The knowledge-doing gap: A theoretical perspective on developing eco agency through education

Athena Vongalis-Macrow*

La Trobe University, Melbourne, Australia

Abstract

Education for Sustainable Development aims to develop better understandings of the issues associated with the interrelations between the environment, economics and social factors. An international study asking students from the Asia-Pacific region about their awareness and opinions of environmental issues and appropriate actions for sustainability revealed that students do have a profound awareness and sound understanding of environmental issues and the kinds of behaviours required for sustainability (Fien, J., Yencken, D. & Sykes, H. 2002). However, when asked about how they go about turning knowledge into actions, the results were less than encouraging. It appears that while students are aware of what they should be doing, they are reluctant to put it into practice. This raises an important issue about the knowledge-doing gap and the transformation of knowledge into doable actions. It suggests that no matter how powerful the ideas, translating those ideas into action, beyond classroom and beyond curriculum strategies remains elusive. For this reason, the deconstruction of the space between knowledge and doing is essential to reconsider. How this space is constituted is a multidimensional problem.

Keywords: agency; knowledge transfer, sustainability, education

Title Page Footnote:

*Athena Vongalis-Macrow. Faculty of Education, School of Educational Studies, La Trobe University, Bundoora, Melbourne, Australia, 3086.
Introduction

In a paper entitled, *If It Doesn't Directly Affect You, You Don't Think About It* (Connell, et al., 1995), the authors draw attention to the apparent cynicism, frustration and ‘action paralysis’ displayed by young people when asked their views and opinions about sustainability practices. The attitudes displayed by 16-17 year olds, across Australia, mirror the attitudes intimated by youth across the Asia-Pacific region (Fein et al., 2002). The issue appears not to be the lack of information about sustainability and how life-style can contribute to better sustainable outcomes, rather the issue the lack of student confidence in applying their understandings through their actions. There are immense pedagogical issues inherent in attempting to map out the problem of the application of knowledge into actions. However, the aim of this paper is to broaden the focus and draw on other areas of learning which may help in our understandings of the transfer of knowledge into actions, as not only a problem particular to this educational issue, but a broader learning issue.

The transfer of knowledge to practices has concerned many organizations seeking to bridge the differences between what is known and how this knowledge is used by organizational members. Organisational research has revealed multifaceted reasons for explaining why the knowing doing gap persists. For example, studies into the improvement in the application of knowledge by hospital managers has identified factors such as skill level, culture, structures and process as few of the variables affecting transfer of knowledge into good practices (Adler, et al., 2003). The examination of the knowing doing gap evident in the transfer of sustainability knowledge into sustainability actions in schools, begins by reviewing the lessons learnt from organizational studies because, as in health systems, the organizational context of educational systems contextualize educational practices. An examination of
The organizational context of educational systems begins a theoretical exploration of the knowing doing gap exposed by the problematic transfer of sustainability knowledge into sustainable practices.

Research into applied knowledge in organisations aims to clarify and construct models of organizational practice through managing processes, mechanisms and structures that enhance organisation learning and knowledge transfer (Senge, 1994). In constructing organizational models of learning, attention focuses on the role of knowledge as information and data, as well as knowledge as applicability (Atul Gupta & Jason McDaniel, 2002). At the core of unpacking the knowledge-doing gap, in the organisational managerial models, are concerns about competitive advantage, innovation and sustainability. School education has changed in incorporating more business like practices and organisational features, so much so that there is overlap between corporate learning and school based learning. For example, many educational administration and managerial strategies look towards the learning organisation model as a way to structure and manage educational systems. Certainly, much can be understood about the knowing doing gap through organisational research.

The other example where the knowing doing gap is critical is in the treatment and prevention of ‘high-burden’ diseases that continue to plague world populations. More specifically, the knowledge doing gap in healthcare and prevention concerns the transfer of information about disease and how knowledge can be effectively incorporated into new behavioural patterns for preventative actions (Pang, 2003). According to World Health Research Officer, Pang (2003: p383), “Although I would in no way deny the value of biomedical and upstream basic research, I believe we have placed too much emphasis on that and not enough on the translation of knowledge into actions to improve people’s health”. In order for program to have impact, systematic approaches are required in engendering participation of those who are
the targets of behavioural change. The measure of success is the ‘real impact’ a health
program has on improving health.

These two examples of how the knowledge-doing gap is identified are important for
educational system to consider and draw expertise. Educational systems can draw upon
research from the organizational management perspective in that schools systems have
become enterprising models and many of the concerns of a modern organisation are relevant
to educational settings. Similarly, the interests of health and well being have been embedded
in modern curriculum and pedagogy where the role of the school extends into personal and
familial spaces. For example, the focus on bullying and bullyproofing schools exemplifies
the duty of care now part of the educational space. This paper will therefore, draw from
organizational studies and health research in order to examine the knowledge doing gap
surrounding taking actions towards a sustainable use of natural resources and biodiversity.
The discussion will critically examine organizational features in schools which may act to
impede the transfer of knowledge into actions and examine ways that health programs
function to ensure participation. Finally, recommendations will be made about a missing
component in both paradigms, that of agency, and that the complexity of agency is a key
variable in the knowledge-doing gap.

**Knowing it**

Organisational studies distinguish between information, data and knowledge. Data refers to
facts in their raw state without classification or organisation, (Parikh, 2001). In the school
context, data may appear in administrative fields as a collection of statistics about the school
population or it may appear in class rooms as the underlying facts on which areas of learning
are founded. Once organized, data sense making creates information. It follows that the kind
of information created depends on the schema used to interpret and organize the facts.
According to Senge (1994), the schema, or mental model is the filter through which information is interpreted and evaluated. In education, the mental model can also refer to learning theories and curriculum models representing those theories. Without some theoretical schema or model for teaching, facts and information about the world are very disordered and so not make much sense. For example, we can have data after data about changes in the ozone layer or other sustainability phenomena, but without some schema to make judgments about the data and information, any form of deeper understanding about the implications of this information remains elusive. The prevalence of constructivist theory in current pedagogy, constructs a teaching and learning model that has epistemological, psychological, and sociocultural framings. Although there are branches of constructivist theorizing, which dispute the meaning of a constructivist understanding, there are two essential tenets of constructivist thinking. These are:

knowledge is not passively received but actively built up by the cognizing subject; the function of cognition is adaptive and serves the organization of the experiential world, not the discovery of ontological reality (Husen & Postlethwaite, 1989).

The constructivist organisation or the experiential world represents a schema through which data and information about the world is organized for sense making. In making sense of data and information, psychological, social and personal factors contribute. At this stage, the creation of knowledge emerges. According to Gupta and McDaniel, (2002),

Knowledge implies a deeper (in emotional, psychological, and social terms) involvement of individuals, and initiatives aimed at altering existing patterns (particularly if they are anchored in years of experience/practice) (Gupta and McDaniel, 2002:2).

Gupta and McDaniel stress the deeper engagement of individuals at the stage of knowledge making. In the organizational context, the deeper involvement of people seeks to ensure that knowledge is not misconstrued and that knowledge transfer happens unimpeded for innovation and growth.
A critical review of how knowledge about sustainability is created in schools, and by implication, a critique of constructivist modeling for knowledge making, may be a factor in the creating the knowledge doing gap. Firstly, the simplification of complex knowledge and phenomena may be a pedagogical device to help students’ understandings, however this may also impede deeper learning and deeper engagement. However, there are two problems associated with the oversimplification of complex knowledge. The first issue is that in reducing complexity, what may be lost are elements of the emotional, psychological and sociological factors that construct knowledge. The result may be a partial knowledge about the phenomena and as such, manifesting as less engaging or encompassing in the learners’ knowledge making. In a study arguing that there is a common basis for instructional failure based on ‘unrealistically simplified’ (Spiro et al, 1991:1) information and knowledge transfer, the authors content that learning needs to be complex. The authors state;

Cognitive and instructional neglect of problems related to content complexity and irregularity in patterns of knowledge use leads to learning failures that take common, predictable forms. These forms are characterized by conceptual oversimplification and the inability to apply knowledge to new cases (failures of transfer) (Spiro et al., 1991:2).

It is reasonable to raise similar questions about sustainability knowledge transfer. The way that scientific knowledge is taught to students and then how this knowledge is made ‘messy’ when transferred into real case situations presents a conundrum. If knowledge making is indeed about engaging the total person, that is the emotional, psychological and sociological factors, then more well structured instructional designs and pedagogies are necessary to ensure knowledge making happens from informational complexity. Flexible knowledge application would be an area of further investigation in the light of the problems with transfer of sustainability knowledge into positive action.
The second problem related to the simplification of knowledge relates to the teachers’ information and knowledge about sustainability issues and how this is then transferred to learners. In a forthcoming study, Kurup and Vongalis-Macrow(2008) undertook a survey of 200 pre-service teachers to find out the extent of their accurate knowledge about sustainability. The pre-service teachers were asked to rate the most correct answer when given information about climate change, greenhouse gases and global warming. Asking pre-service teachers the meaning of climate change, 65 stated that it referred to changes in average temperatures, 15 stated changes in weather forecasts, 16 replied increase in sea water level and 46 answered global warming. Significantly, of the 191 students, only 156 attempted to answer, 35 opted not to answer. Therefore, 23% may not have known. In another question, students were asked what constituted greenhouse gases. Forty-two students answered carbon dioxide, 39 methane, 19 oxides of nitrogen, 37 CFC gases, 7 ozone and 44 all of the aforementioned gases. As in the previous question, about 25% of the students did not supply any answers. Overall, less that 50% students had the correct information about greenhouse gases.

Further analysis of the survey results will follow in another publication however, there are two points of interests when we consider the knowledge level of pre-service teachers when asked about climate change and greenhouse gases. Clearly there appears a gap in how teachers’ information and knowledge about these two sustainability issues. This may have an important affect in the knowledge passed down to learners. I particularly refer to knowledge and not just information. A teachers may be able to gather the correct information however, whether taught with the convincing emotional, psychological and social depth may be an issue. It is even more critical when considering that the survey showed that over 73% of the pre-service teachers stated that the issue of sustainability was of such importance that they believed it is the teaching responsibility of all teachers. There are important quality issues
here, however, the point being made is that the knowledge doing gap may be affected by lack of knowledge about sustainability on the part of teachers, and the learners’ own knowledge making from this deficient base may be a hindrance in the way learners construct their own psychological, emotional and sociological schema to engage with the knowledge.

Furthermore, recent studies into socioscientific reasoning has suggested that learners are more willing to incorporate scientific knowledge into their reasoning patterns around complex scientific issues, if that information is given by someone they consider an authority in the topic (Kolsto, 2001 cited in Sadler, 2003). The authoritative source of information, as a critical factor in knowledge making resonance affirms Connell et al, (1999) findings that,

The young people surveyed placed most trust in information about the environment which they gained through personal experience or from people living in their own area. They tended not to trust information obtained through the media although television was their most common source of environmental information (Connell et al, 1999:96).

This is indeed problematic when considering the knowledge level of teachers and how issues around sustainability may be presented. The aim is not to blame the teachers, in fact, teachers ought to be applauded for their proactive stance on sustainability. The aim is to advocate for more effective teacher training programs which incorporate sustainability knowledge as a key component of teacher training, as a social and pedagogical necessity for future generations.

**Doing It**

The knowledge doing gap is also of concern to health practitioners and researchers, especially in high burden disease prevention (Davies, Ireland and Buchan, 2005). When faced with situations leading to mortality and/or morbidity, the decision making capacities of people, and how they act upon certain knowledge, is vital. In the context of this paper, there have been overlaps of theories which attempt to model behavioural patterns and decision making
patterns towards positive actions for change when people are faced with certain indisputable information. Balanced theory and theory of reasoned response are two prominent theories seeing to explain behavioural change and its ties to knowledge. These are important to consider in the light of the previous discussion about the quality of knowledge transfer about sustainability.

**Balance Theory**

In 1958 Fritz Heider proposed balance theory as a psycho-social explanation of behavioural change. In brief, balance theory proposes that if a person believed that some object was not associated with a negative attribute, that this would suggest that the person has a positive attitude towards the object and more likely to behave positively towards the object. Extending balance theory, Fishbein’s (1993) research showed that while balance theory may explain and show strong indication of the intension of individual action, it did not help predict actual behaviour. In other words, positive association, were not enough to predict positive actions. According to Fishbein, two important variables helped to provide better indications of behaviour. He surmised that intensions to engage in certain behaviour were dependent upon whether the outcome was under the volitional control of the individual. Behaviour perceived as under volitional control proved better predictor of probable actions. However, if the outcome was perceived outside the volitional control of the individual, the likelihood for predicting actions was markedly reduced. For example, if there were other factors that impinged on the success of the action, it was less likely that the person would engage in that behaviour. Fishbein devised the theory of reasoned action as a way to explain that behaviour was more likely to change if we can maximize the likelihood of goal attainment by focusing actions on one or two goals deemed attainable and under the control of the individual. Fishbein focused on cognitive structures, that is, on behavioural and normative beliefs that
influence individual attitudes and subjective norms. Fishbein has used this rational, linear model for behavioural change to explore smoking, drinking, the use of contraceptives to name but a few health related issues. The directional change offered by Fishbein is an important step towards understanding behaviour because Fishbein is acknowledging the complexity of external influences that shape actions. His solution to environmental complexity is to reduce the complexity by narrowing the focus on a couple of achievables. This has been a major limitation of rational, linear behavioural theories of change. Changing behaviour towards a more sustainable use of natural resources and biodiversity is a complex issue that has social and political influences, which resist normative framings. For example,

Changing the way people think and act when it comes to sharing their knowledge, integrating and using that of others, as well as creating it collaboratively, is not an easy task. It involves considering psychological factors, personal attitudes and competencies as well as the history and the dynamics of the social, emotional and organizational context in which people operate (pp.1)

The politics of sustainability create a dynamic and complex social space in which attitudes towards sustainability take shape. The proclamation of sustainability, as public legislation, was spurred on by a series of international ecological disasters such as Three Mile Island, Chenobyl, and Exxon Valdez, and led to Our Common Future report, which presented a political definition of sustainability. The report, also called the Brundtland Report after the defined sustainability as,

Development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Brundtland, 1987).

reconciliation of economic development and environmental protection and the resulting policies intended to affect the flow of global finances and trade. The main message from the summit proposed that large scale changes in attitude and behaviour were needed to ensure a healthy planet. Changes in behaviour and attitude were needed in these areas:

- Patterns of production — particularly the production of toxic components, such as lead in gasoline, or poisonous waste…
- Alternative sources of energy are being sought to replace the use of fossil fuels which are linked to global climate change…
- New reliance on public transportation systems …
- greater awareness of and concern over the growing scarcity of water.

In 1997, the Kyoto Conference on Global Warming opened dialogue centering on greenhouse emissions. The negotiation over the compliance, specific targets and responsibilities were ratified in 2005, which led to the Kyoto Protocol. This brief historical overview of the growing international awareness of sustainable practices, serves to map out the way sustainability has entered public discourse and occupied social space.

Dominant ideas inhabit social space through their persistent presence in the media, in public opinion polls, in classrooms, in discourse, and in relationships. However, while dominant ideas may be easier to identify because of their ubiquitous presence in public discourses, social space is constituted by more than dominant ideas. Elias (1978) proposed that exchanges happen in “pacified social spaces” (Elias, 1978: 450), resulting from dominant ideas prioritizing, arranging and organizing exchanges. Presumably dominant ideas prioritize exchanges thereby creating some sort of order in which lesser important ideas drop off the agenda. While priority may be given to dominant ideas, other ideas also inhabit and occupy social space. The presence of a range of ideas occupying social space challenges the notion that social space is a pacified territory. There are numerous tensions within any public space and one of these tensions may be in the representation of ideas and how these are
prioritized in the public discourse.

The rise of media reports about climate change illustrates how ideas about climate change have started to penetrate public discourse challenging the dominant ideas that climate change was a fictional model of global warming. Interestingly, the ascendancy of climate change as a dominant idea in the public discourse, illustrates a global phenomena whereby, ideas are no longer bound to local territories but have global reach.

Negotiating ideas of global significance creates a political conundrum for social action. Social action can be distanciated from local expressions, can align with exchanges beyond the nation state, beyond institutions and organizational boundaries and give rise to a more complex set of choices. It is within this complex place, resisting the isomorphic organisation of ideas and action that education is situated. Changing behaviours towards positive attitudes and actions towards sustainability requires making a diverse sets of choices negotiated through sociopolitical, emotional and psychological involvement. Clearly this is challenging for schools, teachers and learners.

However, a social function of the school, as an organization, may impede the formation of positive environmental attitudes and actions because of the tendency for institutional closure as a way to deal with complexity. The impact of institutional closure may be to further reduce knowledge making and thus diffuse the capacity of learners to create meaningful, informed knowledge that underpins the actions and motivations.

According to Downward, Finch, and Ramsay (2002), the role of school and learning happens in a simplified way as the structure of education sets up a quasi closure of open systems (Downward, Finch, & Ramsay, 2002). The open system in this case would refer to the highly politicized social context in which issues about sustainability are prevalent. In order to
help regulate and make persistent certain ways of learning, responding, making decisions and taking actions, education systems shut down access to the social and political context and in doing so, access to the political and social debates which construct complex, social space. According to Downward, Finch, and Ramsay (2002), in the face of too much choice and action, the quasi closure of education systems acts to set limit to possible courses of actions in order to create regularity and limit structural decisions. There are of course ideological reasons for reshaping educational structures in this narrowed way, especially when there is highly charged debate around an area of knowledge, such as climate change, which has lead to political decision-making and has had legislative implications.

The evolution of sustainability as a resonant idea and public value, displaces complacency about the environment with political ideas and actions seeking deep structural and agential changes so that systems and relationships are restructured to function towards achieving balance and optimization rather than maximization of resources use. As a public institution, education, illustrates the tensions when new ideas and new practices occupy public spaces. From the mid 80s onwards, the managerial framework for organizing public education has dominated educational ideology (Psacharopoulos, 1996; Welch, 1998). The dominance of educational ideology reconstituting education as a site for economic efficiencies, performativity, work training and fiscal rationalization, has rendered educational sites as pacified social spaces. Pacified space refers to functional operations where notions of politics and conflict as sidelined in order to achieve systemic harmony and balance of efficiencies and effectiveness. However, the infiltration of sustainability and eco agendas unsettles compliance and problematises educational spaces. As intimated through the historical evolution of the concept of sustainability, and how governments have been challenged to act in accordance with global rules about sustainable systems, challenges pacification.
Gruenewald (2003) states,

When we fail to consider places as products of human decisions, we accept their existence as noncontroversial or inevitable, like the failing of the rain or the fact of the sunrise...we also become complicit in the political processes, however problematic, that stewarded these places into being and that continue to legitimize them (Gruenwald, D. 2003, pp. 627.)

Recognising education as more than work preparedness, necessitates that educational sites be reconfigured as socially constructed places and not only as sites for performative products and services, framed by bureaucratic control and condemned to reproduction. The entrenching of education as instrumental practice has prioritised what Berry (1988) terms an ‘autistic’ education which undervalues deep dialogue, communication and participation in meaning making of our places. I would also add that meaning making has been further undervalued when examining issues around sustainability by the poor quality knowledge about the science of sustainability and related issues which makes informed meaning making challenging for learners.

Downward, Finch, and Ramsay (2002), suggest that institutions such as education, represent a shared territory in which the institution represents a shared space for the exchange of ideas and values about the outside environment and how actions, relationships and decisions should be managed. In other words, the school transmits favourable practices to learners through quasi closure that pre-limits choices and actions, and how to behave. The assumption being, that once outside school, the learner will have a model for quasi closure, and limiting choices based on their experience and learning within the school. Perhaps this assumption is misleading.

Overlooking the complexity inherent in educational spaces, becomes a pedagogical issue. Gruenwald (2003) stresses that, “The gradual process of taking our socially constructed places
for granted is deeply pedagogical” (pp. 627.) When educational spaces are de-invested of meaning, solid knowledge, beyond the managerial framing of outcomes and achievement, negating the sociopolitical in place making, education, as an institution, divorces from deep connections with the extra-institutional landscape. It is this dislocation that may contribute to the knowledge-doing gap in students because they cannot bridge the divide once outside the school enclosure. In other words, once outside the school, the sheer complexity of informed decision making in a political context creates troublesome tensions for students and the resulting actions steer them away from actively participating in complex decision making and having a say in how their social space is constituted through their actions.

Perhaps the dislocation of education from broader social, political and economic debates, limit meaningful engagement and participation in place-making of students and staff. The dislocation of education from participating in social dialogue, in creating a presence in social spaces has consequences that delimit deeper knowledge making about sustainability and may water down the educational messages about sustainability and eco-friendly living.

A true learning organization requires the unencumbered transfer of knowledge towards meaningful actions. However, it can be argued that the predominance of behavioural theories emphasizing reasoned action may have limited application in a school context. Clearly, issues relevant to sustainability draw on norms and values which are glocalised. The quasi closure of schools, in a sense to help students delimit information, knowledge and decision making, may present an unrealistic appraisal of sustainability and neglect the scientific, political and ideological debates that construct glocalised norms. Perhaps, the quasi closure of schools is a hindrance to fuller engagement with sustainability and this eventually presents problems in the transfer of knowledge from school to messy, and political real life.

So far, this paper has argued that in order to target the knowledge doing gap more attention
needs to be focused on how informed knowledge in constructed to engage the learner fully, which necessarily means retaining social and political complexity so the realistic appraisal of how peoples’ actions impact and construct sustainable places. The final section will consider another aspect of complexity, which is overlooked in pedagogical design and knowledge transfer. I refer to the complexity of human agency and how agency theory may be better understood to support more targeted knowledge transfer and action outcomes.

**Agency Theory: complexity of authority and autonomy**

Essentially, what we require of students applying their knowledge into sustainable use of natural resources and biodiversity is that they have authority in the way they understand sustainability information and secondly, that students are able to make autonomous decisions about how to apply their knowledge towards sustainable actions. So far, the paper has argued that the knowledge-going gap is dynamic, complex and irreducible. Another layer of explanation is needed to understand actions or lack of actions.

Social agency theory may help to bridge explanations about how the knowledge-doing space is constituted, building on the aforementioned theories. In a recent paper (Vongalis-Macrow, 2007), I argued that agency is a multifaceted construct. The multifaceted layers of agency mean that actions are not so much action plans, but more akin to strategic movements that are contextually dialectic. The action space is complex, integrated territory where agency has capacity to assess obligations, construct authority and negotiate autonomy. These three elements have been identified as the constituents of what is agency (Archer, 1988) and each element can is independent and interdependent on the other making for intra and inter-dialectic relations.

In addition, the matter of taking action, is further complicated when considering the internal
landscape that constitutes the agent. Deleuze & Guattari (1988) drill down to the molecular level, arguing that change is simultaneous interactions between the molar, in this case the complex context, individualized, elemental expressions of agency and the molecular, meaning the internal desires and drives of the individual. Importantly, when asking someone to take action, how this request engages the agent at the very least requires negotiation and strategy that draw upon inter and intra agency responses.

Axiomatic to addressing the problems associated with the transfer of knowledge into actions about the importance of practicing eco friendly living, needs to account for the aforementioned complexity of the agent in question, that is, the learner. In problematising the complexity of realism, Archer (2002) conceptualized the human agent as someone partly transformed by their sociality, having also capacity to transform their society. The experience of reality and how the world can affect who we are and our actions, our ‘social conversations’( Archer, 2002: 12) have influence over our reactive behaviour. Archer’s ‘social conversations’ describe how each agent negotiates their obligations, authority and autonomy with their knowledge and perceptions about their context. While Fishbein stipulates that behaviour under volitional control proved better predictor of probable actions, for Archer, the power to anticipate the probable impact of environmental occurrences for well-being, through our own emotional commentaries, proves critical. Archer states, “the relationship between properties of the environment and of our embodiment are sufficient for the emergence of emotions, like fear, anger, disgust and relief” (Archer, 2002:16). The critical self commentary on what works and how one feels, its relationship to sustainable living through an internal dialogue, is often overlooked. Yet, the feelings of cynicism, fatalism and powerlessness have been identified in youth reaction to environmental issues (Connell et al., 1995). Archer states, “The task/undertaker relationship is quintessentially that of subject confronting object and what exactly goes on between them is known to the subject
alone” (pp. 16). Archer (2002) provides a strong critique of current school practices. Her main critique focuses on the passive process of socialization in which student roles are often assigned and furthering this claim, the quasi of schools adds to the passivity of context and the artificiality of real response in confronting the realities of complex issues contextualised in politicized spaces.

Furthermore, this passivity can be attributed to transmission modes of learning where students are receivers of information and knowledge without great opportunity of co-configuration of complex knowledge making. A current research project examining the sustainability knowledge and attitudes of pre-service Primary teachers at an Australian University, endorses the view that sustainability education should emphasize three dimensions in the program; knowledge, skills and values. Citing research which proposes that reasons for young people not acting out their environmental awareness in their personal lives has to do with the perception that individual actions are lost in translation, their ‘helplessness’ is thought to be accentuated by particular teaching methods. The authors, Taylor, Kennelly, Jenkins and Calligham (2006) criticize traditional forms of environmental education, instead calling for a more socially critical approach to learning underpinned by socially critical theory. Socially critical pedagogy has students thinking reflectively, participating democratically, engaging in futures thinking and collaborative planning.

How do these strategies accentuate agency and internal conversations? Perhaps this same criticism can be leveled at socially critical pedagogy because it may contribute to students’ helplessness by positioning the learner in an adversarial role. This position is difficult to sustain, and may be at odds with internal conversations of the agent negotiating their own sets of obligations, their own authority and capacity for autonomy given information contextualized by the real world politics and political movements.
Participation in socially critical inquiry assigns a particular role to student, in this case, as a critical agent. The student is positioned. According to Archer, this positioning could be involuntary and creates a role not necessarily under the control of the students’ volition. Archer argues that in choosing the value of a certain choice or practice, the student would reflect upon that role, the worth of occupying that role, and then decide upon their self worth in the process. The internal dialogue would interrogate their positioning and point the students towards making a decision about whether that role is worthy of replication or meriting rejection. A possible obstacle at this stage may be the very positioning of students towards a socially critical process that frames their objectives and actions. In framing objectives and actions, students’ agency, that is their authority and autonomy are relegated as less important. The internal dialogue of students would be interesting to consider, in order to find out how they appraise their positioning and how they feel about it. These feelings and inner thoughts may be the key in finding out the trigger factors that would help students transfer their knowledge, feelings and thoughts into eco friendly actions.

Rather than constructing a set of pedagogical obligations that meet social critical pedagogy, perhaps Education for Sustainable Development should focus on building authority through informed knowledge-making and modelling authority through the confidence and assurance of teachers, as primarily authoritative figures in knowing about sustainability. Pedagogy focusing on the learners’ knowledge making feeds into agential authority and gives status and credence to learning and self image. If indeed, learners are appraising the issues, the value of certain knowledge, then an authority over subject matter would build a basis for also appraising worth and self worth. Being informed is knowing.

In finding ways to influence learners’ emotional commentaries about issues, I am proposing that having confidence in creating knowledge about an issue, that is having social, political
and psychological responses shaping knowledge making, may influence the internal conversations and help align obligations, authority and autonomy towards synchronous actions. Agency is the conduit through which knowledge and action interrelate. A closer investigation of eco-agency and how this is created is needed.

Final remarks

The knowledge doing gap appears to be influenced by the quality of knowledge, the wholeness of knowledge making, and the way that relevant knowledge is enabled in the complex and messy context of real world where normative actions are still emerging. In addition, the complexity of the knowledge maker, the agent, adds further layers to this problem. As the knowledge doing gap is about personal actions, discussions about the notion of agency is critical when examining the knowledge-doing gap because essentially agency refers to action capacity. However, agency is not a singular entity but represents a multiplicity of actions leading towards change and doing things differently. Agency capacities rely on an ontology of open systems in which actions and decisions are evidenced through the agent’s authentic capacity to make decisions in response to knowledge and context. Referring to the initial problem posed by the knowledge-doing gap, such agential capacity would mean that the school-based agential capacity would closely mirror real life capacity. Students’ experiences of active agency engaged learning, would entail rigorous knowledge, from which students determine their own obligations, acquire authority and make autonomous decisions about ecologically sound behaviours in response to a growing awareness of environmental problems. Since the transfer of knowledge into eco actions is problematic, it suggests that the kind of agency encouraged by schools and through learning may be different to the agency required in life outside school. Sustainability pedagogy, and ecological education needs more critical research.
Reference:


