THE RISE OF VIRTUAL LEARNING

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Collaboration is not defined by the office anymore. Ideas and innovation happen all around us; technology is an enabler and unifier, and we need new spaces of operation.
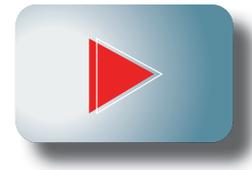Justin Bovington, Rivers Run Red

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OVERVIEW

This short white paper on virtual learning is part of series of white papers Cegos is producing on some of the most exciting learning trends in L&D today and follows a recent paper on 'informal networks'. The paper will also link in to a number of issues raised in the broader May 2010 white paper from Cegos - 'Exploring and Interpreting the Most Important Learning Trends across the Globe'.

If you are interested in Learning Management Systems and the latest technology systems to support virtual learning environments, this isn't the paper for you. This paper isn't about the systems themselves, rather the virtual learning applications that are being used, how and with what impact.

What this paper does is provide a broad snapshot of the corporate virtual learning market today, its origins, the market drivers which are pushing it forward, the different elements that make up virtual learning (some more established than others), and most importantly, what organisations can do to make sure they make full use of its potential.

1.   INTRODUCTION – THE RISE IN VIRTUAL LEARNING

The last few years have seen virtual learning enjoy increased take-up throughout organisations worldwide as a means of managing and training talent more efficiently,

In the US, for example, the use of virtual classroom tools increased from 45% in 2008 to 59% in 2009 according to Bersin & Associates. Furthermore, a June 2010 study conducted by the US-based Elearning! Media Group found that 64% of all corporate respondents have implemented virtual learning within their organisations, and 18% more plan to add them. The same study reports virtual worlds for learning will grow 250% over the next year to 21% of enterprises.

Virtual learning is on the rise elsewhere as well. The recent 2011 Training Industry report by KeyNote, which surveyed the UK training market, pointed to a number of training providers who provide virtual learning services (for example, Huthwaite Research Group has a virtual training campus). A September 2010 survey by industry training organisation, The Learning Sanctuary, also found two thirds of those questioned saying that they would rely on the virtual delivery of their training in the future. And in countries, such as Korea, more and more virtual learning applications are being developed.

With a need to save costs and improve learning effectiveness, particularly against the backdrop of the economic slowdown and slow return to growth, as well as the benefits of bringing together people in geographically dispersed places, L&D managers have been able to put forward a strong business case for virtual learning. Yet, how much do we really know about virtual learning today? What are the market forces which drive it? What forms is it taking? And what makes the difference between success and failure?

We will take a look at all these areas, as we seek to explore the world of virtual learning and how organisations can maximise its benefits. While referencing some technology providers, it's important to stress that this white paper is not intended to provide an exhaustive list of key players, rather a snapshot of this fast moving and rapidly expanding area of corporate virtual learning today.

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In the future, the challenge for L&D professionals is to harness this ability for young people to combine using technology so readily, whilst developing old fashioned skills like leadership and communication, and transfer this into the corporate world.

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Martin Baker, Founder and Managing Director of the Charity Learning Consortium

2. VIRTUAL LEARNING – ITS ORIGINS AND KEY BUSINESS DRIVERS

Today virtual learning is defined by cutting edge technologies from avatars and virtual worlds through to serious gaming and Internet television (methods which will be described later).

It is about harnessing these powerful tools and technologies to create a virtual learning environment where employees can access and enjoy the very latest in learning techniques and methodologies from their desktop. It is much more than a new delivery channel for learners but a highly potent learning technique in its own right.

In order to truly understand virtual learning, however, it's important to understand how virtual learning developed and what the key market drivers are behind its increased take-up. As we will see, many of the precursors to corporate virtual learning today come from educational institutions.

2.1 Origins

Interestingly, the educational establishment have been arguably ahead of corporations for a number of years in their embracing of virtual learning, with virtual learning environments much more common in educational environments before being incorporated into corporations – mainly through Learning Management Systems (LMS).

For example, business schools, such as Insead, the Stockholm School of Economics (SSE) and Duke Corporate Education in the United States, have been experimenting with 'Second Life' for a number of years. In the UK, the University of Durham recently launched a fire escape simulator, based on the layout of the university campus and designed around a video game. The initiative was part of a wider investigation into how game development tools can be used to prototype virtual learning exercises.

And education is likely to lead the way over the next few years as governments pour more resources into it. For example, the Chinese Ministry of Education plans to reach 100 million more students through online learning over the next 10 years. In South Korea, Megastudy.net, one of South Korea's largest online tutoring services, serves nearly 3 million students.

An example of the power of university-based research learning and knowledge sharing can be found in GÉANT2 (see below).

GÉANT2 is the high-bandwidth, academic Internet serving Europe's research and education community. It connects over 30 million researchers in 34 European countries and covers a wealth of different applications.

It is intended to make cutting-edge research projects, such as the particle accelerators at CERN, available to users everywhere. But there are many other applications. For example, art students can access a library of ultra high-resolution images of major artworks and study the artists' techniques, brushstroke by brushstroke; and music students can attend virtual master classes, accompanying each other even when they are hundreds or thousands of kilometers apart (Source: TellaSonera)**.**

2.2   The Market Drivers

So what has spurred corporate L&D departments to embrace virtual learning in the same way as educational institutions? There are a number of key drivers, starting with economic ones.

The Economic Benefits. The economic slowdown and now slow return to growth have shined the spotlight on the importance of maximising the value of training budgets. The result has been a move away from expensive and time consuming conference and 'hotel' based training and a move towards bite-sized learning that can often be coordinated from the desktop and can be integrated into employees' day-to-day activities to ensure they remain productive.

Against this backdrop, virtual learning can have an enormous impact on the bottom line through reduced costs from training away-days, greater productivity among the workforce, and a leveraging of the technology across organisations to foster more effective and collaborative means of working together. In terms of both cost savings and value generated, the potential business benefits of virtual learning can run into millions.

Learning On Demand. Virtual learning and its flexible access aligns itself perfectly with the current workplace context where employees – particularly from newer generations – are looking to learn 'anytime, anywhere'. In this sense, virtual learning is very much a product of its time.

More Effective & Efficient Collaborations. Virtual learning can also help employers make their existing employees even more productive – particularly important when organisations have been downsized. Recent research from people assessment firm, Talent Q found that over 66% of organisations cited developing high performing teams as their primary HR challenge over the coming year. Virtual learning doesn't just impact learning – it can influence every facet of the business where collaboration is required, whether it be internal management dynamics through to customer service and operations.

The Changing Context – Workforce Demographics. Finally, there is the favorable context in which virtual learning is growing today. The changing demographics of the workforce with younger generations entering it, more attuned to the latest in technologies, is helping spur virtual learning on. In the US, for example, "in just five years, potentially more than half of the workforce will be composed of members of the Millennial/Gen Y generation (born after 1981) who have grown up immersed in technology and social media", according to the ASTD 2010 State of the Industry Report.

And demand for virtual learning and the latest technologies are only likely to grow when Generation Z (the 'net generation' born between the early 90s and early 2000s) enters the workplace in the next few years.

3. IMPROVING THE LEARNING EXPERIENCE

However, probably the most important driver for virtual learning today is that it really does **improve** the learning experience.

This is not to say that it is better than the classroom-based approach but it brings with it a number of unique elements. If you have ever seen virtual learning in practice – the use of avatars for example – it is stunningly life like and highly impressive to observe with the body language providing incredible details and people being shown to be actively learning. Against this backdrop, it should be compulsory for all L&D and HR professionals to experience the virtual learning environment. It is only then that they can make complete decisions about their employees' L&D needs.

Virtual learning can also improve communications skills between people and encourage new behaviors. For example, those people, who are less assertive in an office environment, might be prepared to be more assertive in the virtual world.

Flexibility is also key to virtual learning today. Rather than receiving a learning tool on a CD-Rom, the virtual learning environment can be customised for evolving learner requirements

According to Steve Mahaley from Duke Corporate Education in North Carolina, virtual learning **"lets people explore and practice new behaviours that will impact positively on the business."** Retention is also improved because of the **"experiential" nature of the learning."** (Financial Times, 15th March 2010).

Albert Angehrn, The director of the Centre for Advanced Learning Technologies at INSEAD Business School, also discussed the importance of play in learning today: **"Up to now, business simulations have concentrated on numbers - the sort of things that appeal to accountants. We are now seeing the emergence of simulations that concentrate on characters who change their behaviour based on the learner's decisions. This reflects business practice more accurately than a purely numbers-orientated simulation"** (Training in Action, Innovate to Compete Conference, 2007).

4.   THE AVAILABLE TECHNOLOGIES

So what are the technologies that have overseen the rise in virtual learning? Probably the best starting point is e-learning.

4.1   E-Learning

E-learning remains the core technology behind virtual learning and a vital tool for getting across basic learning principles.

Despite not living up to its initial hype when it came to the market in the early 2000's, today e-learning is central to many organisation's L&D practices. Cegos Group's May 2010 survey, for example, found that the adoption of e-learning continues to increase with the UK and Spain leading the way in Europe with 56% of Spanish employees and 53% of UK employees taking part in e-learning training, against the European average of 35%.

While the first incarnation of e-learning tended to be positioned as a niche learning delivery method, technical in application and most commonly used for technical business areas, such as compliance training and production orientation, today e-learning is used across the professional skills spectrum. At Cegos, for example, our e-learning modules cover everything from purchasing to management & leadership to marketing & innovation. See www.elearning-cegos.com for further details.

4.2   Web-Conferencing/Webinars/Web Meetings

Another virtual learning technology that has been on the market for a number of years and which is closely aligned to e-learning is that of web conferencing. Standard packages include Cisco's WebEx or Microsoft's Live Meeting. While web conferencing has typically been embraced in the past as a tool for online meeting, it also has tremendous potential for L&D in creating virtual classrooms.

The last few years has seen a number of new applications such as a new Adobe application for I-Phones which enables you to conduct webinars on your mobile rather than via your PR. Other new developments include web sites, such as www.livematrix.com, which list thousands of live online events every day and which people can use to access HR and learning topics of interest. If you find a subject of interest, for example, you can tag it, invite your friends and even promote on your Twitter account. In this way, webinars are becoming much more than a narrow business-focused activity but one which enters the social space and enables individuals to design their own training requirements.

One potential obstacle to web conferencing being incorporated as a virtual learning tool, however, is that it remains too much a one-way medium where a person is making a presentation, for example. Participants need to have the courage to interrupt and the facilitator needs to make more interventions to ensure that this it is a truly interactive environment where people are engaged. How many times have you been checking your emails, while on a web conference call, for example?!

4.3 Virtual Worlds

Probably the element which draws most attention towards virtual learning today, however, is virtual worlds – an area which has developed dramatically over the last few years.

Perhaps the most well-known virtual environment is Second Life (www. secondlife.com), a web-based virtual world which enables users to interact via avatars in a rich and immersive 3D and training environment. Participants can explore, meet each other and participate in individual and group activities.

Since Second Life was launched in 2003, a number of other virtual environments have come to the fore, one such example being Reaction Grid (www.reactiongrid.com), where participants create an avatar and learn to walk and interact with virtual objects and other avatars.

Then, there is VenueGen (www.venuegen.com), which focus more on ad hoc events. VenueGen is cheap, easy to do and, most importantly, works. It is a browser-based web conferencing service where its 3D virtual meeting software enables users to interact with each other through avatars (which can be developed to look like specific individuals).

Healthcare providers can have medical education training through Second Life.

Through VenueGen, users can host and attend meetings, conferences, and trainings with other colleagues and upload rich media into virtual meeting rooms for real-time collaboration. It sees the integration of web conferencing and audio conferencing within a virtual environment.

So how are these virtual worlds being applied in practice?

There are numerous potential applications, not just as an internal L&D tool but across the entire business spectrum. For example, the virtual space can be used as a means to interact with customers. A supplier, for example, can use the space to invite customers and prospects to experience new products of even new additions to the team.

Virtual worlds can also facilitate collaboration across borders and customers helping to solve problems, for example, by tapping into expert avatars from remote locations.

Virtual worlds can even support some of the agile business models developing in the past, such as the lean manufacturing model, developed by Toyota, or the Six Sigma management strategy developed by Motorola. With Six Sigma's goal being to improved the quality of outputs by minimising the variability in business processes, normally across many regions and a number of mixed supplier teams, there's no reason why virtual worlds can't be an a highly effective enabler.

In short, virtual worlds have enormous potential to reshape the way we as individuals don't just access our learning but also how we access knowledge and further develop our business skills.

The Virtual world
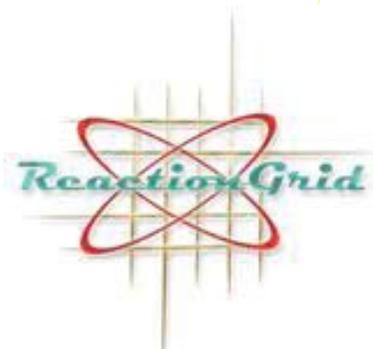
4.4 SERIOUS GAMING

Another important development in virtual learning today is serious gaming.

While games-based learning has been in existence for 200 hundred years (games were used for military training in the Prussian Army), it's only since the technology has caught up with the vision that it has really taken off.

Forrester Research expects serious games to take off in the next five years due to 'technology populism' and the Generation Y effect. The May 2010 Cegos Group survey also found that 15% of European employees had used serious gaming as part of their learning activities.

To this end, there are a plethora of serious gaming vendors in the marketplace today. Ones worth noting include PIXIELearning (www.pixelearning.com) and Soshi Games (www.soshigames.com/).

Take PIXIELearning and some of the serious games it offers. For example, Call Centre Coach is a game where the call centre agent is challenged with constantly keeping customer service levels high. Immersed in a role play scenario, the agents navigates through the call, ensuring high customer satisfaction levels as well as maximising call impact, whether it be through follow-up sales, for example.

Another example, is the Finance Game, an online web based serious game, immersive learning simulation, designed primarily to familiarise non-financial people to key financial terms, metrics and concepts.

Here's how it works. Learners are placed in a fictitious scenario involving a medium-sized, underperforming mountain bike manufacturing company, in desperate need of help. The learners can see the previous two years historical trading figures (sales figures, profit & loss, cash flow and balance sheet). They are also then given performance targets to achieve over the next three years.

Presented with challenges and a range of decisions to make, users need to discover the strategy in order to achieve their targets. The learner's performance is tracked and compared to the predicted performance allowing users to see where improvements and adjustments need to be made.

This serious game features a very detailed profit and loss, cashflow and balance sheet model. Management accounts are generated each month and then annual accounts are 'filed' at the end of each completed year.

All decisions cause realistic, logical business outcomes. For examples, falls in market share when prices are increased sharply allowing learners to understand the interdependencies of various business concepts.

As they practice and strive to achieve the in-game targets that they have been set, they will quickly begin to grasp the sensitivities of each factor (e.g. the importance of working capital) and be able to understand the interdependence of the different aspects of the business from a financial standpoint.

So why is serious gaming proving to be so effective today?

The improved quality of serious gaming, rapid simulation and content-rich platforms has significant potential for L&D.

The games are made to provide an engaging, self-reinforcing context in which to motivate, educate and train players and the fact that they are often based on one singe objective, can help focus the learner's mind. In addition to this, the advances in video and computer game development can result in a highly sophisticated activity customised to your organisations' needs.

Serious gaming is also perfectly targeted at the Generations Y and Z entering the workplace and has the ability to engage these people early on. The sophistication of games today can also make participants understand the true consequence of their actions with a real focus on outcomes.

4.5   Internet TV

The last few years have also seen the growth of Internet Television which is close to delivering full screen streaming video to computers and set top boxes over broadband at the same quality as satellite TV.

ABI Research, for example, predicts that revenue from global pay Internet TV services will be $40 billion by the end of 2015 and Sony estimates that 90% of all televisions sold in 2012 will be able to connect to the Internet.

Internet TV essentially allows you to broadcast live or record items as if you had your own television channel. This can means that video casts, online lectures, live press releases etc can be instantly accessible on your customer and employee desktops.

And the beauty of Internet TV is that you don't need a studio. All you require is a room, a decent digital video camera, a green screen (blank wall with a green cloth to be crude!) and one of the new generation "studio-in a-a-box" concepts that allow you to record in a rich 3D environment, broadcast live, and maintain programming for ongoing access.

We believe that Internet TV has enormous potential for L&D and businesses in the future.
Benefits include its low entry and distribution costs (a suitcase, a camera and some editing software), the fact that it is on demand, and its ability to reach specific and global markets with precision. It also allows L&D departments to take content and present it in a fully interactive and rich, 3D environment.

It is against this backdrop and due to our belief in Internet TV, that we at Cegos are pioneering the concept of Internet TV-based learning through a partnership with leading Internet TV specialists, Vision IP TV (www.visionip.tv). Watch this space!

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THE KEY TECHNOLOGIES

E-Learning

Web Conferences
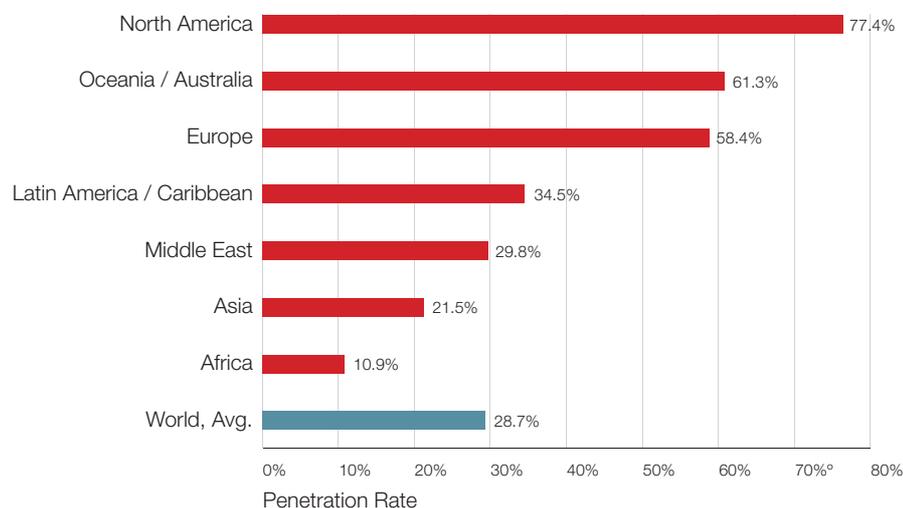
Virtual Learning Environments

Serious Gaming

Internet TV

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5.   VIRTUAL LEARNING – A REGIONAL PERSPECTIVE

So is virtual learning growing at a consistent rate worldwide? While this white paper won't go into detail on virtual learning environments throughout the world, a number of observations can be made.

• Countries, such as the US, the UK and across Europe are continuing to take up virtual learning. A recent survey from Cegos in May 2010, however, found Spain and the UK to be ahead of France and Germany in regard to the embracing of online learning.

• Asian countries, such as Korea, are setting the standard in designing learning environments. At present, the only thing holding them back is that many of the deliverables are just in Korean. In terms of technologies, however, they remain world leaders.

• Clearly a technology gap remains where in countries (such as in Africa), there is limited bandwidth and access to the Internet, and users can't enjoy some of the latest virtual learning environments. See world internet penetration rates as of June 30th 2010.

Bar chart – Penetration Rate:
- North America: 77.4%
- Oceania / Australia: 61.3%
- Europe: 58.4%
- Latin America / Caribbean: 34.5%
- Middle East: 29.8%
- Asia: 21.5%
- Africa: 10.9%
- World, Avg.: 28.7%

X-axis: 0% 10% 20% 30% 40% 50% 60% 70%° 80%
Penetration Rate

World Internet Penetration Rates by Geographic Regions – 2010

6. WHAT MAKES A SUCCESSFUL VIRTUAL LEARNING EXPERIENCE

In this white paper, we have looked at some of the key elements of virtual learning, its benefits, how it differs from region to region, and the key market drivers behind it. Yet probably the most fundamental question is how it can be successfully implemented within organisations? Here are a few suggestions below:

6.1 Don't Forget That the Learning Premise Remains the Same

Successful learning requires an environment where employees are exposed to new information, can express ideas, practice new skills and interact with colleagues. Most importantly the learning needs to be relevant to the employee needs and delivered in a way that helps them not just retain it, but apply it in the workplace. Just because it is a different medium, it's important to stick to these core principles. One potential means of ensuring that the learning principle remains at the forefront is to involve learners in the project team at the design phase.

6.2 The Importance of Integrating Different Learning Techniques and Collaborative Social Media Techniques and Technologies

One of the biggest dangers to the progression of virtual learning today is chasing after each new fad at the expense of technologies that have stood the test of time. That's why at Cegos we have focused on utilising new technologies but also integrating them into existing solutions. Don't dismiss traditional e-learning modules as 'old hat', for example, just because serious gaming comes along.

An incremental approach normally pays dividends (even Skype in its simplest format has important implications for virtual learning). Otherwise, you can simply be overwhelmed by the plethora of technologies available (see illustration below).
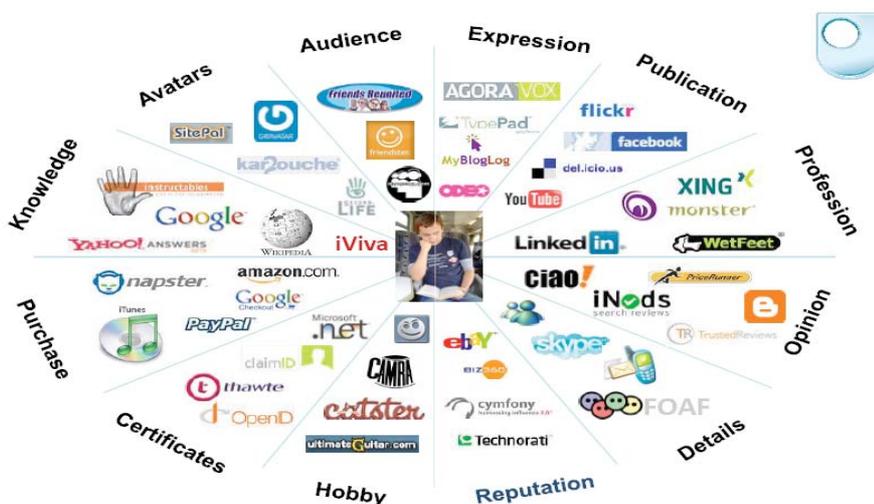
Which technologies should I opt for?

6.3 THE IMPORTANCE OF BEING LEARNER-DRIVEN, OBJECTIVES & MEASUREMENT

As in any form of learning intervention, it's important that the learning experience is driven by the learner. The virtual environment also has to have valid learning objectives. Instructional design must blend seamlessly with game design, for example, and must include mechanisms to track, assess and validate progress. The ability to judge a participant's involvement in a virtual session, for example, is crucial – otherwise, it will be difficult to assess the benefits of virtual training. Possible components could include quizzes or specific game objectives to complete.

6.4 It's All About the Content

The commitment to good information, targeted at the employee and presented in an engaging way, is essential for success in the virtual environment. There must always be a focus on good content.

6.5 Creating the Right Culture

For virtual working to be effective, it's about more than just having the right technology and processes in place, it's about developing an organisational culture that supports and trusts employees to work remotely. Employers need to focus less on where their employees work and more on their delivery and impact. It's also about taking a more open and creative approach and communicating constantly.

The goal here is to make the whole virtual learning culture viral so that it starts to run itself and create its own ongoing collaborations and application of the learning.

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A SUCCESSFUL VIRTUAL LEARNING ENVIRONMENT – A CHECK LIST

Am I getting carried away with new technologies at the expense of older proven ones?

Does the learner remain in control?

How can I involve the learner more at the design phase?

What about measurement and objectives?

Am I still relying on quality information?

Is there internal buy in and a political will for virtual learning to succeed?

How can I take virtual learning viral?!

7. THE PERFECT VIRTUAL LEARNING ENVIRONMENT AND THE FUTURE

The bottom line here is making sure that all the unique attributes of virtual learning are prevalent to create the right learning environment for your employees.

What are these attributes?

These include (among many others) the realistic nature of the learning interaction – the avatars, for example; the interactivity and high quality content of Internet TV, for example; the huge variety of choice from online webinars; the very unique attributes of the learning experience from the ease of access to the focus on specific objectives; and the closely alignment of the medium with the interests of the next generation entering the workforce.

Virtual learning and the variety of different components under the virtual learning umbrella have enormous potential for the future application of L&D and business. What is clear is that we are just at the beginning of what could be a long and potentially transformational journey.

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www.webex.co.uk

ABOUT CEGOS GROUP

Cegos Group, established in 1926 is today the European leader in professional education and one of the major global players. Its consultants have expertise across all subject areas in management and developing competencies: human resources, management and leadership, performance and organizational skills, individual and team performance, marketing and commercial, project management, deployment of large training systems internationally.

In 2008, the Cegos Group achieved sales of 195.5 M€ and trained more than 200,000 staff in Europe and internationally. Cegos employs 1,200 consultants and works in 30 countries across the globe.

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