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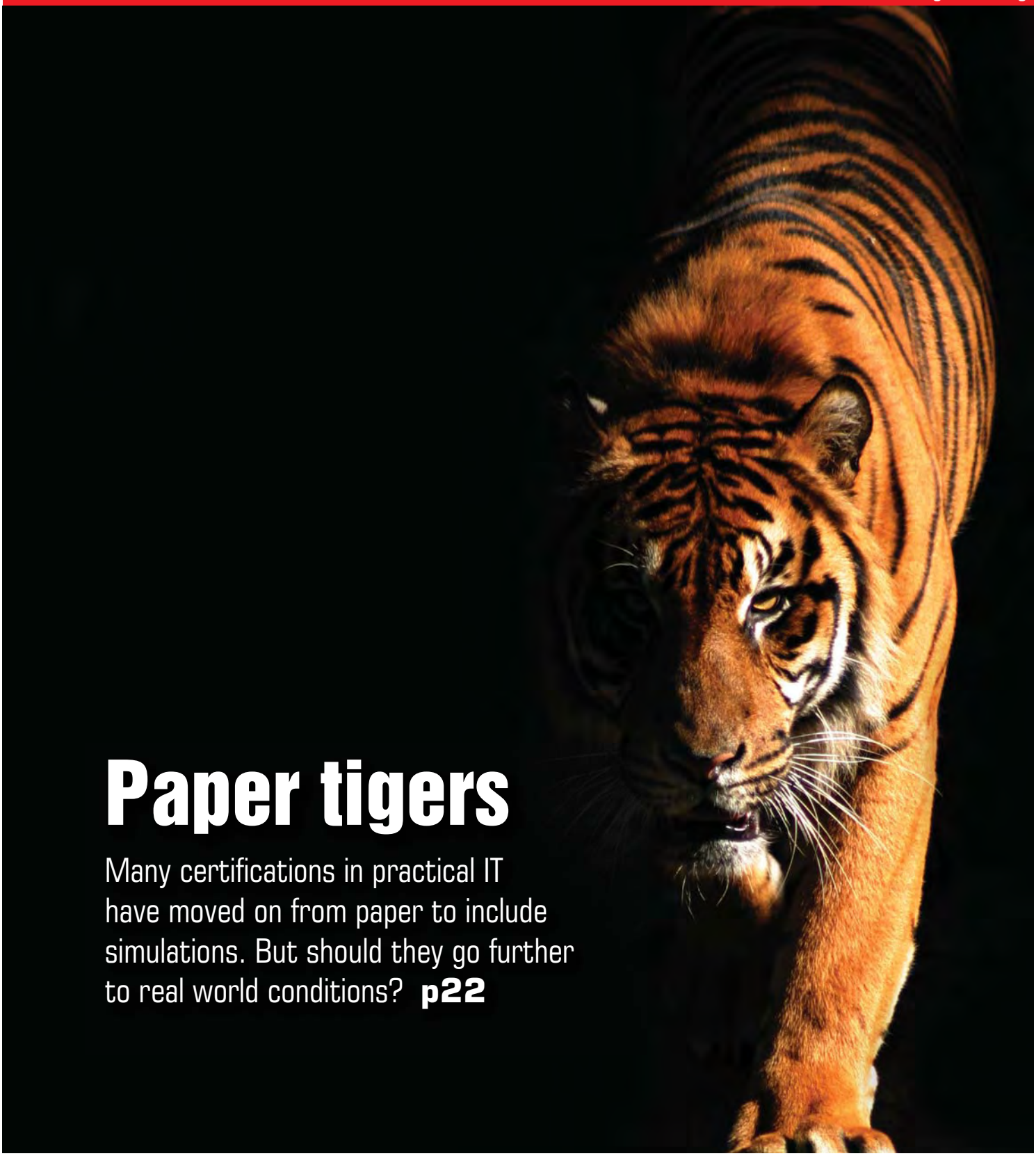
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Paper tigers

Many certifications in practical IT have moved on from paper to include simulations. But should they go further to real world conditions? **p22**



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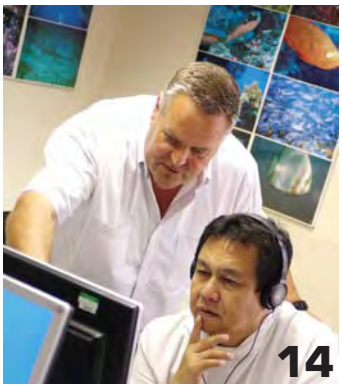
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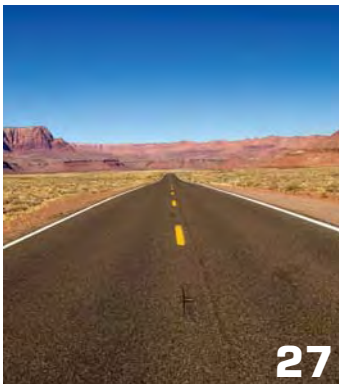
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Editor's intro

Watch out for the monthly e-news



IT Training is getting ready to live up to the technology part of its name and go electronic. From January next year, we will be producing a monthly e-newsletter, as well as the quarterly paper copy of *IT Training*. The new e-monthly will include more news, case studies, interviews and features on the various areas of training in IT. If you're signed up to receive the hard copy of the magazine directly (i.e. not via the IITT) you will automatically receive the e-monthly, as long as we have your current email. So please make sure that you update us, if necessary, with your email address online at www.turpin-distribution.com/coa. You'll find your unique subscriber number with the sheet accompanying this issue.

Inside this issue, our trainer-to-trainer section discusses how training may need to be adapted for the generations who grew up using IT from a young age. One of the arguments is that future generations will need to learn different skills from current employees, as they'll still need to learn how to link applications and apply them to business.

I suspect, furthermore, that although youngsters may have good IT user skills when they start their working lives, they will need to keep updating their IT knowledge and skills as technology moves on. On the positive side, they will be used to learning technology and, no doubt, be more aware of its potential.

So much for the techno-kids, but what about the rest of the working population? At a recent Westminster e-Forum, Karen Price of e-skills UK said that 70 per cent of the workforce in 2020 will consist of people who are already working today. That really highlights the necessity to make sure the current workforce has the best skills possible in IT.

This links nicely into mentioning two of our other articles in this issue on the question of whether training and assessments should include a practicum element. One article describes Microsoft's new distance learning offering that includes e-labs on real servers, while another feature looks at conducting examinations for technical certifications in real world conditions. The question is whether real servers could improve learning and better assess what skills have been acquired.

If you've got a view on any of these topics, why not drop us a line?

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IT training

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Update

A round-up of the latest news and developments for IT training professionals

Germs are breeding: keep your computer clean



Cerco IT Training has introduced a one-day computer hygiene course, designed to teach IT personnel to effectively and safely clean IT equipment, without causing damage. It responds to research by the University of Arizona that viruses can survive on computer equipment surfaces for up to 72 hours.

The **IT services market looks buoyant**, according to the latest Gartner forecast. It predicts growth of 8.7 per cent for this year worldwide and 6.7 per cent for 2008, rising to a value of US$779 billion. The hardware service sector will show the slowest growth, up 4.7 and 2.9 per cent for 2007 and 2008 respectively, reaching US$95 billion. Process management is forecast to show most growth up 10.3 and 9.4 per cent to US$126,544 million

Will there be sufficient IT professionals to work in the sector in the UK? Further research has been conducted recently into whether there really is an **IT skills crisis.**

Almost half (48 per cent) of those surveyed for Silicon.com research believe there is a skills crisis in the IT industry, while the other half thought not.

45 per cent of the 721 respondents said there are IT jobs in their business which they are unable to fill, up from 37 per cent last year.

Similarly, in another piece of research, conducted by Pardo Fox on behalf of Global Knowledge, 51 per cent of IT professionals believe there is a skills gap. Almost half think skills shortages are having a significant impact on their department's effectiveness but 23 per thought there is none.

On-the-job training was rated as important by 85 per cent of respondents, compared with 67 per cent for informal training, and 61 per cent for formal training. Only 22 per cent attached importance to their university or college course.

The Silicon.com survey showed that programming languages such as Java, C variants, HTML and XML are in shortest supply in the workplace for the fifth year in a row, followed by web services, SOA skills, such as J2EE and .NET, and then IT management skills and database expertise.

The IT-related soft skill in shortest supply continues to be project management, with leadership skills also proving difficult to locate. 62 per cent of Silicon.com respondents said it is important to have both business and technical skills and 67 per cent agreed or strongly agreed that business skills are key.

Just 18 per cent of respondents think technical skills are the most important to IT success.

Given the last figure, is there any need for concern that the numbers taking **A level** computing in 2007 fell to 5,610 from 6,233 in 2006? A level ICT examination numbers also dropped this year to 13,360 from 14,208 last year.

User skills in IT have also been the subject of recent research, highlighting the difference between school leavers' ability and that of older generations.

92 per cent of employers are happy with the IT skills of school leavers, despite around 50 per cent being unimpressed by their English and maths skills, according to a CBI/Pertemps Employment Trends survey.

Richard Lambert, CBI director-general, said: 'School

leavers' fluency with iPods, mobiles and MySpace has translated well into the workplace, and often gives them an edge over their bosses. The greater focus on IT in schools and investment in computers is also helping.'

In contrast, employees in UK companies say that their own IT skills are not up-to-scratch and hamper their performance.

5 per cent of the 1,000 workers polled by YouGov for Samsung claimed that their IT skills were poor, while the average employee describes their level of IT knowledge to be average 'at best'.

Perhaps these skills will improve with the increased investment into technology for learners pledged by the Learning and Skills Council (LSC). It plans to spend £59.8 million during 2007/08, almost £20 million more than last year.

The additional investment will contribute to learning infrastructure, student equipment upgrades and expanding the numbers of mobile devices available for students.

Recent LSC research found that learning programmes delivered using technology can improve the engagement, retention and achievement of post-16 learners.

The investment programme will include expanding the number of FE colleges that introduce mobile learning devices, and supporting innovative proposals from work-based learning providers seeking to embed technology into their learning programmes.

Another boost to IT users could come from plans mooted by the government to accredit in-house training schemes of major companies, so that they lead to recognised qualifications.

Supplier briefs

At home and abroad

Global Knowledge has teamed up with Fox IT to provide the UK with IT service management and governance consultancy and learning solutions. Global Knowledge is running a service management public course schedule on behalf of the two companies while Fox IT will focus on developing consultancy and private training engagements in the UK and across EMEA.

Global Knowledge has also launched Cisco and Microsoft collaboration courses in the UK, as part of the enhanced customer collaboration program between the two vendors. The courses are aimed at experienced voice and data sales and technical employees that need to know about the key Cisco and Microsoft products and how they fit together into a unified communications solution.

Internationally, Global Knowledge is buying Synergy Professional Services (SPS), based in Dubai. SPS provides professional and technical IT skills training, consulting, and services in the Middle East and Africa. SPS employees and management will continue running the business as usual.

Quality in accessibility

The inaugural BCS Quality Mark Awards for Accessibility were announced at the BCS's Accessibility Awareness Day on 30 October.

Dolphin, Deafax, RNIB and CIA Training were among the award winners, which have been introduced to acknowledge the contribution that organisations have made towards improving accessibility.

BCS held the day to recognise the success of a series of initiatives to improve the accessibility of its qualifications and to identify new opportunities to build on the current momentum.

Key speakers included David Banes, director of development for AbilityNet, and Derek Mills, accessibility and technical support advisor at BCS.

A firebrand in the camp

The Training Camp has moved from franchise status to become completely independent, changing its name in the process to Firebrand Training. As far as customers are concerned, it is just a name change; otherwise it's business as usual with Robert Chapman at the helm.



Firebrand Training has become the first company to offer authorised accelerated learning courses for Sun Microsystems. The courses include Sun Java Pro and Solaris Certified System Administrator (SCSA).

Firebrand Training has also launched the first EC-Council's Certified Secure Programmer course (ECSP) in the UK. The ECSP qualification is aimed at programmers and developers responsible for designing and building applications in various programming languages or architectures.

Redtray in with Bytes

Redtray and software services company, Bytes Technology Group, have signed up to a three-year agreement worth £2 million.

Through the agreement, Bytes will offer a range of additional high value services to its customers – it's one of the UK's largest Microsoft and Xerox resellers. Bytes will draw on Redtray's e-learning experience to supplement its training business. The two companies have already been working together for two years informally.

Uni to offer Prince2

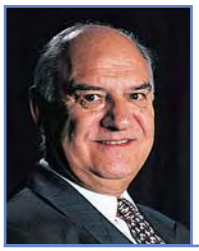
Maven Training is to provide Prince2 courses for university candidates at the University of Westminster. Students enrolled in the School of Informatics at the University's central London campus will have the option of studying for the accreditation.

New MOF under design

Examination Institute, EXIN, has developed an updated version of the foundation exam for Microsoft Operations Framework (MOF) on behalf of Microsoft. EXIN will also accredit the training providers for the MOF exam.

Conference on SFIA

Keith Aldis, CEO of the IT Service Management Forum, will give the keynote speech at the SFIA Capability Management International Conference on 29 November in London. The conference's aim is to show how leading organisations are getting business advantage by taking a mature approach to the management of their IT skills and capability.



Alan Bellinger

The bar has been raised

The Carnegie Mellon Report that I covered in my last column – showing the typical knowledge worker no longer relies on their current knowledge to make decisions – underlines the effect of 'googlisation' on most organisations. It also reminds us that the next wave of the internet revolution is predicted to hit L&D.

These dynamics are often referred to as 'raising the bar'. What should we do about it and are learning ecosystems the answer?

The world of business is always acquiring new terms, and so the Harvard Business Review talks about a business ecosystem, in our world a learning ecosystem.

And there already is one in your organisation – the big issue is that you need to foster it and push it in the direction that will have the greatest impact. We can define the learning ecosystem as the set of relationships between learners, resources, thought leaders and knowledge providers that enables knowledge sharing, and supports both formal and informal interventions, to achieve overall and individual performance objectives.

One of googlisation's effects is that cross functional networked relationships will develop, even in organisations operating on a highly functional basis. But once developed, they will atrophy unless sufficient common interest sustains them.

A well-balanced learning ecosystem will ensure that people will have the knowledge and skills they need to do their job through a combination of formal and informal learning interventions. Structured well, you can use the formal interventions to drive the overall direction and informal interventions to fine tune, contextualise or provide just-in-time skills. These informal interventions will most probably include mentoring, participating in communities of practice, collaborating with others and accessing content that is critical to their job.

To test the effectiveness of your learning ecosystem, there are three areas to evaluate. First, look at the extent to which you are able to personalise the learning experience for each category of learner. Next, assess the effectiveness of any collaboration projects between both learners and stakeholders – if it's still in an embryonic stage, then it needs to be fostered, but if you get a 'tried that, it didn't work' then you'll need to look at the lessons learned. And finally, assess the way in which you're currently managing your learning resources (both knowledge and skills) and the way in which you report that.

In the past, we may have referred to the learning ecosystem as a learning culture, but now we have some real deliverables and critical outputs to flesh out that otherwise somewhat nebulous notion.

BCS Information & Technology Training Specialist Group

Last meeting: the remit of e-skills UK

'e-skills UK has a mission to ensure that the UK has the technology-related skills it needs to survive in the global economy', explained Genny Dixon from the Qualifications Reform Team of e-skills UK at the I&TTSG meeting on 30 October.

To this end, e-skills UK is involved in various programmes and projects. These include: running the Computer Club for Girls (CC4G); developing the new diploma for 14-19 year-olds: and setting the framework for a degree in information technology management in business.

'The meat of our work is the professional agenda,' explained Dixon. e-skills UK's role in Prof IT (an alliance of BCS, NCC, Intellect and e-skills) is the professional competency model. To create this, e-skills UK plans to define a common terminology in describing IT roles and competencies, set up a framework for qualifications and plan the detail of how qualifications fit in it.

Work so far has defined seven main disciplines, split into more than 100 sub-disciplines.

An I&TTSG member asked where trainers would fit in this model. A quick discussion came to the conclusion that they would probably straddle across different disciplines.

Next meeting: February 2008 at BCS London office. AGM and presentation. Group details and full reports: www.bcs.org/ittsg

I&TTSG membership secretary Simon Perry

Profile

Simon is a director of Brass Bullet whose mission is to 'promote excellence through the application of engineering best practice'. He has over 20 years experience in all aspects of software and systems engineering.

He has worked as a consultant with many organisations including major industry (defence, aerospace, rail, communications, radio, television), academic institutions and government organisations.

Simon also delivers Brass Bullet training courses and workshops which include all aspects of the theory and application of the unified modelling language, UML, to many applications, including systems engineering, standards analysis and definition, requirements modelling, data modelling and quality systems.

REDTRAY

REDTRAY, for the second year running, has made the Sunday Times Tech Track top 100 growing technology companies. As part of our continued growth, by providing customer focused Blended Learning, REDTRAY is increasing its team in all areas of the business. We are looking to recruit people from diverse backgrounds, who are able to work as part of a passionate team and who are also self-motivated to succeed. Salaries vary depending on experience and we are prepared to pay for the right people.

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General Trainers
Based in the North & Midlands we are looking for trainers with a broad range of skills including MS Office, to undertake various training roles within our Managed Service Team.

Instructional Designers
Working as part of a 15 strong team in this key role in the business, you will be probably be based in our Bath, Romsey or London offices. You will need to have extensive experience of instructional design using a range of industry development tools and we would also be particularly eager to hear from anyone who has experience of industry standard simulation software.

New Business Sales
A highly motivated self starter with a minimum 3 years experience selling large-scale learning solutions at senior level. You must be able to demonstrate over-achievement of targets and be capable of delivering a strategy and tactics to meet a significant target in return for the best earnings in the industry.

Project Managers
Working on a range of blended learning projects, you could be based from home anywhere in the UK, though expected to travel to customer locations as needed. Experience is essential, preferably in a learning and education context with a formal qualification such as Prince 2.

Account Executive
Working on a number of small and medium sized accounts, you will be required to manage the existing business and to grow it by forming close, customer focused relationships. London based, you will need to have experience of a similar role or be in a supporting role and looking to move to working more independently.

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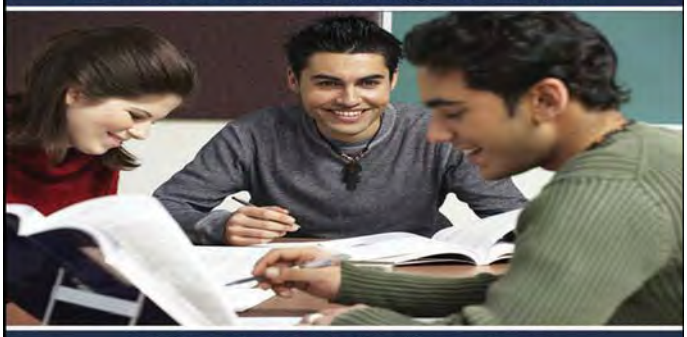
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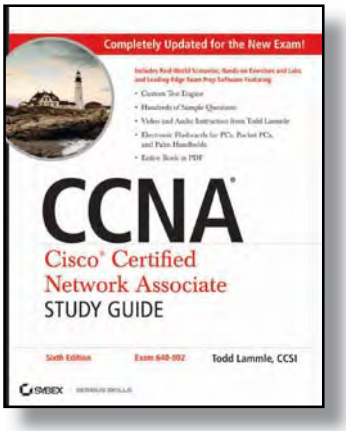


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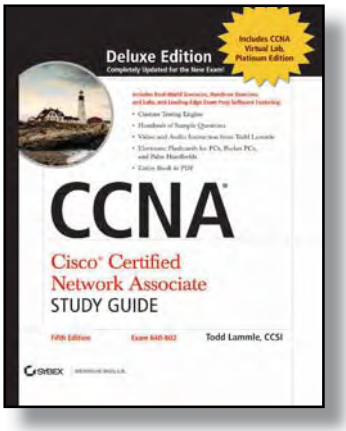
New CCNA Exam Launched August 1, 2007

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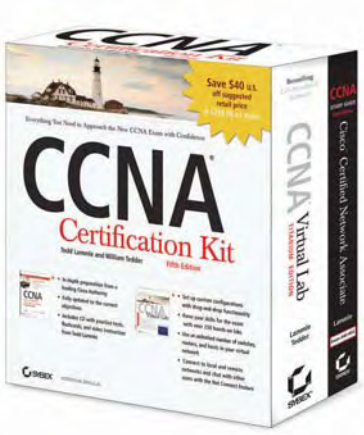
Cisco has announced the launch of its much anticipated revision to the CCNA exam. Exam 640-802 replaces Exam 640-801 which will be officially retired on November 6, 2007. Sybex has a full complement of resources from Cisco Networking Authority Todd Lammle, to help students train for the new exam.



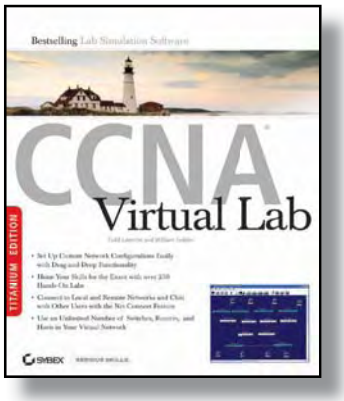
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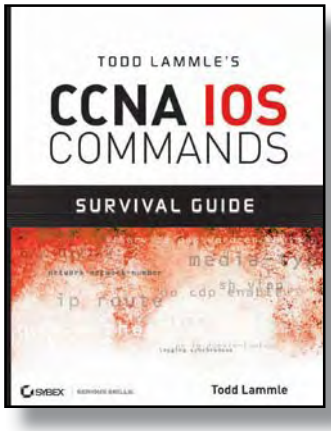
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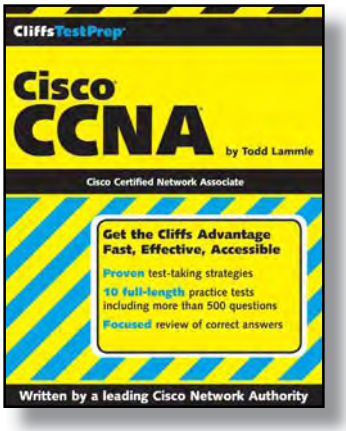
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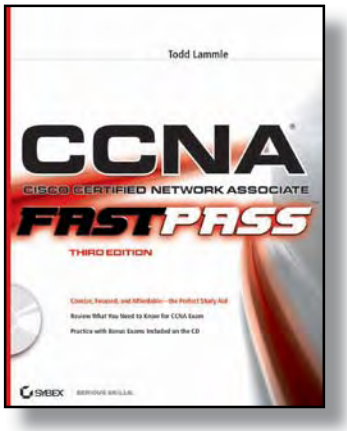
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On the ground

What are good ways of managing a a group with diverse prerequisite knowledge of a topic? We asked trainers to share advice and guidance on this delivery method.

I have found a six step process to be helpful:
1: Be totally clear as the trainer on what the course/event content is about prior to engaging with the group.
2: Create a climate that allows everyone to feel comfortable about expressing their prerequisite topic knowledge and experience.
3: Use a framework to gather personal knowledge and experience
4: Create a joint agreement, trainer and group, on what is possible given the content of the course/event and the expectations of the group.
5: Gain agreement from the group regarding the achievement of the jointly agreed deliverables.
6: Have a pre-determined exit strategy for those individuals having either too much or too little knowledge or experience to remain in the group.

The use of a prerequisite background questionnaire is useful too in managing expectations of diverse groups.

Bob Black, Learning Tree

Begin the session by asking each delegate to introduce themselves and explain how much they know about the subject. This acts as an ice-breaker because others can immediately say 'yes, me too', the trainer gets to know particular strengths and weaknesses and all the delegates find out each other's knowledge. The tutor can draw attention to the fact that there are different levels of knowledge and encourage the advanced ones to assist the novices.

Jag Johal, Premier IT

I recommend buddying the learners who are working at a different pace from the majority with a compatible-paced learner. This is reassuring for the slower-paced learners as they do not feel alienated and can help each other. It also allows for the faster-paced learners to move on with additional, challenging exercises that mean they appear to achieve more and feel valued in their efforts.

Jooli Atkins, Matrix FortyTwo

Next issue

What advice would you give fellow trainers to handle IT failing during a course?

Breaking developments

How will the next generation of students affect the classroom environment? Born into technology, what will they expect from a course?

I believe that a generation exposed to technology has the advantage of some accelerated learning when it comes to being able to use the features and functions of software applications. What they may lack, however, is knowledge of the practical application and benefits of such technology in a commercial arena, and how to apply the skills acquired.

This, I believe, would be more of a driving force behind training. This knowledge can only be acquired through a mixture of targeted and focused training and practical experience.

Tony Carr, Premier IT

The next generation will expect more advanced and in-depth explanations than previous courses have been designed to deliver. Time constraints have dictated that the emphasis be on explaining features of the software and the application of those features has been via general examples. In future, delegates will want to delve into specific exercises and deal with their particular requirements, i.e. customised courses will be the norm. The other trend will be towards more merging of courses such as linking Word to Excel, Access, Outlook, Frontpage, etc.

Jag Johal, Premier IT

Managing the expectations of 'digital natives' for what will happen in their classroom experience is where both benefit and challenge lie for trainers.

Expectations of what will be in a classroom environment require managing to reduce unrealistic expectations.

Just because we can do IT does not mean that we should do IT. The strength of technology and effective classroom delivery is by blending technology e.g. video clips, presentation delivery, in-class PC/ laptops with inter-active learning.

Bob Black, Learning Tree

Next issue

What effect will social networks have on training and to what degree do you think training will integrate with these communities moving forward?

For more comments, check out the website: www.bcs.org/ittraining

Trainers: this is your page – please send in your views for the next issue to the editor: helen.boddy@hq.bcs.org.uk

Advisers: Jooli Atkins, Matrix FortyTwo and Dave Britt, BCS Trainer of the Year 2006.

Copier King receives a corporate toner change

When Xerox introduced its new purchasing software, it wanted to ensure that it was accompanied by a state-of-the-art training programme. Gary Flood reports on how the company went about delivering the multilingual, multi-country, blended programme.



Xerox did not only invent the concept of photocopying, but its famous Palo Alto Research Labs gave the world the first truly personal computer, the graphical user interface, the mouse, laser printing and even Ethernet. Its products are at the heart of many businesses document processes.

Last year, however, Xerox managers had started to think that in some ways the firm was in need of a corporate toner change.

'We had an earlier version of a purchase management system that was fine but we were not sure we were getting all the benefits we wanted out of it,' said Simon Hannaford, Xerox training manager, responsible for all training falling out of business process change work. 'Bad habits had crept in with use and in some cases well-meaning people were passing on misunderstandings about the system that had been around for years.'

As a result, Hannaford and his team looked at the best way to roll out a major new application, the SAP platform, and decided the best approach would be via a phased approach, where key applications were installed one by one.

The first step was the introduction of SAP's supplier relationship management (SRM) module.

As well as e-learning and translation, instructor-led and train the trainer techniques, a wealth of support materials were developed

because clarifying what goes on around Xerox's sizeable annual purchasing spend was a priority. And as test bed for the whole transformation project, getting SRM right would be a test for the overall initiative and a prototype for the next elements, too.

SRM involved the introduction of two systems that would support and improve work being done in purchasing: mySAP SRM and an upgrade to a finance package. To get this done right, says Hannaford, meant getting in some expert help. 'We didn't want to build a training organisation just for this project.'

This was especially necessary as Xerox wanted a truly blended approach. There were also many people to be trained, and getting SRM in to Xerox Europe was going to have significant multi-country and multilingual challenges.

Xerox wanted to give its staff a state-of-the-art training programme that would instil confidence in – and knowledge of – the new systems and processes. As well as encouraging better use of the system, it would also hopefully deliver specific business benefits including cutting of purchasing lead times and processing costs through the mechanism of more electronic catalogue use (ideally from 5 per cent to 25 per cent), cut overall costs by standardising processes and systems, get the firm to experience both better system performance and overall user experience, and finally

improve quality and compliance in reporting.

Furthermore, the programme would aim to provide long-term support for not just existing employees but new starters too.

Personnel within local organisational units delivered the learning events and managed the change awareness programmes while DACG was employed as training provider to supply the core components. Xerox mandated that only training materials that met key criteria would be acceptable, given the importance of the project overall. Thus all training material had to be modular, flexible, robust and easily adapted (customisable).

A key driver was that everything had to be easily transferable (as part of a 'train the trainers' approach), plus quick to update and distribute.

The project kicked off in April 2006 with DACG developing all relevant material for the end of August, with a short, sharp delivery period of just six weeks.

The programme contained a number of elements that Hannaford classes as important for the project's ultimate success. As well as e-learning and translation, instructor-led and train the trainer techniques, a wealth of support materials such as step-by-step helpcards and detailed user guides were developed.

To help track the impact of the training, user feedback was gathered using web-based surveying tools, while a special training portal to hold all simulations (examples of how to carry out certain procedures in the new systems) and other support materials was made available. This was hosted on the training supplier's website but was linked in to Xerox's own learning management system (LMS) for reporting and training administration needs.

The training partner supplied an overall project manager responsible for the development and deployment of the training content, plus three dedicated SRM subject matter experts and a number of technical consultants for the finance side and other aspects. The team included native French, Spanish and German consultants who were able to review and ensure the quality of all the non-English materials.



Stick to your guns – if you are sure what needs to be done is right, the business will eventually end up thanking you

Simon Hannaford, Xerox training manager

Over 60 'storyboards' that eventually became e-learning simulations were also created, as well as nine sets of instructor led courseware (for example instructor guides, exercises, data sheets, and quizzes) for classroom use.

In terms of delivery to the actual users, Xerox played a big part, handling quality assurance and translation, while messaging and project progress was communicated to the Xerox community via its own internal corporate communications.

Train the trainer sessions were run about two weeks into the development phase to transfer knowledge to Xerox representatives and explain how to work with the new training portal. Some 20 internal trainers were selected to deliver the blended training events that were presented to some 1,000 employees across Europe.

The first training started in mid-July last year while the first refresher training took place in early September.

The groundwork in getting this right paid off, thinks Hannaford – training feedback after the project indicated that 90 per cent of staff who had taken the course felt confident in their skills and knowledge to perform their role.

By go-live day DACG had delivered a total of 206 separate training and support components. SRM as an SAP module finally went live in September 2006.

The breadth of this coverage allied to the short timeframe won the project the Gold Award from the Institute of IT Training (IITT) in the category 'External Training Project of the Year' for 2007. This level of prize is for situations where partners have really worked together on a business critical initiative with aggressive timescales.

As the SRM rollout was step one in a multi-step programme of change, what had been learned needed to be captured, so as to help subsequent projects. This was done with a structured project review meeting that assessed comments from both formal and informal feedback mechanisms, including web surveys, course evaluation forms, hit counts on the e-learning content and feedback from the wider Xerox community.

Hannaford said: 'It is clear that there are significant reductions in purchasing lead times and much improved visibility of business performance through management of information [post SRM]. Many of the business efficiencies and cost reductions anticipated have already been achieved.

'It didn't all go smoothly and there were some bumpy moments. But what I learned here is stick to your guns – if you are sure what needs to be done is right the business will eventually end up thanking you.'

Xerox

Xerox is a global technology and services provider, specialising in helping businesses to deploy document management strategies.

With around £8.5 billion revenue, the organisation is ranked 152 in the Fortune 500 and has 55,200 employees .

The SAP roll-out is part of a major, simultaneous, multi-country ERP implementation, which is the cornerstone of a four year pan-European business transformation programme. When fully rolled out, 12,500 employees across 16 countries will be impacted.

Blended e-learning meets hospital's needs

E-learning is a growing part of the portfolio of learning resources at the Royal Hospital for Neuro-disability where its flexibility is a major advantage. Discussion breaks and availability of a tutor has made e-learning more popular and successful, as Tony Houston, IT training & data manager, explains.

Learning is like rowing upstream; not to advance is to go back, according to a Chinese proverb.

As with all parts of the health service, costs need to be managed effectively at the Royal Hospital for Neuro-disability (RHN), so strategies that can be used to curtail costs are welcome. It can be very difficult and expensive to have staff attending training courses at specific times during the day, as they are not only unavailable to work but, in the case of the nursing staff, we very often have a double expense of using agency or bank staff.

E-learning at the RHN is allowing our resources to be better utilised and has allowed staff to learn at times that suit their shift patterns and clinical demands. The flexibility of learning was seen as key to engaging staff in this type of learning.

Furthermore, as the health service is moving inexorably to electronic patient records, online hospital booking and so on, there is an increasingly urgent need to upskill staff in IT. This needs to be done with a very large number of people, many of whom are nervous of computers and the time they take to learn.

The ECDL program was our first real effort to encourage staff to learn electronically. We have been using it since it was first offered by the NHS with students working in their own time. We run two sessions a month from 4.30-8.30pm in our training room where anyone is welcome to attend for any amount of time, and a tutor is always available. We previously found it difficult to motivate students to work on their own, which guided us to blended learning. Now our exam passes are about 75 per cent.

Our experience of ECDL made us decide to take a blended and structured approach to other e-learning, which we introduced as more e-learning became available at a cost level we could afford via the NHS Core Learning Unit and others.

The hospital currently runs 15 blended e-learning courses (which include soft skills such as communication and time management and some IT courses, such as display screen equipment) and two non-NHS courses. We also act as one of the few ECDL testing centres in South West London.

By providing tutor support throughout e-learning courses, we found very quickly that our completion rate increased

Tony Houston

At present, e-learning courses and training occur at set times in a single location. A tutor is always available. In some courses we take breaks for group discussions. We are working to get more flexible timings but are hampered by tutor availability. Twice a month sessions are run at night to cater for the night staff. Certain high dependency students also have additional email support at out-of-work agreed times.

By providing tutor support throughout the e-learning courses, we found very quickly that our completion rate increased dramatically and is now approximately 95 per cent. This provides a much more effective return on investment, as well as happier staff.

Six months ago we conducted a more formal audit of learner evaluations and the impact these courses were having on practice.

The audit was conducted in two parts:

- a post course survey of 328 students;
- a follow-up survey one month after the course completed to highlight the impact on practice.

The Royal Hospital for Neuro-disability

The RHN, based in Putney, offers assessment, treatment and ongoing care to adults aged 18+ who have profound disability as a result of neurological damage or disease. It is registered for 260 beds for provision of long-stay, short-stay, rehabilitation, respite and day care in accordance with Care Standards Act 2000. The hospital has 700+ staff.

Post course survey

Responses were positive from a wide variety of staff through all disciplines with 95 per cent positively rating the e-learning. Key points to emerge were:

- Different learning styles of students need to be catered for.
- Students have to see what value the learning has to themselves.
- If you arouse curiosity the student will continue to learn after the actual course has finished.
- If it is fun, students will learn and pass knowledge on to others.
- If learning by experience, students retain knowledge.
- Students looking for elusive answers learn more than being given the answer by the tutor.

In response to questions about what they liked and disliked, the content of the courses were rated highest. In second place was being able to go at their own pace. Simulations using real-life situations on video were universally popular as it made the learning real and put it in the context of their everyday lives.

Dislikes included the computer being impersonal and one wishlist item was for more discussion during the learning. Learners found the level of concentration required more tiring than attending classroom sessions, although short breaks reduced this.

An almost universal reaction was dislike of tests but this was not the top of students' concerns.

93 per cent said they would like to do more e-learning but didn't want all learning to be delivered in this form. All said they liked to discuss the learning with others with breaks providing some relief from the higher levels of concentration, as well as providing an open forum. 55 per cent preferred having a tutor in the room.

Top of the topics that students would like to see as e-learning courses were clinical education. The RHN is currently investigating this but a number of important issues need to be resolved if we are to pursue it. The most obvious is that someone has to evaluate the courses' fitness for purpose and audience. What might be correct for one practitioner may not work for another, and it has to be in context of RHN policies and procedures.



85 per cent said they had used the knowledge in the workplace

Tony Houston

A substantial number requested more of their mandatory training as e-learning. Dealing with stress and complaints were other popular topics for future inclusion.

Evaluation one month on

Initial attempts to carry this out via email produced poor results so we took a random selection of 15 per cent of the students and conducted the survey on a face-to-face basis.

90 per cent still considered e-learning to be of value and even those that did not like the training method agreed that the knowledge acquired was of value.

85 per cent said they had used the knowledge in the workplace.

Most felt that the learning had refreshed existing knowledge, and consequently the transfer of knowledge to the workplace was not revolutionary but rather evolutionary. The majority of those who said they had not transferred any skills to their workplace were because they were already using the knowledge before the course.

Recommendations included:

- to continue to use the blended approach to e-learning;
- review all learning to establish whether e-learning could positively contribute;
- increase the analysis of knowledge transfer to the workplace;
- encourage collaborative e-learning (blogs, wikis etc).

Since conducting this evaluation the RHN has started recording clinical audits, which it is making available as podcasts as a pilot. This is still in its infancy but is being very well received.



Intelligent business

Visual representation of data usually provides much quicker insight into operations – vital for business analysis. As new visualisation tools allow ever more complex data to be presented better, Alan Bellinger considers how to make sure IT professionals are equipped with skills to make optimum use of visualisation.

There are two technology areas that are the key drivers behind the need for visualisation skills – they are business intelligence and rich internet applications. And anything you do as a learning and development manager to develop visualisation skills needs to be in the appropriate context.

Business intelligence

Business intelligence (BI) has changed dramatically: it was traditionally seen as a presentation layer that sat on top of the data management infrastructure. As such, it represented an online analytical processing application that provided ad hoc queries and relied on reporting tools that were used by senior management and business analysts. The audience was small, the data analysis was restricted, and output was relatively predictable.

Today, the focus is moving much more toward performance analysis which provides a much broader vision of pervasive BI, and makes the application far more strategic. BI therefore becomes an integrated part of the ongoing day-to-day processes, and a key enabler of decision-making. It requires that organisations shift the focus from technology that serves a small segment of decision makers, to a much broader initiative that puts people and business objectives first.

From our learning and development perspective, there are four key consequences of this change. The audience is larger, the presentation is more complex, there are critical skills impacts for both IT professionals and users and, finally, anyone involved in course development will be an experienced visualisation practitioner.

Dashboards are very effective in business

Alan Bellinger

BI skills

For the IT professionals it's not just an issue of understanding the tools – it involves imagination, interpretation and empathy as well. And if they're to get the best outcomes, they'll need to be specialists in partnering and collaboration as well. It's the users who have the best ideas on what they're looking for from BI, especially when it relates to performance management, and it's the way in which the users can understand and interpret information that the business analysts need to understand if they're to present it in the most effective way.

The real BI breakthroughs come when you compare multiple activities to each other; it's when you can spot the relationship between a number of different variables that

insight is generated. For instance take the dashboard of your car where you can see the relationship between speed and revolutions per minute – or between the level of petrol and the distance to go.

The car dashboard is an excellent example of how to present a lot of information in a way that is highly visual.

Dashboards and scorecards

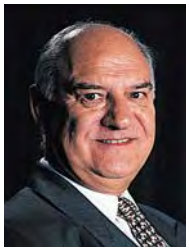
And dashboards are very effective in business as well. A dashboard is a visual means of reporting that summarises and displays metrics and key performance indicators. As a result, users can see at a glance anything that is unusual, and then they can drill down into the specifics to see exactly what is going on.

In effect, a dashboard is a very useful way of reporting key metrics that enable a knowledge worker to monitor and track performance via an aesthetic user interface. They employ visualisation components such as gauges, thermometers, dials and traffic lights.

Scorecards, on the other hand, are applications that help to measure and align the day-to-day operations to the overall business goals and objectives through target setting.

Whilst dashboards can be relatively unstructured, using a scorecard requires adherence to a methodology such as BSC, European Foundation for Quality Management, value-based management or Six Sigma. A popular methodology is the Kaplan and Norton balanced scorecard, which requires that an organisation balances the financial perspectives of performance with non-financial perspectives for organisational learning, customers and internal business processes.

In summary, the dashboard tells us what is happening, and, by linking that dashboard to a BI tool that supports a drill down, we can explore why it happened. In contrast, the scorecard provides a view of how well the organisation is doing against either strategic or departmental targets, and should some corrective action be necessary, the scorecard will show whether or not the corrective action was effective.



The critical role of the portal is to provide a common access point for interaction with operational and analytical applications

Alan Bellinger

Portals

It's important not to confuse dashboards and scorecards with portals – another area in which visualisation skills are key. The critical role of the portal is to provide a common access point for interaction with operational and analytical applications – including dashboards and scorecards.

In addition, the portal will provide access to content that is relevant to the user (that content can be both internal and external to the enterprise). The other key role of the portal is to provide access to and be a repository for collaboration programmes that are being undertaken.

Rich internet applications

Talking of portals and web-based applications gets us to that second driver of visualisation – rich internet applications (RIA). They provide a browser-based interface that surpasses traditional desktop functionality and performance. The critical technologies for delivering RIA are Ajax, Flash, Flex, Silverlight and Laslo.

Internet-based applications are becoming both mission-critical, and much more complex. At the same time, users expect the richness of the traditional GUI and look for it across multiple delivery devices.

A gap exists between the traditional fat and thin client models and established technology is failing to meet emerging business requirements. The traditional fat-client GUI, while supporting a rich user experience look and feel, lacks the ability to support consumer and on-demand corporate deployments. The traditional web model has extraordinary reach, but lacks the rich user experience. This is the gap that RIA addresses.

So what?

So what is the impact of the demand for visualisation skills, and how should you address it? That won't be simple; you can hardly send a few of your IT professionals off to a visualisation course as it's a subject typically embedded in other subjects.

And how will you address the personal skills issue as well? Perhaps this is one of the areas in which you – or one of your staff that have been involved in course development – could assist.

There's some information you need first of all:

- What is your organisation's experience of BI applications; are they being developed; are they just for specialists or is the application becoming pervasive, and what is the users' reaction to them?
- What is your organisation's experience of developing web 2.0 applications; are the web applications becoming mission-critical, and does the concept of RIA figure prominently in the IT function's perception of web 2.0?
- What visualisation skills exist among IT professionals at the moment; is this an area that is insourced or outsourced; are there benefits in developing in-house skills?
- What experience do you have within the L&D function on visualisation and could that experience be useful if positioned in a wider context?
- How successful has the experience of collaboration and cross-functional teams been within the organisation and what 'lessons learned' have come out of previous experience?

Use those five questions as a catalyst – they're your starter. Once you have those answers, you'll be well positioned to structure a project that will enable you to demonstrate the value of collective intelligence within the organisation.



Mix and match suits ITQs

After running for four years, the ITQ is becoming established as an employer-focused mix-and-match user qualification. Helen Boddy looks at its progress to date and how e-skills UK is planning to develop it by adding more units.

In 2008, 750,000 people are expected to have started their IT user journey, according to e-skills UK, which developed the ITQ in conjunction with employers.

'By that, we mean the number of people on individual user training qualifications,' explains Genny Dixon, ITQ programme manager at e-skills UK. 'Some will be on full ITQs, some on a contributing qualification.'

A contributing qualification is one of a suite – such as ECDL, Microsoft Office User, CLAIT and Equals – units of which can count towards the ITQ. This mix-and-match option has no doubt helped the uptake of ITQs.

'We're seeing a lot of people using ECDL as a basis for ITQs,' says Jeremy Barlow, product development manager at BCS, one of the ITQ awarding bodies. 'One of our packages bundles ECDL and ITQ registration together so that candidates can get both. It's quite popular. ECDL maps to certain ITQ units, but you do have to complete a unit that proves you can apply these skills. In many ways this provides a context for the learning.'

Learners are rewarded for passing stages, which incentivises them

James Golfar, Exchange Group

Producing this portfolio of evidence is a major difference between the ITQ and other user qualifications. It is a cornerstone of the ITQ's raison d'être: being able to be tailored to employers' needs.

The other aspect of the ITQ that makes sure staff learn skills tailored

to their jobs is that it is customisable as you can select certain units from a range on offer.

'For example, there's no need to include spreadsheet or database training if they are just not relevant for your design job,' says Dixon. 'Using an employer's bespoke IT system, such as a customer contact system, can also count towards one unit of the ITQ.

'You could say its flexibility is its weakness, as well as its strength, as employers and training providers are not all used to offering such a personalised approach to training and development. We're working to provide new resources and share best practice to help them offer that flexibility.'

Henry Stewart, MD of Happy Computing, also sees assessment as a challenge: 'Training providers need to change their way of working for an NVQ so that assessment can be done as you go along.'

Time is an issue for employers, according to James Golfar of the Exchange Group, another training provider. 'We find that if employers cannot get funding for level 2, they are keener to use ECDL,' says Golfar. 'They haven't the time to do the assessments for an NVQ.'

Nevertheless, according to Dixon, level 2 of the ITQ has proved by far the most popular. 'Just short of 80 per cent of all ITQ enrolments were for level 2 in 2005/6 and I expect the figures for 2007 will be similar.'

It can be difficult to keep track of those undergoing IT user training, admits Dixon. The LSC records all publicly funded training, including those registered with an FE college. Of 1,000 ITQ providers, over 250 are FE colleges. However, e-skills UK relies on combining data from enrolments and certifications from all the awarding bodies.

Why has level 2 proved so popular? 'To some extent, enrolments have followed the availability of public funding,' believes Dixon. 'For example, Train to Gain funding has supported level 2 ITQ, with relatively small amounts of funding for level 3 from European project funding for specific projects – at the moment, for example, Olympic-related projects in the construction or hospitality sectors, are receiving priority funding in London.'



The big change will be the way in which units are given a nationally recognised credit value

Genny Dixon, e-skills UK

Golfar suggests another reason: at pre-level 2 employees are often only using one software package, and therefore don't need several units of learning as required for the ITQ, so they learn just one package.

Nevertheless, Golfar thinks that ITQs have been well received. 'The qualification is one of the easiest to explain,' he says. 'There's a delivery structure, which learners like. It's completed in a set timeframe, and learners are rewarded for passing stages, which incentivises them.'

Andrew Negus, who recently completed the ITQ 3 at Cornwall College, is equally positive: 'I decided on the ITQ level 3 because it was a national, recognised qualification [an NVQ]. I understood the workings of the ITQ quite well with the help of my tutor, Judith, and would recommend this method.'

His tutor, Judith Venning, NVQ assessor at Cornwall College, adds another point in the ITQ's favour: 'The ITQs demonstrate a standard of IT knowledge that is now accepted as the base line for all businesses, and endorsed by the government.'

More units under trial

e-skills UK is currently running test and trials with the awarding bodies in three regions to test its proposals for a new qualifications framework for the ITQ. The aim is to align the ITQ with the new Qualifications and Credit Framework (QCF), replacing the current National Qualifications Framework.

'With the QCF ITQ there will still be three levels and the same range of mandatory and optional units, but additional units are in development, which will ensure the qualification remains up-to-date with new IT user technology,' says Dixon. 'The big change will be the way in which units are given a nationally recognised credit value, to enable both credit accumulation and transfer and the unitisation of funding.

'Many people for one reason or another don't finish work-based programmes, but unitisation of qualifications should help as they'll see success building up unit by unit.

'The contributing qualifications will continue to count towards the ITQ and there are other IT user skills that currently sit outside the framework that we plan to map onto it as part of the QCF. Employers' own courses will be able to be brought into the framework.'

The QCF will allow more innovative ways to assess qualifications, as well as assemble them, Barlow points out. 'The evidence-based units could, for example, be delivered via e-assessment or within a simulated environment,' he says.

'There will also be new software systems to support the QCF to help with the units and rules of combination, for example, and, very importantly, there will be a learner achievement record, which will keep a record of credits accumulated,' says Dixon. This latter record is different from e-skills Passport, which currently underpins the delivery and assessment for the ITQ, and will continue to do so.

'e-skills Passport assesses where the learner is with skills,' explains Barlow. 'The employer can set a profile of what skills their employees need. The gap is what the employee needs to learn. Achievements can then be recorded.'

e-skills UK aims for the new QCF to be operational from August 2008. 'As the QCF ITQ trials conclude we will be implementing the results straight away,' says Dixon.

'We're also developing a specific version of level 1 ITQ for the Skills for Life learner, i.e. those who also have learning needs in literacy and numeracy. Trials are commencing in the New Year in both FE and adult and continuing education.'

Stepping stone makes testing less of a trial



As the relatively young profession of software testing gradually matures, certification is changing to keep pace with it. ISEB has just updated the content and structure of its practitioner level and added a stepping stone to reach that standard, as Helen Boddy reports.

Certification in software testing, like the industry, is relatively young. The first software testing certification in the UK was launched by ISEB just nine years ago for entry level, foundation. The next rung up, practitioner level, was added to ISEB's qualification portfolio in 2002.

In those nine years, interest in the ISEB certifications has ramped up, as the industry itself gradually matures. From 1,300 candidates taking the ISEB Foundation in Software Testing in the first year (1999-2000), numbers reached 10,000 last year. In total, 46,000 candidates have now sat the examination worldwide.

The ISEB Software Testing Practitioner Certificate was launched in 2002 and has similarly grown in popularity. Last year, more than 800 candidates took the practitioner exam, which covered test analysis and test management theory and practice.

With the 'old style' practitioner qualification most companies offered a 10-day course, which was a long time to invest in a single qualification

Angelina Samaroo, Pinta Education

Several factors combined last year to make the time right for ISEB to start reviewing the practitioner syllabus, for which the courses and examinations are now appearing.

One reason was that ISEB wished to bring the practitioner level in line with the ISEB integrated qualification portfolio. To do so, it has added an extra level between foundation and practitioner – the intermediate – and split the practitioner level into two different streams – test analysis and test management.

'By bringing the qualification in line with the structure of the other ISEB qualifications, it makes career progression for software practitioners much clearer,' believes Angelina Samaroo of Pinta Education.

'There is then a defined route to reaching BCS Chartered IT status (CITP).'

By adding the intermediate level, ISEB has also addressed the need for a bridge between foundation and practitioner level.

'With the "old style" practitioner qualification most companies offered a 10-day course which was a long time to invest in a single qualification, when many topics were not relevant to all participants,' says Samaroo.

ISEB split the practitioner level qualification into two streams in response to customer feedback and extensive market research, which showed that most people in software testing go down either the test analysis or test management route.

'They therefore do not have to study something that will be of little use to them back at work,' says Pete Bayley, qualifications director for ISEB.

Robert Ward FBCS CITP, software test manager at Site Intelligence, who passed the examination two years ago, agrees. 'The old style practitioner level was very expensive in terms of time,' he says. 'Practitioner level was phenomenally challenging and I know others on the course found the same. An intermediate level should make it more accessible.'

While changes were being made to the structure of the exam, ISEB thought it also made sense to bring the qualifications up-to-date with industry changes in testing.

'The new intermediate and practitioner syllabuses have made a huge leap forward in quality compared to the first generation, original syllabus,' says Peter

Quentin, training product manager with SQS. 'Many technical issues have been ironed out, the syllabus has been brought in line with the foundation syllabus, the structure is better and the use of Bloom's taxonomy of educational learning objectives has meant that it is much clearer what level of knowledge and understanding will be expected in the examination.'

Both Quentin and Samaroo have found that in the new intermediate courses students were very engaged with the material. Students have particularly appreciated that they can be tailored to individuals' own experience, as opposed to just teaching what is in the syllabus.'

Pinta Education and SQS are planning to offer the two new-style practitioner level courses, subject to ISEB accreditation, and were in the process of writing the course materials as *IT Training* went to press. ISEB is also aware that other training providers are currently writing materials for the new courses. Meanwhile, the old-style practitioner exams will continue to be offered until March 2008.

ISEB is set to make further developments to the qualification, and looking to introduce other practitioner streams. The examination board is also intending to develop a diploma level during 2008 and is currently working on its possible format. 'ISEB is keen to offer a certification route for all software testers as they develop their careers,' says Bayley.

The value of certification

Why bother with ISEB certification at all? Arguments in favour range from it helping individuals' career progression to giving a more professional status to the industry.

Ward sees definite advantages: 'When interviewing for test analysts, or even for a contractor, I don't even look at their CV if they haven't got the ISEB Foundation Certificate.

'Software testing is often seen as an easy way into IT as you don't need the skills of a developer. But if an applicant has bothered to do the certificate, it proves they really are interested. Equally, if contractors are any good, they will have at least achieved the foundation level certification. It is only three days and reasonably priced.

'For me, personally, the foundation was essential for my career, and the practitioner opened doors to interview.

'More generally, I think that people don't understand testing properly because it is still a fairly young profession. ISEB has helped establish it as a career choice.'

Quentin agrees that certification has been good for the industry: 'ISEB has had a huge impact on how software testing is perceived within the software development industry.

'Today most clients like to see their software testers qualified to foundation level within their first year working as a software tester. We are even seeing developers and other people who may not actually be doing testing, but need to understand software testing principles, getting qualified to foundation level. It is a sign the industry is maturing, and testing is being taken more seriously.

'Certification means that individuals, as well as organisations, are recognised for the software testing skills they have. It provides a career path for software testers and motivates individuals to become better software testers.'

In addition to ISEB software testing certification, other skills areas can be useful for testers.

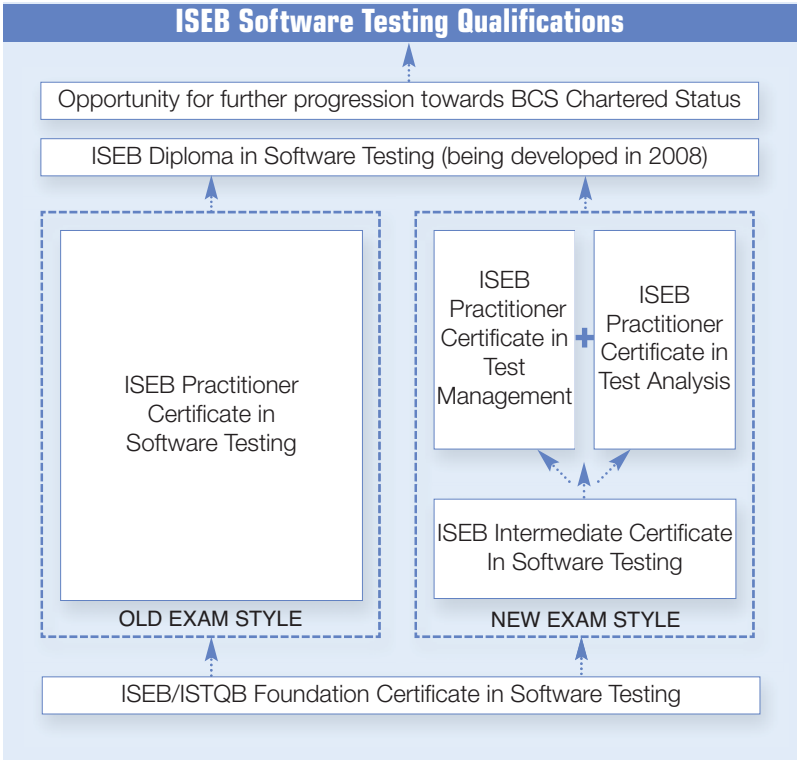
'Other skills areas that a tester should consider are in the related technology that the business is using,' suggests Ward. 'This could be technical, such as Java or SQL, or it could be business specific training such as investment banking or commerce.'

The ISEB qualifications portfolio (known as the ISEB wheel) encourages testers to take up qualifications in other areas such as business analysis and systems development to complement their qualifications in testing.



People don't understand testing properly because it is still a fairly young profession. ISEB has helped establish it as a career choice

Robert Ward, Site Intelligence



More information:
www.ISEB-EXAMS.com/st



Paper tigers take on real world

A few years back, paper examinations came under fire for dubious effectiveness in testing candidates' IT ability. Today, many certifications in practical subjects include simulated computer exercises but is that enough? Should candidates experience real world conditions, using real servers and networks? Gary Flood investigates.

Remember the paper Microsoft Certified Systems Engineer (MCSE) row in the late 1990s? Despite the backlash then against what were held to be essentially meaningless qualifications, there are still real question marks over the value and significance of all the major qualifications out there.

'Five to ten years ago there were unquestionably too many paper qualified people flooding the job market,' confirms Rob Chapman, managing director of training outfit, Firebrand Training (previously called the Training Camp). 'That has abated, yes, but there are certainly some qualifications out there that could still be called into question.'

The issue is that what an exam tests is the ability to pass an exam, and not 'real world' abilities (see box on p24). It's not inconceivable that, given the right set of books and online 'resources', a candidate with essentially no real IT ability could pass a couple of the more popular examinations and compete in the job market.

How far they'd get is a moot point. The problem is that if certification is an invalid process, why should punters bother undergoing it, training professionals endorse it and ultimately employers buy in to it?

Not just ticking boxes

The defining characteristic, it seems, is that certification must test actual ability to perform a task, not just tick some boxes and get marks based on statistical chance. The charge is that not enough exams do this today, which IT companies adamantly refute.

'Any holder of a CCNA qualification [the major Cisco competency] has worked on real world issues and environments,' was the emphatic response of Jane Lewis, education manager, Cisco UK and Ireland, to any suggestion otherwise. Lewis explains that all candidates for the qualification spend 'at least 50 per cent' of their time in exam conditions working on problems on networks and routers linked to Cisco's 'real systems'. 'This is a truly hands-on examination process,' she insists.



Microsoft brought in adaptive testing and scenario-based exams using the virtual PC approach

Robert Chapman, Firebrand Training

Microsoft was unable to offer a specific spokesperson to debate these issues with IT Training, but the objective evidence is there that the company is equally committed to a significant practical element in its education.

That may of course reflect the charges alluded to above – that for a couple of years after its introduction in the mid-1990s, the MCSE (one of the most sought-after Microsoft qualifications) was a bit too easy to put on your business card. Microsoft has in response been seen to have significantly toughened up the exams and introduced a healthy element of practical testing.

This testing revolves around simulation – making the candidate sit down in the exam room and

confront a PC that they have to actually do something with, e.g. install a service or run a diagnostic.

'Microsoft deserves praise here,' notes Chapman. 'It brought in adaptive testing and scenario-based examinations using the virtual PC approach. In effect you have to both answer the paper questions but also show how you would do things in a simulation.'

But the key word – for some people at least – in that sentence is going to be 'simulation'. Is the provision of testing conditions based on pre-set up scenarios enough to really stretch the person trying to prove to you, me and his next boss that he can actually do the job?

This isn't a rhetorical question, as at least one major software organisation, Novell, says more is needed.

When the company absorbed Linux specialist organisation SuSe a couple of years back it also inherited a particular way that organisation had approached it granting qualifications.

Welcome to the world of the 'practicum', as explained by Novell's head of education Stephen King: 'We wanted something that wasn't the traditional multiple choice or fill in the blank type test. We offer a real test, where you have to show what you can actually do.'

Thus anyone who lists either a 'CLP' or 'CNE' on their CV has passed just such a test. Specifically, to become a Certified Linux Practitioner or a Certified Linux Engineer the person has worked in exam conditions on a real instance of the operating system (i.e. SuSe Linux releases 9 and 10) on a real network, doing things like installing and configuring devices, granting user rights and so forth.

Indeed, if they have the older (now superseded) CDE, Certified Directory Engineer, which ran from 2000-2004, they can claim the same thing, as in this forerunner of the practicum they had to be able to link to a real directory to do their stuff.

How does all that differ from the Microsoft way of doing things? For King and others who back this philosophy of what a skills test should be, the point is that it is not a simulated environment. The test means that for up to three hours a prospective network manager faces a computer and is told he has that time to meet three objectives, and he can only pass if he manages so to do.

'There has been a lot of simulation



We wanted something that wasn't the traditional multiple choice or fill in the blank type test. We offer a real test, where you have to show what you can actually do

Stephen King, head of education, Novell

Proves that I have the skill

One IT professional at least feels that the practicum approach to information technology skills acquisition has value. Andy Fox is an experienced consultant who provides technical advice to, as he puts it, 'small businesses that require IT solutions and support at a budget'.

'The practicum exam – unlike standard multiple guess exams – proves that I have the technical skills to configure SuSE Linux services in a real world environment,' said Fox.

'We have all heard the term "paper MCSE or CNE", where an individual has attended a one to two week course designed at getting them through the exams, and understand that there is little to no value to those certifications as a result.

'Those of us who have been in the IT industry for some time also know about the numerous 'braindump' sites that exist, where people who have taken such exams share information about the questions with others, a process that devalues the certification process.

'The practicum proves that the individual can actually configure SuSE Linux and [so] have the skills required.'

Fox holds both the CLP and CLE qualifications, i.e. two certificates you can only get by passing a practical exam.



and neutral environment testing coming into exams, which is fine,' says King. 'But simulation is trying to recreate the environment; the practicum is the environment. Here you really are actually managing the servers.'

'A lot of firms use simulation based approaches,' adds Andrew Mallett, principal technologist with QA-IQ, 'but are they just testing what you can do with a standard test engine? It seems to me the value of a practicum style test is that it's not just hands-on, it tests not how you do it but that you can do it at all.

'If all the answers to a test exist in a book somewhere, then if you are the sort who can page in information quickly you can pass that test. In contrast, doing tasks on a machine to completion means you really can do those tasks.'



To be fair, Novell is obviously promoting all this to increase the allure of its qualification portfolio. King says: 'We are getting great feedback from something not so easy to pass as other exams, and employers love this.'

There can be no denying something of a gauntlet has been thrown down to the rest of the certification industry here – and not just to the ones who have brought in simulation but those bodies whose exams are still tick-box exercises. In that sense, QA-IQ's Mallett is right when he says the practicum idea is a 'challenge' to the whole training community.

The practicum tests not just how you do it but that you can do it at all

Andrew Mallett, QA-IQ

Who will take up the challenge? If enough candidates and HR departments say they need such qualifications, we will have our answer.



All qualifications need dovetailing into experience

When it comes to evaluating the real merit of a qualification a job candidate presents, it must be said that however many real-world elements the exam can incorporate, it's still only one part of the picture regarding their ability.

This is the position at least of Geoff Chapman, EMEA head of communications at Prometric, a company that specialises in the delivery of many of the exams, related to skills around technologies like Novell and Microsoft, that are at the heart of the debate around the right mix of academic-practical.

'An exam is only as good as the curriculum it is intended to validate,' he points out. 'And from an employer's perspective, certification is only ever a small part of the overall story.

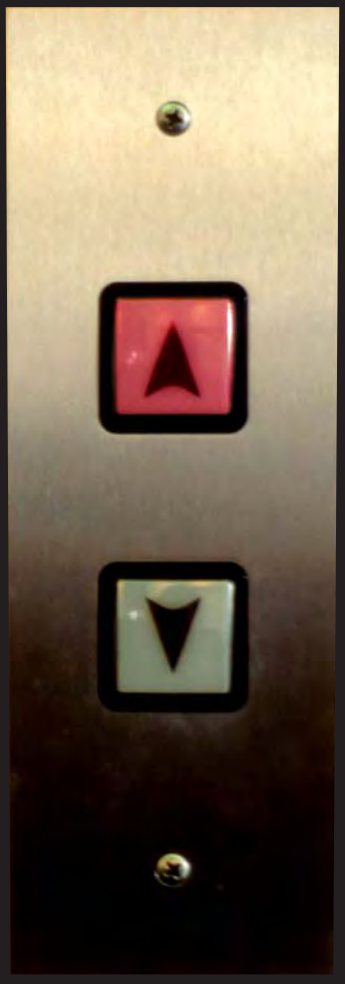
The reliability of certification will always have its place, and the testing of core competency will always be important. But it is also true that the market is moving towards a more holistic assessment of both knowledge and abilities: it is no longer sufficient just to test the individual's memory and recall.'

Chapman sees this as an 'encouraging' development, and praises Novell as a being 'a real pioneer' in this regard – but it is not the only technology company getting it. 'The best IT companies, you can see, are always trying to develop their qualification portfolios and in some cases are setting the bar very high – I'd point to all the work Microsoft is putting in to making its new IT Architect qualification as being particularly interesting here.'

The message is it all has to be about balance: 'Employers want to see solid evidence of experience so any work done getting certification and all qualifications work itself has to be dovetailed into that. Organisations must ensure that their training courses and exams are an accurate reflection of the skills needed now and in future. IT in particular is a fast-moving industry, where different skills sets constantly need to be refreshed.

'In any case, we need more than technical skills. Employers are now looking for a greater variety of skills from workers, not just technology-specific qualifications. For example, skills such as project management are now recognised as being crucial, particularly where big IT projects risk going over budget or over schedule. The integration of practical elements into assessment gives a fair representation of skills and abilities, but dirty hands matter too.'

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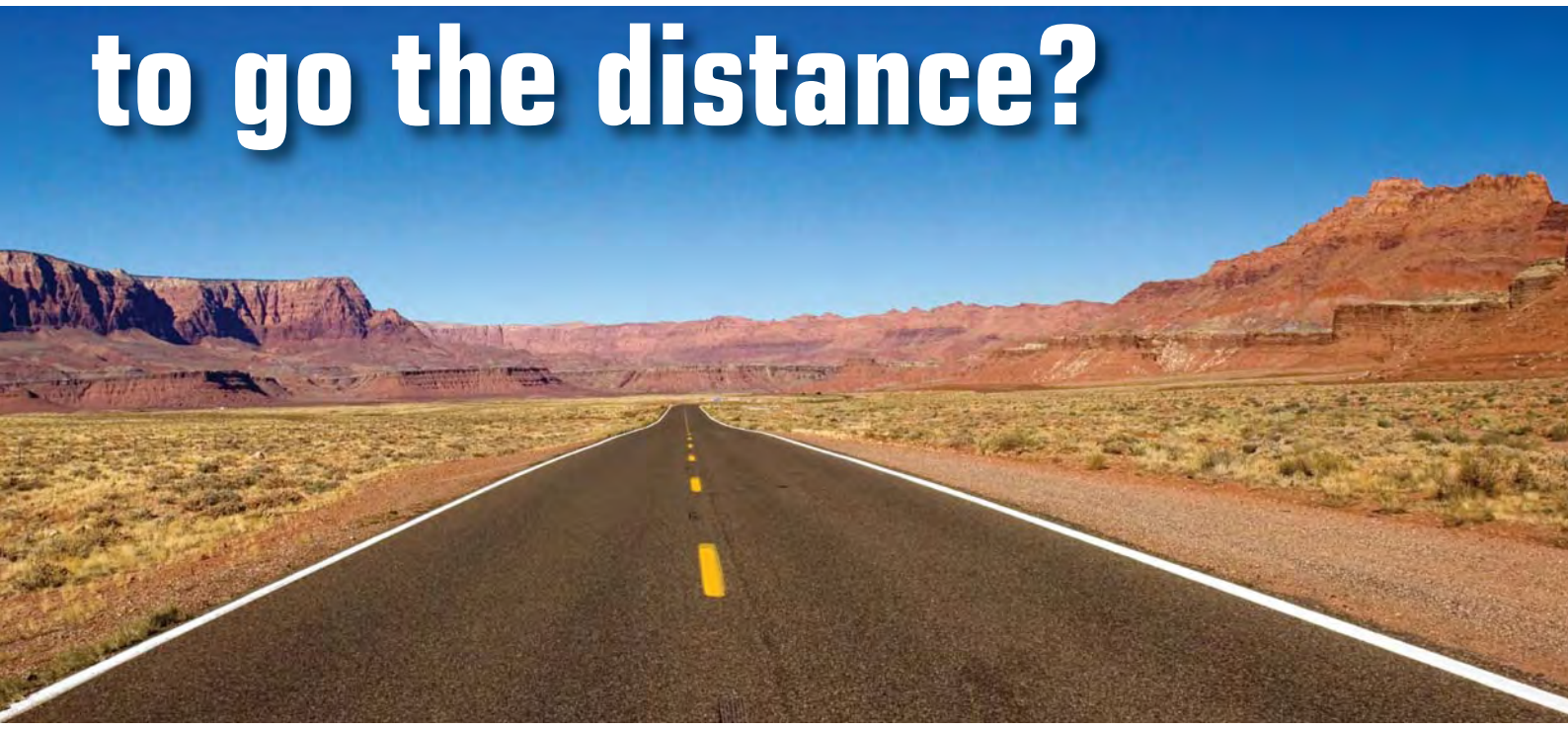
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Will Microsoft be able to go the distance?



Microsoft Official Distance Learning is set to hit the shores of the UK in the next few months. Will it be plain sailing for learners or be like riding to Bognor by bicycle instead of taking the train? Helen Boddy investigates.

The flexibility of distance e-learning is not enough to endear it to all. But what if you throw in an online tutor and e-labs on real servers – will that win over the sceptics? Microsoft is trying to do just that with Microsoft Official Distance Learning (MODL).

Microsoft officially launched MODL last November and training providers in the UK are now gearing up to offer it to their customers here.

MODL blends instructor-led virtual online learning with self-paced e-labs. Microsoft has developed ten of the newer Microsoft server and developer courses for IT professionals in the MODL format. A certified trainer delivers the Microsoft syllabus over a series (typically five to ten) of two-hour sessions at set times to a group via Live Meeting.

'There are case studies, activities, and interactions between the students, so they are all working together,' says Wendy Johnson, MODL innovations product manager.

The learners then spend an hour on self-paced e-learning and a further hour to complete real-world scenario exercises in their own time and at their own pace between the sessions on virtual labs, hosted by Toolwire.

So what's new with the approach? 'While distance learning has been available for some time, what MODL has done is to combine all of the essential elements together in a very innovative way,' says Dave Britt, who has been involved as a consultative instructor from early on in the project. 'Scenario-based virtual labs, online assessments, distance learning, certified instructors and making the offering globally available.'

> **MODL has combined all of the essential elements together in a very innovative way**
>
> Dave Britt

Cameron Crowe, Toolwire commercial manager, also believes that the idea of the four-hour module approach (two hours virtual ILT + two hours self-paced learning) to complete a module, is an innovative way of learning.

'Our research shows that after two hours of learning, the short-term memory is full, and the student needs to encode what has been learnt into the long-term memory,' he says.

'We are discovering that retention is higher with MODL. The pass rate is much higher than for Microsoft certifications usually.

'However, this new instructional paradigm has nothing really to do with distance learning. It could equally be followed instead in the


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classroom in four-hour cycles.

'Toolwire's labs used for MODL also differ from most others because with most simulations you are on a set path. With our labs each student accesses, via the internet, their own server, which they can crash without affecting others.'

Toolwire's Live Labs are already used in some CISCO courses, but the company developed the 'day-in the life' scenarios specifically for MODL.

'They are almost like a soap opera or sitcom,' said Crowe. 'The learner gets emails, pagers etc and has to decide how to apply them in a live environment. The student has access to a live server to perform "day-in-the-life" tasks, creating solutions on live servers, application platforms and desktops.'

The price to take a MODL course is similar to classroom-based training but there are other cost benefits for companies, stresses Johnson. There is no need for travel and subsistence costs, nor to take key staff away from their desks for a substantial period.

'For training managers, I think MODL is a great training paradigm: it offers the learner flexibility but with the confidence that they are following the same technical content that would be delivered in a classroom environment,' says Britt.

He sees three scenarios where MODL will be of particular benefit:

- companies with reliability offerings. For example service desks where it's hard to release a person for a whole day.
- groups of people over different time zones who need flexibility. And for people who want to learn at home.
- one instructor providing a global delivery, where you have participants in multiple classrooms.

Flexibility is of course a watchword for promoting this distance learning. 'One major advantage is the ability to train outside 9am to 5pm' says Will Hawkins of QA-IQ, which is gearing up to offer the courses.' One major client has engineers in South America and can't let them out on courses, but they want standardisation of their skills.'

Is this flexibility, however, enough to guarantee success?

'We know from our research that IT professionals generally are sceptical about e-learning,' says David Pardo, director of IT Skills Research. 'They are very positive about e-labs, but they don't like self-paced e-learning, and they are still to be convinced about live virtual classrooms, because most of the early implementations have been hard to use.



I think e-learning's place is more for bite-sized chunks of learning, for example, Excel or PowerPoint

Richard Chappell, Learning Tree



'MODL is a great concept – its flexibility and versatility are beyond question – and it will win the hearts and minds of IT professionals if it succeeds in integrating the various elements to deliver truly interactive and effective learning.'

Richard Chappell, managing director of Learning Tree International, however, believes MODL simply will not be as effective as classroom-based ILT.

'There's no question the technology can do it, and on paper it's very neat, but learning in this way is a bit like trying to go to Bognor by bicycle compared to taking the train,' he says.

'I'm not against e-learning but think its place is more for bite-sized chunks of learning, for example, of Excel or PowerPoint. 'I don't think this sort of delivery is right for full-on technical courses for IT professionals.

'I think that the drop-out rate will be high with this sort of training, whereas it's rare for anyone to drop out of a week-long course. I can guarantee a buyer that after one week in the classroom the student will be skilled, equipped and competent. I wouldn't have the confidence to do so with distance learning.

'To see if this is really good value, you should consider if skills transfer will have taken place after the course, as well as potential cost savings.'

Good completion rates would help make a case for MODL, suggests Chappell, but, Crowe says they do not have enough data points to do so yet. It is indeed still early days for MODL. 'Counting pilots and course offering around 400 students so far have experienced the MODL course,' says Johnson.

'As it's still only in its first year, we are gathering intelligence on which courses work best. We are still investigating which audience and which subject areas work best.

'In this financial year, ending June 2008, we will also roll out four courses in Windows Server 2008 and our top-selling developer course, Developing Microsoft ASP.NET Web Applications Using Visual Studio .NET.'

Two training companies, QA-IQ and New Horizons, have signed up to offer MODL in the UK and are planning to start running courses in a few weeks' time. It's also a product that may appeal to start-up providers, given that no buildings and little equipment is needed to deliver it.

Of course, given that MODL is delivered via distance learning, there's always the option of buying a course from a provider in another country.

www.microsoft.com/learning/modl

Book reviews

Our IT experts review a selection of recently published books covering an array of subject areas. For more reviews, see www.bcs.org/bookreviews



World Class IT Service Delivery

Peter Wheatcroft, 162pp

BCS, £29.95

ISBN: 978-1-902505-82-4

Rating ★★★★☆

Service managers across the world have been eagerly buying up copies of the ITIL version 3 texts. But possession of the books and qualifications does not equate to automatic success in the implementation of service management.

Even having well-oiled IT processes is not enough if you are failing to match the expectations of the business. It is this premise that is at the heart of Peter Wheatcroft's book: to deliver world-class service, you must understand and add value to the business.

The expression 'world class' is not used as a meaningless throw-away phrase, but as a quantifiable way of describing organisations that have made an effort to be amongst the best in their field by understanding the business perspective.

In addition to ITIL, the book discusses many other open standards, models and best practice such as the SFIAplus3 skills framework, the EFQM excellence model, ISO standards, and Six Sigma.

With such a broad subject, the depth of each chapter is inevitably brief, so I would have preferred more sources behind the author's views.

This book is not for the IT novice, but aimed squarely at senior IT and business executives. It is well-constructed and thoroughly readable, packed with case studies and real-world examples.

Reviewed by John Beaver
MBCS CITP



The Technology Garden: Cultivating Sustainable IT Business Alignment

Jon Collins, Neil Macehiter, Dale Vile and Neil Ward-Dutton, 200pp

John Wiley & Sons, £24.99

ISBN: 978-0-470-72406-4

Rating ★★★★☆

There's nothing like a good metaphor. And, at times, an IT environment does indeed behave more like an organic and evolving entity than a fixed and rigid structure. But the first couple of chapters really do use the gardening metaphor… well…in spades.

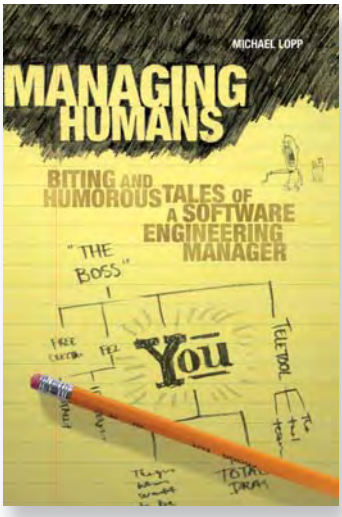
Happily, there is some excellent material between the gardening references. Aligning IT and business strategy is a hot topic at the moment and there are plenty of titles that delve into the technicalities. This book takes a much broader view and establishes six straightforward principles: get the basics right; create a common language; establish a peer relationship between business and IT; work towards common goals; manage IT as a business-driven portfolio; and foster relationships with key IT suppliers.

A chapter for each of these principles presents the common areas of misalignment, the alignment imperatives, and the steps required to achieve and maintain alignment. A final chapter brings the principles together and suggests a chain of four goals.

The approach taken is relaxed and good humoured and, although based on serious research and real-life experience, is interspersed with plenty of insightful quotes from CIOs and senior managers, as well as case studies.

This book will prove very useful to senior managers in both business and IT roles, and be helpful to enterprise architects and service managers.

Reviewed by John Beaver
MBCS CITP



Managing Humans: Biting & Humorous Tales of a Software Engineering Manager

Michael Lopp, 209pp

Apress, US$24.99

ISBN: 978-1-59059-844-3

Rating ★★★★☆

I don't think that the narrowness of the field of software engineering should stop anyone outside that field from reading this book, but what is it about?

Well, it is in the field of management and as its name suggests, specifically people management. It is a management theory book or at least an anti-management theory book and as such it does outline approaches to people management, but thankfully not in a scientific or theoretical way.

The author uses his wealth of experience to provide examples, both positive and negative, of people management. All of the stories are anonymised, although some may be based on the companies that the

author has worked for. The book is broken down into three parts: The Management Quiver; The Process is the Product and Versions of You.

The first, as you might have guessed from the title, concerns management skills and how they may be utilised or murdered depending on your viewpoint, with interesting views of management based on Pride and Panic.

The second part, again guessable from the title, concerns how processes can be used both to protect and destroy, but what they all do is divide the workforce into those that monitor processes and those that suffer under their control. The final part is of course about you and how you look after yourself, as well as manage others and the author makes interesting name choices for the category types.

Overall this is a very interesting book which utilises a different approach to get the message across.

Reviewed by Len Keighley FBCS



Programming Erlang: The Pragmatic Bookshelf

Joe Armstrong, 536pp

O'Reilly, £26.50

ISBN: 9781934356005

Rating ★★★★☆

Erlang is an open-source, functional programming language designed to promote fault-tolerant, concurrent and distributed programs. This book is a practical introduction, written by one of the developers of the language. The style of the book is very practical and readable, with plenty of source code examples. The book is intended for developers.

The book is organised as 20 chapters addressing aspects of the Erlang language, tools and libraries. It starts with a brief explanation of functional programming.

The next chapters describe sequential, concurrent and distributed programming in Erlang, with plenty of short examples. The only area not covered in much detail is text manipulation.

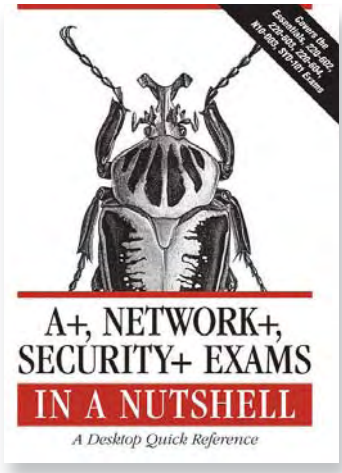
The central section of the book describes the standard library (called OTP), then interfacing to files, networks and other programming languages. This work is consolidated with three larger example programs: a SHOUTcast, streaming MP3 server; an IRC chat system and a full-text indexing and search system. It would have been good to have a web application example, where the concurrency and scalability of Erlang would be a great advantage.

The most intriguing aspect of Erlang is the promise of seamless operation with multi-core processors. The later chapters describe steps needed to exploit this in Erlang program design. Some benchmark examples are given to test the difference in performance between single-core and multi-core operation.

The book finishes with a very good section describing the standard library and a list of further Erlang resources. The publisher's website has the source code examples and list of errata. The book is available in conventional paperback format and as a PDF.

Overall this is a very interesting book and is good value for money. It gives practical advice and examples in a very promising area of computing. Anyone fancying a change from C++/Java/C# should find it interesting. I highly recommend it.

Reviewed by Simon Clarke CEng FBCS CITP



A+, Network+, Security+ Exams in a Nutshell

Pawan K. Bhardwaj, 812pp

O'Reilly, £38.95

ISBN: 9780596528249

Rating ★★★★☆

This book prepares you for the examinations leading to the CompTIA certification in A+ (PC support), Network+ and Security+.

It is not intended to provide a complete study guide or replace the recommended level of practical experience necessary for passing the exams leading to the certifications, but is intended to provide you with a final review just before taking the exam.

The book is presented in a logical manner, with effectively three books in one (i.e. one section per certification). The format is the same for each of the certifications.

The introduction section for each certification states the percentage coverage of the various domains within the exam to give you a good idea of areas to concentrate on. This is followed by a bulleted list of the main topics to be covered against each domain, providing a useful checklist to test your knowledge.

The body of the book covers the main topics in detail, yet still in the style of study notes i.e. very clear bulleted lists or statements.

Where appropriate, a limited number of screen shots and command lines are presented to reinforce the key points. The last section is a summary of the key points presented. Finally this is all brought together with a sample exam of 40 multiple choice questions.

My only criticism of the book is a lack of examinations online or on a CD to accompany the book. With this book the tendency may be to test yourself only against the 40 sample questions, giving the false impression that having mastered the 40 questions you are ready for the examination.

After completing the exams, the book should also provide a good reference guide.

Reviewed by Mehmet Huhrer CEng MBCS CITP

For further information on these books please contact Jane Dickinson at Computer Bookshops.
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Mystery shopper to test professionalism

The Institute of IT Training has launched a mystery shopper service to help companies assess their customer facing processes.

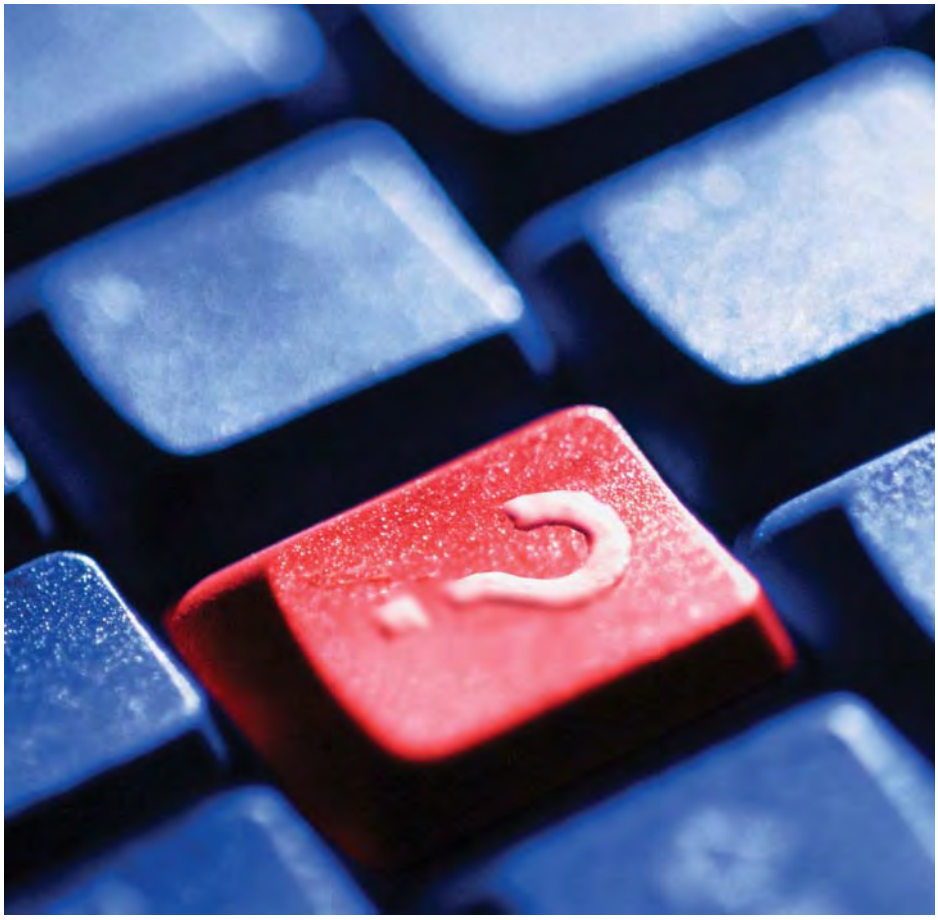
The mystery shopper has historically been an extremely valuable part of the assessment process for institute accreditation but the benefits of this service will now be made available to all IT training companies as a separate service too.

The purpose of the mystery shopper is to experience the first engagement process of the training company with their potential clients and to gauge the level of professionalism exhibited. This will provide the company with an external, independent view of how their sales process appears to a potential client. The process will either reinforce the current good image of the team and processes in place or uncover opportunities for improvement.

The mystery shopper call will be made with a pre-determined set of questions specifically designed to test the sales process and a customer's first contact with the company. Discussions will take place prior to the assessment between the company and the assessor to ascertain if there is a particular issue to be observed. This will enable the assessor to be guided to the particular area of the company's sales process to be reviewed and will make the assessment as focused as possible.

The assessor will call the company anonymously to make an enquiry and go through the same process as a genuine enquiry but carefully guiding the call as required by the pre-determined criteria.

Following the call, feedback will be supplied to the company in a report format highlighting any issues or areas for improvement and praise where the company has implemented a professional process and provided the assessor with successful mystery shopper experience. The report will help organisations focus on their customer sales processes and to continuously improve their business.



Edmund Monk, director of business development, said: 'The mystery shopper has always been a successful and sought after part of the IITT accreditation assessment and is regarded as a highly beneficial process by our accredited companies. We are delighted to now be able to offer this assessment as an independent service to any training company wishing to review their procedures and improve their customers' experience.'

For further information on the mystery shopper service from the IITT, please contact Edmund Monk, on 0845 006 8858 or email emonk@iitt.org.uk

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The annual IT Training Awards go from strength to strength

The Institute of IT Training is once again delighted to have attracted exceptional company sponsors for the 2008 IT Training Awards, as well as welcoming back high profile sponsors from previous years to this annual flagship event.

The IT Training awards, now in its 12th year, continue to attract innovative and thought provoking entries which make the judging process increasingly challenging. This year's Awards ceremony is to be further accentuated through the sponsorship of some of the biggest and most influential names in the industry. Put this together with a glittering ceremony at a stunning location and you have one of the most prestigious award ceremonies in the IT training industry's events calendar.

The Annual IT Training Awards will take place on Thursday 7 February 2008 at the Dorchester, Park Lane, London. The awards are firmly established as the benchmark for excellence in the IT training industry celebrating outstanding examples of high standards, best practice and innovation.

Sponsorship of an award can bring great opportunities for the sponsoring organisations. Not only are they included in all publicity prior to and after the event, they are invited to take part in the event by presenting their award to the winning company.

Sponsors confirmed this year are Oracle, SAS, Ricoh, EMC, NCC, Global Knowledge, OCR, QA-IQ, Prometric, Pearson VUE and Capital Training.

Paul Howarth, managing director of Pearson VUE, comments: 'We chose to be a sponsor of the IT Training Awards 2008 because we recognise that it is the major IT training award event in the UK. Our position as one of the largest players in the UK market supported by a global parent company which is the largest education company in the world means that it is the perfect partnership and we are delighted to be part of and able to support the event.'

Edmund Monk, director of business development at the Institute, said: 'We are delighted to secure the support of all of our sponsor organisations for the IT Training Awards 2008. To have the endorsement of organisations of this calibre not only serves to encapsulate and reinforce the prestige and importance of the awards, but also





further enhances the achievement of the successful entrants.'

For further information about IT Training Awards sponsorship, please contact Edmund Monk on 0845 006 8858 or emonk@iitt.org.uk



Clive Shepherd

Learning for real in virtual worlds

If I asked you to think about what the term '3D virtual world' conjured up for you, chances are I'd get a wide range of reactions.

You're likely to visualise one of the following: (1) some form of simulator that allowed you to hone your flying, driving or similar skill; (2) an environment that allowed you to freely explore some interesting geographical location without having to leave your chair; or (3) a fantasy world in which you shoot everything that moves.

What you are less likely to envisage is that these and many other manifestations of virtual worlds are of significant relevance to learning and development, and that you'll ever have a chance to work with what used to be considered the absolute top-end of big budget e-learning.

Virtual worlds are becoming accessible to more routine use in learning and development because the tool-kits originally developed to support action gaming and military simulation have found their way into the public domain and are being transformed into the 3D equivalent of rapid e-learning tools.

Creating your own 3D learning world is no longer a question of buying 3D modelling software, building your world from scratch and then having a programmer get it to behave something like the real world. This is still an option, and may be necessary for more ambitious projects with higher budgets, but now you have the option to work with libraries of ready-made worlds (or at least components of those worlds) and to use authoring tools to shape those worlds into environments in which learning can take place.

Why would you want to? Well, even at their simplest level, virtual worlds are more engaging and authentic than a typical 2D e-learning environment or even a classroom. Let's imagine that: you create a 3D model of a manufacturing site and use it to help new starters find out where everything is; perhaps you use the model of the inside of a computer to help explain how it all works to IT students; maybe you use a model of the African bush in which to hold a live, online discussion for charity workers about the problems of working in the field.

In none of these cases are you attempting to simulate the functionality of these environments; what you are achieving is a sense of immersion, of authenticity and engagement. Try doing that as effectively with an e-learning scenario based only on text and still images, or a case study delivered in a classroom.

But this represents only the starting point for what can be achieved in virtual worlds. Visual realism can be combined with functional fidelity to create 3D worlds that actually behave like their real-world counterparts.

Creating your own 3D learning world is no longer a question of buying 3D modelling software

Imagine: a model of a fashion store in which trainee sales staff must interact with virtual customers; or a busy warehouse in which learners must identify health and safety hazards; perhaps the head office a multinational corporation, in which trainee consultants must interview key personnel to conduct a study.

Simulation is valuable because it allows for safe practice, without risk to life, limb, wallet or ego. 3D simulations not only feel right, they look right too.

But as anyone who is currently nursing a repetitive strain injury caused by over-zealous usage of their Nintendo Wii console will testify, game playing takes engagement to new highs.

Games provide the player with challenges in which they have to overcome obstacles (hazards, misfortunes, competitors) in order to achieve well-defined goals, while working within preset constraints (time, rules, 'lives').

Well-designed games provide the player with sufficient reward to tempt them to

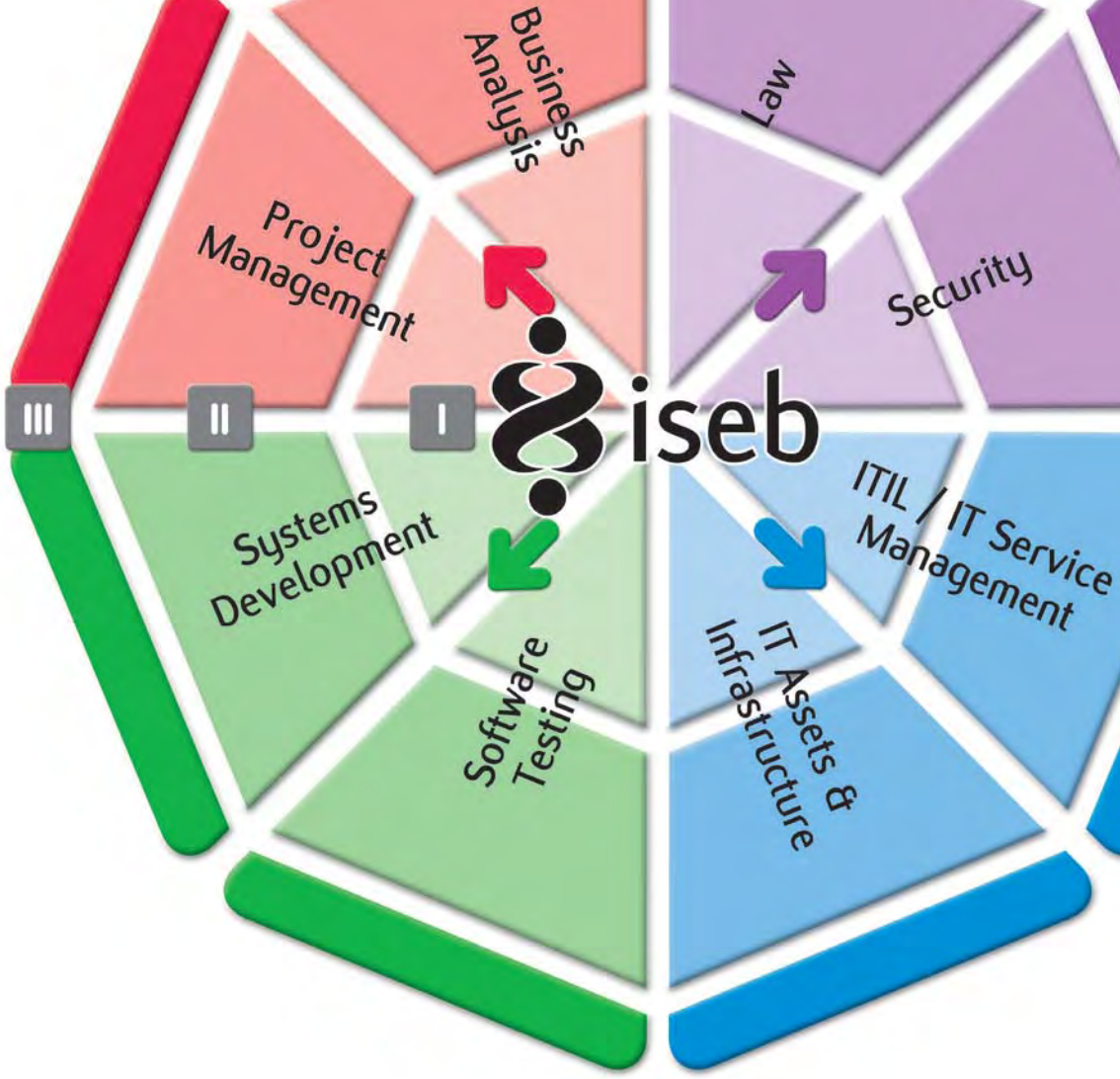


ever-greater efforts. They are the ultimate motivator and can, of course, be integrated into 3D worlds, with or without the added bonus of simulation.

Imagine that same retail scenario, but one in which trainees progress to higher levels by tackling more and more difficult customer situations. Or a variant of the warehouse simulation in which trainees compete to find the health and safety hazards in the shortest possible time.

Virtual worlds can be used in a variety of contexts. Worlds designed to support self-paced learning, such as those produced with Caspian Learning's Thinking Worlds software, can be deployed online or offline. Collaborative, real-time learning can be accomplished using tools such as Forterra or simply by developing your own real estate in that most notorious of internet worlds, Second Life.

No, you're not going to knock up a virtual world in an afternoon, but then you already have tools to help you do that. Virtual worlds are for those situations where innovation will be rewarded, where the objectives are a little tougher to attain. Whatever the case, from now on, virtual worlds are another option you really do have to take seriously.



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