

# Literacy in a Complex World

by **Tracy Westell**

**In January 2005, when I was planning an Appreciative Inquiry workshop with Jean Cannon Unda, I read Peter Calamai's piece in the ABC CANADA newsletter, *Literacy at Work*.**

The article was an excerpt from a speech Calamai gave at the Literacy and Health conference the previous fall in Ottawa. Calamai is a journalist and long-time supporter of literacy in Canada. His speech was hard hitting and many literacy workers, including myself, took offence at the criticism he levelled at us. He tempered his criticism of literacy programs with an understanding of the low levels of funding ("cash-strapped literacy providers") and the lack of "quality standards." But he claims the needle that shows a reduction in "the number of adults whose literacy skills fall below Level Three" hasn't moved in 17 years of literacy funding and this cry will only get louder with the results of the new Adult Literacy and Life Skills (ALL) Survey.

Reading about complexity theory helped me to understand Calamai's viewpoint. He sees literacy education as a simple input-output problem and that, somehow, we literacy practitioners had been applying the wrong inputs and, consequently, had not made the gains in literacy that we, and the government, had hoped for. In the last 30 years, complexity theorists have begun to realize that many of our natural and man-made systems are not created out of a unilinear cause-and-effect paradigm but are complex adaptive systems that are created out of multiple interactions. These interactions include feedback and feed-forward loops, sensitivity to initial conditions (the butterfly effect), fractal design (repeating iterations of patterns that are endless) and self-organization. Complexity science is now influencing many non-scientific fields including education, urban planning, psychoanalysis, policy development and architecture. Phelps and Hase, in their article "Complexity and Action Research", explain the implications for the social sciences in this way:

First, it places an increasing stress on self-organization and a realistic awareness

that sociological phenomenon often cannot be forecast. Secondly, the theory recognizes that all living organisms are self-steering within certain limits and that their behaviour, therefore, can be steered from the outside only to a moderate extent. Thirdly, complexity theory highlights the continuous emergence of new levels of organized complexity within society (p. 508).

We are living in a policy landscape that is based on an audit culture, a culture committed to Newton's view of the world, that for every action we take there is a reaction (or in social management terms, an outcome) and that those reactions can be used as measures of performance of the agent initiating the action. In a closed system, such as a refrigerator, we know that we can put freon into a set of tubes,

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provide some source of power generation and get cooling. If we don't get cooling we can examine all of the inputs to determine what isn't working, fix the input and get a satisfactory outcome. In adult education, checklists, standardized tests, matrices, etc., are all put into place to assess if our system of adult education is working, all predicated on the erroneous assumption that we are working with a cause-and-effect system that can be measured and graded. Furthermore, society, within which adult education is embedded, is also a complex system and the number of adults whose literacy skills fall below Level Three is a social fact that is multiply determined by diverse factors that include, but go far beyond, our education system, including economics, family, health and individual differences, to name a few. To call on adult literacy programs to unilaterally move those statistics is to shift the burden onto a minor player in the system as a whole. This is not to say that literacy programs should not be held accountable for what we do, but rather to insist that we not be expected to make up for the ills of a society that result in such large numbers of Canadian adults with low literacy levels in the first place.

Contrary to Calamai's doom-and-gloom view of the literacy field, I believe that learners and practitioners have accomplished much over the last 17 years. I'll only mention three things—all hard to measure:

1. We understand that learning is complex and that no one system will satisfy all learners'—or even most learners'—needs.
2. We understand that we can help adults to learn, but that there are many other factors that learners and practitioners have little control over that work against and for the success of that learning.
3. We understand that progress in learning is sometimes unpredictable, not easy to quantify and often connected to the relationships and community in which the learning takes place.

Tim Blackman writes:

Performance management has been described as one facet of the audit culture that 'relies upon hierarchical relationships and coercive practices' (Shore and Wright 2000, p. 62). It involves the use of

information centralized in the hands of the few to manage the performance of the many. A series of problems follows from the coercive accountability often associated with this paradigm, from 'implementation gaps' to the manipulation of performance indicators and frustration about being held to account for the effects of external factors on internal performance.

Complexity science tells us that it is very difficult to predict outcomes when dealing with complex systems. Blackman puts forth a vision of policy development and public management that moves away from the audit culture paradigm toward a culture that is based on dialogue, innovation, transformation and acknowledgement of the environments within which organizations are (usually) struggling to work.

In Canada, literacy policies have been developed with directives, outcomes and performance indicators that, if not met, would jeopardize an organization's funding (this is not necessarily stated explicitly but is implicit in the whole culture of the system). So coercion is embedded in the system.

## Canada lacks an adult literacy system

As the provincial snapshots reveal, adult literacy is a patchwork, often charity-based, remedial "system." The patchwork includes programs run by community-based organizations, school boards, community colleges and workplace programs run by business and unions. Some programs focus on family literacy, youth or specific language groups. There is very little "system" to support students moving from one program to another, from basic literacy to adult basic education or upgrading, or to job or career training. Very few programs across the country have adequate or stable funding.

Over the last ten years, changing measures of literacy have created a bigger "literacy" problem. In 1989, the National Literacy Secretariat asked Statistics Canada to profile Literacy Skills Used in Daily Activities (LSUDA). The survey was based on the idea of literacy as a continuum rather than something people did or did not have. LSUDA concluded that 7% of Canadians couldn't read at all, that 9% were barely literate, and that 22% of adults were not literate enough for success. The first IALS study (Statistics Canada, 1996) ranked adults at various levels of proficiency: 22% of Canadians were at the lowest level, 26% were at level 2, and proposed that both levels would benefit from instruction. At the same time resources for literacy programs largely stayed the same. Programs were given no increases to enable them to meet this growing need. Awareness of the complexity of adult literacy issues and of the importance of alternative

approaches continues to be limited. Access to programs is inadequate: less than 1% of Canadians ranked in levels 1 and 2 (Statistics Canada, 1996) attend adult literacy programs.

The provincial and territorial snapshots reveal that:

- Most practitioners work in positions that expect them to assume a great range of responsibilities with few supports.
- Practitioners in many parts of the country work part-time for relatively low pay.
- Programs in many parts of the country rely on year-to-year grant funding.
- Many practitioner networks rely on project funding and must recast their work each year as a special project rather than as ongoing work.

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This excerpt is from:

Horsman, Jenny (2006). A National Snapshot. In Jenny Horsman and Helen Woodrow (eds.), *Focused on Practice: A Framework for Adult Literacy Research in Canada*. Vancouver: Literacy BC, 85.

## Creating sensible policies

How might applying the principles of complexity theory shift literacy policies so that they are more flexible and responsive, more democratic and more innovative?

- **Do not tie simple outcomes to complex systems.** Better jobs may not be (and I would suggest rarely are) a result of better literacy skills; fewer gun deaths are not the result of more recreation centres. However, the combination of rec centres, literacy programs, health centres, tenant groups, job training, etc., may result in better jobs, fewer gun deaths and more democratic action.
- **Acknowledge and encourage (rather than silence) the natural feedback loops in the system.** Create opportunities for dialogue among learners, practitioners, bureaucrats and politicians.
- **Develop a set of guiding principles for literacy programs** that provides some limits and parameters but **promotes organizational sensitivity to local conditions and innovation:** complexity theory says that systems are self-organizing.
- **Do not tie funding solely to literacy performance.** We need benchmarks to determine an organization's performance but to isolate one complex system from the many complex social systems within which it is embedded and then mark its performance is frustrating and not representative of how the organization is performing. "There has to be an alignment between the aims of policy and the capacity of organizations to deliver, and this includes considering the fitness landscape which each organization faces" (Blackman).
- **Encourage innovation.** Above all, "organizations need to have the autonomy to initiate innovation rather than be constrained by predefined performance targets" (Blackman). Literacy practitioners in Canada have no time for reflection and innovation because they are too wrapped up in servicing the audit culture. Practitioners are the holders of a vast set of experiences and have learned much from their practice: they are truly the potential generators of empirically gathered knowledge about learning but have had no acknowledgement of this and no time to document it.
- **Strengthen the infrastructure of the field.** "Structure arises dynamically from agents' patterns of common or coordinated responses to given conditions, repeated over time" (Blackman). Adult literacy is a very small part of the government's responsibility. What would happen if, as an experiment in policy development, government allowed the field to structure and monitor itself with help from government in terms of field development, guiding principles (developed with the field but partially monitored by government field workers) and financial accountability guidelines? I would suggest that the field might have a moment of disorganization and incredulity but it would soon start using the excellent infrastructure already in place to organize itself and continue in the ever-changing and challenging project of providing the best education possible.
- **Find meaningful ways to document adult literacy.** Acknowledge that the whole is greater than the sum of the parts: "[C]omplex open systems have evolutionary potential. These systems cannot be understood through analysis—through reduction to their component parts. Neither does the reductionist principle of causation apply. Complex things have properties and causal liabilities which do not reduce in a hierarchical sense—things at different levels can recursively interact. Emergence is crucial..." (Byrne). Some things are not measurable and perhaps those are the most important things. Certainly, complexity science tells us to take note of the unusual, those things that emerge out of the pattern. Let's document our work in a meaningful way and resist the temptation of measuring the immeasurable. ■

**Tracey Westell** has left literacy work.

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