EXPLOIT THE LATEST TRENDS IN RAPID-E-LEARNING AND AGILE DEVELOPMENT

A culture willing to embrace both agile theory and rapid e-learning technologies will launch your organisation into the next decade, says Margaret Kelsey.

We've all heard the rumours that we're coming out of recession. But how we learn and how accessible we make our learning will be the primary factors influencing whether or not our enterprises succeed in the next decade.

The model for businesses to grow and thrive is simple. Organisations need to understand and anticipate the needs of their audiences and customers, or face the economic consequences.

They must harness their intellectual capital, respond to new opportunities with fresh ideas and perspectives, and channel these into improved services and products.

How will businesses achieve this? With a highly sophisticated, innovative group of instructional designers leading a three-stage charge towards agility! Firstly by ensuring knowledge is accessible; secondly, by applying this knowledge to everyday problems and anticipated opportunities (to achieve anticipatory and responsive learning versus reactive learning); and lastly by implementing rapid e-learning methodologies and practices.

HOW AGILE IS YOUR ORGANISATION?

Here we explore trends in organisational development and learning technologies, and share how rapid e-learning and agile development can benefit your enterprise. A few key historical timelines have converged,

leading to a highly opportunistic period in the way organisations embrace e-learning. It will continue to evolve, informing new pedagogical and andragogical practices.

In many ways, technology is advancing far beyond our intellectual capacity, and the main drawback we face is the limit of our own imaginations.

The Technology Continuum

Information and communication technologies emerged in the 1950s-60s. This in turn facilitated the introduction of Computer Based Training (CBT). PLATO (Programmed Logic for Automated Teaching Operations) was the first generalised computer instructed system, designed to automate and expand access to education, largely in response to Sputnik. By the 1970s, more than 1,000 terminals were available worldwide with CBT. The primary limitation to developing and deploying early CBTs was computer memory and storage.

By the mid 80s, as computer and networking technology evolved, so too did CBT. The introduction of the desktop PC with increased memory, disc space and eventually CD ROM, made it possible to produce more involving and interactive CBT. While memory and storage had become less of an issue, these programmes only offered asynchronous learning.

The Internet followed in the 90s, paving the way for distance education programmes and web-based seminars. Thus anytime-anyplace learning engagements could be deployed via a web server and web browser.

Advances in both learning design technology (programs that support graphically rich and dynamic content), and increased computer memory and storage, heralded increasingly sophisticated CBT and WBT.

But there was something lacking in these advanced programmes - the opportunity for broader connection between learners. This shortfall gave rise to broadband access and the call for Web 2.0, which is a paradigm shift in how and when learning happens. A synergy of communication, information and learning technologies has made it possible for instruction to be provided in a myriad of ways. From asynchronous to synchronous, from smartphones to BlackBerrys, and from Kindles to desktops and web servers.

We've moved from a push-based to a pull-based culture of knowledge and skill acquisition.

Clive Shepherd commented earlier this year: "Apart from some e-learning developers who are unjustifiably worried about their jobs, almost everyone seems to agree. The future will see a blurred distinction between teachers and learners, and between publishers and their audiences. Everyone will be a teacher."

In many ways, technology is advancing far beyond our intellectual capacity, and the main drawback we face is the limit of our own imaginations. How do we work with all these dynamic, evolving technologies? And how will they shape the evolution of business theory and development in these post-recession times?

To shed a light on these questions, let's consider some points along the learning organisation timeline.

Prior to the 1960s, where manufacturing was the primary source of gross national product, the de facto management style was top-down and autocratic, a derivative of Scientific Management, theorised by Frederick Winslow Taylor, a US mechanical engineer who sought to improve industrial efficiency in the late 1890s. After watching individuals at work, he deduced that decisions based on rules of thumb should be replaced with precise procedures enforced by management. This gave way to the adage: 'There's one best way to fix a problem'. This reinforced the notion that experts must manage the work.

In the 1940s this was further fuelled by Fordism, named after the introduction of the Ford's Model T car, that the learning organisation was designed to support mass production and consumption. But who would be ultimately satisfied with that?

In the 1960s two great eras emerged: Information Technology and Social/Behavioural Science, when white collar jobs began to outnumber blue collar jobs. Two organisational theorists, Frederick Herzberg and Douglas McGregor, introduced ideologies that shed light on human performance and behaviour. Unsurprisingly this coincides with the introduction of the personal computer.

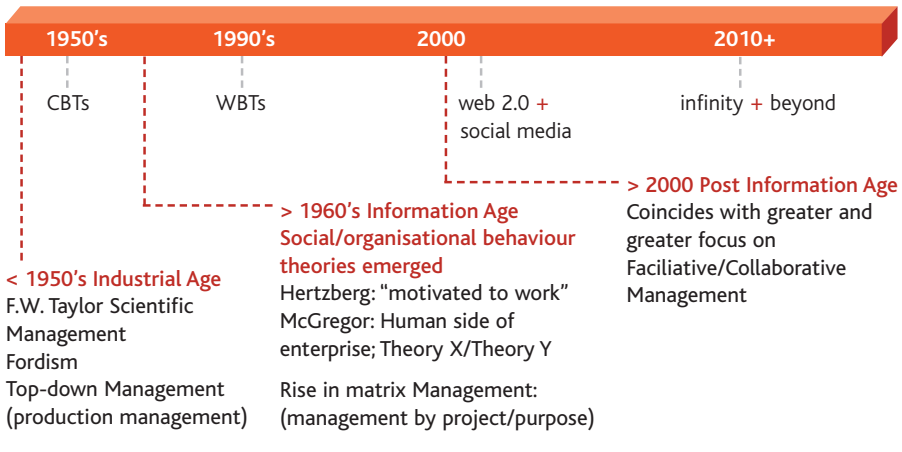
In The Motivation To Work, published in 1959, Herzberg theorised that workers' satisfaction is extracted from different factors than dissatisfaction. Satisfaction comes from factors that deal with doing the job versus factors that define the context of the job.

Therefore, achievement, recognition, opportunity and advancement lead to satisfaction. Whereas relationship to peers, managers, policies and conditions are factors that effect dissatisfaction.

In the 1960s, Douglas McGregor contributed his Theory X and Theory Y. Theory X reflects authoritarian management, whereby the average person dislikes work and will avoid it if at all possible. Therefore most people must be forced with the threat of punishment to work towards organisational objectives. The average person prefers to be directed, to avoid responsibility, lacks ambition, and wants security above all else.

Theory Y suggests participative management, whereby effort in work is as natural as work and play. People will apply self-control

Figure 1: Learning technology timeline



and self-direction in the pursuit of organisational objectives, without external control or the threat of punishment. Their commitment to objectives is a function of rewards associated with their achievement. Such people often seek responsibility, demonstrate a high degree of imagination, ingenuity and creativity in problem solving, which is widely, not narrowly, distributed in the population. Moreover, in industry, the intellectual potential of the average person is only partly utilised.

Arguably, Theory Y has begun to infuse business and learning practices slowly but steadily. Starting with the rise in matrix management (management by project and purpose), and continuing with a post-Information Age focus on collaborative management, performance-based cultures are redefining business operations.

Is it any surprise that the monolithic businesses that have not abandoned the top-down industrial style of management, are falling like dominos?

We are in a global economic recession because we are in a critical period of colliding continuums. This is how Tony Buzan kicked off the 2009 Learning Technologies conference: "We are not in a global recession - we are in a global revolution." This year, we're not only in a global revolution, we are in a perpetual state of pedagogical re-invention. How we learn and how we make training available will be the primary factor influencing whether or not businesses succeed or fail in the next decade.

How does this rich legacy impact rapid e-learning and agile theory?

Rapid e-learning describes the production of e-learning modules (typically in less than three weeks) leveraging the knowledge of subject matter experts. The term rapid is derived from the Latin rapere, meaning 'to take by force'. Here is a definition of e-learning by learning champion, Jay Cross: "The use of network technologies to create, foster, deliver, and facilitate learning, anytime and anywhere. E-learning delivers accountability, accessibility, and opportunity. It allows us to keep up with the rapid changes that define the Internet world. It is a force that gives people and organisations the competitive edge to keep ahead of the rapidly changing global economy."

Is it any surprise that Jay Cross's definition includes this word 'force'?

From prior articles and conference themes, most of us know all too well how organisations benefit from rapid e-learning. a) It allows your organisation to adapt more quickly to continual change, b) It allows shorter production and process life cycles to stay competitive, c) it enables a ready transfer of knowledge to a distributed workforce, and d) it places you and your organisation at the cutting edge of innovation.

AREAS OF RAPID ADOPTION

The success of rapid e-learning is a function of three organisational and instructional dynamics: firstly, the audience size; secondly, the content variability; and lastly, the purpose of the content. Accordingly, it offers the highest return on investment when it is adopted for larger audiences, where the content is highly variable, and when the purpose of the content is well defined.

An organisation presents approximately five levels or needs of training:

1. orientation and onboarding material
2. compliance training
3. policy, product and process updates
4. system simulations
5. niche training.

Looking at these, rapid e-learning will have the greatest impact from the bottom-up. For example, developing a rapid e-learning tool on a new performance management process, or health and safety training for thousands of employees, is far more effective than attempting to train the same learners with instructor-led content, particularly when it leverages content from the multitude of resources that already exist. Whereas, the costs of developing e-learning that simulates a new surgical procedure for an elite group of cardiothoracic surgeons would be prohibitive and inefficient.

Agile v waterfall

Does your organisation recognise the value and benefit of adopting an agile approach to design and development? The waterfall development model is a sequential process, with progress seen as flowing steadily downwards. Agile is the opposite of waterfall development and rests upon these tenants:

- The production team leave egos at the door and attachment to a finished polished product are banished to the corner. This allows a higher consciousness to emerge for the good of the learner.
- The team always builds something testable and therefore has many prototypes.
- The team always builds something functional.
- The work stops if the output is broken. The production team revisits and reviews what needs to be scrapped and starts again.
- Everyone adheres to work hours and limits. Late-nights in front of the computer selecting the right font and animation, are banished and replaced by the sound of bed time stories being read to the children.
- The pace of production is fixed but the scope is elastic. The point is to hit iterative goals rather than a defined end point.

To cement the agile methodology, let's take an example of building an e-learning module on a new performance management process.

In the traditional waterfall development approach, the subject matter expert (SME - typically someone on the HR team in Organisational Development) requests the e-learning development team to produce a captivating new module on the new performance process, to be implemented across all lines of business.

The SME provides hard copy of materials they've used to introduce and develop this new process, they are willing to provide a few hours of input, expecting the internal team to put forward a storyboard, a prototype, a build to review and a final build. The project does not advance until the SME signs off each stage and presents it to their bosses to sign off.

Ultimately, the final, final, final build is presented to top executives in the HR

RAPID E-LEARNING CHECKLIST

Which projects should you consider for rapid e-learning?

- Will it promote knowledge awareness over soft and hard skill development?
- Is the content clear and light in scope?
- Is the purpose and anticipated impact to behaviour well-defined?
- Are subject matter experts onboard and able to commit 24 hours per 30 minute module from inception to deployment?
- Is the timeline tight?
- Is the budget small?

Does your organisation ascribe to Theory Y? If you live and work in a culture where accessing GoogleDocs, YouTube or Wikipedia is viewed by management as a threat to employee productivity, then you'll be forever stuck in the attempt to make rapid e-learning happen. Give it up and head to the pub!

department, maybe even the CEO, who give their nod of approval or potential recommendations for modification. Even worse, they suddenly scrap the idea because a new strategic initiative has taken priority. Weeks of effort potentially wasted. A typical waterfall production cycle spans sixteen weeks for a thirty-minute module and includes the following phases: Scoping, Procurement, Design, Development, Testing, Deployment and Evaluation.

Contrast this with an agile, rapid approach, SMEs are responsible for identifying the learning objectives and initial content. A designer or developer takes this and appropriately package the content for learners using a rapid e-learning authoring tool. With some initial training, the SME is informed of the tools features and benefits up front, so there is an understanding of it's limitations and capabilities. Potentially they can even get involved in production.

The designer/developer build the module in portions, presents to the SME, who then weighs in with feedback which is woven into the next build. The final build is subsequently finished with very few surprises. The SME is also empowered to make final decisions about when and how it should be deployed, assuming all risks and rewards for its impact.

Layers of sign-off are obviated. This rapid, agile production cycle spans four to five for a thirty-minute module and includes these phases: scoping and procurement, design, develop and review, deployment and evaluation. Besides the obvious reduction in the number of team members involved, the success of the agile approach hinges upon one other crucial factor: the willingness to empower your SMEs and allow them to assume accountability for the finished product.

Based on my experience of working with clients who need levels of approval and sign-off to support the waterfall process, the amount of time and resources wasted is just gross. Accountability is distributed to the point where no one really assumes responsibility for the programme. Yet organisations still wonder why projects go beyond scope and budget and employees are burdened with working on the weekends.

Let's assume you're working for an organisation that's currently undergoing such a project (for example, training on SMART objectives - a hot post-recession topic). Why not empower the HR organisational development SME to significantly influence the design and development of the module? Call me radical, but why not let them assume accountability for improving and effecting the change such an e-learning program is designed to promote?

The agile-rapid approach, if fully adopted will allow you to build something your learner actually needs, and will allow your team to run a successful project, on task and on purpose. If that alone doesn't sell you on the advantages just stand back and take a good look at the cost savings.

For rapid e-learning to be truly and fully adopted, organisations need to examine just how agile they are. A culture willing to embrace both agile theory and rapid e-learning technologies will undoubtedly lead us into the next decade.

Margaret Kelsey is Principal at Kelsey +Co and will be speaking at the Learning Technologies 2010 Conference.

RAPID E-LEARNING. HOW MUCH WILL YOU SAVE?

The chart below shows the cost comparison of traditional waterfall e-learning roles against rapid e-learning roles. Production time on projects can be reduced by two thirds, and costs can be slashed by fifty percent. It's a no-brainer.

Traditional e-learning roles		Rapid e-learning roles
65k - project manager 55k - instructional designer 40k - storyboard writer 55k - flash/interactivity designer	→	lead instructional designer - 70k
Hourly - audio narrator ? - SME	→	SME - ?
45k - graphics designer	→	graphics designer - 45k/hourly
?- tester	→	pilot group - free
55k - LMS/deployment manager	→	implementer - 55k
Salary costs: 300k		**Salary costs: 150k**