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# Enabling Life-long Learning @ Work and @ School: What we would do if we meant it?

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Presented at ELSIN, June 2006  
Oslo, Norway

My intention in this presentation is to exhort those interested and involved in learning styles research or application to greater aspirations, larger profiles and more socially relevant impact. The present groundswell of demographic and therefore economic change can be used to our advantage in achieving those aspirations. Careful attention is, of course, required to correcting the errors and omissions of the past decade of styles research and application. As the theme of this 2006 ELSIN Conference is lifelong learning, this review presents the current and potential contribution of styles to lifelong learning in four sections:

1. Rhetoric in learning styles
2. The rub: what is not working in learning styles
3. New realities; new opportunities for learning styles
4. Redesign & reboot for learning styles

## Learning Styles Rhetoric

Learning styles as a discipline grew out of the study of individual differences in cognition (see, for example, Cattell, 1971<sup>i</sup>). Since then researchers, writers and practitioners in many areas have observed and attempted to manipulate style and task attributes. For example, cognition researchers study trait stability (i.e. field dependence); educational researchers study adult learning methods under varying performance conditions; training & development practitioners attempt to improve product efficiency by task individualization and management researchers study the effects on performance of varying task conditions, inputs and supports. The study of styles is a broad field with a great deal of intuitive appeal. Attention to learning style offers the possibility that not all of the observed variability in performance is due to innate task relevant abilities or even more immutably, a generalized ability such as general intelligence ‘g’ factors. Unfortunately, the reality of learning styles in application has not often met the expectation.

Over the years, researchers and writers have made a range of claims for the application of learning styles. Improved efficiency in learning<sup>ii</sup> and in work production on the job<sup>iii</sup> by matching style to task have been the principle claims. Claims are also made for better attention, time on task, concentration and focus across interruptions. Better retention in school and in work positions has also been expected. All this is supposed to lead to measurably better outcomes: in exam performance and in on-the-job performance.

## The Rub: why the rhetoric is not working in reality

The preponderance of critical opinion is that learning styles have not delivered on their promised claims<sup>iv</sup>. The most significant limitations in the field are conceptual confusion and poor research design that compromises the validity of research conclusions<sup>v</sup>. However, a number of structural phenomena also work to reduce or

diminish the potential for learning style effects at school and in the workplace. These barriers also prevent action research on the subject. For example, there is little or no recognition of style differences in how schools or workplaces are organized and operated. Well differentiated voucher school systems, targeted private school systems and specialized workplaces, particularly those focused on the arts, are the most likely locations to find real demarcation by learning or cognitive style. For the most part however, there is considerable organizational press for conformity in public schools and in most workplaces. Neither the average school nor work experience is organized from the student or worker point of view, indicating that individualization of their experience is not generally valued. Most learners and workers cope with environments designed and operated for managerial efficiency, and for those that do not, the admonishment to “Try harder,” is still considered good advice by too many parents, teachers and supervisors.

Life long learning itself appears to be a rhetorical luxury for those with advantages of time, money, confidence, awareness and responsive environments. Those who most need adult education are the least likely to get it. In Canada, those with university educations are five times more likely than those with high school educations to participate in adult education programs<sup>vi</sup>. Due to a number of barriers (time, money, lack of interest, lack of confidence, lack of awareness, unresponsive learning environments) participation levels for less educated learners have not changed in the last five years leaving them even less equipped to participate in the transformation of western economies to knowledge-based production. Even on-the-job training is provided disproportionately to skilled workers leaving least skilled stuck in a low skill/ low wage jobs.

These patterns in lifelong learning are counter-intuitive given that most governments recognize that a country’s overall competitiveness depends on a better educated workforce. A number of new realities are converging that will force governments to become involved, opening up opportunities for more intelligent application of learning styles in the delivery of real individualization in learning and work environments.

## **New realities, new opportunities for learning styles**

### **New Reality #1: The effect of aging populations on global public finances**

By the middle of the century (2050), the world’s population will reach nine billion from the current 6.5 billion. The median age will be 38 years, a decade older than today. The immediate effect will be to shrink the proportion of the population in the active labor force compared to the proportion collecting age-related benefits. This misbalance is most exaggerated in industrialized countries. Without significant changes in fiscal stance or policies (i.e. state pension and health care spending), most of the 32 industrialized nations will lose their investment grade rating for government bonds by 2050<sup>vii</sup>. Junk status government bonds raise the risk of government default and resulting economic chaos.

Countries attempt to rebalance their workforce numbers by trying to attract working age immigrants, preferably those with society-relevant skills. There is increasing global competition for new recruits at all levels of training and experience<sup>viii</sup>, including among professions, in all workplaces. Until the 1980's most industrialized countries were self-sufficient in producing enough professionals to serve their own societies. This is no longer true. The increasing difficulty attracting professional class workers from within home country populations is evident in the elaborate measures undertaken by public and private employers in western countries to recruit professionals from abroad. This competition will only grow fiercer as the working population numbers dwindle with retirements among the Baby-Boomers in North America and Europe.

## **New Reality #2: Growing disconnect between willingness to pay and demand for services.**

Faced with this growing misbalance between the active labor pool and retirees claiming benefits, governments are increasingly pressured to contain costs across all government services, particularly in pensions and health care. No modern government has successfully made the case for increased taxation to cover these expenses, so costs will be driven down by other available means including coverage claw backs and redefinition of need.

Simultaneous with this contraction in willingness to pay for services, there is increasing demand for services. Across the world we now expect diagnostic imaging, medical laboratory work and GPS systems support anytime and all the time. In the current parlance, services are expected 24/7/365. The sources of this demand are many and growing: clients/ patients; technology; social and economic need for increased productivity.

However, regardless of the demand, and regardless of their role in producing that demand, workers, especially professionals, are not willing to work shifts that provide the demanded 24/ 7/ 365 services. Limits to hours worked are a central point in union negotiations and fee schedules across North America and Europe.

The market-response to this growing gap between demand for service and dwindling local supply has been to out-source. At the lower end of the wage and skill scales, outsourcing has been well established for at least 25 years. Since IT connectivity was overbuilt in the dot.com boom of the 1990's the speed of this transformation has accelerated. Outsourcing service functions to less expensive off-shore sources is increasingly common in North America. Increased physical mobility, but more importantly growing electronic communications bandwidth and application-to-application connectivity has made all points on the globe accessible, reliable and proximate. So far, the outsourced service functions tend not be mission-critical and are those easily supported by communications technologies. For simple functions (i.e. call centres, bookkeeping, IT and HR) outsourcing has produced 20% savings over a 5 year period. For system support functions such as supply chain management, outsourcing can produce savings as high as 80% over North American costs. With this kind of economic

result and with the rich educational heritages in India, China and Russia it is inevitable that outsourcing from industrialized countries will climb the skills ladder<sup>ix</sup>.

### **New Reality #3: The ‘plugged in’ generation**

The changing, primarily electronic, media make new cognitive demands. Average media stimulation thresholds are higher with more simultaneous action, faster screen changes and multiple sound tracks. Multi-tasking is routinely required (i.e. monitoring multiple screens with a diversity of data streams). The electronic media interface has effectively replaced a number of older routine information sources. We now use our cell phone displays to see the time; we use *Wikipedia* for instant reference, and increasingly ‘real’ electronic fictions (i.e. *Second Life*) have replaced older diversions into imagination. Furthermore, everyone in the world has access to the same, increasingly public, information bases, leveling the playing field for innovation and entrepreneurship.

### **New Opportunities for Learning Styles**

Collectively the direction of these emergent vectors is to accelerate social change. Global sourcing for capital, goods, services and labour will continue to expand and be exchanged rapidly in response to market conditions. International pressures to reduce barriers to real free trade in capital, goods, services and labour will continue and enterprising private and public sector organizations will capitalize on facilitating this phenomenon by providing guarantees for appropriate training (i.e. transparent accreditation processes) and expertise (i.e. transparent licensing). World economies already require competitive HR strategies. For all economies, the competitive advantage will come from educating their indigenous workforce, all of it, not just the top third. Anyone, anywhere can set up a website, access the world, demonstrate a needed skill and using the same infrastructure, supply that skill to the global marketplace.

The growing competition for active, skilled workers will bring about a change in power structures both at school and at work. Workers and students will increasingly be perceived as the untapped competitive edge for societies, economies and companies. Their concerns, and their individual capabilities, will drive increasing individualization. A growing sense of ‘consumerism’ both at school and at work will accelerate this change in attitude. Students and workers are less willing to tolerate uncongenial tasks and environments, less willing to put the needs/ desires of the workplace or school room before their own. Asynchronous globally accessible databases and applications mean that real individualization can be made available almost anywhere, anytime and for anyone.

Governments and industry will grow much more interested in HR retention than they have been as they realize that retention is more cost effective than constant recruitment and training particularly for those functions not suited to outsourcing.

What will newly empowered students and workers demand? What will make workplaces more competitively attractive? Three trends are already apparent. The first of these are scope changes at school and work that result in more integration across

relevant disciplines and between learning and application. Secondly, the demand for adaptive education and training is already apparent. This includes ‘just in time’ training, professional decision and process support, early and continuous paid internships and routine sabbaticals from school and workplaces for individual refreshment and refining. A third perceivable trend is the growth in adaptive accreditation (i.e. at point of foreign recruitment), credentialing (i.e. time/ place limited) and licensing (i.e. focal practice restrictions).

All of these trends present real, and current, opportunity for learning styles professionals to design, implement and evaluate real individualization at school and at work as a response to the very real HR pressures on governments and industry. Are we ready to respond to the opportunity?

## Styles Redesign & Reboot

### **Need for a new type of professional: “Style Wrangler”**

The professional job advertisements have already indicated some awareness of this opportunity. There are increasing numbers of positions available that include the following job description: *Knowledge translation in work/ life optimization*. What that actually means is the ability to rigorously pick out the useful bits from a discipline and work with engaged clients to implement and adjust applications through constant progress & outcomes evaluation. Do we know what to design in learning styles applications? Do we know how to capitalize on this opportunity?

### **What Styles Wranglers Should Design**

There are at least three fruitful areas for those interested in learning style to pursue. The first is simply improving the assessment of learning style and task requirements. Real individualization in learning style requires self knowledge in relation to task environment analysis. What are the most efficient and effective means to make valid self knowledge about learning style available to all learners and workers? How can learners and workers be assisted in doing accurate, real time task and environmental analysis?

Secondly, more needs to be known about style equivalencies. Is it true that styles are value-free, that it doesn’t matter what the style is as long as there is an efficient relationship between style and task. That could mean a style matched to task or environmental demand or mismatched in a planned dimension (i.e. to produce style flexibility, or induce creativity or prevent boredom). Knowing about style equivalencies will allow better individualization within a shared learning or workplace. We need to have more robust responses to differential style capacities beyond noting surface variances.

Style wranglers also have large opportunities to facilitate task analysis projections. What will the workplace demands be in 5 years; in 10 years, by mid-century? How will learning environments evolve over those same time horizons?

### **Key Starting Points**

Do Styles Wranglers know how to capitalize on these opportunities? The uptake capacity is not at all clear and certainly not yet demonstrated. The academic base of most current learning styles wranglers should be an advantage as that environment supports at least limited entrepreneurship and positively rewards disciplinary application to real world problems. Learning styles champions need to take ownership of the opportunity and provide leadership to government and industry.

We have a choice to make as a discipline in learning and cognitive styles. We can watch the world unfold as it will and provide our learned observations after the fact. Alternatively, we can assume the responsibilities of leadership, knowledge translation and stewardship of our knowledge base and expertise. I believe that we have both a moral and an intellectual debt to the societies that support us, so in my view we have only the second path to follow. But how best to do that, especially as most of us have more experience as academics than wranglers?

Mastery and adroit application of the standard leadership tools is required. These tools will include strategic planning, foresight analysis, business case analysis, consensus development, program planning, funding as well as formative evaluation, and operative program adjustment. Most of these leadership tools are familiar. One, which is not familiar, foresight analysis, may be the most immediately useful to new learning style wranglers. Foresight analysis is a developing discipline most often used as an improvement on strategic planning (see, for example, Curry 2004<sup>x</sup>). It is the systematic attempt of looking into the longer-term future with the objective of identifying emerging change factors likely to influence the target (individual, group or organization) and yield the greatest potential impacts. Change factors are broadly sought including the source areas of research (best practice, evidence syntheses and innovation), technological development, situational or context change, trend or pressure. Foresight information provides a basis for choice and action that can become strategic, as opposed to reactive, in relation to identifying and achieving a preferred future. Foresight tools develop better understanding of the integrative context (vertical and horizontal), challenges and opportunities that the client (individual, group or organization) will have to cope with looking ahead.

Style responsive programming can provide a 'competitive edge' to attract and retain students/ workers. Style analysis provides an analytic response to evolving cognitive demands including information pacing and electronically mediated interaction. Style also provides an organized, auditable direction for application of individual values. Style wranglers can capitalize on these opportunities also. Opportunities need not be local given the globalized search for new ideas and skills. Do your own preferred futures work. Figure out what you would want to see happen in lifelong learning for students

and workers. Once that is clear in your mind, it will be a lot easier to make it clear for others. The foresight analysis discipline will enable you to develop a consensus on how act together to make a preferred future your real future.

Take initiative. Come to decision makers with both an opportunity analysis and a proposed solution process. Include process and outcome evaluation. Begin and sustain disciplined, application focused, communication about the utility of style considerations in life-long learning. That communication must be both ‘push’ (initiated by the source: you) and ‘pull’ (available on demand from interested potential clients and users). Ongoing communication targets will include our Style Wrangler peers, our employing organizations, our students, our potential partners in these ventures and our potential buyers (governments and industry). Effective communication with all these sources will allow style wranglers to perceive opportunities as they form and to track their development and evolution. Unexpected things can happen quickly, even with the best of intentions and hard work. However, fortune favors the prepared. Now is the time for learning style wranglers to create the future they would prefer for lifelong learning.

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