



People development in a knowledge economy: Working paper No. 2

The convergence of e.learning and knowledge management:

Fusion or confusion?

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1. Introduction

The first paper in this series drew analogies between coal, as the fuel which drove the first Industrial Revolution and knowledge as the energy source and driving force behind today's Knowledge Economy. We also spoke of knowledge as the ultimate in renewable energy since in use it is not consumed but grows and develops. The faster the rate at which a knowledge-intensive organisation burns this fuel the more rapidly the stocks are likely to grow.

This apparent anomaly in the laws of nature is what we call organisational learning. As knowledge becomes an ever more important commodity then those organisations that stand out from the crowd as *Learning Organisations* able to cultivate harvest and deploy knowledge most effectively will be the ones who also stand out from the crowd as successful.

However, a key difference between knowledge and coal as energy sources to drive an economy is that the value of knowledge is determined not by its weight but by its relevance. If knowledge is a primary energy source for our business we can't just throw any old shovelful on the fire. Data mining needs to be conducted with far more precision than coal mining. Each little nugget of knowledge down in the fuel store will therefore fluctuate in value over time. It may be more or less worthless one day and priceless the next, or vice versa.

The ability of knowledge management systems to identify rapidly the most relevant knowledge and deploy it to assist with the execution of current tasks in hand can lead to impressive improvements in operational efficiency. Data originally generated by an unknown colleague in India may be that last piece of the jigsaw necessary to reach an optimal business decision in New York.

In the not too distant past the chances of retrieving relevant information from a filing cabinet in the next office may well have depended on the serendipity of someone remembering where a particular document was stored and what it contained. However, the contribution of knowledge management to individual and organisational learning depends as much on human factors as on the power of the software tools at the organisation's disposal.

Speaking at the KM Europe 2001 Conference in Brussels, Larry Prusak of IBM opined that successful knowledge management depended 30 percent on having the right tools and 70% on having the right people properly committed and trained to get the best out of them. It is the human contribution to knowledge management processes that gives it that uniquely self-multiplying characteristic as an energy source for knowledge-intensive organisations.

It is the process of knowledge sharing that makes it knowledge an economic wonder-fuel; the more you burn, the more you learn. However, in the corporate context knowledge sharing has yet to become as natural a part of the corporate culture as keeping a close eye on those numbers that follow more logical mathematical rules and lead close to the bottom line.



People development in a knowledge economy: Working paper No. 2

Some clues as to why may lie in the very fact that in an age when we are becoming increasingly conscious of energy as a finite resource we have a source of corporate energy that both appears to be infinite, and follows a different kind of logic. In childhood maths lessons the earliest attempts to help us understand the concept of division would be likely to have gone along the following lines:

Question: "If Jane has six apples and shares them equally between herself, John, and Susan how many apples does each child have?"

Answer: "Two "

However, if Jane has six "knowledge objects" and shares them equally with John and Susan then each has six.

Division becomes multiplication. To share is to multiply.

(" To share is to multiply" was adopted as the guiding principle for an EU-supported research project, [KALiF](#) that helped to facilitate knowledge sharing among other projects within a thematic research programme whose objective was to; *developed and experiment with DT-based tools, processes and infrastructural means that support and enhance e-learning capability hand of e-learning effectiveness of individuals and organisations*. See also "[Knowledge and Learning for a New Europe](#)", Kelleher, van Heijst, Haldane, & Kruizinga electronic version downloadable from. The experience gained in this project will be further referred to below)

If, in other walks of life, sharing is seen as a process by which a person diminishes their own possessions by dividing them amongst others it is, perhaps, understandable if knowledge sharing does not always come naturally. We are conditioned in every other aspect of our lives to using "proper" mathematics and to experiences which tell us that sharing means giving something away. When sharing our knowledge we can achieve what we would always have understood to be impossible; that we give something away yet still we keep it. However is this really what guides most people's attitudes toward sharing their personal intellectual property? We are also conscious of the nostrum "knowledge is power".

Long, long ago when many of today's high school students were just toddlers, e.learning and knowledge management were in their neolithic period and it was rather easier to become one of the big beasts in the jungle by hoarding knowledge. Keeping one's own good ideas to oneself, borrowing the bright ideas of colleagues repackaging them and thereby building one's own credibility on the backs of others has often been credited as being a personal success factor, especially by those who would claim to be the donors of wisdom exploited by others.

There are still plenty of dinosaurs out there, however and although they may be a bit more conspicuous if they crash into you it still hurts. Culture changes continue to move much more slowly than technological changes and since, elsewhere, our experience is that if we give away our apples we don't have them any more human beings may always approach knowledge sharing with a certain amount of caution.



People development in a knowledge economy: Working paper No. 2

Hoarding knowledge to build one's own power base rather than distributing it to power the organisation may be less easy to achieve and less easy to disguise than it once was, but it is still possible and it still goes on.

2. Convergent functions of ICT tools

Such a strategy should be less easy to implement now that every corner of the corporate jungle is served by an information highway and more and more dialogue takes place in an electronic collaborative working environment. We have a bit more visibility, transparency, and much better retrievability.

In order to reflect on how e.learning and knowledge management are converging and the implications of such a convergence it may be helpful to reflect on the particular learning processes that each of these two disciplines has hitherto been associated with.

Ever since the Stone Age the human race has engaged in two modes of learning;

- ✚ *Education/Training*, deliberate and purposeful interventions intended as a response to a perceived need for additional knowledge/ skills.
- ✚ *Experiential Learning*, an accumulation of knowledge/skills gained in the course of performing the necessary tasks required for day-to-day living.

The application of good knowledge management practice can significantly enhance the experiential learning process, particularly where some emphasis is placed on effectively and systematically engaging the whole organisation in knowledge sharing and the gathering and dissemination of lessons learned. In its earliest manifestations e.learning, on the other hand, has offered a technology facilitated and supported means of providing training and education.

Comparatively recently, however, it has become possible for e.learning for work to be much more closely integrated with the day-to-day tasks in hand. This trend is especially prevalent in situations where "just-in-time" training is required and is likely to become even more firmly established now that customised, highly company specific, content has become a realistic and cost-effective option through the development of authoring tools that make content origination by in-house subject matter experts a highly practical proposition.

Education and training providers are also themselves responding by utilising technologies to prepare learners more appropriately for a world where meta-competencies such as problem-solving, creative thinking, analytical skills, and learning-to-learn skills take precedence over committing to memory a corpus of knowledge that has an increasingly short half-life.

Many universities colleges and training providers are adopting methodologies such as problem-based learning and online collaborative learning to help inculcate such capabilities.

There is growing interest in the use of technology as a means of providing interactive business games and simulations. For example the "KITS" project, (<http://kits.edte.utwente.nl>) part-funded under the EC Fifth Framework Programme



People development in a knowledge economy: Working paper No. 2

Action Line "Advanced Training Systems" is building KM QUEST an interactive business game/simulation to help develop competence in knowledge management.

One-dimension therefore of the convergence of knowledge management and e.learning could therefore be described as the fusion of two hitherto quite distinct modes of learning; experiential learning and education/training. However, there is also a second process of fusion in progress. This is the fusion of the processes and systems used to deliver e.learning and knowledge management.

Writing recently in the ASTD online journal "[Learning Circuits](#)" Tom Barron summarised this particular process of fusion in the following terms;

"Take an e.learning course. Chunk it into discreet learning bites. Surround it with technology that assesses the learners' needs and delivers the appropriate learning nuggets. Add collaborative tools that allow learners to share information. What do you get? Something that looks a whole lot like knowledge management"

Barron goes on to describe a third need for fusion; that of the current divisions of managerial responsibility where one group of people is likely to be driving knowledge management and a second group e.learning.

It might have been interesting at this point to indulge in some discussion as to whether

3 Fusions = Total Confusion.

However, there is a possible further process of fusion that could be added to the equation. It has been argued above that the process of sharing in most aspects of our lives involves some elements of altruism and generosity in that sharing usually involves depriving one person of some part of their property in order to pass it on to someone else. Furthermore it was suggested that perhaps for this reason the possibility that one person's knowledge might be used for the benefit of someone else, perhaps even at the expense of the previous "owner" could lead to an understandable reticence among prospective knowledge sharers.

Most of us will have been fortunate enough to experience face-to-face learning experiences where the interpersonal interaction peer to peer and tutor/trainer/facilitator to peer provided a vivid demonstration of the "to share is to multiply" principle where the process of learning enabled everybody's knowledge to grow to mutual benefit. These learning experiences would typically have been gained through some education or training event detached physically and psychologically from the workplace. Will those experiences, that a learning taxonomy would classify as education or training and are now to be broken down into bite-size chunks and integrated more carefully with experiential learning, bring along this social and interpersonal dimension of learning that can lead to uninhibited and productive knowledge sharing? Or will our suspicions be confirmed that in an environment where personal ambition is a positive driving force will the "knowledge is power nostrum prevail?

3. Conclusions

So having described at some length fusions and confusions that the convergence between e.learning and knowledge management can give rise to, are there any solutions around?

Firstly, let us address the fusion between experiential learning and education/training and the consequence for reassessing managerial and organisation structural issues that might arise when groups of people previously designated as responsible for either e.learning or knowledge management find themselves converging upon, and potentially fighting turf wars over, a more integrated organisational learning function.

In the KALiF project, briefly alluded to above, knowledge sharing was seen as being supported by two infrastructures, an IT infrastructure and a people infrastructure. The human factors component of both knowledge management and e.learning policy and implementation would appear to sit naturally within the human resource management function. However Barron highlighted possible issues regarding IT infrastructures. Knowledge management systems, learning management systems and associated content having been established originally by different people with different objectives suddenly find the key subset of these objectives being addressed by convergent solutions. Ultimately it is to be expected that the convergence will be met by totally integrated software solutions. This will not happen overnight nor will organisations be over-enthusiastic at the thought of declaring existing systems prematurely obsolescent.

There are options other than calling a halt to the progress that the convergence of e-learning and knowledge management represents. The imminent arrival of the SCORM standards for learning management systems allow for content to be assembled from Sharable Content Objects to meet precisely defined learning needs. This potentially allows for a whole range of "knowledge objects" residing in the knowledge management system to be tagged as "content objects" which help to place firmly in the specific workplace context principles and concepts of a more generic nature that may form part of an e-learning programme. This will become an even more practical proposition if tools emerge that help to simplify the currently laborious process of assigning the appropriate tags to content objects.

This happy prospect would leave outstanding the one key issue. That is the human factors issue associated with knowledge sharing. To address this issue it may be helpful to return to the analogy between coal and knowledge as the energy sources that have driven two quite different industrial revolutions. If we accept that "to share is to multiply" - that knowledge is a source of energy that is not consumed but grows through sharing and learning - then how do we release that energy to best effect?

Coal does not spontaneously combust. Somebody has to provide the kindling and light the fire. The key lesson learned from KALiF could be summarised by revisiting Prusak's proposed 70:30 rule. Whilst most knowledge sharing transactions may ultimately take place over the IT infrastructure at least 70 percent of the kindling and ignition necessary to light the fire was dependent on facilitating more direct interpersonal interaction. A range of interventions in the form of "knowledge markets" "sharing events", "clinics" etc were devised for this purpose.

There is one more critical success factor that our analogy may help to illuminate. Suppose a company's core business were the operation of coal-fired power stations.



People development in a knowledge economy: Working paper No. 2

In such circumstances one could imagine the key preoccupation in the Chief Executive's long-term strategic planning and daily oversight of operations would focus on the need to have secure supplies of high-quality fuel at the best prices and on ensuring that the best infrastructure to support efficient and clean combustion was available.

In the knowledge economy new and existing businesses are becoming more knowledge intensive by the day. Is their development as Learning Organisations a key preoccupation of their CEO's?

If not, should it be?

About the author

Andrew Haldane is a Director of Learning Futures Ltd. Board Member of the European Consortium for the Learning Organisation and a Vice Chair of Prometheus the EC's advisory panel on e.learning.