships. The three questions, and associated prompts, were as follows:

- **How can environmental education add meaning to our lives?**

  Can we imagine an environmental education that is able to add meaning to our lives? If so, how does environmental education contribute to the construction of more healthy individuals, communities, and social identities? How does this contribution enhance socio-ecological understanding and relationships?

  Has participation in this Congress and dialogue with other participants influenced your answer to this question? If so, how?

- **How can environmental education contribute to social innovation?**

  To what social models do we aspire? What forms of social innovation do we value? In light of these questions, how can environmental education contribute to addressing socio-ecological issues, constructive change, and eco-development? How should environmental education contribute to citizen actions and social and cultural change within these social models?

  Has participation in this Congress and dialogue with other participants influenced your answer to this question? If so, how?

- **How can environmental education contribute to political innovation and influence public policies?**

  How can we foster citizenship awareness and prepare citizens for participation in public policy development? What policy changes are needed to support and develop environmental education? How can we re-imagine environmental education? If you could talk directly to your *minister of education* or *environment*, *dean of education/science/humanities*, or favourite *non-governmental organization*, what message would you have? What would your environmental education plan be?

  Has participation in this Congress and dialogue with other participants influenced your answer to this question? If so, how?

By focusing on these questions, we expected that participants and presenters would contribute to Congress outputs and add an important dimension to the usual exchanges, reflections, professional development, and networking that occur at international conferences.

Introduction to the Analysis of Research Results

All registered participants were recruited to participate in this research project through a letter of invitation that was placed in the Congress program and sent electronically to registrants just before and immediately following the Congress. The letter contained a link to an online questionnaire. In the end, 233 people chose to take part, 115 responding in English, 60 in French, and 58 in Spanish. As they indicated consent to participate on the first page of the questionnaire, participants were also asked if they would like their comments to be attributed by name in the subsequent reporting. Thus, names in the results were published with permission.

As we began the analysis, it became apparent that, in addition to responding to the questions posed, a number of participants responded with what they most wanted to say—particularly in space allotted for Question 1, but also throughout the questionnaire. Accordingly, a number of emergent cross-cutting themes were observed. It appears that there were some themes that transcenced the questions, or perhaps existed outside of the framework provided. With this in mind, we have organized the results in two sections. The first explores the cross-cutting themes, while the second addresses the research questions. In the reporting of results, respondents' remarks have been translated from French and Spanish to English as required. We have taken a "free translation" approach that seeks to maintain the essence of respondents' words, but may not be a precise translation.

Cross-Cutting Themes

> "…the face of environmental education is always changing." (Anonymous)

As the participant quotation above suggests, environmental education—in its conceptualization and role in our lives and the lives of our students—is dynamic. The data from this study suggests that re-imaginings of contemporary environmental education require dialogue, reflexivity, and continuous interplay of both remembering and reenvisioning how to live well in our *oïkos*, our home places, built and wild. While a comprehensive overview of participants' conceptualizations of environmental education is beyond the scope of this paper, we outline three meta-discussions which frame six cross-cutting themes that emerged from the data. These cross-cutting themes illuminate current complexities of environmental education and some of the broad ways in which environmental education is being normatively defined within communities of praxis.

First, *Environmental Education and Interconnectedness* examines how awareness of broad socio-ecological interconnections can inform calls by environmental educators for greater intra- and inter-disciplinary collaboration, the centering of environmental education in teacher education and curricular policy

development, and interdisciplinary and integrative pedagogies. Second, *Reflexivity and Worldview-Shifting* discusses ways in which individual and collective identities shape, and are shaped by, processes of social-transformation. Third, *Relations of Compassion, Care, and Empathy* examines the role of environmental education in fostering caring relationships within interconnected human and more-than-human communities.

Environmental Education and Interconnectedness

Environmental education is being re-imagined in ways that reflect and respond to the socio-ecological complexities and diverse forms of knowledge in, and of, local communities within global contexts. Participants in this study called for increased collaboration in environmental education amongst academics, practitioners, and other education stakeholders in order to foreground environmental education in pre-service teacher education programs and curricular policy development. Furthermore, survey responses repeatedly identified a need for greater collaboration between environmental education movements and the socio-political-economic mainstream to foster greater public support and funding for environmental education initiatives.

*Environmental education as interdisciplinary, socio-ecological education***.** Many participants explicitly articulated conceptualizations of environmental education that integrate critical understandings of social and ecological systems. For example, Greg Misiaszek wrote: "Environmental education, more specifically, ecopedagogy, can critically teach the interconnections between environmental devastation and social injustices." Other participants acknowledged that shifts towards socio-ecological education, while laudable, are only now beginning to occur. William Parish wrote that this interconnection "is becoming more widely understood …[and is] a positive development as it helps to blur the lines between issues facing our society and environmental curriculum." Beyond the integration of socio-ecological perspectives *within* environmental education, many participants indicated that "environmental education cuts across the curriculum" (Ian Signer) and could serve as an interdisciplinary theme within "natural science, social science, and humanities" courses (Anonymous).

Towards effective environmental education: Teacher education, curriculum, and collaboration. Despite the widespread sentiments that environmental education is "inherently interdisciplinary" (Anonymous), this study suggests that many environmental educators grapple with how best to implement environmental education in K-12 schooling in the face of a perceived disconnect from other mainstream institutions. Many participants seem to value integrative pedagogies. Joelle Van Den Berg stated that Ministries of Education should **"**transform teaching structures to permit and promote interdisciplinary pedagogies.**"** However, concern remains that environmental education may not be adequately represented through its integration into other subjects. As a result, a few participants

stated that environmental education should be a required, stand-alone discipline. Still, most participants felt that increased attention to environmental education in pre-service teacher education programs could significantly facilitate the effective cross-curricular integration of environmental education. Charles Scott articulated a deep challenge for environmental teacher education:

> The challenge… is in having teachers in all disciplines being able to develop an environmental ethos,… which means that… teachers need both to understand the environmental ethos and "sign on" to its inclusion.… Increased environmental awareness in teacher training will be essential.

Other participants identified the development of comprehensive curriculum policies for environmental education, and financial and political support for environmental education programs in schools, as strategies that could support an integrative approach to environmental education.

Participants frequently noted a need for greater collaboration by academic and practitioner sectors of environmental education and with other mainstream social-political-economic sectors outside of environmental education. One participant wrote that "environmental education will evolve best when it is able to collaborate with other sectors such as arts and culture to achieve common goals" (Anonymous), while William Godfrey stated that environmental education should "focus on connecting with those who are more concerned with economic and social issues." To this end, Rosalind Wade noted the importance of finding a language "which will engage the powerful" and that "this is still mainly an economic language." There is no doubt that environmental educators have an important role to play in building these relationships.

Reflexivity and Worldview-Shifting

Survey respondents called for environmental educators to work as animators who encourage rethinking individual and collective identities that have led to the current global ecological crisis. For example, one respondent noted:

> Environmental education contributes to broadening and strengthening the capability of an individual to view things around him/her in a holistic and balanced way which then contributes to enhancing the socio-ecological understanding and relationships that an individual or a community experiences. (Shyamala Mani)

The reference in this quotation to holistic and balanced thinking is in contrast to the mechanistic and consumptive quality that many respondents identified as problematic features of currently dominant worldviews. This meta-discussion is constituted through two cross-cutting themes that arose from the data analysis: Facilitating Transformations, and Identity and Remembering.

Facilitating transformations. The survey responses present a strong (but not universal) message that many environmental educators view their work as

political activism. One respondent stated that "citizen actions should be fostered since childhood to promote social and cultural change from reflexive practices in environmental education" (Maria Victoria Talavera-Williams), while another pointed out that while current manifestations may be apolitical, "environmental education needs to become a catalyst for citizen democracy—raising a political voice for wise policy development at the municipal, provincial, and federal levels of government" (Skid Crease). The political quality that respondents ascribe to environmental education is connected with ideas of citizen empowerment (for youth, in particular) towards ecologically responsible behaviour and actions. Myriam Fritz Legendre, for example, noted that "environmental education contributes to social innovation by lateralizing relationships and making every participant in the social transformation an active citizen of their own society." A sentiment expressed by many respondents is that environmental education as socio-cultural activism should be positioned in reciprocal relationship to human identities, as constructed through understandings of our many histories.

Identity and remembering. Respondent Nancy Castaldo noted that "environmental education helps connect us all together," a feeling that is common among respondents and highlights the importance of reflexive thinking about personal and social identities as we consider possibilities for social change through environmental education. The sense that "environmental education encourages us to expand our minds and our sense of who we are and our sense of place" (Sharon Abreu) means not only looking to the future, but also remembering ecologically sustainable histories to guide our future directions. Making decisions about the future in relationship to the past is important for many reasons; survey respondents voiced a clear call for respectful approaches to accessing traditional Indigenous knowledge and for developing intergenerational ethics. These strategies, and others, may help us to "build better futures for [our] children" (Martin Haigh).

Relations of Compassion, Care, and Empathy

"We as members of a learning community can together come to a better understanding of ourselves, our relations to each other, and our relations to the more-than-human world" (Anonymous). In the sprit of this quotation, respondents overwhelmingly characterize environmental education as a relational undertaking that should foreground concern for students and pass on the inclination to feel care, connection, and generosity; one respondent went as far as saying that "compassion is another name for environmental education" (Anonymous). Within environmental education, the importance of caring extends to both human relationships and the more-than-human world.

*Recognizing the more-than-human***.** Fostering a non-exploitative interest in more-than-human communities is a key element of environmental education, according to respondents. As Milagros Chavez wrote, "environmental education's

fundamental dimension consists of developing ethical reflexivity about our relations to all living beings." This effort includes helping students understand both their dependant relationship with ecosystems that support human health and wellbeing, as well as humanity's contribution to the *oïkos* in which all living beings exist in interconnection. For one anonymous respondent, "environmental education is about reconnecting our species with the world that gave birth to it. What is more meaningful than realizing your connectedness to an intricate web of life?" Within the survey responses, this outlook underlies a call for rich pedagogies situated within relationships: "If education involves social interaction in active inquiry, then it can change relationships because learning is embedded in the community and in action, not just in thought" (Anonymous). Environmental educators, some of whom also appear to engage in this rich experiential inquiry in wild spaces, understand that the "relationships" described here can be understood as those amongst humans and with other beings, and that our "community" in fact extends to the more-than-human world.

Human relationships. "Meaning in my life comes through a sense of connection to like-minded others and being engaged in purposeful activity that I really believe in. Environmental education continues to delight me as being a forward-looking endeavour" (Catherine Nelson). These words highlight the strong current of dialogue and sharing that respondents identified as a critical feature of environmental education, and also a benefit of the World Environmental Education Congress. Sharon Abreu elaborates that environmental education can facilitate the:

> coming together with people from around the world, seeing what they are doing, and sharing with them. We educate, inspire, and support each other, and that is very important. I am inspired by stories of political change in various parts of the world, and am interested to learn how to motivate people in my own country….

With caring and compassionate relationships for our fellow humans, some environmental educators may be well-positioned to extend an ethic of care to include interspecies relationships. As a community, they may also encourage and support others who are inclined to do the same.

Congress Research Questions

While the first part of the results section discusses cross-cutting themes that emerged from the data, this section focuses on each of the research questions. Analyzing research material from this perspective, we found some sharing of promising educational strategies and descriptions of contentious issues in environmental education.

How Can Environmental Education Add Meaning to Our Lives?

This study reaffirms that environmental education invites re-connection to the self, to communities, and to the environment. Research participants mentioned that feeling our relatedness to the human and more-than-human worlds, and recognizing the importance of building respectful relationships, can truly add meaning to our lives. "This construction involves the person as a whole: mind – body – heart," wrote Christophe Vermonden. This represents a wider sentiment from respondents that a person's complete involvement in defining these relationships can definitely contribute to the constitution of healthy individuals and healthy societies.

Participants shared the perspective that understanding that interrelations among mind-body-heart, through reflexive thinking, brings an interconnectedness of feeling that, in turn, helps build social solidarity. Iztel Arista wrote that "it allows us to be conscious of what our differences and similarities with others are and so makes our relationships with them more cordial." And as Ricardo Domingez explained, not only does environmental education aim to identify interconnections and create solidarity, but it also focuses on understanding complex relationships: "It allows us to take up complex dimensions of culture-nature relations at individual, local and global levels."

Enhanced socio-ecological understanding allows for respectful behaviour that celebrates diversity and denunciates inequity. In fact, many participants mentioned that environmental education prepares learners to take action. It helps to identify action possibilities, develop competencies, and inspire desire and confidence to work towards more socio-ecological justice. "It transforms people so they feel empowered and become conscious of their capacity to positively influence the world, to choose in between possible actions" (Geneviève Audet).

Many participants suggested that environmental education can add meaning to our lives through the invitation to "an in-depth reflection on both individual and social values, attitudes and behaviours" (Anonymous). An important element of this values clarification perspective is that environmental education serves to *inform* values and not *prescribe* them. From another perspective, participants mentioned that environmental education can add meaning to our lives through specific values promotion. "Environmental education must help establish alternative ways of living and show the values associated with these alternatives," wrote Alejandro Alvarez Iragorry.

Many participants considered knowledge development as a key contribution of environmental education, for the construction of healthy individuals and communities. They explained that environmental education brings about a comprehensive understanding of socio-ecological relations; "it provides basic knowledge concerning fundamental issues and suggests critical ways to face rising environmental questions" (Valeria Fuentealba).

How Can Environmental Education Contribute to Social Innovation?

> Environmental education, through its ability to widen perspectives and strengthen understanding of a wide variety of situations, can contribute to addressing socio-ecological issues, constructive change and eco-development. (Shyamala Mani)

Valued forms of social innovation. Research participants identified four major trends in social innovation: forwarding technological innovation, reducing technological dependence, rethinking neoliberal socio-economics, and encouraging political activity at a local level. Interestingly, two of these form opposite poles on a values continuum regarding the role of technology in human communities. Some participants argued that one big challenge for environmental educators is to deconstruct the technological innovation paradigm; others defended continued efforts at technological innovation through environmental education, noting, for instance, that "some of the most exciting areas in engineering and science today have to do with sustainable design and urban environmental design" (William Parish).

Consistent with the idea that we need to stop viewing technological innovation as the key for socio-ecological problem solving, some participants expressed that environmental educators must resist neoliberal economic trends. Pablo Meira believes in a "deconstruction (not a destruction) of the market, its related cultural hegemonization instruments, its unjust benefices and environmental consequences distribution, and its alienation outcomes towards nature."

Community and political commitment were often mentioned. For instance, Edgar Gonzalez Gaudiano wrote that "citizens' alliances defending environmental justice must be created in order to induce change in political structures." In order to realize this commitment, participants called for greater engagement of environmental education stakeholders. Also, they noted the need to emphasize community empowerment and put concepts of eco-citizenship into practice. Many respondents mentioned that more participatory processes need to be established for community engagement to flourish.

Inspiring social models. Just as we saw competing values of social innovation emerge from the data, we also encountered support for contrasting social models. Many believe that sustainable development should be the aim of environmental education, while others advocate simple living principles and de-growth concepts. For René Jam, "the new paradigm of a happy simplicity, respectful of life and living things, must guide our creativity within the eco-development field." Participants referenced social justice, equity, participation, solidarity, and respect of others and the environment as the bases for the construction of healthy societies.

While these responses highlight discursive tensions, many participants also indicated that a plurality of social models is desirable: "I only hope environmental education can contribute to a true citizenship education, respectful of everyone's values, that do not aim to impose a social nor a cultural model"

(Anonymous). For Nadeson Thiaga, "it need not be a social model fit-all, but the models have to be worked out by respective individual countries or regions according to the diversity and variation in the needs of the societies." Consistent with this idea of individual and societal diversity in desires, beliefs, and worldviews, participants in the study valorized cultural differences and richness. They also insisted on the consideration of traditional knowledge and the importance of its transmission from one generation to another, so that "we consider [it] as a part of our contemporary knowledge" (Patricia Carla Souza).

Contributions to socio-ecological problem-solving, citizen action, eco-development, and cultural changes. Participants identified many ways environmental education can prepare citizens to engage in eco-development action and socio-ecological problem-solving through the development of competencies such as values clarification, reflection upon *self-other-environment* interrelationships, critical thinking, and creativity. Many respondents mentioned that eco-literacy within environmental education is fundamental, since it activates consciousness and stimulates a sense of responsibility. Transdisciplinary perspectives were identified as a successful way to work towards eco-development. One participant elaborated that "environmental education weaves a web of interconnectedness that binds many disciplines, many challenges, united in a common goal of ecological understanding, creating space for conversations and actions, engaging hearts and minds for stewardship" (Anonymous).

How Can Environmental Education Contribute to Political Innovation and Influence Public Policies?

Research participants mentioned that policy changes are needed to support and develop environmental education; many responses called for greater institutionalization. Participants suggested that environmental education become a mainstream part of school curricula, starting from elementary school, and also part of teacher training and professional development. Resonant with question two, some respondents encouraged interdisciplinary approaches to curriculum development. For Joelle Van Den Berg, this means "to make the teaching structure evolve so that it allows and promotes interdisciplinary and complex pedagogies." Many participants indicated that environmental education needs better recognition. By this, they meant allocating more resources to environmental education initiatives, integrating its perspectives within various social spheres of action, and bringing an educational dimension to environmental management projects.

With regards to the sub-question which relates to the ways environmental education can foster citizenship awareness and prepare citizens for participation in public policy development, we found answers that were very similar to the question two prompt concerning contributions to eco-development and socio-ecological problem-solving. In response to question three, however, some

participants explained that they do not believe environmental education could or should play this role. For instance, Fatima Rodriguez mentioned that environmental education "is too heterogeneous and, given this, not enough valued to really influence [public policies]." Another participant answered with a question, asking: "Does anyone in the environmental or environmental education movement really want to?" (Anonymous).

Participation in the Congress

Responding to prompts about the value of Congress participation in relation to each of the cross-cutting questions, many respondents noted the value associated with being a part of a World Environmental Education Congress. For some, Congress participation represents an opportunity for dialogue and sharing around a broad spectrum of environmental education themes. According to Richard Renshaw, "the rich moments of the Congress provided many opportunities both to hear new ideas, share experiences and to provoke me to rethink a number of questions." Other participants reported value in very specific elements of the Congress: "attending MJ Barrett's session really re-introduced me to trusting such instincts and helped me start reclaiming forgotten knowledge" (Elisa Lee).

Another respondent noted that dialogue and sharing transcend the temporal and geographical boundaries of the Congress, and nourish the broader environmental education enterprise:

> Environmental education practitioners create a community of sharing and it is often these people, in their respective communities, that connect people with place, sharing and celebrating, practicing and living in a hopeful way, for the greater good of our people and our land. (Anonymous)

The sentiment underlying this statement is prominent throughout the survey responses, suggesting that the value in the World Environmental Education Congress movement manifests not only in professional development for delegates, but also in the Congress as a thermostat for both measuring and adjusting the temperature in the environmental education *oïkos*.

Sharing Promising Educational Strategies

An interesting outcome of this research project is that it highlights two main educational strategies that environmental educators should favour in order to enhance contributions to knowledge development, social innovation, and public policies development. Many wrote about social learning principles, about the importance of getting learners involved in community projects. For Richard Renshaw, "getting involved in the issues and reflecting on what we are learning in the process seems to be the way environmental education usually works

best." Lots of respondents also mentioned the effectiveness of outdoor education, explaining that it builds a relation with nature that nurtures a healthy sense of belonging. A participant suggested that "this love for nature will foster a stewardship ethic that will contribute to the construction of healthy communities" (Anonymous).

Identifying Contentious Issues in Environmental Education

In responding to the three research questions, participants also identified major stakes faced by actors in environmental education. Many participants mentioned that environmental education needs to go beyond eco-literacy. They called for an emphasis on the development of critical thinking and holistic comprehension: "It must help to get a broader vision of what is happening in the world," wrote Claudia Hernandez. Moreover, the idea of decompartmentalization often came back within participants' answers, referring to age groups and spheres of action. Environmental education should be institutionalized and present from elementary school, participants indicated, but "we need to reach the whole population, not only the kids," wrote Valeria Fuentealba. More networking is needed amongst environmental education actors and also between these actors and those from other sectors (artistic, politic, economic, etc.).

Some participants indicated that more research needs to be done to inform action, to allow for evidence-based initiatives. Others suggested making better use of theoretical tools and approaches in the field.

As mentioned earlier, some respondents strongly suggested greater integration of environmental education within the sustainable development model, while others indicated that there was a need to free environmental education from this paradigm, or go beyond it. We also highlighted diverging opinions among participants about the potential of technologies for resolving socio-ecological problems. Concerning the responsibility concept, we encountered multiple approaches. While most respondents stressed that environmental education should encourage individuals to take responsible actions, others stated that more importance should be given to the idea of collective responsibilities. One participant even mentioned that promoting responsible actions at the individual level can induce "a challenge, but also a burden" (Anonymous). While diverse and diverging perspectives were encountered among participants' answers, at the same time, vibrant calls were made for greater cooperation and respect for different contributions and visions:

> It is about understanding the world as a web of interactions rather than thinking of its antagonisms and oppositions; it is about looking for complementarity in between natural and social matters, reason and feelings, sciences and ideologies, a scientific field and an other, individual and collective responsibilities, local and global, men and women, etc. (Carmen Solis Espallargas)

Pursuing the discussion concerning the environmental education contribution to social and political innovation will certainly highlight these issues.

Conclusion

In drawing this paper to a close, it is important not to overreach. This research does not attempt to test a hypothesis or bring order to the field of environmental education. It was, however, presented as an invitation to allow for participants, through participation in the World Congress and this research project, to have a say in co-constructing an image of environmental education and vision for its shared future. Like past Congress organizers, we wanted participants to reflect on their Congress experiences and on the state of their ever-changing field. As such, it represents a snapshot of environmental education at a particular place and time.

We noted in particular that the organizers of the 4th World Environmental Education Congress did not attempt to construct a Congress declaration, so common these days. Rather, they chose to engage participants by distributing a collection of "think pieces" published in their most recent issue of the *Southern African Journal of Environmental Education* (2007). This was their strategy to "open possibilities for enhancing and deepening debates" at their Congress (Lotz-Sisitka, O'Donoghue, & Robottom, 2007, p. 6). Similarly, we wished to enhance and deepen debates and discussions and chose, as our strategy, to enmesh the 5th Congress with the research project described here. While the research questions were constructed with brevity, and were presented in the three Congress languages, we anticipated that our approach would make focal points for discussion more readily available to a broader range of participants.

International conferences, with ensuing declarations, can mark major changes in thinking and set new agendas for action. The Tbilisi Declaration certainly did. More recently, the Fourth International Environmental Education Conference was held in Ahmedabad, India in 2007. This conference was the most recent in a series of United Nations conferences held at decade-long intervals, beginning with Tbilisi, Georgia in 1977. The Ahmedabad declaration (Anon, 2007) is interesting in that it breaks from tradition by taking more risks, conveying a sense of urgency, and proposing more radical directions. "We no longer need recommendations for incremental change" it states:

> We need recommendations that help alter our economic and production systems, and ways of living radically. We need an educational framework that not only follows such radical changes, but can take the lead. This requires a paradigm shift. (¶10)

To develop and enact such recommendations, and to enact such radically new stories, educators will need to embrace fundamental changes in ways that knowledge is created, transmitted, and applied.

In posing the question, "How many declarations do we need?" Lotz-Sisitka (2009) argues that such declarations do at least have some guiding power and provide "markers" that allow us to make the current "state of play" visible for scrutiny and deliberation. She also suggests they provide cultural capital that can allow practitioners opportunities to become more reflective of current practices and assumptions of change. However, she also points out that declarations can be influenced by institutional politics and international negotiations, and in cases such as the recent Bonn Declaration, a modernist, anthropocentric Enlightenment agenda. Similarly put, Sauvé (2009) argues that conference declarations can be seen as social compromises and pseudo-planetary consensuses, often negotiated by politically influential actors. The effect, as Stevenson (2007) and others argue, is a tension between transformative intentions of environmental educators and the institutional architectures that maintain the status quo.

It seems then, that while congress declarations may provide some critical traction, alone they are not sufficient to provide the creative and reflective guidance for enacting the kinds of urgent transformation called for at Ahmedabad. We hope that more forthright engagements with practitioners through critical "think pieces" (*SAJEE*, 2007) and experiments such as our research project will add valuable insights, more critical traction, and greater dimensions of reflexivity within our field.

What we can now say about the results of this research is relatively modest. We think that they do confirm the view that environmental education is dynamic, ever-changing, and increasingly complex (cf. Sauvé, 2005). Also, the positive response to the diverse array of thematic niches and the research participants' comments affirm that environmental education practitioners are intensely concerned with social and socio-ecological issues. The results point to interest in exploring relationships between social and ecological systems, socio-cultural activism, social innovation, complex dimensions of culture-nature relationships, relationships within human communities and with the more-than-human world, Indigenous knowledge, and dependencies on ecosystems amongst others.

What we can observe in reading the reported research results is, in part, framed by the nature of this kind of research which typically seeks trends emergent from the data. We note that there appears to be a plurality of approaches, differences of opinion, contentious issues, and possible points of tension amongst the participant environmental educators. Rather than trying to impose any concluding order on these results, we encourage readers to read them critically and reflect on the convergences and divergences, and to use these reflections for constructing new possibilities.

What we cannot see are more idiosyncratic comments that do not emerge as trends within the data. But, they will be present. It may be that more radical individuals and non-conformists amongst us will have important but overlooked ideas, critical to our future developments. And, of course, there will be inevitable blind spots owing to the predilections of the participants and the researchers

involved. We encourage readers to be on the lookout, in their own investigations and practices, for these blind spots and non-conventional ideas.

What we environmental educators and interested others can do is use these results to gain further traction in discussions about environmental education and its future, as a means to both shape our practices and create our own research directions. Organizers of future conferences and Congresses may also use these reflections in their own struggles to add value to their own meetings.

Finally, we thank the research participants for their forthright comments, and we acknowledge the ongoing contribution of environmental educators who were unable to attend, yet participate in this important shared work.

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