Getting Learning Infrastructure Right for the Extended Enterprise

A CERTPOINT Systems White Paper

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CERTPOINT

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New Ways of Working

Huge changes are afoot in the workplace. Hierarchies are flattening, organizational boundaries are softening and extending, and even the traditional concepts of a 'job' and a job role are being questioned[1] as work becomes more focused on bringing the right expertise together at the right time to solve specific problems and challenges.

Josh Bersin, CEO of Bersin and Associates terms this world *'the borderless workplace'* – an ecosystem where workers communicate continually and seamlessly across time and distance with co-workers both inside and outside their own organization.

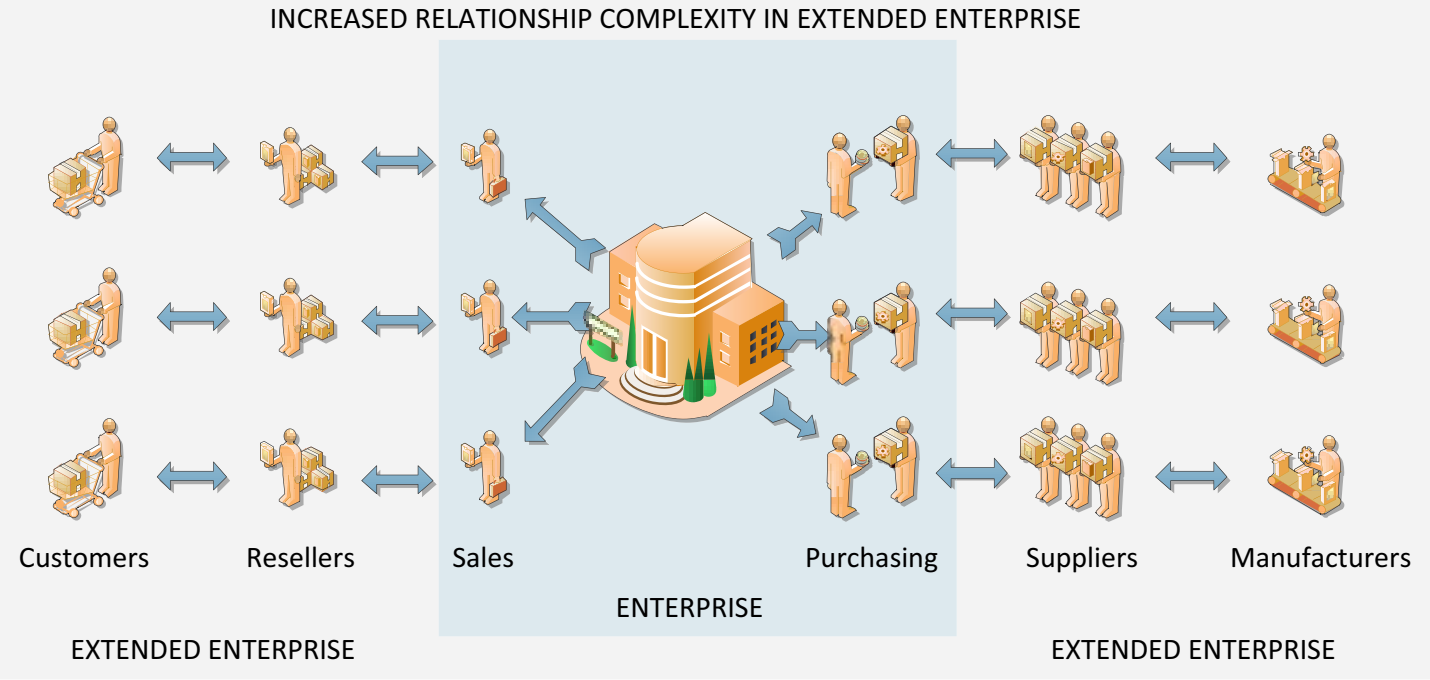
An extended enterprise is a typical representation of a borderless workplace where, in order to realize value, the entire value chain operates seamlessly as if it were a single unit.

The evolution from discrete to extended enterprises is as a response to a working world of continuous flux. Where change is the normal state and speed of execution is the key driver. Every year organizations respond to the pressures to deliver new services and products faster and with greater levels of innovation. Everyone is under pressure to do more with less, and do it better year-on-year. This simply can't be achieved without high levels of coordination within organizations and across their business partnerships – their suppliers, their resellers and ultimately, their customers.

The key enablers in this rapidly changing world are [1] the capabilities of workers, and [2] the flexibility and capabilities of the technologies that support them.

It is often said that 'it's not about the technology'. However, the technology is vital and there is no denying that in a world that is becoming increasingly dependent on technology to 'get stuff done' the technology is the lynchpin for success.

Learning and capability-building is no exception. Without the right technology it is almost impossible to achieve our aims.



1 Josh Bersin. 'Then End of a Job as We Know It.

Building Expertise in a World in Flux

Underpinned by ubiquitous communications and work centered around tasks and projects, expertise is built through exposure to challenging experiences, through practice, through rich conversations and through reflection across ever-increasing networks of co-workers and collaborating organizations.

It is this world into which we need to design and deploy our learning solutions and infrastructures. It is complex. It involves the provision of a wide range of learning experiences – from formal classroom-based events to continuous on-the-job workplace performance support. Learning solutions are no longer simple one channel activities. They may involve a myriad of interventions and multiple technology requirements – from simple web-based interactive learning content, through rich collaborative and immersive simulations and community-based learning, to informal on-demand support in the workplace.

This is the real 21st century world of the extended enterprise.

Supporting New Entrants to the Workforce

An entire new generation of workers is being injected into this new world of work. Often termed the *millennials,* many in this group have vastly different expectations and aspirations to their leaders and managers. The gulfs are often too patently obvious.

These new entrants are inculcated into an 'always on' world of with instant access and constant connection, where agility and fluidity are part of their *raison d'être*. They will undoubtedly make up the engine room of the emerging extended enterprise. And their number is growing and will continue. The generations following them will be even further removed from our current dominant 20th century operating models based on 'scientific management'[2] and our concepts of discrete organizations that operate with only limited interaction with value chains and even less with competitors.

Ara Ohanian, President and CEO of CERTPOINT Systems, Inc., has explained the impact of this new generation of millennial learners, and the speed at which it will occur, in an earlier detailed whitepaper[3] available from the CERTPOINT website.

Into the Future

It is important to remember that by 2020, just eight years away, more than half the workforce will be members of the millennial and post-millennial generation, knowing nothing but a hyper-connected world. Although there will obviously be variation in their expectations and responses, their life experiences will inevitably influence these.

These life experiences will be vastly different from those of the pre-millennial generations. Our learning infrastructures will need to fit with these new expectations and life experiences or they will simply be discarded.

2 Scientific management, also called Taylorism (after FW Taylor 1856-1915), is a theory of management whose main objective is improving economic efficiency, especially labour productivity by applying well- understood industrial scientific methods.

3 'A New Generation of Learners: how the new learners of today are changing the face of workplace learning'. Ara Ohanian, CERTPOINT white paper. Available from the CERTPOINT website.

New Ways of Learning

Although the changes taking place in the world of work will not ring the immediate death knell at a stroke for all our traditional approaches to building employee capability through away-from-work structured courses, programs and workshops – success will undoubtedly emerge from supporting new ways of learning rather than attempting to maintain the *status quo*.

To this end, eLearning and other digital learning approaches have made inroads into organizational learning over the past 10 years.

Learning and Work are Converging

Despite all the developments there are still some major hurdles.

Today's world of eLearning is still primarily centered on the idea that learning and work are separate activities.

"Looking at today's world of eLearning is a little like looking at the sky at night. What we see is already in the past. It is a world of courses and of learning separated from work".
– Ara Ohanian, President & CEO, CERTPOINT Systems

This world of courses and learning separate from work is starting to diminish as Business leaders, HR Directors and CLOs strive to meet the increasing demands of the distributed workforce. However there is still some way to go before learning can be fully driven by the worker in the context of the particular business task or problem to be solved.

This is where performance-centric, business-focused learning infrastructure is vital. Without the ability to support the specific performance requirements of all individuals, no matter what their role and no matter where they work in the extended enterprise ecosystem, learning infrastructure will remain a tool supporting HR processes and operational efficiency rather than supporting business outcomes, increased revenues, higher customer satisfaction and other important business metrics.

Business-Focused Learning

In a world of constant flux, knowledge may still be powerful but access to the right information and the right knowledge at the right time, in context, to achieve business outcomes is where the real power lies.

This leads to a move away from 'knowledge transfer' as the principal objective of learning. It is far more complex than that.

Workers need support to help achieve their targets and to build their skills and capability. Business drivers move focus firmly to *doing* rather than just *knowing* – to action rather than knowledge. Yet much of the focus of eLearning and organizational learning remains on building knowledge and ensuring process is followed and completed.

Learning is of little or no value if it doesn't change behavior for the better and drive business performance. Organizational learning in the modern world needs its prime focus to be on supporting activity and actions that help achieve desired business outcomes.

The focus on supporting business-led performance presents a major challenge for learning infrastructure that has been designed and installed to meet the needs of the HR department. HR needs tend to be fixed around process management, whether management of talent, management of core competencies, or management of employee compliance and career development. HR-led learning rarely focuses around supporting immediate business objectives.

New learning infrastructures need to respond to these new ways of learning as much as they need to respond to the new ways of working across the extended enterprise.

Learning in a Torrent of Data

IDC reports the digital universe having expanded by 62% during 2011[4] - despite the global recession.

IDC also predicts that the millennial workers in 2020 (just 8 years away) will be navigating a world of work where the amount of digital information will have grown since 2009 by a factor of 44 but the number of IT professionals only by a factor of 1.4.

IDC calls the situation 'a perpetual tsunami'.

It will also be a world of increasingly unstructured information, each with increasingly shorter half-life. Where the 'correct' information or knowledge we acquired last week is increasingly likely to have been superseded with new or different information or knowledge this week.

It is a world where access to resources and content to support continuous learning is essential, and where consistency of content available to all parts of the enterprise and the extended business ecosystem of suppliers, resellers and customers is critical.This is the world for which we need to build our learning systems.

Finding Needles in Haystacks

IDC also estimates that efficiently creating, finding, organising and analyzing information will not only become more vital, but that searching for information currently consumes 8.8 hours of knowledge workers' time each week, and analyzing information to support meaningful decisions an additional 8.1 hours.

Information work is expensive and valuable only if workers have access to the right information and have developed the right skills to make meaningful decisions.

Our learning tools and infrastructures need to help workers address all of these challenges.

The Rise and Rise of Informal Learning

Informal or non-directed learning has always been with us. It is simply being 'rediscovered' in the world of knowledge work after 60 years of our Cyclops-like focus on its formal counterpart.

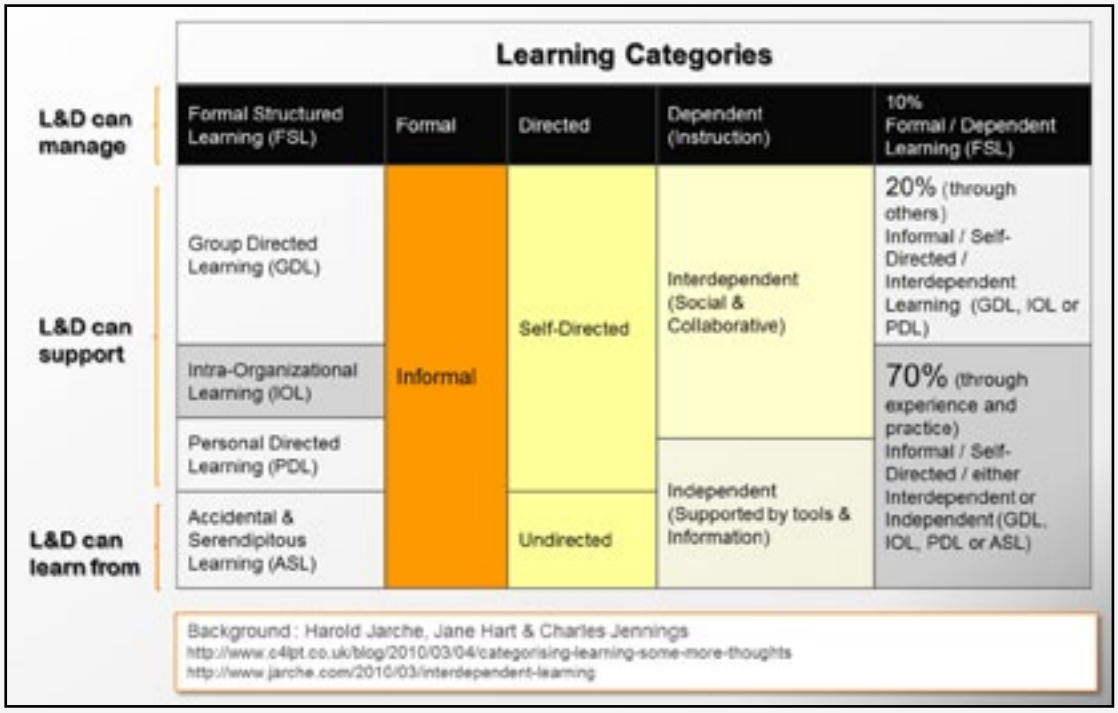
Informal learning is a far more prevalent form of knowledge and skill acquisition than its formal counterpart.

A fact that is hardly necessary to point out, but often needs reinforcing, is that formal and informal learning are not competing entities. They are complementary. Two parts of a whole.

It is not an either/or situation with formal and informal learning. Both contribute to individual and organizational success. It is simply that a great deal more informal than formal learning occurs.

Our learning infrastructures in our 21st century world of interlinked and extended enterprises need to be designed to support structured, directed learning and informal self-directed learning. With learning increasingly moving into the digital world, the responsibility of serving these two masters falls on the tools and systems we develop as part of our *learning ecosystems*.

4 IDC 'Analyze the Future' study



Proprietary and Tacit Knowledge

Proprietary and tacit knowledge are very valuable commodities for any organization. Learning infrastructure needs to support not only the codification and distribution of both, but also the two-way sharing of information that leads to the development of these assets.

Capturing Proprietary Knowledge

Proprietary knowledge has always been the jewel in the crown for any organization. It is the differentiator that places clear water between one organization and the next and creates the value that maintains an organization's unique offering.

In the world of the extended enterprise, the ability to capture and share proprietary knowledge is even more critical – and sometimes more complex – than sharing more general information. Especially as the pressures to deliver at speed increase and many organizations are losing the luxury of the two-step process employed by many training or L&D departments – of capturing information from an SME[5] and converting it into a format that is appropriate for distribution. Although that approach worked in the slowly evolving world 50 years ago, it is simply inadequate to meet the multi-directional and rapid information-rich working world today. We need tools and infrastructure to share experience and expertise, information and knowledge directly – in many directions at once.

5 Subject Matter Expert

Distributed Content Creation

This leads to the obvious conclusion that any appropriate learning infrastructure must support the facility for distributed content creation with simple tools and processes for content modification and updating.

It is important that knowledge flows in extended enterprises are two-way. A dealer, a reseller or a customer is often as likely to provide the insight that feeds innovation and proprietary knowledge creation as the product development team. This is where the support of social learning, collaboration, and communities add significant value.

Any infrastructure for the extended enterprise should contain tools and facilities for two-way flow of learning materials and sharing of expertise. One-way flow will provide limited value, but opportunities of engaging and sharing across the wider ecosystem will be lost.

In other words, one-way learning infrastructures that ignore the opportunity to capture and share 'the wisdom of the crowds' in all its forms - especially when those 'crowds' are part of the value chain - does so at its own peril.

Capturing Tacit Knowledge

To fully exploit the learning and performance potential of an extended enterprise environment, it is vital to facilitate the free flow of data, information and learning resources, together with captured experiences with easy access to expertise to help solve problems as easily and quickly as possible.

There is much real value to an extended enterprise that comes from the ability to capture tacit knowledge and to share it quickly and seamlessly.

The traditional training design and development model takes tacit knowledge and makes it explicit through training content, but we need learning infrastructure to support a wider set of processes than simply the development of training materials.

Our 21st century learning infrastructures need to support other aspects of learning and sense-making. They should support either in native form, or integrate with systems and tools that do support their fully networked workers/learners in such a way as to answer questions such as the following:

- How do I keep track of all of this information?
- How can I find the learning resources or experts to help me complete my current task now?
- How do I make sense of changing conditions and new knowledge in my working ecosystem?
- How can I develop and improve my critical thinking skills?
- How can I cooperate with my colleagues and others better and more effectively?
- How can I engage in problem-solving activities at the edge of my expertise?

If learning infrastructure design focuses on addressing these questions, and others like them, it will certainly help people 'work smarter'.

Consolidation, Innovation and Accountability

Market Consolidation

There has been significant consolidation in the learning systems world during the past few years. One of the major trends has been the acquisition of Learning and LMS services and technology providers by Talent Management technology providers. In turn, a number of the Talent Management providers have been acquired by larger HRM[6] vendors. The biggest fish eat big fish that eat smaller fish in the HR world.

The recent acquisitions by SAP and Oracle of SuccessFactors and Taleo respectively are examples of this consolidation activity. Previously SuccessFactors has acquired the LMS vendor Plateau Systems and Taleo had acquired the LMS company Learn.com.

Bersin & Associates' most recent research on buyer strategies shows that almost one-third of all talent management software buyers are now willing to sacrifice their feature requirements for the opportunity to select a vendor with an end-to-end solution. However, this significant minority requirement for integration is being based on today's demands – not tomorrow's.

It is also based on the assumption that it is in the best interests of the ultimate stakeholders – individual workers and the enterprise itself – that tight coupling of HR and learning systems is desirable.

When looking at the extended enterprise, there is a very strong argument that this is not the case.

Integrated HRM, Talent & Learning Infrastructure

Although consolidation makes some sense from an HR point of view of providing a single-vendor offering for the management of people and processes within an enterprise, this model is not necessarily ideal for the extended enterprise or, in fact, for the provision of effective support of learning within individual organizations themselves.

There is a strong argument that consolidation reduces the flexibility required of learning infrastructure to an extent that it may be counter-productive from the organizational learning point-of-view, and certainly counter-productive from the individual employee's point-of-view.

Integration and the Extended Enterprise

From the extended enterprise viewpoint, the various organizational entities that derive business benefit from being coupled together are highly unlikely to have the same HRM systems. In fact, there is little need for them to do so, or none at all. They still operate as discrete entities in terms of payroll and in their HR and Talent Management processes. So, what benefit does a learning platform that is integrated into these systems offer?

The answer for the extended enterprise would appear to be 'very little, if any at all'.

In fact here it is likely that there are more drawbacks than benefits.

It is a major problem if learning can't be distributed and shared through a seamless two-way process across collaborating organizations in extended enterprises. For example, a car manufacturer will want to ensure its dealer network is up-to-speed on a new model before release; a technology manufacturer will want its suppliers to understand the use of their components; an aircraft manufacturer will want to share all its learning material with its client airlines and maintenance companies. The list is endless.

There is no doubt that learning infrastructure will struggle to be 'best-in-class' for extended enterprise use if hobbled by less flexible HRM and Talent systems and by HR and Talent directors who have no visibility of, or interest in, the entire learning ecosystem to be served.

6 HRM – Human Resource Management

The Challenge of Innovation

This LMS/Talent/HRM consolidation is likely also to work against innovation.

The fact that the learning component of the infrastructure suite is tightly coupled to HRM and Talent systems inevitably results in a lot less flexibility and responsiveness to changing learning-specific conditions and enhancements.

This has certainly been the experience in the past and there is no reason to believe that it will change dramatically in the future. Many CLOs have lost sleep over the fact that whole-system regression testing costs need to be included in any learning infrastructure upgrades for installed systems, or that vendor-initiated upgrades are often either 'all-or-nothing' in integrated SaaS[7] environments. Equally, the large HRM providers have attributes that tend to vary between the high-innovation, rapid-response and agile models employed by specialists learning infrastructure providers.

What is really needed are learning solutions that are flexible and modular and the question remains whether the consolidated solutions offer flexibility at a granular-enough level.

Shared Accountability

Learning is a strategic business tool. As such, the prime function of learning infrastructure is to support business activity by helping people do their jobs, complete their tasks, and deliver results to the highest standard and as quickly and effectively as possible.

But operational efficiency alone is not enough. Learning infrastructure must play its part in delivering tangible and measurable results for the organization – whether a single entity or an extended enterprise ecosystem.

Accountability for delivering business results is shared by the learning infrastructure provider and the client organization. As with any other business tool, learning infrastructure needs to be fit-for-purpose. Increasingly that 'purpose' is broaching the walls of individual enterprises and encompassing suppliers, resellers and end customers.

Business-Focused Learning Infrastructure

The CERTPOINT implementation for Techtronic Industries is an excellent illustration of realization of the potential of a business-focused LMS.

Techtronic is a $3.45 billon manufacturer of well-known brands such as Hoover, Dirt Devil, Ryobi and AEG electronic tools.The company deployed the CERTPOINTVLS™ learning infrastructure four years ago.

Matt DeFeo, SVP of Sales, Training and Recruiting, has been able to demonstrate the business benefit with hard numbers as Techtronic worked to increase global market share and profitability.

DeFeo reports that sales have increased, with a significant contribution from the learning infrastructure

"We can directly link good sales with the learning technology. For example, we have courses on how to do product demonstrations, and how to do merchandising in the store. There has been an 11% increase in sales in 2011. Much of that is down to innovation and execution but at least 2% of that increase – a conservative estimate – is down to training."

The CERTPOINT learning infrastructure and training programs have also contributed to improved operations, with product returns reduced by 1.8% - a cost saving of between $33-35 million over two years with key customers.

Other benefits have been realized, too.Techtronic has been able to reduce classroom training by 33% and the company now has the ability to provide learning content to all employees with little or no marginal cost.

Over the four years since implementation of the CERTPOINT solution, the total of the three measures of value used by Techtronic - increased sales, reduced returns and cost savings - is $46.2 million. Learning infrastructure investment over that period has been just 2% of that figure.

Factoring these orders of value across extended enterprises makes the rationale for a business-focused learning infrastructure very clear.

7 SaaS – Software as a Service

Democratizing Content

We have moved rapidly from a world where learning content was a scarce resource to one where it is abundant.

We have also moved from a world where learning content production was an arcane and highly specialized art to one made much easier through the availability of comprehensive tools coupled with simple delivery mechanisms. Many 'rapid content' platforms are available which, although still requiring a sound understanding of learning content design, have removed many barriers.

A number of learning infrastructure platforms have well-integrated content production and LCMS[8] functions. This is an essential feature for extended enterprise support.

Freeing Content Development

Many leading universities now make their teaching, learning and resource content freely available openly and globally. The open education resource movement, started by MIT's OpenCoursewareProject began the movement which has impacted the way we now view educational content.

Business - and work-based learning is likely to follow this trend, with the development of crowdsourced community-driven learning content services and portals, and content being developed by distributed teams of designers and subject matter experts – from within the extended enterprise ecosystem or outside it - who come together on a project-by-project basis, using a common authoring platform such as CERTPOINT's Content Creator, within a democratized content authoring framework.

User-Generated Content Production

This content democratization presents a significant change as the walls between producers and consumers of content are broken down.

Forward-looking learning platforms such as CERTPOINT-VLS™ enable distributed content production and easy content sharing using integrated rapid content development tools to exploit distributed content development.

There is no doubt that the future of learning content is one of distributed development and distributed consumption within a cycle of rapid re-use and contextualization.

As rates of change increase and the half-life of enterprise knowledge shortens, the development and renewal of learning content will become more and more time-critical. Organizations without learning architectures that provide integrated tools to support rapid content production and distribution simply won't be able to keep up.

8 LCMS – Learning Content Management System

Going Mobile

The ITU (International Telecommunications Union) reported there were nearly 6 billion mobile subscriptions at the end of 2011.

That is equivalent to 86.7 mobile cellular subscriptions for every 100 men, women and children on the planet. The developing world lags only slightly behind the developed world with 78.8 subscriptions per 100 people compared with 117.8 per 100 people in the developed world.

Mobile broadband subscriptions have grown 45% annually over the past four years. Today there are almost twice as many mobile broadband as fixed broadband subscriptions.

Even these raw figures tell us that mobile access even now is becoming a critical channel for learning in the extended enterprise. Its importance is likely to move in only one direction.

The support for mobile learning will become a core requirement for extended enterprise learning infrastructure.

"Real learning does not happen in isolation at each employee's desk. Learning systems need to support a style of learning that is in line with today's highly mobile, highly connected workforce."
– Ara Ohanian, iVentiv Executive Knowledge Exchange, New York, May 2011

Mobile support needs to extend from learning content delivery to providing a conduit for collaborative working and learning, and to providing performance support in context in the workplace.

Supporting Social Learning

"If learning is conversation, then online conversations are the essential component of online learning"[9].

The power of technology-supported social learning is starting to be realized and many learning platform providers have built 'social' modules into their platforms.

This is certainly a step in the right direction. However, fragmented social 'add-ons' to LMS-managed courses is only a first step, and not a fully-formed solution. Provision for social learning needs to break free of the course paradigm and support, as well as the entire range of non-course learning.

Social learning has tremendous potential for the extended enterprise. The challenge for infrastructure providers is to be able to support or integrate a range of social learning activities across disparate networks and corporate IT structures.

One answer to this dilemma is for the extended enterprise platform to become malleable – to allow different branding and functionality for each enterprise partner, and also to provide the 'social glue' necessary for rich social learning across the entire extended enterprise – whether the social environments are part of the platform or loosely-coupled generic ones.

New Role for LMS

Claire Schooley of Forrester identifies[10] a new role for the LMS within an emerging mobile and social learning world. She points out that learning infrastructure needs to:

- Integrate informal learning tools (including social).
- Provide Amazon-type content evaluation and rating of expert help.
- Allow flexibility of taking courses offline and from mobile devices.
- Provide robust tagged content search so learners can find a piece of content or document they need to do their job.

Schooley goes on to say that 'only those LMS vendors that offer components for interactive learning on-the-spot will survive'.

She could have added that 'only those flexible enough to provide these facilities across the discrete enterprise as well as across the extended enterprise will be fit-for-purpose'.

9 Harold Jarche, Internet Time Alliance www.jarche.com
10 Getting Social: 'How The LMS Is Evolving' Claire Schooley, Senior Analyst, Forrester. Available from the CERTPOINT website.

Getting Learning Infrastructure Right for the Extended Enterprise

Apart from Schooley's specifications above, next generation learning infrastructures need to be:

- Robust – allowing for information to flow quickly and easily around the enterprise and across the extended enterprise.
- Seamless – providing portal-like access via a range of devices – PCs, tablets, smartphones and other personal productivity tools.
- Integrated – with equally straightforward access for employees, partners, suppliers, resellers and others outside the organizational firewalls.
- Flexible – easily modified and updated from any point across the extended enterprise at any moment in time and from virtually any device.

Technology is Important, but so too are People

We need to learn from the relatively recent history of knowledge management that technology-centricity does not hold all the answers. Knowledge management has evolved from a technology-centric and data-centric view of infrastructure through a process-centric view, to its current people-centric view.

Learning infrastructure for the extended enterprise needs to follow a similar path.

With virtualization of learning infrastructure – cloud-based computing is becoming extremely easy to use and flexible, with support for workplace, social and mobile learning environments – we are seeing opportunities to support the extended enterprise in ways not believed possible a few years ago.

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