## Review

# How the concept of agency aids in teaching about sustainability

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Sustainability education is becoming an integral part of education for all students. The paper revisits startling results from large scale international studies that show the dissonance between young people's sustainability knowledge and the resistance of young people to put into practice. The reluctance to enact sustainability knowledge necessitates a review of current teaching practices as these raise important issues about current models of education and how sustainability is captured within education. Education about sustainability seeks to future proof our society through the teaching and learning of actions that ensure our collective long term future. For this reason teaching about sustainability incorporates a focus on social responsibility as well as individual responsibility. This paper examines the notion of agency as a critical component in the understanding of how behavior and actions are organized and integrated by students. Agency theory is highly sensitized towards these learner demands as it provides educators with ways to appraise and make judgment upon content as well as guiding learner's actions. By developing a more refined understanding of agency, and incorporating this into educational practice around sustainability, it may be possible to develop more resonant sustainable actions through education.

**Keywords:** Agency, pedagogy, sustainability, education.

### INTRODUCTION

Sustainability education is becoming an integral part of education for all students. It aims to increase students' pro environmental practices by fostering a combination of knowledge, actions and school wide approaches. However, education about sustainability continues to challenge educators because, unlike curriculum designed to produce measureable learning outcomes, education about sustainability seeks to future proof our society through the teaching and learning of actions that ensure our collective long term future. For this reason teaching about sustainability incorporates a focus on social responsibility as well as individual responsibility.

This paper will focus on drawing on agency theory in teaching about sustainability. The paper explores the concept of agency and discusses how a better understanding of agency theory can offer educators a pedagogical approach that underscores the problematic associated with social action. The discussion and exploration of agency is timely as we consider the future demands of education to be more relevant to students and the students for an education that is more individualised and tailored towards their specific needs. The paper will argue that agency theory is highly sensitized towards these learner demands as it provides educators with ways to appraise and make judgment upon content as well as guiding learner's actions. Educators constructing learning underpinned by agency theory acknowledge the complex and dialectical interactions between the learner's internal and external contexts that situate learning. This complex and very

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individual landscape has to be navigated in order to achieve learning that resonates.

### The need for alternative approaches

The focus on the future of schooling underlies the current educational need to re-imagine education and schooling, especially as our society, social expectations, social connections continue to change and evolve. Within this landscape, the role of education and the function of schools needs to keep up or else the idea of schooling will be equated with some anachronistic mental model (Senge, 1990) that bears little connection to how people learn and what they expect from their educators. While data and empirical studies can show how we do things and how well we can improve in doing them, it cannot hold to question the foundations of education and schooling (Biesta, 2009), by engaging in a productive dialectic about education beyond performativity, we seek a new understanding of education.

Current teaching and pedagogical theories focus on individualised learning and the co-construction of know-ledge as a result of teacher-student working together to create meaning and a platform for learning. Popular educational theory in curriculum and pedagogy has been dominated by constructivist learning. Alternative pedagogies can also add to the quality of learning, especially to the long-term, resonant learning needed to ensure the sustainability knowledge is enacted and becomes common social and individual practice (Kegley, 2010).

This paper focuses on an alternative pedagogical approach based on agency theory. The focus on agency theory as a contemporary theory that resists pedagogies of indifference (Lingard, 2007), captures the dynamics of teacher-student relation, complexity of learning about contemporary issues embedded in the curriculum, and respecting the complexity of the individual and their self reliant-regulated forms of learning. By focusing on agency theory, rethinking the positioning of the teacher as a facilitator, the laissez faire construction of educational relationships, and the relativity of constructing meaning are central. Agency theory begins with the premise that important issues that confront students as social actors and citizens, are the domain of good educators and obligates educators to do more for the learner than present a range of choices without a complementary empowerment of how to make judgment and act. Agency theory explains learner's rudimentary introduction to systems thinking, orientates the educator's as a learning crux, and calls on their authority and autonomy to forge routes that aid learner to navigate challenging learning.

Our common human concerns about climate change and preserving our biodiversity are the topics of purposeful and important education. Such issues are

becoming more common place in the curriculum reflecting the concerns of educators and casting education as instrument for future repairs. Dealing with difficult and complex issues (Vongalis-Macrow, 2012), challenges us to review what currently happens in schools and ask ourselves if we can do better.

## DISSONANCE BETWEEN LEARNING AND DOING: THE SUSTAINABILITY ISSUE EXAMPLE

Education has a dual responsibility; that is improving the life and opportunities of the learner as well as developing the world (Arendt, 1958; Peters, 1976). The concept of development in the broader sense that is beyond the economic rhetoric so often associated with education as a source of personal and social economic benefit and the learner as a self capitalizing individual is used in this study. Rather, in this paper, and in keeping with notions of sustainable futures, Masschelein and Simons (2010: 536) recently described the role of the school thus; "School is regarded as the architecture to enable people to live in the world referred to as the public sphere". Living in the public sphere is not solely an economic proposition, but schooling that is relevant and takes seriously educational responsibilities, takes hold of the public sphere and the troublesome issues around sustainability that are axiomatic to the public sphere.

Teaching about sustainability is a troublesome issue for both teachers and learners. The problematic nature is punctuated by evidence from large-scale international studies that show the dissonance between young people's sustainability knowledge and the resistance of young people to put into practice (Fein et al., 2002; Patchen, 2006). The studies suggest that while students are aware of what they should be doing, as a result of their knowledge about sustainability, they are reluctant to change their behaviour and action in their everyday life. These results raise important issues about current models of education and how sustainability is captured within education. The results suggest that no matter how powerful the ideas and how well intentioned the methods of education for sustainable development, translating those ideas into action, beyond classroom and beyond curriculum strategies remain elusive.

How can education and schooling work to better understand the capacity of people to change how they live and create sustainable futures? This type of question is the domain of agency because it calls upon understanding both thoughts and actions.

In order to begin unravelling this question, a definition of agency is necessary. In sociology the concept of agency is important because it provides a way to understand individual and social decision making. At the most basic level, agency is defined as, "effective, intentional, unconstrained and reflexive action by individual or collective actors" (Burns and Dietz, 1992: 187).

The focus on agency is specifically relevant when considering research, which essentially identifies the obstacles to agency. For example, Connell et al. (1995) highlighted the out of sight and out of mind attitude of young people. The authors drew attention to the apparent cynicism and frustration conveyed by young people when asked their views and opinions about sustainability practices. In addition, there was a major and 'action paralysis' in terms of incorporating sustainable practices into their everyday lives. The attitudes displayed by 16 to 17 year olds, across Australia, mirror the attitudes intimated by youth across the Asia-Pacific region. A large-scale European study undertaken by the European Opinion Research Group found that young people between 15 to 24 in 15 European countries were more likely to think that they are "not making an effort to take care of the environment because it does not have any impact as long as others do not make an effort." (EORG, 2002 cited in Patchen, 2006:31). These large-scale studies underscore a malaise and incapacity, which are barriers in developing lifelong sustainable actions.

These studies show that young people are reluctant to act out their knowledge about sustainability in order to apply sustainability thinking in their everyday actions. A further examination of the reluctance to act makes an analysis of this phenomenon based on agency theory is entirely suitable.

### **ENABLING AGENCY/ENABLING ACTIONS**

The attitudes of young people towards enacting sustainable futures reminds us that it is not so much the lack of knowledge but the resistant attitudes. These attitudes prompt the question about how such attitudes may be forming when there is so much good information about sustainability and the environment. A common solution to dealing with complexity around issues related to the environment is to promote a constructivist approach to teaching and learning. The premise for constructivist teaching is encapsulated by such remarks as, "...people will need to accept and own the concept of change itself and apply it to the diversity of their local systems" (Bardsley, 2003; Lempert et al., 2004). Bardsley and Bardsley (2007) explain that a constructivist approach prioritizes the intellectual appreciation of complexity. They contend that a constructivist methodology, such as inquiry based education helps students 'reinvent' (p.31) knowledge to engage with ideas. The point is that the focus in on knowledge making not emotional response.

A full scope of the different facets of constructivist theorizing falls outside the scope of this paper, however, in general constructivist approaches focus heavily on the intellectual or knowledge-making space. In doing so, the constructivists generally advocate that the learner is positioned in the centre of the inquiry. The learner's self directed and inquisitive problem solving approach

requires that the learner comes to their own comprehensive understanding of the issues. The student is presented with a complex myriad of social, scientific and personal information and somehow is required to make intellectual understanding of it. This approach has also produced interesting contradictions. For example, Loughland et al. (2003:13) have noted a dissonance between increased student knowledge and a lessened relational attitude to the environment. In other words, the more students know about the environment, the less they feel connected to it.

For high school students, knowledge seems to be quite independent of their environmental conceptions. For primary school students, an increased knowledge base is a significant factor in explaining the occurrence of 'relation' conceptions of environment. However, it seems to work in the direction that increasing knowledge reduces the odds of the 'relation' conception by a small but statistically significant amount! [Authors' exclamation].

Despite many years of teaching about sustainability and huge resources spent on sustainability teaching in schools, there remains lingering questions about why young people may still feel disconnected and indifferent to actions around sustainability. Social justice in the post neoliberal imaginary begins with learning as being engaged and on task, accessed by learning outcomes as non-controversial competencies.

What can we make of such sentiments that that young people are "not making an effort to take care of the environment because it does not have any impact as long as others do not make an effort" (EORG, 2002 cited in Patchen, 2006:31). If we unpack these and similar sentiments, the issue is not the intellectual content, but the learner's relationship to the knowledge, how students judge their capacity for action and how their action relates to the public sphere. Therefore, to be more effective and create resonant educational experiences, education needs to address these concerns and circumvent the barriers that may prevent the enactment of sustainable living practices. Rather than measuring performance and competencies, educational focus should be concerned about the products of potential decisions. Learning areas, such as sustainability, as education for future repairs demands more of education than a short sighted assessment of current socio-scientific knowledge.

Essentially, what we require of students is to apply their knowledge into sustainable use of natural resources and biodiversity. In other words, we require that learners create purposeful action. This implies that learners have the freedom to create, change and influence events (Bilton et al., 1996:654). What would be required to channel and aid their purposeful action? Firstly, 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. This draws on a different yet demanding type of learning that mutually engages thought and action in order to enable learners to go beyond the intellectualization of the content. For this reason, taking the focus off the information and socioscientific content leads educators to consider a different way of teaching with an emphasis on learning not solely measured by mastery or manipulation of information, but one that privileges action.

# AGENCY THEORY: PUSH/PULL AND INTERNAL/EXTERNAL DIALECTICS

Bridging the gap between learning and doing, may be better addressed by understanding agency theory and the role of learners as agents in sustainability education. Unlike constructivism, which focuses on the process of learning, agency focuses on capability and the capacity for action. Agency theory is deceptively simple when it is, as argued by Mitnick (1998:275) "a general social theory of relationships of 'acting for' or control in complex systems". In Mitnick's simplified definition, two prominent ideas, action and control, are critical. The relationship between action and control underscores an ongoing dialectic, which goes to the very heart of agency capacity. The capacity to act is tempered by the propensity for control of those actions.

However, the dialectic tug of war between action and control are played out within complex systems and dynamic interactions. Shapiro (2005) maps out the terrain of agency as,

...enacted in a broader social context and buffeted by outside forces—other agency relationships, competitors, interest groups, regulators, legal rules, and the like—that sometimes right informational imbalances, offer or constrain incentives, exacerbate the risk of adverse selection or moral hazard, provide cover or opportunity for opportunism, and so forth (Shapiro, 2005:269).

Complexity is created by external influences such as other people's perspectives, especially evident around the debates about climate change, different interest groups pursuing their agendas, government positioning, legislation, rules governing actions and many more such complications. For example, even the very definition of climate change is contentious. Despite evidence that climate change is 'real', there is enough scepticism among the community to ensure that the debates around climate change continue to invite division between those who think we need to act now and those who will not concede that the phenomenon on climate change is real.

In addition, the matter of negotiating the push/pull dialectics and taking action, is further complicated when considering the internal landscape that constitutes the agent. Deleuze and Guattari (1988) argue that enacting

change is simultaneous interactions between the molar, in this case the complex contextual landscape of the individual integrated with the molecular contextual landscape, meaning the internal desires and drives of the individual. These negotiations between the individual's drives and desires are weighed up against the prevailing context, which may or may not liberate desire.

Furthermore to the considerations of internal and external context, in a recent paper (Vongalis-Macrow, 2007), argued that agency is a multifaceted construct revealing at least three interconnected aspects; obligations, authority and autonomy. In other words, when considering the internal drivers and desires, these can be better clarified through the individual's positioning around obligations, authority and autonomy. These three elements delineate agency and it is through considerations of these three elements that individuals negotiate their capacity for change. The obligations aspect of agency constructs the rules and regulations that delineate action. Authority refers to the influence and clout with which a person can act, and finally autonomy describes the level of independence and self sufficiency in acting.

Enabling the assemblages of agency, within complex external and internal terrain begins the troublesome process of grappling with learning with the intent to influence and guide the capacity for action. This type of education is not an anti-intellectual process, nor an antithesis of good learning, rather it acknowledges that capacity for wise action is informed by deep learning, social interactions, psychological awareness, and future projections. The learning-action space is complex, integrated territory where agency has capacity to assess its own obligations, construct authority and negotiate autonomy.

### AGENCY PEDAGOGY: WHAT MAY IT LOOK LIKE?

Axiomatic to addressing the problems associated with capacitating 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, mediated through our 'social conversations' (Archer, 2002), which have influence over our reactive behaviour. Archer's 'social conversations' are internal conversations that provide a narrative of the agent's negotiations between their molar and molecular landscape. He provide clues as to how each agent negotiates and positions themselves with respect to possible action.

Unlike Vygotsky's notion of inner speech, which essentially focuses on the cognitive role of inner talk that helps the learner articulate the learning, Ehrich (2006)

social conversations have a more abstract function. For Archer, internal conversations illustrate how "personal projects are formed and how they mediate the exercise of systemic constraints and enablements" (Vandenberghe, 2008:227).

Social conversations negotiating agency are attempts to engage in a personal appraisal of systems thinking. According to Nguyen et al. (2012), "Systems thinking has become increasingly popular because it provides a 'new way of thinking' to understand and manage complex problems, whether they rest within a local or global context" (p.15). It could be argued that systems thinking can be a way of forging understandings around relationships between actors' thoughts, their context, and value and attitudes. A learner's grappling with personal systems thinking is based on information about the environment weighed up against, social, cultural, political understandings, as well as considering their own self disclosure and capacity for self enactment. In doing so, the agent considers their obligations, authority and autonomy in the light of their knowledge and perceptions about their context. Archer (2002:16) 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". The critical selfcommentary on what works and how one feels, its relationship to sustainable living and how we should or should not act are conducted through an internal dialogue. Archer (2002:16) 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".

For example, referring to Patchen's research, the agents make decisions not to act because others do not do so. Their social conversations would have determined that they were not obliged to act as this obligation is not evident in their social experiences or, social expectations. They may indeed have the knowledge, and therefore, some authority in understanding the imperatives around sustainability, however, they are not obliged to act. Indeed the system, that is the social, political and economic context, is deemed an obstacle for personal action, so that they have little autonomy to enact change that makes a difference.

Social conversations and inner dialogues are often overlooked in our education systems because the focus tends to be on demonstrable achievement and outcomes. In other words, that "learning is strictly an intellectual enterprise" (Lunenburg, 2011:3). Yet, the feelings of cynicism, fatalism and powerlessness have been identified as young people's reaction to environmental issues (Connell et al., 1995). The knowledge of such dialogues and the emotions embedded in dialogic deliberations requires an insightful education built upon a well-tuned understanding of how both intelligence and sensitivity need to be mobilized for resonant learning that builds capacity to act in sympathetic ways. If we consider this

type of personal systems thinking applied to learning about sustainability and transferring this learning into action then the learning and learner deliberations are quite personal and complex. Perhaps, we can go so far as to say that they resist the normative scaffolding of learning in most school systems, and the normative framing of attitudes and values.

#### The school

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. By this, she means that schools reproduce the hierarchical relationships between students and the school. If we analyse this reproduction, in terms of what it means for agency, then the school context becomes the external site for the first of many restrictions on the learner's agency. Having proposed an initial recasting of education with a purposeful sensitivity towards of the learner's dialogue in order to respect the complex deliberations around action, then the current school contexts represents the institutional blockage for sensitivity. As agency is not usually a conventional theory to unpack educational practices, a host of educational practices that are almost standard in schools, can be Interpreted as constraining learners' agency.

Firstly, learners are mostly pre-positioned in terms of their obligations so they have very strict rules and regulations that manage their capacity and define the role of the student. Secondly, the learner positioning ensures that they have less authority within the school system. Finally, students have little autonomy within school systems so they rarely act independently outside of the school rules and expectations. The way schools socialize agency aims to restrict the push-pull negotiations in which agents consider whether to act or not. In other words, schools set up in this way are designed to restrict the external or visible movements of agency. This kind of pre-positioning may have much lesser impact on the internal and invisible deliberations of the agent, simply because these kinds of deliberations are often the learners' internal social conversations. In terms of sustainability, the established curriculum is provided to the students with expectations of specific outcomes in their learning and their attitudes and values. Thus, the students are positioned to concede to the content and outcomes of sustainability education. By being learners, their authority is lessened in relation to the content and finally, they have little scope to opt out of the learning and practices entrenched in the curriculum. So, it could be argued, any dissent remains within the internal context and part of the internal dialogue. It is very rare for schools to consider why some students may feel disgust or cynical or unimpressed. Dealing with such emotional expressions is not the domain of a sensitized education.

Other, well-meaning educational responses have sought to engage the political in the debate around sustainability. Citing research which proposes that reasons for young people not acting out their environ-mental 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. Taylor et al. (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, and engaging in futures thinking and collaborative planning. Socially critical pedagogy comes closer to engaging agency however there is one flaw in the thinking and practices.

Criticism can be levelled at socially critical pedagogy because it may contribute to students' helplessness by positioning the learner in an adversarial role. In this role. the student pushes their actions towards change, thereby challenging rules and regulations and other's knowledge and actions. 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. 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. 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. Social critical pedagogy takes these internal conversations away from the student and restricts that way they negotiate the push/pull tendency of their agency. In addition, by positioning students within the boundaries of social critical stances, 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.

What is the student-agent's real capacity for autonomous action considering both constructivist and social critical stances? It may be fine to reproduce activity and learning within the confines of the school, but what happens when the agent confronts the conflicting demands of the world? Both these pedagogical frameworks neglect the dilemma of autonomy and how this may be perceived by the learner. In a way, constructivist pedagogies try and steer the learner towards action by building up authority and mastery of information. Thus,

armed with sound knowledge the learner is prepared for applying this knowledge to the 'real' context. The learner may have had a 'taste' of autonomy by having to declare their values and explain their actions in many problembased scenarios. However, the issue remains, in the context of real life complexity where conflicting demands of the world cannot be conflated, how does autonomy fare? It can be expected that the internal conversations had by a person assessing their capacity to act in the 'real' world may be very different to the internal conversations in the class room. Exercising autonomy can be dangerous, alienating, futile and a range of other emotions that resemble the range of emotions expressed by the youngsters in the aforementioned Patchen's survey. This is a challenge for future schooling. If, the school is to remain the public institution that enables people to live, then new forms of schooling which allow expressions of autonomy as a trial for autonomous action in the real world are an avenue for further exploration. This would entail devising pedagogies that focus on learning as well as on enacting and creating the necessary spaces that enable agents to deliberate on obligations, build authority and demonstrate autonomy.

#### The teachers

Agency is not new for teachers because teachers have developed their agency, that is, their obligations, authority and autonomy, through interests in curriculum, pedagogy and the professional standing. However, the erosion of teacher's agency is itself a symptom of the remaking of education without ideas about our common humanity taking centre stage. As curriculum and pedagogical practices narrow into a set of skills deployed to guide students along, then we are bearing witness to a degradation of educational possibility.

There is a world-wide move to further deprofessionalize teachers, in some cases reducing teacher education to situated training (Bottery, 2000; Larsen, 2010). It makes compelling argument for economists to argue that the value of teachers can be measured in terms of cost benefit for educational outcomes. However, there is a price to pay for such measures and such measures are the crux of the false economy build around teachers' value. Learning theories such as constructivism are partly to blame for this state of affairs because they have moved educators to the sidelines as those merely facilitating the learning.

Therefore, the teacher's role is to assist and challenge students by providing relevant information and framing the learning tasks (Vygotsky, 1991; McInerney, 1994; Bardsley, 2004; Bardsley and Bardsley, 2007: 332).

Most people, who have access to resources and have been trained to move those resources around to get certain results, can do sidelined teaching. Agency theory resists the sidelining of teachers because it requires more from them in a way that only well tuned, and well-educated professionals can bring out the best in their people.

Education that enables agency is essentially a site of praxis. Gandotti (1996) defines praxis as encounter of not only ideas, but also encounters in action and reflection. The diverse internal dialogue of learners ensures that each will respond to external, contextual tensions in different ways and thus there is a constant potential for agency action difference. For this reason, constructing education as a site of praxis and developing personal systemic dialectics implies a site of development, appraisal, differentiation and contest in which a number of ideas, actions and reflections are negotiated within encounters and relationships.

Finding ways to influence learners' emotional commentaries about important life issues is the role of tuned in educators who can wisely support, teach and educe student's learning. For example, research suggests that learners are more likely to form an opinion and belief on environmental matters based on the knowledge presented by some authority in the field. Information integrity is an important factor in forming beliefs (Kolsto, 2001 cited in Sadler, 2003.) Influencing learner's opinion and resonating in learner's decision making social conversations, are enhanced by teacher being authoritative in the field. Rather than being a guide on the side, teachers as agents with highly developed authority in their field have a greater potential to not only inform but also influence learner's opinions. The authoritative role of teachers is vital especially in the emergent era of multiple sources of information, social networking and technology that exposes a multiplicity of interests. The teacher, as an authority, can wisely capacitate the learner to navigate the understanding of public space. Without this authoritative figure, for the learner there is a vacuum in information trust.

Connell et al. (1999) found 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 (96).

The authoritative teacher can liberate the learner's agency to consider environmental understandings that go beyond experiential knowledge and the hype of media. The teacher is thus, positioned as an influential agent through their capacity to engage their authority in knowledge making.

However, to reclaim authority in education a number of agential changes are needed. Teachers' professional autonomy to decide the direction of their profession is critical. Reclaiming professionalism obligations, as complex sensitivities to learners resists teacher educational knowledge as merely the technical. A learning framework based on enabling agency unites those in educational relationships for the mutuality of building educational capacity to act for the common good.

#### **FUTURE REPAIRS AND CONCLUSION**

Creative imaging about the future of schooling requires researchers and educational scholars to proclaim different theoretical paradigms to guide the evolution of education. A renewed focus on agency theory fits the brief because it challenges the current purpose of education, schooling and the role of teachers. Firstly, agency theory focuses on empowering of the learner to act in ways that are socially responsible. For issues around sustainability that affect our common humanity, agency theory allows us to understand the learner as an emotional agent who makes complex assessments and judgments in very uniquely coded ways. For this reason, our focus on intellectual knowledge making in education, only considers part of the learner and can only be effective in knowledge making rather than in empowering action. Agency theory challenges the way schools function to delimit student experience. Considering fluid connections that mark our era, then perhaps a more fluid transition between constraining school contexts and our common society could be sought. This new space would enable learners to engage with their full agency not only after the work of formal education is finished but as part of the ongoing educative processes.

Finally, education that enables agency demands a phenomenological sensitivity in constructing learning relationships. Education for the development of our common future requires a move towards creating pedagogies embedded with a recognition of sensitivity to non-idiosyncratic differences in learners. Such education heralds the movement away from mass education towards shared education, towards the sensitivity of the visible and the invisible. This alludes to the educators' awareness of multiple hidden and social conversations that are part of learning and that hold sway to influencing thoughts and actions. Such sensitivity in education requires deeper professional understandings and positions the teacher as a key agent in the processes of teaching and learning.

### **REFERENCES**

Archer M (2002). Realism and The Problem of Agency. J. Crit. Realism 5(1):11-20.

Arendt H (1958). The Human Condition. Chicago: University of Chicago Press.

Bardsley D (2004). Education for sustainability as the future of geographical education. Geogr. Educ. 17:33-39.

Bardsley DK, Bardsley AM (2007). A Constructivist Approach to Climate

- Change Teaching and Learning. Geogr. Res. 45(4):329-339.
- Bardsley D. (2003). Risk alleviation via in situ agrobiodiversity conservation: drawing from experiences in Switzerland, Turkey and Nepal. Agriculture, Ecosystems & Environment 99, 149–157
- Bilton T, Bonnett K, Jones P, Skinner D, Stanworth M, Webster A (1996). Introductory Sociology, 3rd Edition, Macmillan, London.
- Biesta G (2009). Good education in an age of measurement: on the need to reconnect with the question of purpose in education. Educational Assessment, Eval. Accountability 21(1):33-46.
- Bottery M (2000). Education, Policy and Ethics. Continuum: London.
- Burns TR, Dietz T (1992). Human Agency and the Evolutionary Dynamics of Culture. Acta Sociol. 35(3):187-200.
- Connell JP, Aber JL, Walker G (1995). How do urban communities affect youth? Using social science research to inform the design and evaluation of comprehensive community initiatives. In J.P. Connell, A. Kubisch, L.B. Schorr, and C. Weiss (Eds.) New Approaches To Evaluating Community Initiatives: Concepts, Methods, And Contexts, Vol. I (pp. 93-126). Washington, D.C.: Aspen Institute
- Connell S, Fien J, Lee J, Sykes H, Yencken D (1999). If It Doesn't Directly Affect You, You Don't Think About It': a qualitative study of young people's environmental attitudesin two Australian cities. Environ. Educ. Res. 5(1):95-113.
- Deleuze G, Guattari F (1988). A Thousand Plateus. Minneapolis: The University of Minnesota Press.
- European Opinion Research Group (EORG). The Attitudes of Europeans Toward the Environment. Brussels: December 2002. Ehrich JF (2006) .Vygotskian Inner Speech and the Reading Process. Australian J. Educ. Dev. Psychol. 6:12-25.
- Fein J, Yencken D, Sykes H (2002). Young People and the Environment: An Asia-Pacific Perspective Kluwer, Dortrecht, Netherlands.
- Gandotti M (1996). Pedagogy of Praxis: A Dialectical Philosophy of Education, SUNY Press: New York p.9 (Translated by John Milton).
- Kegley CW, Wittkopf, Eugene RK, Charles Jr. W (1997). World Politics: Trend and Transformation New York: Palgrave Macmillan.
- Lempert R, Nakicenovic N, Sarewitz D, Schlesinger M (2004). Characterizing climate-change uncertainties for decision-makers. Climatic Change 65:1-9.
- Larsen MA (2010). Troubling the discourse of teacher centrality: A comparative perspective. J. Educ. Policy 25(2):207-231.
- Lingard B (2007). Pedagogies of indifference. Int. J. Inclusive Educ. 11(3):245-266.
- Loughland T, Reid A, Walker K, Petocz P (2003). Factors Influencing Young People's Conceptions of Environment. Environ. Educ. Res. 9(1):3-19.
- Lunenburg F (2011). Systems Thinking and the Learning Organization: The Path to School Improvement, Schooling 2(1):1-6.

- Masschelein J, Simons M (2010). Schools as Architecture for Newcomers and Strangers: The Perfect School as Public School? Teachers College Record 112(2):533-555 http://www.tcrecord.org ID Number: 15743, Date Accessed: 6/30/2010 10:20:20 PM.
- Mitnick BM (1998). Agency theory. In The Blackwell Encyclopedic Dictionary of Business Ethics, ed. Freeman RE, Werhane PH pp.12-15. Malden, MA: Blackwell.
- Nguyen NC, Graham D, Ross H, Maani K, Bosch O (2012). Educating Systems Thinking for Sustainability: Experience with a Developing Country. Syst. Res. 29:14-29.
- Patchen M (2006). Public attitudes and behavior about climate change: What shapes them and how to influence them. Purdue Climate Change Research Center, West Lafayette pp.1-53.
- Peters RS (1976). The concept of education. London: Routledge & Kegan Paul.
- Sadler TD (2003). Informal Reasoning Regarding Socioscientific Issues: A Critical Reviewof Research. J. Res. Sci. Teach. 41(5):513-536.
- Senge PM (1990). The Fifth Discipline: The Art and Practice of the Learning Organization, Doubleday Currency, 1990.
- Shapiro SP (2005). Agency Theory Annual Review of Sociology. 31:263-284.
- Sterman, J. & L. Booth Sweeney (2007). Understanding Public Complacency About Climate Change: Adults' Mental Models of Climate Change Violate Conservation of Matter. Climatic Change 80(3-4):213-238.
- Taylor N, Kennelly J, Jenkins K, Callingham R (2006). The Impact of an Education for Sustainability Unit on the Knowledge and Attitudes of Pre Service Primary Teachers at an Australian University. Geogr. Educ. 19:46-59.
- Vandenberghe F (2008). Structure, Agency and the Internal Conversation, Revue du MAUSS permanente, 19 June 2008 [en ligne]. http://www.journaldumauss.net/spip.php?article362.
- Vongalis-Macrow AI (2007). Teacher: re-territorialization of teachers' multi-faceted agency in globalized education Br. J. Sociol. Educ. 28(4):425-439.
- Vongalis-Macrow A (2012). Developing pedagogies for teaching about climate change. Int. J. Learn. 17(9):237-248.