



New Pedagogies
for Deep Learning

A Global Partnership

Education PLUS

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New Pedagogies for Deep Learning Whitepaper:

Education *PLUS*

The world will be led by people you can count on, including you!

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Education *PLUS*

The world will be led by people you can count on, including you!

Education *PLUS* is the hidden dividend that learners come to acquire if they are educated in what we call the *new pedagogies* - powerful new learning modes steeped in real world problem solving now made more telling through recent, rapid developments in the use of technology for interactive learning.

We can and will define the core learning outcomes as the *'Six Cs of Deep Learning'*, but we first must understand the existential essence of this new human being. It is no exaggeration to say that the new pedagogies have the potential to support a fundamental transformation in human evolution. The result is that action, reflection, learning and living can now become one and the same. This seamless 'ecology' of life and learning occurs during what we used to know as formal schooling, post-secondary and higher education, but then continues throughout life. In this model, learning, doing, knowing, adapting, inventing and living become practically indistinguishable. Although we offer here a philosophical note on Education *PLUS* we are deeply involved with practitioners around the world in doing this new work of learning on an increasingly large and deep scale. The developments we describe are happening in real time, and we predict will take off in the immediate future.

There is one big *'E Squared'* that permeates this endless cycle of learning in action: *Ethical Entrepreneurialism*. This breaks the distinction between being able to work with your hands and your mind and gives a new, deeper meaning to the term 'entrepreneurial'. In our conceptualization entrepreneurialism is not just about making money but also being able to identify and resolve complex personal and societal challenges locally and globally. For the first time in history the mark of an educated person is that of a doer (a doing-thinker; a thinker-doer) - they learn to do, and do to learn. They are impatient with lack of action. Doing is not something they decide to do - daily life **is doing**, and as natural as breathing air. Along with action is an exquisite awareness of the **ethics of life**. Small-scale ethics in how they treat others; large-scale ethics concerning humankind including building a sustainable future and safeguarding the evolution of the planet. When we change our education system, and when hordes of people are acting individually and collectively in ethically entrepreneurial ways the world changes, and keeps on changing with built-in adaptation and resilience.

Another critical foundation point: all of the traits we talk about in this paper - the Six Cs and E Squared - are both an *individual and a collective (or group)* phenomenon. Moreover they are synergistic, they feed on each other within the individual and the group. Finally, you have to master all of them - miss any one or two and the entire edifice is fundamentally weakened.

In K-12 education we talk now of students becoming 'basics *PLUS*'. In higher education we talk of graduates not only being 'work ready' for today but 'work ready *PLUS*' for tomorrow. What is this *PLUS*? It concerns being *sustainability literate* (socially, culturally, economically and environmentally); *change implementation savvy* (being able to engage others in constructive change and make it



happen); **inventive** (being able to create new artefacts, processes, sources of benefit – including making valuable things out of waste and creating better ways of working together); and being **clear on where you stand** on the contestable tacit assumptions driving the 21st century agenda: assumptions like ‘growth is good’, ‘consumption is happiness’, ‘ICT is always the answer’ and ‘globalization is great’.

We will spell out the actual capacities - known as the Six Cs - shortly, but it is crucial to know that if you just focus on the six sets of competencies you will miss the deep meaning of Education *PLUS*. The latter is an epiphenomenon - it arises from immersion in the Six Cs, and their synergy. It generates a growing realisation that being educated means recognising, appreciating, assessing, reinforcing and cultivating the ubiquitous and powerful nature of ethical entrepreneurialism that is fundamental to this new learning. These qualities are both learnable and assessable.

Education *PLUS* is, therefore, not simply about learning 21st century skills in isolation from doing, nor is it about acquiring basic skills and knowledge out of context. Instead, it is about collaborative learning through reflection in action and on action in order to become better at negotiating the messy, fuzzy, dilemma-ridden context of real-world life and work with positive impact. It is about developing an attitude of mind, a set of values and the personal, interpersonal and cognitive capabilities identified repeatedly in studies of successful early career graduates and those leaders who have helped create more harmonious, productive and sustainable workplaces and societies.

For us, learning is, therefore, not only the development of the fundamental competencies (skills and knowledge) necessary for the successful negotiation of an uncertain world. It is also about developing the personal, interpersonal and cognitive capabilities that allow one to diagnose what is going on in the complex, constantly shifting human and technical context of real world practice and then match an appropriate response.

Our studies of successful early career graduates and of effective, ‘turnaround’ leaders in a range of contexts has shown that one’s capability as a worker, professional, citizen, parent or spouse is most challenged not when things are going smoothly but when things go suddenly awry or the unexpected happens. It is then that the practitioner’s personal, interpersonal and cognitive capabilities are most tested. At times like this it is no good simply to know or be able to do a lot, rather it requires the ability to listen, diagnose and figure out what is really going on and determine, in collaboration with the other key players, how the situation might best be handled and then, with their help, to apply the right mix of knowledge and skills in order to make this happen.

In terms of personal capabilities what is repeatedly identified as distinguishing the most effective professional performers and leaders is their ability: to remain calm when things go wrong, to remove their ego from the situation, to ‘practice what they preach’, and to demonstrate their authenticity, humility, tolerance for ambiguity, trustworthiness, transparency and commitment to fairness, underpinned by resilience, curiosity, a willingness to persevere and take responsibility for their actions and a sense of perspective and humour about what is happening.



Concerning interpersonal capabilities what is significant is their ability to listen to all points of view, to work productively with diversity, to engage the disengaged, to show high levels of empathy and effectively read the motivations of others.

Learners with the new cognitive capabilities are particularly deft at 'reading'/diagnosing what is going on in messy situations (that is they are good at problem formation not just at problem solving), at thinking laterally and creatively about solutions, and, like a chess player, at tracing out and evaluating the likely consequences of different potentially relevant courses of action. And they are particularly good at reflecting in and on action in order to learn from their errors.

In the context of school education, Claxton and Lucas's (2013:9) distinction between pro-social and epistemic captures these same phenomena:

Pro-social: kind (not callous); generous (not greedy); forgiving (not vindictive); tolerant (not bigoted); trustworthy (not deceitful); morally brave (not apathetic); convivial (not egotistical); ecological (not rapacious);

Epistemic: inquisitive (not passive); resilient (not easily defeated); imaginative (not literal); craftsmanlike (not slapdash); sceptical (not credulous); collaborative (not selfish); thoughtful (not impulsive); practical (not only 'academic').

The pro-social qualities concern cultivating the attitudes of a good friend, a good neighbour or a good citizen. The epistemic ones are to do with the qualities of mind of the powerful learner-doer: a person who is able to meet difficulty and uncertainty with confidence, capability and enthusiasm. The major challenge for 21st century education at every level is how to design itself so that it functions, day-in, day-out, as an effective incubator of its chosen virtues.

Taken together these personal, interpersonal and cognitive capabilities identify the underpinnings needed by school and college graduates if they are to build the communities, institutions and indeed the societies that will be socially, culturally, economically as well as environmentally sustainable over the coming years. And these value-based capabilities are the engine-house of ethical entrepreneurialism. We note, also that, as A.C. Bouquet pointed out in *Comparative Religion* back in 1941 and Merrill E. Bush in *Educational Leadership* in 1954 they have much in common with the shared values that underpin all of the world's major religions as well as the humanist tradition of many societies. The main difference in our formulation is that values and action merge as doing becomes the centrepiece of learning.

We do not spell out the 'new pedagogies' in this note. Essentially they involve a learning partnership between and among teachers, students, business, community groups and families (see Fullan and Langworthy, 2014, *A Rich Seam*; our New Pedagogies for Deep Learning partnership (www.newpedagogies.org) that involves some 1,000 schools world-wide; for higher education, Scott, 2013). We will say that this new learning combats the boredom of traditional schooling and post-secondary education (both students and teachers are bored), and replaces it with learning environments based on four new criteria in combination. Learning that:



1. Is irresistibly engaging and relevant.
2. Uses information that is elegantly easy and efficient to access.
3. Features the ubiquitous use of digital for (inter) active learning 24/7.
4. Is creative and change-focused not passive and is steeped in real life (local and global) problem solving.

So, whereas the focus in judging school quality seems often to concentrate on performance in the basic competency areas of literacy and numeracy, and college education on the results of standardised graduate exit tests Education *PLUS* says these fundamentals are necessary but not sufficient for the graduates of our schools, colleges and universities to negotiate the social, cultural, economic, vocational and environmental challenges of the mid-21st century successfully and productively. That is, as we have already noted, we not only want graduates who are work ready for today but leaders and people who are work ready *PLUS* for tomorrow. The world will not be run by geniuses, but rather by people you can count on.

Now to the Six Cs: There are some slight variations on the theme when people refer to the deep learning or 21st century skills but the best ones involve a small number of academic and personal/interpersonal qualities and capabilities. We ourselves have referred to the Six Cs by name in our New Pedagogies for Deep Learning initiative.



Character

Character refers to qualities of the individual essential for being personally effective in a complex world including: grit, tenacity, perseverance, resilience, reliability, and honesty.



Citizenship

Thinking like global citizens, considering global issues based on a deep understanding of diverse values with genuine interest in engaging with others to solve complex problems that impact human and environmental sustainability.



Collaboration

Collaboration refers to the capacity to work interdependently and synergistically in teams with strong interpersonal and team-related skills including effective management of team dynamics, making substantive decisions together, and learning from and contributing to the learning of others.



Communication

Communication entails mastery of three fluencies: digital, writing, and speaking tailored for a range of audiences.



Creativity

Having an 'entrepreneurial eye' for economic and social opportunities, asking the right questions to generate novel ideas, and demonstrating leadership to pursue those ideas into practice.



Critical Thinking

Critically evaluating information and arguments, seeing patterns and connections, construction meaningful knowledge and applying it in the real world.

We are back to the question of what is the essence of new pedagogies for deep learning. It is implementing the Six Cs and the E Squared derivative as 24/7 learning and being. It is merging learning and life from day one (babies onward). It is learning that looks at the world from many different perspectives, cuts across the disciplines (after all we live in a trans-disciplinary world not in a mono-disciplinary one), learning that is relevant to the real world interests, needs and challenges of our students, is (inter) active and which concentrates on developing the capabilities that count not only for today but for a sustainable future. It is an approach that gives focus to problem-based learning and assessing less but better, and is part of a system where the teacher is less of 'the sage on the stage' as well as less of merely being 'a guide on the side'. Instead in the new frame teachers and college professors become 'proactive learning partners' and brokers between and among students and other teachers and high quality learning resources world-wide, where access to others is supported by the new digital developments so that learning becomes learning with anyone, anytime, anyplace. In this world multiple 'learning partnership activators' find, and engage each other.

In the new pedagogies of Education *PLUS* we use our schools, colleges, families and communities for learning through doing and reflection and as living laboratories for learning, transformation and research. As Spohn (2003) says: '*We are more likely to act our way into new ways of thinking, than think our way into new ways of acting.*' And it is, above all, realizing that the basic goal is cultivating ethically entrepreneurial capabilities, competencies and cultures through deliberate action.

Education *PLUS* is in the DNA of the new pedagogies. And this now needs to be made explicit. It is fundamental to the evolutionary future of human development and our social, cultural, economic and environmental sustainability and cohesion. And even better, social innovation that will serve evolution, continuous adaptation and invention and the development of a sustainable future for us all. So, there you have it. E Squared and the Six Cs - the essence of Education *PLUS*.

We are well aware, however, of Marie Antoinette's reported observation that '*nothing is new only that which is forgotten*'.

For example, consider how closely the following observation from John Dewey (1916) at the start of the 20th century aligns with what we advocate:

'Since education is not a means to living, but is identical with the operation of living a life which is fruitful and inherently significant, the only ultimate value which can be set up is



just the process of living itself. And this is not an end to which studies and activities are subordinate means; it is the whole of which they are ingredients’.

Kurt Lewin (1948) took up this theme when he focused on 'action learning' in the 1940s and Faure in his 1972 UNESCO publication *Learning to Be*:

‘If learning involves all of one’s Life, in the sense of both time-span and diversity, and all of society, including its social and economic as well as its educational resources, then we must go even further than the necessary overhaul of ‘educational systems’ until we reach the stage of a learning society (xxxiii)... The physical, intellectual, emotional and ethical integration of the individual into a complete person is a broad definition of the fundamental aim for education’ (153).

In the 1980’s Ramsden (1998) building on the work of Marton and Sajo (1976) started to emphasize the importance of ‘deep’ as distinct from ‘surface’ learning in higher education, while Kolb (1984) focused on the use of experience as a key source of productive learning for adults and communities.

While these earlier formulations are compatible with Education *PLUS* they have one serious limitation: **they never caught on**. The timing is different now. The conditions for realizing the learning goals on a large-scale are now rapidly emerging. We can be more precise, and more practical in bringing them to reality. Because they feed and respond to the human condition and spirit, and because the mechanisms for diffusion and connection are ubiquitous, we predict that we are on the cusp of a self-perpetual learning revolution never before experienced. Having said this, the ideas we are talking about, even in places where they are being partially attempted, are still **tangential to the activities of most schools and districts, and post-secondary institutions** (For the dire unaware state of higher education see Barber et al, 2013, *The avalanche is coming*). Not being aware is one thing, but even with awareness and commitment the solutions are very hard to come by on the ground - good ideas with no ideas on how to implement them equals wasted ideas. Even with sincere efforts the new pedagogies and their powerful learning goals can easily get marginalized as regular routines and policy pre-empt further development. In short, we think the time has come for widespread and deep change for the Education *PLUS* agenda, but the implementation problems are gargantuan. And this is where our work on what supports effective change implementation in education comes in (in school education; Fullan, 2013, 2014 and in post-secondary and higher education see Fullan & Scott, 2009). After all we are talking about a revolution in learning that has huge attraction but many obstacles.

One could say, ‘so what’. Won’t this phenomenon be yet another failed implementation in the history of attractive innovations? We think not. The push factors (boredom, and daily failure to learn) and the pull factors (irresistible learning opportunities and digital allure) are conspiring to shake the foundations of traditional learning. More and more people - students, educators, and communities - are willingly being swept up by the new learning forces that abound. We see before our eyes deep change processes at work moving more quickly and more widely than ever before. We see leaders - students and adults alike - easily taking to and creating new learning opportunities across the globe.

As we contemplate the state of learning in the world, what could be better and more essential than to be naturally capable and competent under all conditions! Learn what is essential in order to count on yourself in a complex and uncertain world, and help others do so. This is Education *PLUS*!



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