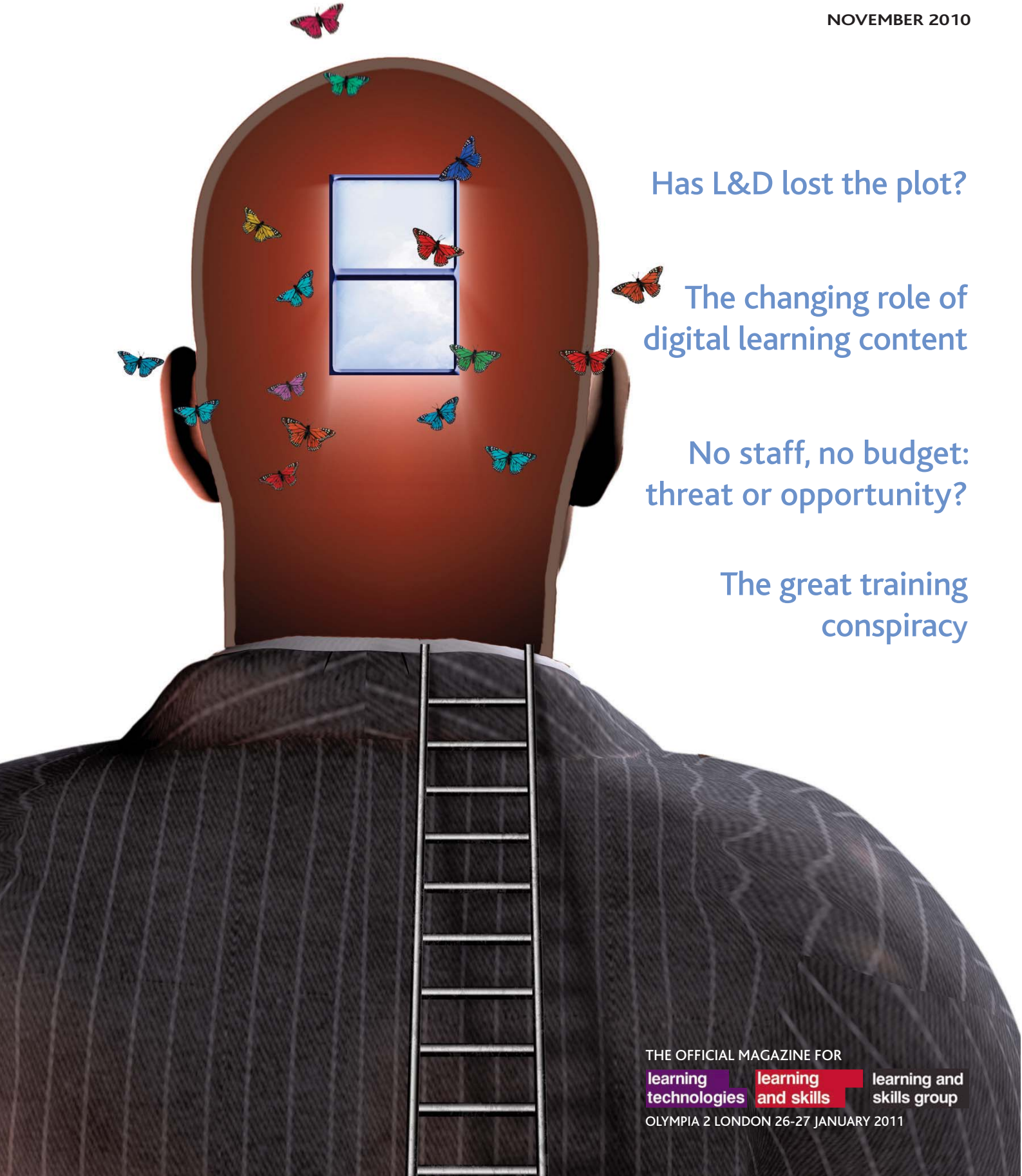


INSIDE LEARNING TECHNOLOGIES & SKILLS

NOVEMBER 2010



Has L&D lost the plot?

The changing role of digital learning content

No staff, no budget: threat or opportunity?

The great training conspiracy

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WORKING SMARTER THROUGH WORKSCAPING

A revolutionary era is opening up in workplace learning, says Jay Cross, and it is very different from our current world of training.

Working smarter is the key to sustainability and continuous improvement. Knowledge work and learning to work smarter are becoming indistinguishable. The accelerating rate of change in business forces everyone in every organisation to make a choice: learn while you work or become obsolete.

The infrastructure for working smarter is called a *workscape*. It's not a separate function so much as another way of looking at how we organise work. Here are some of its characteristics:

- *Workscaping* helps people grow so that their organisations may prosper.
- *Workscapes* are pervasive. They are certainly not lodged in a training department. In fact, they may make the training department obsolete.
- Workers in a *workscape* learn by solving problems, coming up with fresh thinking, and collaborating with colleagues. They don't learn about these things; they learn to do them.
- The *workscape* is the aspect of an



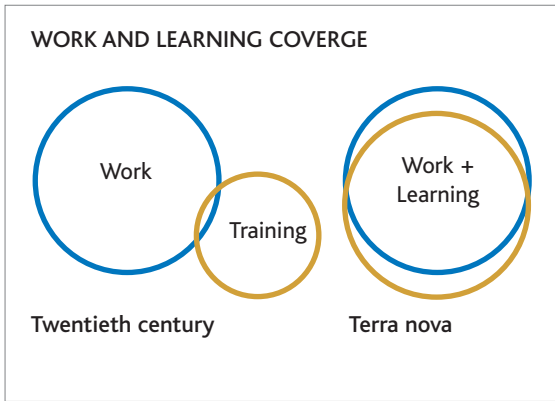


Figure 1

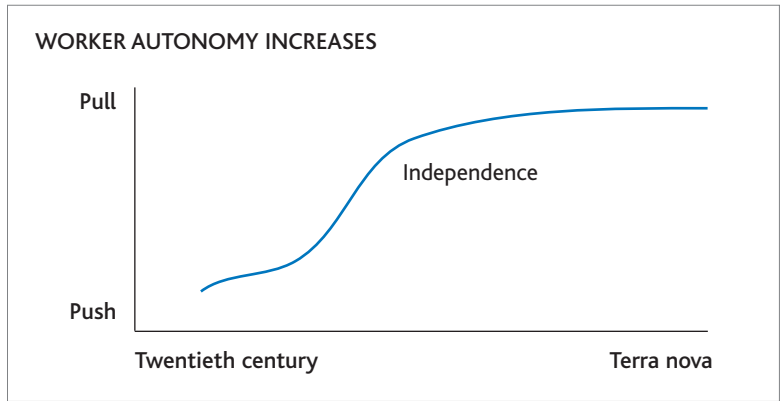


Figure 2

organisation where learning and development become never-ending processes rather than one-time events. It is a learning ecology.

- *Workscapes* are not a new structure but rather a holistic way of looking at and reformulating existing business infrastructure. They use the same networks and social media as the business itself.

Got the idea? Okay, I'm going to stop putting workscape in italics. Think of workscapes as an inevitable part of every organisation.

Technology is never the most important part of this. Foremost are people, their motivations, emotions, attitudes, roles, their enthusiasm or lack thereof, and their innate desire to excel. Technology, be it web 2.0 or instructional design, social psychology, marketing, or intelligent systems, only supports what we're helping people to accomplish.

As business de-emphasises industrial-era command-and-control systems to make way for agile, sense-and-respond networks, the structure of business adapts to its new environment. This has been termed the move from 'hierarchy to wirearchy'.

A NEW WORLD

England's New Forest is called new because it was built in 1079 by that well-known Johnny-Come-Lately, William the Conqueror. William wanted an oak forest for hunting. Timber would be required for building ships centuries later. He was thinking long term; let's follow his example.

Free yourself from day-to-day worries for a few minutes, and join us for a tour of the learning landscape five years hence, in 2015.

We will call our destination Terra Nova, Latin for 'new world.' Within five years, the world will have changed so radically, you will not recognise it. It is a new era and it is right around the corner, the natural step onwards from previous eras:

- Agricultural age: manual labor by individual farmers, 8,000 BCE.
- Industrial age: machine-assisted manual labor in factories, 1760.
- Information age: white-collar knowledge work in offices, 1949.
- Terra Nova: creative collaborative innovation in networks, 2012.

In the industrial age, bosses issued instructions and told workers they were not paid to think. This is the ultimate in push, for people deal with what is pushed upon them.

In the information age, people were encouraged to think, but only "inside the box," that is, complying with narrow sets of procedures and rules. Workers were empowered – within strict bounds. Assignments still drifted down from the top. This is still primarily push.

In Terra Nova, Push and Pull combine to create a dynamic flow of power, authority, know-how, and trust. Change is so fast and furious that work and learning blur into one activity. Workers respond to novel situations as best they see fit, governed by organisation values and gut feel.

Terra Nova is holistic, with significant

decision-making power delegated to the workers themselves. "Power to the people" could be its rallying cry.

Thus, the industrial age was top-down, explicit, and focused on efficiency. By contrast, Terra Nova supplements hierarchy with networks.

"I love to learn (pull) but I hate being trained (push)," said Winston Churchill.

We're optimistic about Terra Nova: Workers will lead organisations as well as managers and executives. No longer treated as cogs in the machine, people will have the freedom to be all that they can be – and the responsibilities that go with that freedom. Our hive mind will create unparalleled value and fulfillment.

Here are more characteristics (inspired by Dan Pink's *A Whole New Mind*, 2006) for describing the transition from one-way push to two-way pull. The lines between them are fuzzy. Old eras never die; they simply fade into the background.

Networks and connections exemplify Terra Nova. Networks crave connections. The denser the connections, the faster the cycle time. Time flies by at blinding speed. There's more progress made in one of your

CHARACTERISTICS OF TERRA NOVA			
	Industrial Age	Information Age	Terra Nova
worker	manual labourer	knowledge worker	creative networker
source of value	hard assets	intellectual capital	design & emotional appeal
what works	muscle & blood	'left-brain' logic	'right-brain' art
focus of attention	mindless	execution	innovation
communications media	speech	text	context
exemplars	factory labor, robber barons	MBAs, lawyers, engineers	inventors, counselors, entertainers
workflow	sequential	linear	simultaneous

minutes than in one of your father's hours. One scientist (The Singularity is Near, Kurzweil, 2006) calculates that the 21st century will contain 20,000 20th-style years!

Isaac Newton gave us a clockwork universe where every action yielded an equal and opposite reaction. René Descartes made the case for pure logic (by taking God out of the equation.) Their world was predictable, precise, and tidy. We felt in control. Logic ruled.

In Terra Nova, things are relative. As more and more people and entities interconnect, everything flows. Control is an illusion. Complex adaptive systems create effects all around. In the industrial age, an exemplary worker might produce 25% more than average; now, a great engineer may create two-hundred times the value of an ordinary engineer.

Making progress in this network age requires know-how and the motivation to apply it. Let's look at each in turn.

MOTIVATION

People are motivated to do things because they want to make progress (Amabile, T. Creativity, Improvisation, and Organisations, Harvard Business School Case Notes, 2009). As Dan Pink writes in Drive, the Surprising Truth About What Motivates Us, "It's about satisfying workers' desire for autonomy, which stimulates their 'innate capacity for self direction'." Some people want to increase the breadth of their repertoire to gain personal power. The best motivation is intrinsic. People do things for their own satisfaction, not external rewards.

The carrot-and-stick method doesn't work. In fact, external reward initiatives often backfire. Withdraw the reward and the desired behaviour may stop. Also, rewards tied to performance have the potential to change play into work.

If you set high expectations of people, they usually live up to them. If you have low expectations of people, they live down to them. A person not trusted with the authority to do something can't take responsibility for doing it. "It's not my department." A person authorized and trusted to take responsibility cannot help but do so.

As Will Herzberg, "the father of motivation theory," pointed out in One More Time, How Do You Motivate Employees? in 1968, workers are motivated by achievement, recognition, the work itself, responsibility, promotion, and growth. This innate desire to do well can be hindered by obstacles that reduce motivation: lack of respect, poor working conditions, perceived

unfairness, low pay, lack of job security, and poor relationship with supervisor.

In Analyzing Performance Problems, published in 1970, instructional design pioneer Robert Mager proposed a way to determine whether a roadblock was inadequate knowledge or lack of motivation. Hold a gun to her head.

If she does what you ask, you're grappling with a motivation problem.

only about 8-10% of what we needed to know. The rest is stored in our "outboard brains" -- our laptops or, increasingly, our smart phones.

Instructional designers once only designed instruction. Now they must assess the tradeoff of putting knowledge in the worker's head (learning) or putting it in an outboard brain (performance support).

Among the options available to them are:

FORMAL	IN BETWEEN	INFORMAL
<ul style="list-style-type: none"> • Instructor-led class • Workshop • Video ILT • Schooling • Curriculum 	<ul style="list-style-type: none"> • Mentoring • Conferences • Simulations • Interactive webinars • Performance support • YouTube • Podcasts • Books • Storytelling 	<ul style="list-style-type: none"> • Hallway conversation • Profiles/locators • Social networking • Trial & error • Search • Observation • Asking questions • Job shadowing/rotation • Collaboration, Community • Study group • Web jam • Wikis, blogs, tweets, feeds • Social bookmarking • Unconferences

SOURCES OF KNOWHOW

My class at Harvard Business School has the distinction of being the last not allowed to bring portable calculators to exams. (A Bowmar 4-function calculator cost \$99, a sum that kept many of us from acquiring one.) I got through by doing discounted cash now with a slide rule.

Everyone has several calculators today. They are giveaways. There's probably one in your phone. All of which makes it irrelevant to learn long division, how to take cube roots, or logarithms. Why bother? That's yesterday's know-how.

Robert Kelley at Carnegie Mellon discovered that whereas in 1986 we carried 75% of what we need to know to do our jobs in our heads, by 2006 our brains contained

Searching and asking questions work best with explicit information, things that could be written down.

The subtle information that cannot be pinned down in simple sentences, for example, the emotions and nuances that make or break a sale, is tougher to transfer because – according to Harvard professor Charles I. Gregg – 'wisdom can't be told'. People acquire this implicit knowledge through observing others, collaboration, and lengthy trial and error. Like blindfolded Zen archery, mastery sometimes takes years (see Herrigel, E and Suzuki, D. 1953. Zen and the Art of Archery).

Of course, many times we have already learned a skill through experience. Today experiential learning can be accelerated through simulation, virtual worlds, and role play.

	• FORMAL	• INFORMAL
• Control	• Top-down	• Laissez-faire
• Delivery	• Push	• Pull
• Duration	• Hours, days, week	• Minutes
• Locus	• Apart from work	• Embedded in work
• Author	• Instructional designer, SME	• Individual, the learner
• Time to develop	• Months, weeks	• Minutes
• When?	• In advance	• At time of need
• What?	• Know	• Become

In the increasingly complex world we inhabit, we often confront novel situations. This requires innovation, a new way of doing things. Innovation is often the result of a mash-up of ideas, for example a rule of thumb from one discipline being applied in a new context.

So far, we've addressed motivation and content. How do people actually learn in the real world, and what's wrong with the training that we have in place right now to help them?

HOW DO WORKERS LEARN TO DO THEIR JOBS?

Most people figure out how to do their jobs from the people they work with. They ask questions, they try things out, they ask for help, they tap into the grapevine, they snoop, they copy the behaviour of people who seem to be doing things right. Anthropologists who have studied workplace behaviour tell us this "learning at the school of hard knocks" is four times more important in developing talent than training in workshops and classrooms.

Learning is social; people always learn from one another. They have many, many times more contact with co-workers than with instructors, so it shouldn't come as a surprise that the workplace is where workers figure out what works.

While at first it seems haphazard, this informal learning is generally more effective than what goes on in organised workshops and classes. Why?

Rather than getting ready to deal with a situation that may or may not occur, impromptu learners are figuring out what they need in order to solve an immediate problem. Workers remember things they choose better than things instructors tell them to learn. They trust their peers more than instructors. Perhaps most important, self-motivated workers apply what they've learned immediately. When humans learn something and don't apply it, they forget their lessons before they have an opportunity to use them. Not only that, but people learn better in five-minute chunks than from one-hour sessions.

Strangely, this self-directed problem-solving flies under the radar in most organisations. Corporations invest in training and workshops and put nothing into improving the impromptu side. They also concentrate on novices, leaving experienced workers – the high performers – to fend for themselves. Why do corporations invest in the areas where it does them the least good? I blame schooling.

You can teach old dogs new tricks. They just don't learn them in school. With the

CLASSROOM	WORKSCAPE
Apart from work	Embedded in work
Training push	Learning pull
Programs	Platforms
Piecemeal	Holistic
Events	formanc
Static	Processes
Know things	Work smarter

workforce we'll have for the next decade, we better get good at working with the older dogs.

What's wrong with most training?

It's just like school.

School is not a very effective way to learn things. I know, that sounds blasphemous. That's because for sixteen or more years, you were indoctrinated. What's wrong with school? Lots.

You forget most of what you learn before you have the opportunity to use it. Human memory, if not reinforced, decays at an exponential rate. That's why you no longer remember it after taking the test. There's nothing new about this. Hermann Ebbinghaus published his 'forgetting curve' in 1885.

- You don't get to chose what to learn; you often deem what you're studying irrelevant.
- School bears little relation to the greater world outside its walls.
- School forces you to learn from an authority; you have much more faith in your peers.
- School focuses on individuals; success in real life depends largely on groups.
- School is walled off from the real world, making it impossible to experience and learn from reality.
- School teaches people to answer; it fails to teach them to question.
- Early schooling is impersonal: everyone studies the same subjects.
- School assumes pupils graduate; learning never ends.
- Grades, the measure of performance, are related to nothing outside school. Honor roll students and those who almost fail are equally likely to be happy, rich, or successful.

Formal learning in school can work well when the answer is known. That's rarely the reality we live in. The world has become

more complex, the answers more negotiated and emergent. Schools must prepare people to adapt, not to simply go through the motions.

School, however, was never an efficient way to learn; it did a decent job of enforcing social control. In the industrial age, schools aped factories and Taylorism. Eliminate surprises. Embrace mass production. One size fits all. Times have changed. Traditional schooling is becoming counter-productive – according to John Taylor Gatto's Underground History of American Education at www.johntaylorgatto.com.

It used to be the bottom of the class that dropped out; now the smart kids drop out. This is not a good model for corporations to copy, yet they do. Old habits die hard.

What we are dealing with here is more than traditional learning.

Learning is defined as the acquisition of skills or knowledge. That misses the trade-off of learning and performance support. Furthermore, organisations need more than learning; they need results. Learning is not enough; we want action.

The word learning has baggage. Mention learning to an executive and you can almost see them think schooling. Schooling, eh? That was not very effective. I'm not buying it.

This is why I talk about working smarter. Or tapping into collaborative knowledge. I don't run into many people who don't want to work smarter.

This is an extract from The Working Smarter Fieldbook by Jay Cross, Jane Hart, Jon Husband, Harold Jarche, Charles Jennings & Clark Quinn. Learn more about the authors and the book at <http://bit.ly/ILTM32d>

Jay Cross leads the Internet Time Group (<http://intemettime.pbworks.com/>).