Global Education in the '21st Century': two different perspectives on the 'post-' of postmodernism

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Abstract
In this paper I compare two possible interpretations of the need to shift conceptualisations of knowledge, learning and identities in education towards an emphasis on fluidity and provisionality in global societies. I outline the arguments and potential implications of a framework concerned with 'cognitive adaptation', which conceptualises the 'post' in 'postmodernism' as 'after'; and another concerned with 'epistemological pluralism', which conceptualises the 'post' in 'postmodernism' as 'questioning'. Both perspectives align in their conceptualisation of knowledge, learning, reality and identities as socially constructed, fluid, open to negotiation and always provisional, and in the call for epistemological shifts away from mono-epistemicism. However, they are motivated by different conceptualisations of social problems and envisaged solutions. In the second part of the paper, I discuss some of the tensions created in working towards epistemological shifts and present an example of the translation between emerging theories and practices based on the idea of epistemological pluralism.

Keywords: globalisation, epistemology, postmodernism, postcolonial theory, global learning

Introduction

Theoretical arguments related to global societal changes in the 'knowledge society' and postmodernity and their implications for educational agendas emphasise the need for a re-conceptualisation of knowledge and learning in educational policies and practices in contemporary '21st century'[1] societies (Richard and Usher 1994; Cope and Kalantzis, 2000; OECD, 2000; Gee, 2003; Hargreaves, 2003; Lankshear and Knobel, 2003; UNESCO, 2005; Gilbert, 2005; Claxton, 2008; Andreotti and Souza, 2008; Spring, 2008). Three arguments are central to this literature. First, that the profile of learners has changed and that teaching '21st century' learners requires practitioners to perceive knowledge, learning and education in ways that are different from the ways knowledge, learning and education were perceived in the '20th century' (when most current practitioners were brought up and trained) (Gilbert, 2005; Castells, 2000). Second, that for this shift of perception of knowledge, learning

and education to happen it will not be enough for practitioners to shift the ways they behave or do things, or even the ways they think – they will need to shift the ways they 'know' (i.e. an 'epistemological shift') and the ways they 'see' (i.e. an ontological shift). These will also prompt a shift of perceptions and relationships which impacts all other areas, including the ways practitioners perceive their disciplines, themselves and their students (Gilbert, 2005; Gee, 2003; Richard and Usher, 1994; Cope and Kalantzis, 2000). Third, that these epistemological and ontological shifts involve knowledge about knowledge construction itself and the conceptual/theoretical underpinnings of current knowledge and future possibilities (Trilling and Hood, 2001; Gilbert, 2005; Andreotti and Souza, 2008).

Despite the contested nature of this debate and the denouncement of the complicity of the 'knowledge society' discourse with neoliberal practices (see, for example, Bauman, 2001; Roberts, 2002; Peters and Besley, 2006), this emergent literature has started to shape educational reform world-wide (see, for example, the revised National Curricula of New Zealand, Ireland and England). In this conceptual paper I offer a situated outline and comparison of the arguments in educational literature related to two different theoretical perspectives that agree on the need for shifting conceptualisations of knowledge and learning in education: one concerned with cognitive adaptation and another with epistemological pluralism. Both perspectives align in their conceptualisation of knowledge, learning, reality and identities as socially constructed, fluid, open to negotiation and always provisional, in the call for epistemological shifts away from universalisms and in the recognition of the development of learners' 'global skills' (Bourn, 2008). However, they are motivated by different conceptualisations of social problems and envisaged solutions. I have framed these two perspectives around two different understandings of 'post-modernity'. I associate cognitive adaptation with an understanding of post-modernity where the prefix 'post-' means 'after', conversely, I associate epistemological pluralism with an understanding of the prefix 'post-' as 'questioning'. In the second part of the paper, I discuss some of the tensions created in working towards epistemological shifts and I present an example of a model of thinking about a pedagogical process based on the idea of epistemological pluralism grounded in postcolonial theory.

Cognitive Adaptation: Postmodernity as 'After Modernity'

The need for cognitive adaptation is based on the understanding that teachers need to adjust their thinking and practices to a new social reality dictated by new economic and technological demands (Claxton, 2008). This perspective generally draws from a specific interpretation of postmodernism to frame an idea of reality and time that follows a telos or a progressive order: starting from pre-modern times, followed by modern and post-modern times respectively. 'Twentieth century' thinking is thus interpreted as a period of grand totalising explanations of the world, or

metanarratives. Metanarratives are 'stories' that attempt to explain what is real and ideal in terms of history, experience and knowledge. Examples of metanarratives that permeate education can be found in common understandings of development, modernisation, progress and 'the end of history'. 'Twentieth century' thinking is thus characterised by fixity: knowledge, identity and culture were understood as 'nouns' or 'things' and learning was conceptualised as the accumulation of fixed building blocks of knowledge (Gilbert, 2005).

In contrast, the '21st century' is a postmodern period – the 'post', in this sense, means 'after' modernity. Thus, postmodernity is interpreted as a time of constant change, multiplicity, fluidity and uncertainty, where knowledge, identity and culture start to be thought of as verbs and that are always already socially and historically situated (i.e. they cannot be thought of in absolute or objective terms). This renders metanarratives somewhat obsolete as it is recognised that there are many possible stories about reality that can be thought of – or 'constructed' – in different social, cultural and geographic contexts. Hence, the '21st century' is thought of as a context where, due to the impact of technology, there are multiple sites of dynamic knowledge and identity creation. These sites, where knowledge is much more 'fluid', challenge the traditional 'modern' knowledge and identity boundaries and hierarchies, as well as ideas about knowledge construction associated with building blocks. Therefore, learning is associated with the generation of partial and contingent knowledge – not to be stored or accumulated, but to be replaced once the context changes. This argument can be found, for example, in the works of Cope and Kalantzis (2000), Trilling and Hood (2001), Hargreaves (2003), Lankshear and Knobel (2003), and Claxton (2008).

The need for change in education within this logic can be summarised in three different arguments that are usually combined. First, as the economy shifts from industrialism and scale into service and scope, the need for innovation increases and the value placed on human capital shifts from industrial skills to creativity, entrepreneurship and exploration of new markets, new consumer identities, new fashion trends in what has come to be known as 'knowledge societies'. Therefore, education is called to change accordingly: to produce a workforce that is capable of operating under the new circumstances. In rapidly changing contexts, the new demands require a prioritisation of the development of learners' ability to generate new knowledge (and not just repeat it); to work in multicultural teams (and capitalise on different ideas and creativity); and to negotiate their way within different contexts (to 'play' different language and identity games). In pedagogical terms, these new priorities translate into the notion of learning to learn, of individualised learning and of life-long learning.

The second argument is that there is a mismatch between '20th century' teaching and the needs of '21st century' learners, which is foregrounded by access to digital technology. 'Twentieth century' teachers who were introduced to technology at a

later stage in life are believed to have lost touch with the cognitive and relational processes that characterise the generations whose main form of learning is technological and whose identities are shaped by digital connectivity. From this perspective, digitally-mediated modes of learning, communication and access to information create different ways of knowing and being that enable children to become better equipped to deal with fast-paced change, multiplicity, complexity and uncertainty than their teachers. Within this logic, the claim is that if teachers cannot understand these new ways of knowing, thinking and relating, they will be poorly equipped to connect to the students and to create learning opportunities that will be attractive or appropriate to expand their horizons and challenge their views – or to develop their ability to operate in the market knowledge economy. The irrelevance of '20th century' education, in turn, leads to learner disaffection and 'boredom' at school.

The third argument is based on equity and redistribution. If the '20th century' thinking created hegemonic systems and inequalities in the distribution of wealth and labour, '21st century' thinking should offer an opportunity for those who have been excluded or marginalised in the '20th century' to become new knowers and be included (economically and civically) in '21st century' societies. Excluded and marginalised groups should be equipped with the right tools to identify new opportunities for participation in old and new markets and to play the 'knowledge society' performance game. It is assumed that all excluded and marginalised communities already aspire (or should aspire) to these ideals.

This perspective is not concerned with fundamentally changing the system – it challenges modernity's notion of progress to re-inscribe it later in postmodernist terms. This can be interpreted as the promotion of a new '21st century' (and universalist) metanarrative based on similar '20th century' teleological foundations. Critics of this perspective tend to associate postmodernity (or the 'postmodern condition') with liberal (or neoliberal) market economies. They state that the fluidity of knowledge and identities is a result of social relations derived from capitalism and should be resisted (Bauman, 2000). Some critics also resent the scepticism of postmodernity towards the possibility of envisaging universal goals and values for all humanity, which undermines a collective project of social justice (Allman and Wallis, 1995; Mayo, 2003). The second perspective presented in this paper calls for deeper changes making use of similar means in terms of the re-conceptualisation of knowledge and learning, however it is based on very different assumptions of why change needs to happen.

Epistemological Pluralism: Postmodernity as 'Questioning Modernity'

Within the logic framed here as 'epistemological pluralism', the need for the pluralisation of knowledge is based on the understanding that the current system is inherently violent in its (mono)epistemic practices and unsustainable both in terms

of exploitation of natural resources and human labour and in terms of how relationships are constructed. From this perspective, the local and global problems societies currently face are complex, interdependent and reflect the effects and failure of the Enlightenment ideals which have been violently imposed and universalised through colonialism and market globalisation, rendering other ways of knowing invisible, a process Santos calls 'epistemicide' (2007a:16). This coercive process universalises a particular idea of humanity and creates a specific social and economic order that distributes power and resources according to criteria that privilege a small minority at the expense and through the exploitation of a majority. Through education and social relationships, the minority and majority are socialised into thinking that the order is normal and natural and that there is no alternative. Different articulations of this argument can be identified, for example, in the works of Bhabha (1994), Spivak (1992), Freire (1998), Willinsky (1998), Spring (1998), Gee (2003), Brydon (2004), and Santos (2007b).

Therefore what is presented as the '21st century' system (often interpreted as a 'neoliberal' order) is a more complex continuation of the '20th century' ways of seeing and, as long as it remains within the same logic, it will reproduce the same ways of knowing, thinking and relating that created the problems it is trying to solve. Therefore, the proposed way forward from this perspective, is to decolonise the imagination and to pluralise the possibilities for the future by pluralising knowledge in the present in order to enable dialogue, relationships of solidarity and, ideally, the collective creation of non-hegemonic systems. Different theoretical traditions propose different interpretations of this vision and the role of education in making it possible. In this paper I put forward an interpretation of this vision that draws from indigenous and postcolonial theories and is informed by poststructuralist ideas. This vision emphasises the interface between discursive practices and their 'material effects'. It interrogates the privileging of knowledges and the telos and notions of progress and linear time of 'modernity': the very idea of the 20th/21st centuries as universal facts is questioned as it represents only one way of thinking about and measuring time. This perspective proposes critical engagement with the system from within through an ethical engagement with difference (Spivak, 1994) and the pluralisation of epistemological frameworks as means to yet-to-be-collectively-negotiated ends. In this sense, it does not trash modernity as a whole, but proposes its social and historical relativisation – as one way of seeing amongst many – in order to open more possibilities for the future.

The need for change, within this logic, can also be summarised in three arguments. First, there is an urgent need for teachers to resist instrumentalist thinking and to reclaim the autonomy of the profession in shaping change in society, and not just adapting to change. Education is compulsory 'subjectivity making' and the question of whether it will reproduce or transform society relies, at the end of the day, on the capacity of teachers to negotiate their work, the constraints of their work and their

priorities in each school and in each classroom. Their ethical/political choices in terms of the role of education (and what to do when they close their classroom doors) will be based on their own interpretations of their mandate, which are based more on their assumptions of the needs of society, communities and learners than on the ideological and practical constraints of the school. Therefore, clarifying, questioning and pluralising these lenses/assumptions are important starting points.

Second, the exposure to technological learning creates different learner profiles, ways of learning, possibilities for communication and expectations in schools. Although technology, as a tool, provides exciting opportunities for transformation, it has also become the main vehicle for dissemination of the '21st century' economic order and the construction of consumer identities. Educators, then, are faced with very challenging demands in terms of the new profile of learners who get bored very easily, who see themselves as customers (and teachers as service providers), and who demand that learning be intensely fun, easy and optional. They are also more proficient than their teachers in multi-tasking and surviving within (and manipulating) complexity and change according to the interests generally defined by the market logic (e.g. immediate gratifications, popularity, status, power). It can be argued that the creation of separatist, individualistic and competitive relationships (shaped by this market logic), coupled with the adults' lack of skills in engaging in renegotiations and offering alternatives, contributes to the loss of perspective and disaffection that many young people experience today. Therefore, there is indeed a need for teachers to reclaim their role as cultural brokers by 'raising their game': increasing their awareness and capacity to analyse and see the world from different perspectives, learning to listen and to negotiate in diverse and complex environments, and connecting to the worlds of their students in order to challenge and expand their boundaries. With this set of skills, teachers should be able to start to support learners to learn to unlearn, to see different choices and possibilities and to imagine and to think 'otherwise'.

Third, the 'what' to think otherwise cannot be imposed by the teacher. Different from universalising pedagogies promoting radical transformation in one single 'liberating', 'progressive' or 'transforming' direction, the aspiration here is for an 'uncoersive re-arrangement of desires' (Spivak, 1994). If the pedagogical project is to decolonise and pluralise ways of knowing, the role of the teacher is not to define what needs to replace the old system (or impose her own epistemology onto the learners), but to keep possibilities open and equip learners to engage critically with each possibility, to listen and to negotiate ethically with others, and to analyse and take responsibility for the implications of their choices. This requires an understanding of knowledge and identities as verbs created in context, in transient and changing learning communities.

The difference between this understanding and the fluid self-interested individualism of consumer identities is that the identified common problem is survival 'in

difference' and together – a relationship based on solidarity that renders the other equal when there is a claim to superiority, at the same time that it renders her 'different' when sameness threatens her unique identity (Santos, 2007b). This ethic commands mutual respect for each others' right to signify (i.e. to make meaning about the world) (Bhabha, 1994) and collaborations based on context bound and provisional knowledge-verbs. In this context, the role of the teacher is to support learners to develop a reflexive ethic which would seek not 'to suggest what people ought to be, what they ought to do, what they ought to think or believe' (Foucault, 1978, quoted in Spivak, 1995:156), but to equip learners to analyse 'how social mechanisms up to now have been able to work... and then, starting from there, [leave] to the people themselves, knowing all the above, the possibility of self-determination and the choice of their own existence' (ibid).

Within this logic, the 'post-' in postmodernism, poststructuralism and postcolonialism indicates 'questioning' rather than 'after'. This questioning creates new possibilities for relationships and for an ethics that brings more people to the table to define how we are going to live together. It does not define what comes next: this is supposed to be negotiated and re-negotiated in context through relationships of solidarity, as defined by Santos (2007b) (once significant discrepancies in power relations are acknowledged and renegotiated). Similar to the first perspective, epistemological pluralism cultivates a scepticism towards normative projects that are invested in consensual universal goals through the elimination of conflict and disagreement. In valorising 'difference' (as an ethical relation to the 'Other') and its capacity to bring newness to the table, this perspective seeks to question 'white mythologies' (Derrida, 1974; Young, 1990) such as claims of universal reason that tend to be attached to an idea of consensus and to dismiss incommensurability, dissent and antagonism as 'irrational', preventing equality and solidarity from emerging. This perspective also seeks to reclaim, re-signify and politicise dialogue and democracy as concepts related to radical and lively agonistic pluralism and contestation (Mouffe, 2005; Todd, 2009) that can better engage the multiple and 'ambivalent character of human sociability' (Mouffe, 2005:3).

This perspective may be seen as idealistic as it assumes this ethic is possible. Some may also argue that it is unrealistic to think that teachers will be able to deploy it within the constraints of schools and of the teaching profession in current times. Others will argue that epistemological pluralism leads to paralysis and that people need firm grounds to make decisions and take action in their lives, therefore an approach based on contestation and difference is counterproductive in terms of 'real' change and resistance to forms of hegemony. Another possible critique is that all the conversations could be a waste of time if, at the end of the day, everyone reached the conclusion that there was no alternative to the market-economy defended in the first perspective and that education should first and foremost prepare individuals for the job market. This kind of epistemological pluralism assumes that

there will be multiple possibilities for conceptualising society and that critical dialogue will prompt people to de- and re-construct their conceptualisations as they go. However, it does not exclude preparation for the job market as it promotes change through dialogue, in context and from within (as opposed to confrontational oppositional projects). Therefore, being able to operate effectively in different worlds, includes the current world of work – and others!

Crafting Epistemological Shifts Without Manipulating Directions

The idea of shifting conceptualisations of knowledge and learning in teacher education begs the questions: Who should decide the direction of the shifts? In whose name? And for whose benefit? In the context of a new curriculum informed by the perspective concerned with cognitive adaptation, educational change would be directed by government political and economic agendas. Thus, the implementation challenge would be to get teachers to understand what teaching in the '21st century' means according to the government's interpretation of it, what should be prioritised, what it looks like in practice, and how they can operate in that way.

From the perspective concerned with epistemological pluralism, the challenge would be to equip educators to make their own informed decisions in relation to the contributions they can make in their contexts in dialogue with colleagues, learners, parents and the wider society (who will have competing perspectives). This would involve supporting educators to recognise their own lenses and the implications of wearing them, to understand and see from different lenses, to let go of the need for finding 'the one right lens' and to be able to negotiate and use different lenses in different contexts in ways that are ethical and responsible. From this perspective, teachers' autonomy would be based on their response-ability: their capacity to analyse their contexts and options for intervention, to engage critically with different perspectives and possibilities, to engage in dialogue and negotiate meaning in ethical ways and to justify their decisions in ways that are 'accountable to the Other'. Hence, teacher education would be concerned with supporting educators to develop their ability to recognise different systems of knowledge production and validation, and the implications of those: the opportunities, imaginaries and technologies enabled or disabled in each site of production. It would also involve fostering their ability to negotiate between systems, which requires an awareness of how these systems have emerged and how they constantly change in response to different systems and social/cultural/historical contexts.

The literature on epistemological shifts in education is not very extensive and generally still confined within theoretical silos concerned with specific angles of the debate, e.g. gender, sexuality, multiculturalism, anti-racism, sustainability, cognitive psychology, etc. Much still needs to be done in translating theory into pedagogical praxis that can be available to a wider group of people within the mainstream educational system. One of the theoretical strands that operate in this area focuses on

the use of 'deconstruction' in education. Spivak (2004) conceptualises deconstruction as a mode of critique that points out that in any construction of an argument certain (ontological and epistemological) choices are made and 'forgotten', becoming part of implied premises that sustain the argument. Deconstruction is a strategy that enables the remembrance of these forgotten choices, the interrogation of their validity and the opening up to other possibilities of understanding and negotiations as it unsettles dominant discourses from 'within'. This unsettling creates constructive questions and corrective doubts towards better practice and ongoing (never ending) dialogue (Spivak, 1994). Spivak frames this kind of education 'to come' as an 'uncoersive rearrangement of desires' (1994:526) prompted by a process of unlearning, learning to learn from below, and learning to work without guarantees.

A Situated Example

One situated example of a project using deconstruction as a tool to support epistemological pluralism while promoting a discussion of the new New Zealand Curriculum (NZC; see New Zealand Ministry of Education 2007) was the project 'Thinking Together' funded by the New Zealand Council for Educational Research (NZCER). This project used a set of pedagogical tools for inquiry (PTI) (Andreotti and Souza, 2008) to prompt discussions around issues related to globalisation and education and the new NZC. The resources were designed with the following pedagogical aims:

- to enable educators to engage with a level of complexity in the debate around the 'post-positivist turn' in education where different perspectives can be contemplated;
- to address the interface between mainstream and emergent thinking in education, making connections with pedagogical practices;
- to affirm their partial and limited nature (i.e. the fact that the tools themselves are also presenting a 'perspective') and to invite critical dialogue – encouraging educators to engage critically with the tool itself vis a vis their personal and professional contexts;
- to encourage educators to 'think otherwise' (to find their own voices and positions within the debates) (Andreotti and Souza, 2008:9).

The theoretical framework which informed the design and learning process of the PTIs was based on poststructuralist and postcolonial theories and responded to emergent issues in interdisciplinary discussions around globalisation, power and identity. The pedagogical process focused on issues of alterity, relationality and response-ability (see Derrida, 2001; Said, 1993; Falzon, 1998; Levinas, 1998), the pluralisation of epistemologies (see Santos, 2007b; Nandy, 2000; Ziarek, 2001; Bhabha, 1994) and critical/self-reflexive and affective capacity building (see Stronach and MacLure, 1997; Spivak, 1999; Boler, 1999; Davies, 2000; Britzman, 2006).

	One Right Answer (knowledge is 'discovered')	Contingent Answers (knowledge is 'socially constructed')
Education 1 Think as I do and do as I say.	A	B
Education 2 Think for yourself and choose responsibly what to do.	C	D

Figure 1: One of the pedagogical tools for inquiry (Andreotti and Souza, 2008:7) used in the project 'Thinking Together'. This tool invited participants to analyse the possibilities and limitations of each type of education (A, B, C and D) in terms of pedagogical strategies, the construction of subjectivities and relationships to 'difference'.

The PTIs were developed to prompt a deconstruction of universalising notions of reality and knowledge, a goal of both '21st century education' and 'epistemological pluralism'. They aimed to create opportunities for learners to experience thinking and relating to others differently within a space of complexity, uncertainty, contingency and difference. The PTIs aimed to provide a safe space and stimulus for learners to engage in controlled situations where they were invited and encouraged to compare the construction and implications of different epistemologies (including their own epistemic choices), to find blind spots and contradictions, and to learn to listen and to 're-signify' with others in non-coercive ways (not aiming towards consensus). An example of a PTI used in these discussions is presented in Figure 1.

The analysis of the preliminary data in the Thinking Together project (see Bull, 2009) led to the development of a draft model that maps the ontological/epistemological spaces participants seemed to pass or to settle in their ongoing learning journeys. Based on the theoretical discussions related to postcolonial/poststructuralist theories and the preliminary empirical evidence in the responses of project participants, the model maps the potential movement of the learning process from a space of security in universal certainties to a space where participants feel comfortable with complexity, uncertainty, contingency and difference, and are willing to negotiate meaning 'in context' in dialogue with others.

The model also mapped enabling and disabling responses in relation to the openness of participants to the learning process itself. The first draft of the model was developed by Andreotti and Bull (2008). The sample responses broadly reflect initial patterns of responses found in the Thinking Together project and in other projects which used similar tools to the PTIs[2]. In this paper, the model is not used to indicate the validity or reliability of the data of the Thinking Together project or to make claims about the effectiveness of the PTIs (for a discussion of these aspects, see Bull, 2009). The model, and the theoretical notes that follow, are used in this paper solely as an illustration of the translation between theoretical discussions and pedagogical processes that forms part of the argument towards improved levels of intellectual engagement in the teaching profession.

Theoretical Notes on the Learning Spaces of the Model

These notes aim to exemplify the translation of a theoretical framework into the description of a pedagogical process observed in a study. They refer to the seven spaces illustrated in Table 1 (overleaf), which articulate a learning process that starts at 'absolute certainty' and develops towards 'contextual certainty'[3]. The framework illustrated in these notes is based on poststructuralism and postcolonial theory and is situated within the agenda of 'epistemological pluralism' described in the first part of this paper[4].

Learning Space 1: Certainty/one lens

The central argument within poststructuralism and postcolonial theory in relation to universalism is that the basic (ontological and epistemological) tenets of the Enlightenment project (i.e. Cartesian subject, Western humanism, Protestant work ethic, notions of linear time and civilisation/primitivism/progress, etc.) were largely adopted by European peoples and violently imposed onto 'Other' peoples (both European and non-European) through different forms of colonialism with a high degree of success (through mechanisms of control, subjugation and exploitation). This successful project shaped and became associated with modernity and its institutions which helped to foreclose the violences and histories of the process itself and made the Enlightenment tenets look as if they were a result of natural (human) evolution. The way of knowing (or epistemology) constructed in this process frames knowledge as an accumulation of facts and reproduces aspirations for the certainties of a completely known, coherent and (scientifically/technologically) engineered metropolitan world. This world would be collectively agreed upon by 'educated' people who can use universal reason to see things correctly (without the bias of any cultural constructions) and agree to live a moral life within this framework. The combination of this notion of knowledge, the aspiration for progress, certainty and coherence, and the embodiment of a self-defining, all-knowing subjectivity creates the conditions for the first space of the model. Within this space, learners will tend to project their 'local' (and culturally bound) assumptions about

Increase in tolerance to ambiguity, uncertainty, and complexity

Learning Spaces	Enabling responses	Disabling responses
Learning Space 1: Certainty/one lens	This is what I think. It comes from my experience and it works for me.	What I think is right. Others think exactly the same and if they don't they are wrong.
Learning Space 2: Recognising contradictions in own thinking	I'm confused now. Why have I not thought about this before?	This cannot be right. I am sure I am right. I don't want to think about it. Why are we doing this?
Learning Space 3: Recognising own lenses (underlying assumptions and their origins)	Why did I come to think the way I do? How was my knowledge constructed? What are the implications of thinking in this way?	What I think relates back to my culture. This has worked for many people up to now and therefore it is alright to think like that.
Learning Space 4: Recognising multiple perspectives and underlying assumptions behind them	What are the different perspectives on this issue? How were they (socially and historically) constructed?	Looking at different perspectives is only useful in order to find the right perspective.
Learning Space 5: Recognising that each context will require a different answer and grappling with what is right	What are the implications of this perspective in this context? How does it work differently in different contexts?	No answer is ever good enough – this is too much work, it is too hard. We will never find a perfect answer, so why bother?
Learning Space 6: Becoming comfortable with complexity, conflict and the idea that what is right is dependent on the context (and will change as the context changes)	Every context will require a different answer and, as the context changes the answers will also have to change	We should not be required to change what has worked in the past – some things are universal and fixed. Human beings need certainty and stability.
Learning Space 7: Being able to analyse contexts at a deeper level and to create provisional meaning with others as you go along	If every context is different, my confidence comes from my understanding that I will need to be open to listen, negotiate, and learn with others and to justify what I do as I move through different contexts	Just tell me what I need to do differently and I will incorporate it in the language I use to describe my current practices.

Source: Andreotti and Bull (2008)

Table 1: NZCER Thinking Together Project – Draft Analysis Model of Participant Responses to a Deconstructive Pedagogy

reality and knowledge as natural and universal, and accept their cumulative experiences and 'factual knowledge' bank as the basis and measure of their own worth (and the worth of others) within communities. The validation of their being and the conditions for their safety within this space rely on the recognition of the validity of their own experiences – that is why the pedagogical process starts with the creation of a 'safe space'[5].

Learning Space 2: Recognising contradictions in own thinking

Deconstruction relies on the identification of 'aporias' (i.e. logical contradictions or blind spots) within texts. In this learning process, the 'text' was the logic of the perspectives presented to the learners through the PTIs and the narratives of the learners themselves. By engaging with the comparison of the different logics presented in the pedagogical tools, within this space, learners will tend to realise that there are assumptions in their own systems of thought that they had not thought about before or that do not have a solid 'objective' basis. This is usually a space of enormous discomfort where the certainties that provide a 'floor' (or substance) for one's identity starts to collapse.

Learning Space 3: Recognising own lenses (underlying assumptions and their origins)

At this stage of the learning process, learners will have practiced the use of deconstruction in relation to different discourses (including their own discourses), modelled in questions related to power/language/knowledge such as: Where does this come from? Where does this lead to? And who decides? In whose name? For whose benefit? In this space, learners tend to de-naturalise the universalisation of perspectives and perceive the traces of the social and historical construction of their own discourses and subjectivities.

Learning Space 4: Recognising multiple perspectives and underlying assumptions behind them

Once learners realise and recognise their own situatedness, there is an excitement in the search for other and new or formerly unacknowledged possibilities. However, this search still tends to be informed by a teleological aspiration for new certainties found in either an alternative epistemology (which is complete in itself and universalised) or in the unproblematic merging of the 'good parts' of different epistemologies into one totalising whole. In other words, the excitement of the discovery of other ways of thinking, knowing, seeing and being is tinted by the often unacknowledged hope for the discovery of a stable (non-provisional) 'right one'.

Learning Space 5: Recognising that each context will require a different answer and grappling with 'what is right'

At this stage of the learning process, the search for certainties is frustrated by the realisation that what works in one context might not work in another as the knowledge and aspirations of different communities will have been constructed by different configurations of knowledges, discourses and power, attending to different contextual priorities. This is the space where learners experience the feeling of loss once the search for absolute answers (which characterised the project of knowledge construction in the '20th century') becomes irrelevant. The temporary, but frustrating paralysis that follows can be interpreted as an effect of this dominant '20th century' conceptualisation of learning (i.e. the focus on the discovery of right answers that can hold true across contexts and that lead to certainty and universal value).

Learning Space 6: Becoming comfortable with complexity, conflict and the idea that what is right is dependent on the context (and will change as the context changes)

Within this space, learners have to grapple with the tiresome thought that they will need to come up with different answers for different contexts and learn to live with 'contingency' (i.e. context dependency) that only allows for provisional certainties. In this space they learn to see the learning process anew, beyond the feeling that engaging in learning is pointless if it does not lead to absolute answers. They start to reconceptualise difference and conflict as sources of learning and not as threats to stability. They also start to learn not to be attached to 'good' or 'bad' answers (or labels) and to see successes and failures as learning opportunities in terms of their ability to read and to respond quickly to (and not be overwhelmed or threatened by) complexity, difference and uncertainty. This space could be interpreted as one where learners start to effectively bear witness to themselves and to embrace the complexities, multiplicities and contradictions in their own subjectivities (Boler, 1999).

Learning Space 7: Being able to analyse contexts at a deeper level and to create provisional meaning with others as you go along

Within this space, learners are comfortable with the construction of speculative (Somekh, 2008) and equivocal knowledge, as well as with the constant re-negotiation of meaning, power and identity in different contexts. They start to apply advanced analytical tools (which involve knowledge about knowledge construction) to operate effectively within different 'worlds' (or discourse communities). They can 'read' across different contexts and epistemologies (i.e. see through different lenses) scanning for different solutions to complex problems. They can identify tensions and points of contention in epistemological clashes and contribute new ways forward. They become 'border crossers' and 'edge walkers' who can translate learning

and information from one community into another and who are open to learn/negotiate meaning with people who are different from them, in unfamiliar contexts. This happens because their sense of self and security is grounded in their ability to learn, to relate to and connect with others, and to feel comfortable in their process of 'becoming' (as opposed to 'being') – and not on what they know already, where they belong, or on a fixed notion of identity.

As described in this last stage, this learner profile fits both the 'cognitive adaptation' and the 'epistemological pluralism' agendas. However, they are interpreted differently. Cognitive adaptation would highlight the value of fluid, empathetic, adaptable and self-authoring identities in navigating and negotiating in uncertain and dynamic liberal consumer markets. Epistemological pluralism would emphasise the need for openness, positionality and relationality in creating a space where 'imagining otherwise' and an 'ethical relation to the Other' are possible.

This model is not presented as a map, but as a compass that points to the need for a higher level of theoretical engagement with these issues before we can claim any substantial understanding of the process. The idea of numbered spaces is also deceiving when applied outside of a learning process: people navigate between these and other spaces as they inhabit different contexts. On the other hand, although extremely limited, this model does aim to create a language for much needed dialogue around pedagogical process concerned with epistemological pluralism. This 'languaging' can open the possibility of deeper theoretical engagements and provide a more accessible entry point for those who are coming from other areas. This theoretical discussion needs to be mindful that 'empirical evidence' of generalisable effectiveness of the model (or the PTIs) is always going to be contested and contentious due to the inherent epistemological clash between claims of provisionality and context dependency versus reliability and generalisability in empirical research (Stronach and MacLure, 1997).

Conclusions

In this paper, I started with an analysis of two different theoretical perspectives that defend the need for a reconceptualisation of knowledge, learning, identities and culture in education: cognitive adaptation and epistemological pluralism. In the second part of this paper, I explored some of the implications of working with the notion of shifting conceptualisations and of translating epistemological pluralism into pedagogical praxis. I used a draft model developed in the Thinking Together project as an illustration of this translation. The objective of this paper was not to provide an unproblematic solution, but to show that every epistemological choice carries with it an 'action package' that leads to different results and creates new problems. The new problems created by the different epistemological choices we have at this historical moment in education, which include *but are not exclusive to*, what I have framed as 'cognitive adaptation' and 'epistemological pluralism' need

more engagement with, debate and critique. This could support educators to understand the gifts and limitations of these and other perspectives, so that their epistemological choices are better informed. However, in an age of instrumentalist and corporatised thinking and curriculum, with a strong focus on the quantification and assessment, we seem to lack the time for intellectual engagement and autonomous thought in in-service and pre-service education. This context also accentuates practitioners' urge for silver bullet, simplified solutions and quick fixes. Therefore, equipping educators to think independently and to participate in complex intellectual educational debates is, perhaps, the greatest challenge we face in education today. In the words of Boler (1999):

> 'What we are faced with in the course of the most ordinary lifetime is terrifying. The desire to order chaos through simplified schemas, to ward off the felt dangers of ambiguity, seems perhaps more 'human' a characteristic than any other. The educator who endeavours to rattle complacent cages, who attempts to 'wrest us anew' from the threat of conformism, undoubtedly faces the treacherous ghosts of the other's fears and terrors, which in turn evokes one's own demons. The path of understanding, if it is not to 'simplify', must be tread gently. Yet if one believes in the alternatives to the reductive binaries of good and evil, 'purity and corruption', one is challenged to invite the other, with compassion and fortitude, to learn to see things differently, no matter how perilous the course for all involved' (1999:176).

As there are no silver bullets, the challenge involves inviting those in the profession to an ethic and pedagogy of discomfort (Foucault, 1997; Boler, 1999) where familiar and comfortable notions of knowledges and identities are disrupted and transformed, so that educators learn to live with difference, ambiguity and complexity in their contexts and within themselves. What there is to gain, from my perspective, is a renewed energy to move beyond boundaries imposed by mono-epistemic practices and to have more rigorous and lively intellectual spaces in education that will open possibilities for us to see, to know, to relate, to imagine and to become 'otherwise' – and to make different mistakes so that learning and conversations keep going.

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Notes

1 I use '20th and 21st century' in brackets in this article to highlight the cultural location and non-universality of this understanding of time.

2 See, for example, Open Spaces for dialogue and Enquiry (www.osdemethodology.org.uk) and Through Other Eyes (www.throughothereyes.org.uk).

3 Three video files related to more recent cross-theoretical discussions related to this model can be found at http://voicethread.com/share/835109/.

4 Through the work of Jenny Moon (2005) on critical thinking as epistemological development in Higher Education (available at http://escalate.ac.uk/downloads/2041.pdf), I have come across a similar model developed by Baxter Magolda (1992) which is founded on a different theoretical basis that can be interpreted within the framework concerned with 'cognitive adaptation' towards self-authorship. This model consists of 4 stages, rather than 7.

5 The principles for the creation of open spaces of the OSDE project (www.osdemethodology.org.uk) was used in the Thinking Together Project. These principles propose that, within the pedagogical space, all participants should adopt 3 premises. First, that all participants bring valid knowledge to the space and that this knowledge is constructed in their contexts. Second, that this knowledge is also partial and incomplete. If knowledge is socially constructed, participants lack the knowledge constructed in contexts that are not their own and therefore should listen with respect in order to find out what informs each others' perspectives. Third, the space itself is characterised by inquiry and critical engagement, not consensus. Therefore, the idea is to always try to unpack interpretations and to look at things from different perspectives: to learn to relate and explore together without having to agree.

References

Allman, P., and Wallis, J. (1995) Challenging the postmodern condition: radical adult education for critical intelligence. In M. Mayo and J. Thompson (eds.) *Adult Learning, Critical Intelligence and Social Change*, pp.18-33. Leicester, UK: NIACE.

Andreotti, V. and Souza, L. (2008) Global Education: four tools for discussion. *Journal of Development Education Research and Global Education*, 31: 7-12.

Andreotti, V. and Bull, A. (2008) *Thinking Together Project Report*. Wellington: NZCER.

Bauman, Z. (2000) *Liquid Modernity*. Cambridge: Polity.

Bauman, Z. (2001) *The Individualized Society*. Cambridge: Polity

Bhabha, H. (1994) *The Location of Culture*. London: Routledge.

Boler, M. (1999) *Feeling Power: Emotions and Education.* New York: Routledge.

Bourn, D. (ed.) (2008) *Development Education: Debates and Dialogues.* London: Bedford Way Papers.

Britzman, D. (2006) *Novel Education: Psychoanalytic Studies of Learning And Not Learning*. New York: Peter Lang.

Bull, A. (2009) *Thinking together to become 21st century teachers: teachers' work. Working paper 1.* Available online: http://www.nzcer.org.nz/pdfs/21st-century-teachers-200906.pdf.

Brydon, D. (2004) Cross-talk, postcolonial pedagogy, and transnational literacy. In C. Sugars (ed.) *Home-work: Postcolonialism, pedagogy, and Canadian literature*, pp.57-74. Ottawa: University of Ottawa Press.

Castells, M. (2000) *The Rise of the Network Society* (2nd edition). Oxford: Blackwell Publishers.

Claxton, G. (2008) *What's the Point of School?: Rediscovering the Heart of Education.* Oxford: Oneworld Publications.

Cope, B. and Kalantzis, M. (2000) *Multiliteracies: Literacy and Learning and the Design of Social Futures*. London: Routledge.

Davies, B. (2000) *Inscribing Body/Landscape Relations*. Walnut Creek: Alta Mira Press.

Derrida, J. (1974) White mythology: metaphor in the text of philosophy. *New Literary History* 6(1): 5-74.

Derrida, J. (1976) *Of Grammatology. Translated by Gayatri Chakravorty Spivak*. Baltimore: Johns Hopkins University Press.

Derrida, J. (2001) *On Cosmopolitanism and Forgiveness*. London: Routledge.

Falzon, C. (1998) *Foucault and Social Dialogue.* London: Routledge.

Freire, P. (1998) *Pedagogia da Autonomia*. Rio de Janeiro: Paz e Terra.

Foucault, M. (1997) For an ethics of discomfort. In J.D. Faubion (ed.) *Michel Foucault: Power.* New York: New Press.

Gee, P. (2003) *What Video Games have to Teach us about Learning and Literacy*. New York: Palgrave Macmillan.

Gilbert, J. (2005) *Catching the Knowledge Wave?: The Knowledge Society and the Future of Education*. Wellington: NZCER.

Hargreaves, A. (2003) *Teaching in the Knowledge Society.* New York: Teachers College Press.

Lankshear, C. and Knobel, M. (2003) *New Literacies: Changing Knowledge and Classroom Learning*. Buckingham: Open University Press.

Levinas, E. (1998) *Otherwise Than Being or Beyond Essence.* Pittsburgh: Duquesne University Press.

Magolda, B. (1992) *Knowing and Reasoning in College Students: Gender Related Patterns in Students' Intellectual Development*. San Francisco: Jossey Bass.

Mayo, P. (2003) A rationale for a transformative approach to education. *Journal of Transformative Education* 1(1): 38-57.

Mouffe, C. (2005) *On the Political*. Abingdon: Routledge.

Nandy, A. (2000) Recovery of indigenous knowledge and dissenting futures of the university. In S. Inayatullah and J. Gidley (eds.) *The University in Transformation: Global Perspectives and the Future of the University*, pp.115-123. Westport: Greenwood Publishing Group.

New Zealand Ministry of Education. (2007) *The New Zealand Curriculum*. Wellington: Ministry of Education.

OECD. (2000) *Knowledge Management in Information Societies: Education and Skills*. Paris: OECD.

Peters, M. with Besley, T. (2006) *Building Knowledge Cultures: Education and Development in the Age of Knowledge Capitalism*. Oxford: Rowman and Littlefield.

Richard, E. and Usher, R. (1994) *Postmodernity and Education*. London: Routledge.

Roberts, P. (2002) Postmodernity, tertiary education and the new knowledge discourses. *Critical Perspectives on Communication, Cultural and Policy Studies* 21(1): 53-60.

Said, E. (1993) *Culture and Imperialism*. London: Vintage Books.

Santos, B. (2007a) Beyond abyssal thinking: from global lines to ecologies of knowledges. *Revista Crítica de Ciências Sociais and Eurozine*, pp.1-35. Available online: http://www.eurozine.com/articles/2007-06-29-santos-en.html

Santos, B. (2007b) Cognitive Justice in a Global World: Prudent Knowledges for Decent Lives. Lanham: Lexington Books.

Somekh, B. (2007) Last words: speculative knowledge. In B. Somekh and T. Schwandt (eds.) *Knowledge Production*. London: Routledge.

Spivak, G. (1992) Teaching for the times. *The Journal of the Midwest Modern Language Association* 25 (1): 3-22.

Spivak, G. (1994) Bonding in difference. In A. Arteaga (ed.) *An Other Tongue: Nation and Ethnicity in the Linguistic Borderlands*, pp.273-285. Durham: Duke University Press.

Spivak, G. (1995) More on Power/ Knowledge. In D. Landry and G. MacLean (eds.) *The Spivak Reader*. London: Routledge.

Spivak, G. (1999) *A Critique of Postcolonial Reason: Toward a Critique of the Vanishing Present*. Cambridge, MA: Harvard University Press.

Spivak, G. (2004) Righting wrongs. *The South Atlantic Quarterly* 103: 523-581.

Spring, J. (2008) Research on Globalisation and Education. *Review of Educational Research* 78(2): 330-363.

Spring, J. (1998) *Education and the Rise of the Global Economy*. Mahwah: Lawrence Erlbaum.

Stronach, I. M. and MacLure, M. (1997) *Educational Research Undone: The Postmodern Embrace.* Buckingham: Open University Press.

Todd, S. (2009) *Toward an Imperfect Education: Facing Humanity, Rethinking Cosmopolitanism*. London: Paradigm.

Trilling, B. and Hood, P. (2001) Learning, technology, and education reform in the knowledge age or 'we're wired, webbed, and windowed, now what?'. In C. Paechter, R. Edwards, R. Harrison, P. and Twining (eds.) *Learning, Space and Identity.* London: Paul Chapman.

UNESCO (2005) *UNESCO World Report: Towards Knowledge Societies*. Paris: UNESCO.

Willinsky, J. (1998) *Learning to Divide the World: Education at Empire's End*. Minneapolis: University of Minnesota Press.

Young, R. (1990) The scientific critique of historicism. In *White Mythologies: Writing History and the West,* pp.83-104. London: Routledge

Ziarek, E. (2001) *An Ethics of Dissensus: Postmodernity, Feminism, and the Politics of Radical Democracy*. Stanford: Stanford University Press.