A Systemic Perspective on the Essential Learnings: A word or two from Socrates and Kant

Richard Bawden[1]

*"Drawing upon a constructivist view of learning, the [SACSA] Framework explicitly identifies five **Essential Learnings** which, together with concepts and processes drawn from the learning areas, provide the connecting threads for the whole curriculum:*
Futures, Identity, Interdependence, Thinking** and **Communication".

Prologue

In this brief paper I want to use the essence of the Essential Learnings (ELs) to explore them: To turn them back recursively on themselves, as it were, as a basis for supporting my contention that ***identity*** is of a different logical type to the other four ELs, and deserves to be the central focus of the DETE reforms. This has significant implications for the design of effective curricula as well as for the communication of their principles to all of the stakeholders involved in this grand enterprise.

Let me start with constructivism: The adoption of a constructivist epistemology demands an acute appreciation of the influence of perspectives or worldviews or *weltanschauungen* both on the process and outcomes of any construction. In any discourse therefore, it is vital that the assumptions underlying particular worldview perspectives are made as explicit as possible. We might refer to this critical process as epistemic appreciation.

In this spirit, I must disclose that for the case I will present here, I am assuming a systemic perspective: My underlying assumptions are grounded in a philosophical position of holism that reflects the fundamental belief, simply put, that any whole entity is different from the sum of its parts. In other words, the process of inter-connection of parts results in the emergence of special properties that are characteristic of the whole, that were not apparent in (or predictable from isolated studies of) any of the parts. Whatever knowledge I have of hydrogen and oxygen in isolation will yield no clue to me about the emergent wetness of water!

Not only is it necessary therefore to study 'wholes' as 'wholes' (systems as systems) but also to provide conditions where such 'wholes' can flourish and where novel properties can emerge as a function of the quality, both of the parts themselves and, most importantly, of the inter-connections between them. Each part contributes to the properties of the whole and influences it in some way through its inter-actions with other parts. The whole moreover, can also influence the nature of its own parts as well as the nature of the interactions between them. It can also influence, and can be influenced by, the higher order system in which it is embedded etc etc. The systemic image is thus of a 'nest' of interacting sub-systems embedded within systems that are in turn embedded in, and which interact with, higher order (or supra-) systems.

Unique properties emerge at every level of this 'holoarchy'.

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Somewhat paradoxically, no study of any whole is therefore complete without a study also of the parts – and *vice versa*!

A key notion is that the entire 'system of systems' is in dynamic relationship with itself: Anything can change at any moment, and by definition, in an unpredictable manner. A small change here can trigger a large change over there. A change at this time might trigger a change at some other time. And so on. Any approach that claims to be based on holistic principles needs to embrace these dimensions if it is to be authentic.

It is from such a systemic perspective then that I will argue that *identity* is an emergent property of *thinking* human beings who are *communicating* with others with whom they are *inter-dependent* and where a focus on the *future* is vital as a prevailing context for understanding and action.

The Centrality of Identity

"First know thyself" exhorted Socrates, and yet as the systemic perspective dictates, this search can never be done in isolation from either others or from nature itself; or indeed from the technological artifacts that we have developed to manipulate that nature. In the quest for the "I", none of us can possibly avoid exploring "the other". We are who we are in relation to whom and what we are not. While we are 'whole' beings, we also are part of a variety of larger social and communal 'wholes' – families, tribes, nation states - that can have profound influences upon us, as well as upon the way we construe ourselves. Our own constructions of the world about us furthermore, are as much a function of the constructions and influence of others - including those constructions that they have of us - as they are of our own construing! "Self knowledge – always a construction no matter how much it feels like a discovery – is never altogether separable from claims to be known in specific ways by others".[2]

As a process of social construction, the search for identity always takes place in a context marked by power relationships between people. In recognition of this fact, Manuel Castells[3] has differentiated "between three forms and origins of identity building": (i) Legitimizing Identity which is "introduced by the dominant institutions of society to extend and rationalize their dominance vis-à-vis social actors", (ii) Resistance Identity, "generated by those actors that are in positions/conditions devalued and/or stigmatized by the logic of domination", and (iii) Project Identity "when social actors, on the basis of whichever cultural materials are available to them, build a new identity that redefines their position in society and, by so doing, seek the transformation of overall social structure."

Emmanuel Levinas[4], a contemporary philosopher who died but a few years back, put a very interesting twist on this notion of 'building new identities'. As he saw it, the "I" is engaged in a continual, dynamic process of 'recovering' its identity through all the events in life that may happen to it – although it is always influenced to some degree by each such event and is never the same again!

[2] Calhoun, C (ed). Social Theory and the Politics of Identity. Oxford, Blackwell.1994
[3] Castells, M The Power of Identity Oxford, Blackwell.1997
[4] Levinas, E. Totality and Infinity tr. Alphonso Lingis. Pittsburg. Duquesne University Press 1998

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It is the search for identity that provides the foundations for the sense that we make of our experiences of the world around us as well as of the others with whom we share it.

We need to make sense or meaning of our experiences of the world about us in order to make informed and inspired judgments as the basis for the actions that we need to take in it. This again is an inter-relational dynamic, as it is through our embeddedness with 'nature' that we can construe it and as we condition and shape that 'nature' so it conditions and shapes us.

Another powerful systemic image here is that of our embeddedness within dynamic networks comprised of people and nature and technological artifacts that again are shaped by us just as they in turn shape us. Networks too have emergent potentialities. Perhaps the more networks there are in which we are active nodes, the more identities we assume – or at least the more the number of roles that we need to play – and this pluralism can have a profound influence on our identity recovery process!

It can be argued that it has been the very absence of the search for identity in this modern age, that lies at the heart of so many of the irresponsible actions that we continue to make in and to 'nature', as well as towards each other. It has not been fashionable in this age of modernity, to be introspective and reflexive – to seek to better know ourselves - and this is perhaps a function of the nature of scientific inquiry, our most prevalent way of knowing, which is not very 'whole person friendly' at all. By convention, it is reductionist both in spirit and method where the key foci reflect linear causality: This leads to this, leads to that, without a shade of emergence or ethical concern! In a world of 'can do' there is little room for 'should do'.

Ironically, while it is through science that we have come to know about the damage we are doing to our globe, it is the same science that provides the foundations for the very technologies that can so greatly amplify the extent of such damage. It is our very identity as techno-scientific modernists that we need to challenge and the very essence of the form of modernity that we have so willingly embraced. As the German social scientist Ulrich Beck[5] puts it: "We are concerned no longer exclusively with making nature useful, or with releasing mankind from traditional constraints, but also and essentially with problems of techno-development itself. Modernization is itself becoming reflexive; it is becoming its own theme". Yet a strong argument can be mounted that our prevailing way of knowing (through techno-scientific reason) will impede our competencies at doing just that. We need to expand our repertoire and embrace a cognitive pluralism if we are to become more comprehensively reflexive.

The way we 'collect' and use scientific facts to build coherent theories actually sets limits to what we can come to understand about nature, and also, significantly, even more so about ourselves. Furthermore, as one commentator has it, "[s]cientists usually do not acknowledge these limits, nor do most other people. And the overestimation of

[5]Beck, U. Risk Society: Towards a new modernity. Sage Publications. London 1992

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science as a way to know, hence of the extent of the knowledge we can gain through science has led us to undervalue other kinds of knowledge".[6]

The 'new' reflexivity must also include matters of identity that are grounded in gender as well as in power relationships, for both markedly influence the way we come to know both ourselves and the world about us. "Knowledge", as Hubbard[7] reminds us, "has become gendered", with science, that seemingly most legitimate form of knowing, being colonised by objectivity, which, in turn, is identified as masculine". And as Mary Belenky and her colleagues[8] argue, "conceptions of knowledge and truth that are accepted and articulated today have been shaped throughout history by the male dominated culture. …[d]rawing on their own perspectives and visions, men have constructed the prevailing theories, written history and set values that have become the guiding principles for men and women alike". Yet this identification is of course not inherent in nature, or in the nature of scientific inquiry, but results from "the ways scientific works, facts, and theories are constructed and from the ways we construct sex and gender"[9].

It is certainly not that science is bad or that all the technologies that it has spawned are quintessentially destructive; far from it. It is merely that scientific inquiry is limited in its scope and like any way of knowing is also subject to the frailties and foibles of human dispositions. There are those who would exploit scientific knowledge to their own ends, and this is aided, as some see it, by the very nature of science itself. David Orr[10] has observed, for instance, that while "modern science has fundamentally misconceived the world by fragmenting reality, separating observer from observed, portraying the world as a mechanism, and dismissing non-objective factors all in the service of the domination of nature" the result has been a radical miscarriage of human purposes where the domination of nature has led to "the domination of other persons". He cites C.S. Lewis[11] in support of this contention: "At the moment then of man's victory over nature, we find the whole human race subjected to some individual men, and individuals subject to that in themselves which is purely 'natural' – to their irrational impulses."

At a time when we are beginning to appreciate that the global problematique must concern our ethical and aesthetic values and moral judgments as much as they concern scientific reason, we are beginning to rue the fact that such "moral judgement has been eliminated from our concepts of rationality as far as they are actually built into existent scientific and systems paradigms".[12] The rational self is not the whole self, as Immanuel Kant was at great lengths to point out some 200 years or so ago in his Critique of Pure Reason.

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[6] Hubbard, R. The Politics of Women's Biology. Rutgers University Press New Jersey 1990
[7] Hubbard *loc cit*
[8] Belenky, M.F., Clinchy, B.V., Goldberger, N.R, and Tarule, J.M. Women's Ways of Knowing: The development of self, voice and mind Basic Books New York. 1986
[9] Hubbard *loc cit*
[10] Orr, D.W. Ecological Literacy:Education and the Transition to a Postmodern World State University of New York Press New York 1992
[11] Lewis, C.S. The Abolition of Man Macmillan New York 1947
[12] Ulrich, W "Some Difficulties of Ecological Thinking Considered from a Critical Systems Perspective: A plea for critical holism". Systems Practice 6: 584-609 1993

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A Kantian View

As Kant saw it, the whole point of reason was its practical use in establishing moral ends where happiness equates with virtue. When used solely for intellectual pursuits it leads to fallacies. Kant is important to my argument here in a number of ways that extend past his connection of reason with morality – although that is pretty profound in and of itself! It could be claimed for instance that he was a proto-constructivist, arguing the difficulty of separating the knower from the known and proposing that the knower is creative in the process, becoming what he referred to as a self or ego[13]. Shades of identity here without any doubt at all. He was also committed to the notion of an inseparable unity between mankind and nature – what Gregory Bateson[14] very much later, would come to call an ecology of mind. There was certainly more than a hint of systemicity in these ideas. There are two other Kantian notions that are central to my argument one relating to connections between knowledge and judgement, to which I shall return towards the end of this piece, and the three questions that he was to explore in his pursuit of what he termed the Canon of Pure Reason: And it to these questions that I now turn, although my purpose in so doing is a lot less ambitious than his exploration of "the ideal of the highest good as a determining ground of the ultimate end of pure reason."[15] Kant was much taken by the notion of happiness as the central theme of living where "happiness is the satisfaction of all of our desires, *extensively*, in respect of their manifoldness, *intensively*, in respect of their degree, and *protensively*, in respect of their duration".

In this context he mused:

What can I know?
What ought I to do? and
What may I hope?

As I interpret them in turn, these represent what can be seen as (i) an epistemological question, (ii) a practical ethical question, and (iii) an aesthetic question. I think that these domains resonate very strongly indeed with the four remaining essential learnings when they are explored as aspects of curriculum and pedagogy within a context of educational reform. Thus: Given the central aim as the search for identity, and the generation of meaning through such a perspective, then we can relate the remaining essential learnings to sound philosophical foundations:

Thinking fits logically into the epistemological domain (*knowing* would be even better!!).
Inter-dependency and *communication* are vital practical competencies aimed essentially towards ethical ends, and
Future, especially as a context for hope, is an aesthetic matter.

As posited earlier, and as now grounded in philosophical categories, *identity* (an ontological issue) is an emergent property of *thinking/knowing* (an epistemological issue) human beings who are *communicating* with others and with other things with

[13] Bronowski. J and Mazlish, B. The Western Intellectual Tradition: From Leanardo to Hegal. Harper and Brothers. New York. 1960
[14] Bateson, G. Steps to an Ecology of Mind Chandler Publishing Co. Toronto. 1972
[15] Kant, I. Critique of Pure Reason tr N.K. Smith Macmillan and Co. London. 1929.

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whom they are *inter-dependent* (both practical ethical issues) and where a focus on the *future* is vital as a prevailing context for understanding and action in fulfilling personal and socially virtuous visions (an aesthetic issue).

So what I am arguing is that it is *identity* that should be the key focus for (essential) learning (and thus for education, which is essentially a process through which we learn better how to learn) and that there are a number of ancillary foci which act as enablers. These should include an epistemological focus, a practical ethical focus, and an aesthetic focus – and the other four essential learnings as identified, provide precisely that.

The eagle has landed: Philosophical foundations can be clearly established to support the submissions being made for the systemic inter-relationships between the five essential learnings, as illustrated below (Figure 1). This is far from simply a matter of scholarly justification for a new conceptual framework: Rather it is schema that can provide a very sound conceptual framework for how we live our lives in practice. It is also a framework that provides a 'map' to help in the process of curriculum designs and pedagogical choices.

It is also of key importance to what was referred to earlier as 'epistemic appreciation', and to the role that worldviews (*weltanschauungen*) play in the construction of 'reality'. Each of us develops such constructions through particular perspectives that reflect certain (epistemic) assumptions that we hold about a whole range of philosophical dimensions that indeed include epistemology, ethics and aesthetics – even if, for most part, we are quite unaware of the fact that (a) we do so, and (b) just what those particular assumptions are.

The model or 'map' below can therefore also be seen as a framework for exploring what was earlier referred to as 'epistemic appreciation'.

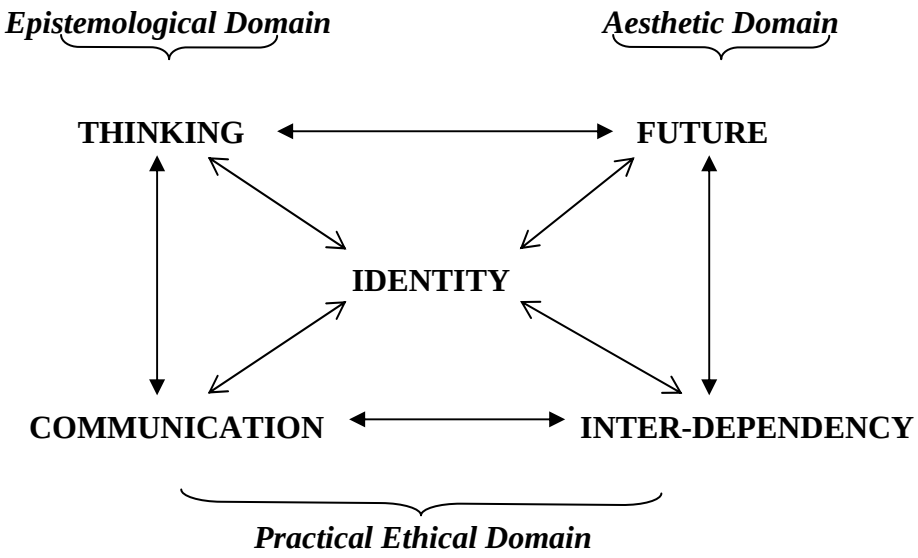

Figure 1. Emergent Identity: A Systemic 'Map' of the Five Essential Learnings

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It is vital here to remember the matter of change and dynamics within 'systems': A change in any one of the above domains can trigger changes in each or all of the others. As change is a constant within both 'society' and 'nature', then our identity is continually emergent. We are therefore continually engaged in the process of becoming [even when it is conceived in terms of 'recovering'] because there are constant challenges to our identity and to such aspects as our autonomy, our dignity, our integrity, and our vulnerability – four ethical principles which "are not only guidelines for the right of the individual to self-determination, but also for the protection of life and the private sphere of the person."[16]

Here then is the imperative for learning to live the 'good life': A life based on respect for, and commitment to, "the ideal of the highest good" and a well-being that is inclusive of all life on earth, including 'those who cannot speak for themselves – our as yet unborn children as well as non-human life forms.

Through our 'thinking' for instance, we should become increasingly aware of the nature and quality of the whole gamut of relationships that we have with other people as well as with the 'rest of nature'. It is through our thinking that we should come to recognize how inter-dependent we are both with 'society in general', and with 'nature as a whole'. In the process of becoming who we are, we need to think much more about how we can, and do, but should aim our influences on society and nature just as we should be much more conscious of the way we are profoundly influenced by our interactions with them. We must learn to come to treat other people and the rest of 'nature' with the respect that they merit and indeed, in the way that we ourselves would like to be treated by them (and it). We should become conscious of what we have to do to nurture our inter-dependency with the world in which we live, and how to minimize doing anything that threatens such inter-dependency, both now and, especially, into the future. In developing our personal visions for our own 'hoped-for' futures we must learn to appreciate how these might impact on the visions of others as elements within a general aesthetic for better tomorrows built on regard for "inclusive well-being."[17]

The point to be emphasized here is that we come to learn about ourselves essentially through our engagement with others and with 'nature': The search for self-identity is inextricably bound up with the search for the identity of 'the other': Change one and you change the other where any use of technology will greatly expand the potential scale of such change – in both positive and negative directions.

Through all of this critical questioning, we must also continually critique the very way we claim that we come to know about any of it. What we do in this life reflects what we know and how we know it and so knowing about knowing is certainly essential. In addition to concerns about the ethical and the aesthetic in the pursuit of our identity, we must include the epistemological. In developing our own identity we need to do all that we can to assure that the identity of others who are also in pursuit of the 'good life', is not threatened. This means that we have to assume a particular responsibility

[16] Rendtorf, J.D. and Kemp, P. (2000) Basic Ethical Principles: In European Bioethics and Biolaw. Report to the European Commission of the BIOMED ll Project

[17] Prozeski, M. (1998) The Quest for Inclusive Well-being: Ground work for an ethical renaissance. Inaugural lecture. University of Natal: Professor of Comparative and Applied Ethics.

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for the way that we come to know what might constitute such threats. We have to learn how to evaluate the value and belief positions that we assume and the impact that these might have on others about us.

Finally, we must learn to recognize that in a dynamic society we are constantly judged by others for the actions that we take, ultimately, in a responsible society, because of the ethical implications of those actions. Every act, even just an utterance, has ethical implications, and so every act of communication is not just a matter of 'sending and receiving' messages, but of ethical action – and that of course includes this and any other piece of writing that might, one day, be read by others.

There is so much more that needs be said about these matters, but in the interests of brevity, will not be further explored here. Such expansion is however worthy of our attention, and indeed not to engage in further discussions and debates and discourse about the essential learnings from these (and other) philosophical perspectives would be ethically indefensible: So let the discourse continue!

It would be quite indefensible of me however, to quit the discourse at this point without a final contribution to the particular matter of the process of 'learning' itself. It is surely essential for the matter of 'learning' to be included in any discussion of the 'essential learnings'.

In the final sections below therefore, I aim to attempt to connect what I have been at some lengths to describe above, with a model of learning that explicitly embraces 'critical reflection', 'epistemic appreciation' and the 'place' of worldviews. As such this will be a brief excursion into meta-learning – learning to learn. This will be but a brief introduction to a range of ideas that I explore in much greater detail elsewhere[18].

Learning for Critical Competence: A systemic model of the learning process

From the perspective that I have developed above, it useful to see learning *as that process through which experience and insight are transformed into knowledge (meaning) and disposition for responsible (meaningful) action.*

Learning is fundamentally a process of adaptation (or co-adaptation) through which we develop judgments about the actions that we then need to take in the world about us in order to better fit it (or fit it to fit us – or both at the same time). The touchstone for such learning is the quest for our own identity and the identity of others (and other 'things in nature') with whom (and with which) we are inter-dependent. Such is the extent of our inter-dependency, that while our search for self-identity is by definition a function of each of us as individuals, learning is essentially a social process – we learn with and through others with whom we are connected in massively complex networks of inter-dependent 'agents'.

We learn, in order to judge which actions we should take in any particular circumstance in which we are involved, through a process that involves two fundamentally different ways of making sense of what is happening in that circumstance, as the basis for our actions to change it (in some way or another). As a

[18] Bawden, R.J. (1998) The Community Challenge: The Learning Response. New Horizons 99: 40-59

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process it involves two quite different ways of knowing that can be labeled experiential (the transformation of experience into knowledge) and inspirational (the transformation of innate insight). With experiential learning, the aim is to immerse ourselves in concrete experiences, and to then make abstract, conceptual sense out of what we sense though such immersion. We then use such thoughts to generate plans for action as a prelude to finally taking those actions. These actions in turn create new circumstances for us that trigger the need for more learning; and so on. This process is typically portrayed as a 'cycle of learning' [19] - albeit one which constantly turns back on itself as a sort of recursive flux.

Inspirational learning in contrast, asks us not to immerse ourselves in the 'real external world of the concrete' (the sensual) nor to 'conceptualize the abstract' (the conceptual), but to 'disengage' from 'reality' and seek 'internal insight' through some form of meditation of contemplation (the spiritual). Both experiential and inspirational learning are important sources of knowledge (and thus meaningful action) and each complements the other profoundly. Both can also be complemented by propositional knowledge (theories as described by others) and practical knowledge (practices as demonstrated by others).

In addition to being able to learn about what we might refer to as the 'matter to hand' – the worldly circumstance that we are currently encountering – we can also learn about the process of learning itself (meta-learning) as well as about the particular perspective that we are bringing to bear on to both our learning and our meta-learning. This third level of learning we can call epistemic-learning.

In essence then, based on theories of 'cognitive processing'[20], we can (a) learn, (b) learn how to learn, and (c) learn about the perspectives (worldviews) through we learn[21] at least experientially – our prevailing 'windows on the world' as represented by out collective beliefs and assumptions. And we can do all of these from a position of critique – of being critical at each of these three "levels" of learning, about "our conduct in it" as well as about implications of interactions between them. The same might also be true about inspirational processes, although the logic is more difficult to establish for a domain in which conceptualization is deliberately eschewed!

We also need to learn about the role of emotions and of dispositions in learning.

In systemic terms we can translate all of these dimensions into a model that captures the following essence of learning: *Meaningful action is emergent from critical learning systems that are composed of experiential and inspirational subsystems embedded within a system of systems* (Figure 2 overleaf).

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[19] Kolb, D.A. (1984) Experiential Learning: Experience as the Source of Learning and Development Prentice Hall New Jersey

[20] Kitchener, K. (1983) Cognition, Meta-cognition, and Epistemic Cognition: A Three Level Model of Cognitive Processing. Human Development 26: 222-232

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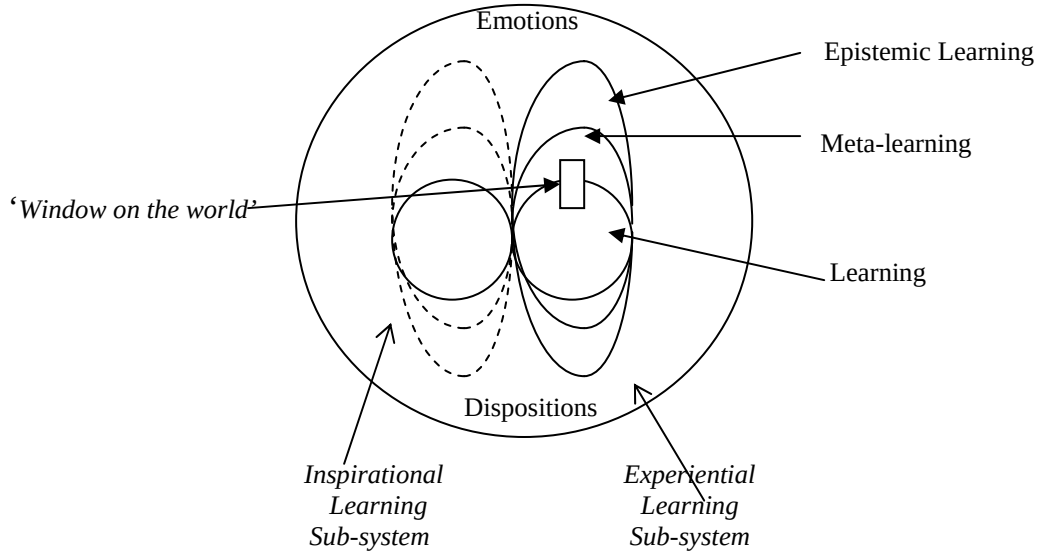

Figure 2: A Critical Learning System.

It is not difficult to construe both individuals and groups of individuals as being 'critical learning systems'. External experiences and internal insights are drawn upon in an ever-dynamic process of 'making meaning' and 'taking meaningful action'. Such learning systems are self-critical in that there is also continual engagement with meta-learning and epistemic-learning processes and questions to do with how the learning is occurring and what epistemic assumptions that could influence the outcomes, are being held. Emotions and dispositions are both features of the internal ambience of learning systems, and these elements, and their roles in the dynamics of the learning system, also need continual critical review.

The central focus of the learning system is the search for identity in the context of an ever-changing world of experience. The system has the 'capacity to think', and to 'envision futures creatively'. As a whole system it can 'communicate' with its environment, with which it is 'inter-dependent' while its equally inter-dependent component elements also communicate with each, with the system at large, and with the environment beyond.

Scientific reasoning is crucial for the process of experiential meaning-making just as competencies in the performing and visual arts are crucial for the inspirational process. Painting, poetry and music provide important media for the latter while objective logic and clear thought are crucial for the former. Most importantly, all of the elements above are interconnected and indeed inter-dependent with each other. We are talking 'wholes' here and philosophical assumptions of holism, and this leads me to conclude the piece on a cautionary note.

While the argument has emphasized the advantages of the development of systemic perspectives in our quest for identity, there are those who argue that such perspectives are quite difficult to learn[22]. Pedagogies to encourage the development of systemic

[22] Salner, W.W. (1986) Adult Cognitive and Epistemological Development. Systems Research, 3(4), 225-32.

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competencies demand close attention to experiential and inspirational processes – processes far removed from the still prevailing conventions of propositional teaching and practical training.

The emphasis within curricula now should be on the quest for identity and on the encouragement of capabilities that enable that quest to be fulfilled and which reflect distinctive philosophical foci of epistemology, aesthetics and practical ethics. These foci will be embedded within the pedagogical processes and thus it will not be a matter of teaching ethics for instance, but of learning to be ethical.

The key strategy will be discourse and, through conversations, discovering ourselves and our place in the world about us, through a vital sharing of our experiences in it and our critical collective reflections on them. Paradoxically perhaps, we will also need to disengage from 'the realities about us' and focus inwards on our intrinsic insights. Now we need to share not our concrete experiences or our conceptualizations of them, but our dreams and visions and insights born of spiritual introspection. There can be no more important role for the visual and performing arts than to provide forms of expressions appropriate to such insights.

Through our engagement with critical learning systems, we can also learn critically about the processes of learning that each of us practices, as well as about the worldview perspectives that influence our 'knowing' so profoundly.

And we can learn about change for the better and what it is that we have to do to achieve that within a context of inclusive well-being.

Tentative Summary and Conclusions

In this brief article I have attempted to explore the Essential Learnings from a systemic perspective. I have made a case, grounded in philosophy, for recognizing the centrality of identity. I posit that it is emergent through our engagement with a number of particular activities that themselves are also grounded in philosophical domains – of epistemology (thinking), of aesthetics (futures), and of practical ethics (communication and inter-dependence). Finally I have presented a model of learning that illustrates systemic perspectives in action. In this case it is indeed the medium that is the prime message.

It is concluded that a strong case can be made for exploring the five Essential Learnings from the foundational perspectives that have been presented here and that this exercise should reveal some very practical implications for appropriate pedagogies as well as important concepts and theories.

In learning to walk the talk of the Essential Learnings, it is vital that they themselves be used as the 'map'!

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