January 2010





Delivering results

with learning technologies in the workplace

Evidence for employer efficiencies and tangible business benefits



Prepared by Towards Maturity Enterprises Ltd On behalf of Becta

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Executive summary

Employers of all sizes and in all sectors are demanding more for less from their learning and development: more results, more quality, more speed, more volume and more responsiveness, but with less time, fewer resources and less inconvenience. As a result, an increasing number of employers are turning to technology to help them.

But is there clear and concrete evidence to illustrate that technology-supported learning in the workplace actually delivers the type of bottom-line business benefits that organisations are looking for?

This study identified a range of evidence from employers (private and public) who reported business benefits from their use of learning technologies. The focus was on evidence that supports business-related outcomes (such as sales increase, cost savings, staff retention and so on) rather than learning inputs (such as volume, completion rates or learner satisfaction).

We found that, despite the economic climate and possibly because of it, investment in learning technology continues to increase as a proportion of training spend. We see that employers are also demanding more from their investments. Even so, we found that quantitative data on business benefits is frequently not collected. We also found examples where technology-supported learning has produced clear competitive advantage and, as a result, the benefits have been kept confidential.

We identified 48 case studies over a five-week period from a review of a wide range of literature, providing persuasive evidence of the opportunities that learning technologies are supplying to support business efficiency and improvement.

The report examines eight themes.

Theme	Per cent of case studies citing benefit	Benefits resulting from the effective use of learning technology
Theme 01 Time saving	46%	Significant time savings can accrue through the effective use of learning technologies, not only as a result of cutting the travel time relating to staff training, for example, but also through reducing time to competency, shorter course duration and benefits from on-demand information. (e.g. Thomson Reuters, Toyota Motor Europe)
Theme 02 Productivity gains	46%	Technology-enabled learning is starting to deliver improved productivity across a range of different functions. This is evidenced by metrics such as improved customer satisfaction scores, faster communication with customers and suppliers, as well as better performance by dealers or distributors. In a number of cases time saved is also being converted to quantifiable productivity gains. (e.g. Accenture, B&Q, Hilton)
Theme 03 Staff benefit	46%	The ability to demonstrate regulatory compliance faster is a widespread benefit. Staff benefits are also reflected in improved morale and retention, with reductions in staff turnover resulting in reduced recruitment and induction costs. (e.g. Fujitsu, Sport England, Care UK)
Theme 04 Sales impact	23%	Learning technologies are increasingly being used to improve sales. Rapid transfer of product knowledge together with targeting skills development in the sales force can improve sales techniques and confidence, resulting in improved and measurable performance. (e.g. Ford, Nike, Hall & Woodhouse)
Theme 05 Tangible quality improvements for learning	35%	More-difficult-to-measure bottom-line benefits are regularly cited following from improved consistency, quality and efficiency of learning interventions. However, increased access to business- critical continuing professional development (CPD) interventions is also cited as a benefit. (e.g. Priory Group, Identity and Passport Service)

Theme	Per cent of case studies citing benefit	Benefits resulting from the effective use of learning technology
Theme 06 Impact of social learning	12%	An early but potentially significant opportunity for business is the growth of knowledge networks supported by Web 2.0 tools for social learning. Benefits are reported by staff as well as by customers and suppliers and distributors. (e.g. BT, IBM)
Theme 07 Green issues	19%	Green issues are also emerging, with evidence of learning technologies being used not only to reduce the carbon footprint of training but also to deliver the skills and knowledge required for compliance with environmental regulations. (e.g. HSBC, Cisco, Blaenau Gwent)
Theme 08 Cost savings	66%	Finally, cost savings are a direct result of a number of the benefits above and are the main efficiency that impacts on the bottom line. Although these savings have to be balanced against the other benefits and gains, when comparing the use of learning technologies with classroom training, the research found clear evidence of savings in delivery costs and travel and accommodation costs, as well as potential savings in programme development, learner support and assessment. (e.g. Cable and Wireless, British Airways)



Looking forward

Looking forward, we see a number of clear trends:

- Technology is starting to redefine the types of learning and performance solutions being offered in the workplace.
- Learning technologies are moving out of the hands of the technologists and into the hands of learning professionals, subject experts and learners themselves.
- Learning technology is supporting the shifting of the role of the learning and development professional from delivery to facilitation in order to support business agility.
- Technology is starting to help organisations harness the existing knowledge and expertise within the workforce in order to improve business performance.

Some observations

- This study highlights examples of evidence from employers themselves around the impact of learning technologies on the business. Learning technologies are more than just a recession-busting tool. Significant efficiencies are to be gained in terms of time and cost, in addition to a wide range of business benefits that are potentially critical for the survival of the business and the growth necessary to beat the consequences of the recession.
- Learning technologies are also allowing learning and development staff to offer new types of solutions to business problems that were not possible when using face-to-face training alone (such as performance support at the point of need and facilitating corporate knowledge exchange). However, these findings do not imply that the use of learning technologies guarantees employer efficiency or business benefit.

Effective implementation practice

- Previous studies highlight that effective implementation practice has a direct influence on business results; this practice is not covered in this report, but widely reported elsewhere.
- A mature and effective application of learning technology (including proactive alignment to address business challenges) increases business impact. The case studies in this report have not been analysed to reflect good practice nor the technology involved, both of which will influence results.

• This report looks at the impact of technology-enabled learning, but the specific role of learning technology has not been isolated. Where a business (e.g. McDonald's) does evaluate the specific impact of learning technology, it often takes place during the pilot phase but is unlikely to be considered separately during the main project rollout.

Measurement

- Senior management teams do not always demand that learning and development staff demonstrate the value of learning on the company bottom line. Where the value is measured, it is not always measured consistently. The signs are that, as a result of the current economic crisis, more emphasis is being placed on this challenge (Training Journal, 2009).
- Public providers, despite a focus on programmes such as the Training Quality Standard on business alignment and the impact of learning, are even less likely to measure the value of learning delivered in terms of business benefits and may need support to do so in the future.









If you need 16,000 people to go through specific training in a tight timetable at less than £20 per head, there is no other way of doing it. The BBC has saved up to £2 million of licence fee money by using this approach." **Rachel Simnet**

Team Leader, BBC

Introduction

The use of learning technologies in the workplace is on the increase:

- Almost three-quarters (71 per cent) of employers currently use some form of e-learning in the delivery of workplace learning (CIPD, 2009).
- Two-fifths (42 per cent) of employers have increased their use of e-learning in the last two years (CIPD, 2009).
- In the current economic climate, when learning budgets are decreasing, organisations expect to spend the same or increase spend on learning technologies.¹

Those who are investing in learning technologies expect more from their investment. Over the past five years or so, employers have been primarily looking for increased flexibility and accessibility, often driven by a growing business need to address regulatory training needs (Overton, 2004).

However, in 2009, employers appear to be demanding much more. One response to the economic downturn is the expectation that learning and development will need to become more closely integrated with business strategy. An increasing number of organisations are looking to improve business productivity, and speed up the induction of new staff (CIPD, 2009) and the rollout of new products and processes, but they are also being asked to do more while saving money and time (Towards Maturity, 2009). Increasingly, they are looking to technology to help them do this.

But is there clear and concrete evidence to illustrate that technology-supported learning in the workplace actually delivers the type of bottom-line business benefits that organisations are looking for?

This is the question that we investigate within this report. Over a five-week period, the research team set out to identify and review a range of literature (academic, research, case studies, online and print) to look for examples of workplace implementation of learning technologies that have tangible business results.

During this period, we reviewed over 180 articles, reports and case studies using the following parameters:

- Employers The review focused on the business users of learning technologies (not learning providers) and aimed to include small and large companies encompassing the private, public and third sectors.
- Technology The definition of technology-supported learning/e-learning used in this
 review includes the application of learning technologies across the learning process
 from assessment of organisational and individual need to delivery of learning,
 learner support, management and administration, and formal and informal learning.

^{1:} Confirmed by various sources in both the UK and USA, such as Towards Maturity (2009), Masie Centre (2009), LMMatters and TrainingZone (2009).

This definition includes a range of technologies and tools, including collaborative Web 2.0 technologies as well as mobile devices.

• Evidence of success – Primary consideration was given to resources where evidence of value was backed with hard numbers. We looked for savings and gains represented by both tangible evidence of business improvement (e.g. measurable bottom-line improvements in sales, or savings on cost or time) and intangible evidence (measurable improvements for important business indicators that do not necessarily have a bottom-line number allocated, such as confidence or customer satisfaction). The report does not review Kirkpatrick level 1, 2, or 3 findings that look at user acceptance, learning or application of learning unless they support business impact findings.

To identify information resources that address all of these three parameters, the research team approached an extensive network of global providers, experts (academic and non-academic) and employer membership groups, in addition to conducting traditional literature research. (Appendix 03 provides an outline of methodology used plus sample of organisations approached.)

Evidence mix

From the review of over 180 references, we identified 48 case studies demonstrating the impact of learning technologies in organisations, together with more than 30 general reports and articles. The case studies helped to inform the eight themes explored in this report and listed below.

Themes	No. of case studies supporting theme ²
01 Time saving	22
02 Productivity gains	22
03 Staff benefit	22
04 Sales impact	11
05 Tangible quality improvements for learning	17
06 Impact of social learning	6
07 Green issues	9
08 Cost savings	32
Total	141

From our selection of research and case studies, some percentages reveal possible trends. We included more UK businesses (73 per cent) than non-UK companies (27 per cent), for example Toyota Motor Europe, which provides a clear British perspective. We have not analysed the percentage of UK private and public initiatives for this review. Finally, it should be noted that few of the case studies sampled represented small and medium-sized enterprises.

- Appendix 01 contains a full list of companies and case studies reviewed within this study, together with links to the original source documents.
- Appendix 02 contains other research studies and publications which were used to inform this report, with a brief overview of each and links to the original documents, where these are available.
- Appendix 03 provides an outline of the methodology used in the research.

Context of report findings

This review's primary aim is to highlight the business benefits that employers have identified as a result of delivering technology-supported learning programmes. It does not attempt to isolate the impact of learning technologies on the bottom line nor validate the reported benefits from the literature. As a result, the authors recommend that any readers also take the following observations into consideration when using the report:

Measuring the value of learning

There is considerable debate³ about the ways in which employers currently measure the value of learning, and this is reflected in the quality and consistency of the data we have been able to extract. The majority collect hard data at level 1 and 2 of Kirkpatrick (acceptance and learning), but not on the application and impact of learning.

At one end of the spectrum, very few who use learning technologies measure the impact of learning in the workplace: only 30 per cent set measurable targets (Towards Maturity, 2009). Of those who use a return-on-investment (ROI) methodology in general, only 10-20 per cent evaluate the business impact of learning, and only five to ten per cent evaluate the ROI of business impact. Our investigation also highlighted examples where the business impact of the learning solution had been evaluated in terms of its ability to support customer services and product awareness, but the employer refused to share details because of the competitive advantage that it brought to the business.

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^{2:} Some case studies supported several themes.

^{3:} Different models of learning evaluation include Kirkpatrick, Phillips ROI methodology and the CIPD value model, all of which focus on alignment to business goals and linking back to business metrics. However, very few organisations employ these models to assess the impact of learning, because they can be time consuming and may not be a priority to business leaders.

As a result, this report does not review the organisation's process for arriving at the business benefits reported, it merely reflects them.

Business success for one organisation does not imply success for all

This study does not compare the impact of one learning medium over another and does not include the implications of mature use of learning technologies, which have been widely discussed elsewhere. Mature users of learning technology are more likely to report business benefits and staff benefits of their implementation and are also more likely both to align learning with business goals and to measure success (Bersin Associates, 2008; Towards Maturity, 2009). Mature users are also more likely to blend learning technologies within other approaches to develop business solutions.

This review does not attempt to isolate the specific role of technology in the blend, the maturity of the user, nor the process of business alignment, all of which influence results.

Caution should be used in applying the results in this review; increasing the use of learning technologies in corporate learning will not automatically achieve success or efficiency savings.

Avoiding the hype

Historically, the e-learning industry has focused on cost savings and efficiencies, and not everyone has been successful in delivering them (see above). In fact, overemphasising efficiency above quality or other gains can result in a potential barrier for uptake (Towards Maturity, 2009).

This report focuses not only on key areas of efficiency (time and cost savings) but also on wider business benefits and gains.

Theme 01 **Time saving**

Time is of the essence in the current economic climate. Research shows that even where training budgets have been reduced, the need for time savings and financial savings means that use of e-learning is often increased (LMMatters and Training Zone, 2009). High-growth companies need to be both fast and flexible, and research has shown that learning technology is playing a key part in delivering that objective because it enables companies to scale up and share knowledge quickly and effectively (Bersin Associates, 2008). And it is not just high-growth companies that need an agile mindset. The speed at which new skills are picked up – the ability to sell new products, the ability to hit the ground running, the ability to respond quickly to changing market dynamics – are important for all businesses as the UK moves out of recession.

Time is money – time away from work affects many businesses' bottom lines directly, but in different ways. For example, organisations in the health sector (e.g. Priory Group) need to provide cover for those learners who would otherwise be with patients, so reduction in time spent learning also reduces the cost of staff cover. For organisations that charge services by the hour (e.g. lawyers and consultants), billable hours are an important business metric. Time spent learning reduces billable hours, which reduces revenue.

Definition

In this review, we look at time savings as reflected in a reduction in:

- induction processes
- average time per person to be trained
- time spent in classroom
- time to demonstrate competency
- time spent travelling
- time spent out of the office
- waiting time
- potential billable hours that have been redirected to learning.

The review highlighted over 20 case studies that cited efficiencies in time saving. There is a close correlation across reports between user time saving and cost savings and efficiency, but not all employers link costs to time – for some, time is a valuable currency in its own right.

Case studies 01 and 02 provide some examples of efficiencies as a result of time saving.

Case Study 01 Thomson Reuters saves time with just-in-time online books

Global media business Thomson Reuters introduced online books (Books 24x7) to support IT staff working in a rapidly changing IT and business environment. In addition to 85 per cent of staff saying they found they were more productive as a result of using the resources, initial research in 2006 on the introduction of the service highlighted that:

- most users (95.1 per cent) said that the service enabled them to find speedy answers to job-related questions
- many users believed that using Books 24x7 saves them time:
 three-fifths (62.2 per cent) of users said that the time saving equates to an average of 4.9 hours per month
 - almost half of the sample said that the service saves them between six and ten hours per month
- two-fifths (41.1 per cent) said that Books 24x7 reduces the need for classroom courses, citing at least two instructor-led courses per annum that are no longer required.

In 2009, this service saved the organisation over £2.9 million as a result of time saved.

Case Study 02 OffPAT saves time and improves staff understanding

The Office of Programme Advice and Training (OffPAT) supports and develops staff in 14 member organisations across the UK involved with public sector economic investment. OffPAT developed a set of e-learning materials and a delivery system for training staff in topics such as state aid and project evaluation. Benefits include accessibility of training, savings in staff time, quality and consistency of training, improved understanding and added value, and improved communication between member organisations.

Specifically:

- e-learning has resulted in a 50 per cent reduction in group training time and 75 per cent of staff report significant improvement in understanding of complex regulations
- a blended learning approach for the project evaluation course (where staff must first complete the online module) has reduced a one-day course by half.

	Additional examples of time-saving efficiencies
Organisation	
Sky UK	A 25 per cent acceleration in time to target performance.
Clydesdale & Yorkshire Bank	Reduction in time for employees to prove competence from 12 months to three months.
NCALT	Based on approximately 40,000 online training activities per month, an average travel time is 40 minutes per person; average mileage saving of £5.62 per person; therefore travel cost savings of £223,000+ in a month or £2.6 million in a year.
Priory Group	New care homes opened more quickly than before, because induction processes for new staff took two weeks instead of three to four months.
Toyota Motor Europe	Improved administration efficiency – in some regions, an immediate reduction was delivered of between 50 and 90 per cent in the time taken to administer courses.
	Reduced learning time – one course that previously took four days can now be completed in two days.
SA Brain & Co Ltd	Learners spend a total of three to four hours on each course, versus the one-day intensive and costly classroom training.
Care UK	The results were a 99 per cent employee completion rate and 3.5 hours in time savings per employee.
BT	Total efficiency savings of more than £8 million each year in employee time are estimated as a result of peer-to-peer learning in 'Dare2Share'.
T-Online	Blended learning saves 30 per cent of previous training time.
Aer Lingus	A Moodle VLE replaced 50 face-to-face training courses a year to provide compliance training for pilots.
Local authorities	Online training was provided for 353 councillors, which involved no travel time – 86 per cent of councils in England have bought in to the service.

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"The blended learning approach – classroombased combined with simulations – has saved us approximately 30 per cent of the training time we previously spent. With a call centre as busy as ours, it's highly critical to find time slots for training, so we need to ensure that every minute spent in training is effective." **Bernd Wiest**

E-learning Manager, T-Online



Theme 02 Productivity gains

Over 50 per cent of businesses are investing in learning technologies specifically to help improve productivity (Towards Maturity, 2009). Evidence from the eLearning Guild in the USA supports this, with 60 per cent of members surveyed in 2009 reporting increased productivity as the second most frequent objective measure of return on investment in e-learning (second only to increased skills/professional development) (eLearning Guild, 2009).

Definition

For the purpose of this report, we define productivity gains as increased output per person or improvements to business-critical metrics. In practice, this may look like:

- improvements in performance (individual and company)
- increase in customer satisfaction
- improvements in quality (output or process)
- relationship value
- improved innovation
- products and services
- faster rollout of new systems and processes.

Twenty-three organisations from across the private and public sectors gave examples of productivity gains. Two examples follow in case studies 03 and 04.

Case Study 03 Accenture improves global productivity with English language training

Accenture's Global English service operates in 50 countries around the world. A common language is needed to collaborate, innovate and serve customers.

Early efforts were local: training was provided face to face in classrooms without any uniform measurement, cost analysis or benchmarking. Classroom training did not deliver an ongoing long-term benefit and was not able to scale to the growing needs of the organisation.

Accenture implemented a comprehensive online solution that now provides complete support, from assessment of current proficiency to defining learning goals, to highly engaging instruction and skill development, and reliable on-the-job performance support.

The research found the following productivity gains:

- Savings of an average of two hours per week are achieved because of learners' improved English skills, translating to more than \$34 million of annual productivity gains.
- Four-fifths (82 per cent) of Accenture learners have used what they've learned from the training programme in their jobs.

Case Study 04 Identity and Passport Service improves interview processes

As part of the National Identity Scheme to combat passport fraud and identity theft, a blended learning programme was introduced over a ten-month period in 68 new offices employing 600 staff. As a result it:

- supported a huge change-management programme within the Identity and Passport Service
- delivered a positive ROI of approximately 2:1
- reached the agreed target of 65 per cent improvement in performance standards
- increased the level of customer satisfaction, as confirmed by independent surveys.

"The project was an immense training challenge, and the programme has delivered competent staff, trained in a cost-effective way, who have maintained high levels of customer satisfaction since the go-live date." Sarah Rapson,

Executive Director Operations at the Identity and Passport Service

	Additional examples of productivity gains
Organisation	
B&Q	The top ten stores using e-learning have consistently higher-than-average customer satisfaction scores and deliver top-level economic benefits.
Bell	A project was named 'Blended learning and performance project of the year' by Training Magazine in the USA, with 99 per cent of learners stating that it increases their effectiveness.
Caterpillar	The learning delivers ongoing added value to the business. The net benefit per individual is calculated to be \$2,200.
Hilton	Almost three-quarters (71 per cent) of Hilton International employees have been able to save more than one hour per week because of their improved English skills.
Citroen	Dealership training for staff to fix faulty key fobs in store resulted in improved customer service and reduced warranty payments.
McDonald's	An initial pilot integrating e-learning into McDonald's University showed an impact on customer service: staff, compared with those traditionally trained, were more confident and showed improved interactions with customers.
Mines Rescue	The implementation of work-based learning facilitated growth in the customer base from five to more than 1,400 and boosted turnover to over £8 million a year.
OffPAT	E-learning has resulted in a 50 per cent reduction in group training time, and 75 per cent of staff report significant improvement in their understanding of complex regulations.





"One of our targets for 2007 was to improve communication with the organisations and companies that use our services. Being able to provide them with access to training on state aid and the de minimis regulations has been fantastic. Improving their understanding of the regulations has cut down on misunderstandings and has greatly improved our support to them." Janet Moore,

Training Manager at Northwest Development Agency

Theme 03 Staff benefit

On a practical level, from an individual and organisation perspective, staff need to be able to comply with regulations in order to do their jobs. Compliance has driven much of the e-learning investment to date (Towards Maturity, 2009).

Many indicators of staff benefit (motivation, satisfaction) cannot easily be measured; however, these aspects are often indicators of company health and are often important to the decision-making process at executive level (Cross, 2009).

Definition

In this review, we considered tangible evidence of improvement in staff benefit to be:

- improved enthusiasm, motivation and morale as identified in employee engagement surveys
- an ability to meet regulatory standards
- an impact on staff retention
- a reduction in staff turnover
- evidence to support career changes.

By using e-learning courses via learndirect, many individuals have been able to change their careers and prospects dramatically:

- Debra Paget left school at 15 with no qualifications and was working as an administrator for her local council. She now has a degree in public services management.
- Tony Nichol, 32, from Newcastle, had been out of work for five years due to illness, but through learndirect he improved his maths and English and found himself a full-time job. He now helps other people to learn.
- Suzanna Garrett, a 37-year-old single parent from Redcar, was made redundant. By using learndirect to improve her numeracy and literacy skills she now has a permanent role as a trainee tutor.
- Neil Frosdick, 43, from Gorleston, is an award-winning learner for overcoming difficulties with dyslexia through learndirect. He brushed up on his maths and English skills and achieved an NVQ in healthcare. Working at the James Paget Hospital, Neil is now a union learning representative.

The Ofsted report on the U-Net, the Unionlearn delivery system, places U-Net among the best providers in the country, awarding it a Grade two for all aspects of learning provision. Ofsted judged overall success rates for Skills for Life learning as above the national average and, importantly in an economic downturn, that 'learners develop good skills and improve their employability and career prospects'. These success rates for U-Net delivered skills for life learning have had a knock-on effect of delivering better industrial relations, lower sickness and absence rates and a big increase in morale.⁴

Case study 05 gives an example of staff benefit through using technology.

Case Study 05 Fujitsu improves staff engagement through technology

Fujitsu is a global leader in the supply of IT systems and services, operating in 13 countries worldwide and with approximately 20,000 employees in the UK.

In this service industry, staff motivation and morale is an important business differentiator. The company's people engagement survey highlighted that the organisation needed to improve its people management skills in order to enable the business to become more effective. A management academy programme was implemented that uses technology to implement 360-degree feedback to support management and leadership development, assessment and development centres, performance review or individual development planning and coaching.

The research found that:

- there were staff benefits from retaining the company's Investors in People accreditation and improving its people engagement survey scores by five per cent, which was achieved across the organisation as a whole
- where some country groups within the organisation did not roll out the management academy programme, the people engagement survey scores showed no improvement.

"We believe it is significant that in the recent employee engagement survey, those countries that have implemented all three modules have significantly higher scores for respect and trust in management."

Vice President, Human Resources, Global Services

^{4:} Unionlearn – Year 3 Moving On annual report.

	Additional examples of increased benefits to staff
Organisation	
Coventry Building Society	Online training shows benefits of a sense of achievement and the effectiveness of timely delivery: 92–97 per cent pass at first attempt, 7–14 per cent at second attempt.
Hilton University	The e-learning facility improved staff retention and support for personal staff development.
Hall & Woodhouse	Enthusiasm and morale has improved, with over 80 per cent of new recruits saying they are joining the company for 'career opportunities'. There has been a 20 per cent reduction in overall staff turnover.
Sky UK	Staff retention doubled following a new onboarding portal for new staff.
Care UK	The duration of mandatory common induction standards has reduced by 47 per cent, and all 2,000 learners trained each year are compliant. Supported a 60 per cent growth in employees and a 15 per cent increase in employee retention, cutting recruitment costs by ten per cent.
Clydesdale & Yorkshire Bank	Staff retention rose from 75 per cent in 2006 to 83 per cent in 2008.
Sport England	Development of a 'fairness and inclusion' e-learning module resulted in almost 100 per cent of staff downloading a team exercise and 50 per cent developing a personal action plan with email support.
Openreach	Adopted a blended approach to change the organisation's culture, with e-learning and face-to-face training successfully rolled out to over 13,000 employees in under 12 months. The number of female employees increased by 140 per cent.
Merseylearn	Skills for Life learning provided a £200,000 saving per year from reduced absenteeism and a 50 per cent reduction in customer complaints; staff turnover reduced by four per cent.



"The benefits are showing up right across the board, from staff morale to quality of service. The effect on recruitment and retention is perhaps the most impressive."

Richard Castleton, Head of Human Resources, Hall & Woodhouse

Theme 04 Sales impact

Effective selling is the ability to match a given product or service to a defined need. In many organisations, learning technologies are playing a direct role in improving sales capabilities by increasing self-awareness, confidence, collaboration and communication skills. Learning technologies are also speeding up the launch of new products into the marketplace by delivering product knowledge at the point of need. Technology is enabling learning to be accessed at point of sale⁵ and is offering consistent learning to support sales across channel partners (e.g. Ford, Toyota).

Definition

In this review, we have looked for evidence of improved sales impact in the form of a:

- direct sales increase (often as pre- and post-e-learning comparison)
- correlation of e-learning usage to sales.

Academic research has shown that improving the knowledge of sales professionals directly influences a superior performance (e.g. Prieto, 2006).

The case studies (see table in this section) highlight how product training delivered by learning technologies on a range of devices influences sales and the speed with which new products can be launched consistently over a large dispersed audience. Mobile technology has the potential to be used in product training. Black and Decker⁶, for example, is using smartphones to capture and share staff product knowledge (phones are also used in store to share information with customers), but it is too early to know the results. A large mobile phone company has used mobile phones to share learning for some time but will not share results in the public domain, because of the competitive advantage it thinks this approach brings.

An example of a company where the introduction of e-learning was followed by a sales impact is given in case study 06.

6: e-learning age magazine Dec/Jan 09 – description of implementation.

^{5:} Forrester research showed point-of-sale learning resulted in a four to six per cent increase in sales from stores where this was available, and a ten per cent increase in real estate agents' commission was recorded in a controlled project comparing online training with traditional classroom training.

Case Study 06 Boots improves sales following e-learning launch

In September 2008, Boots launched e-learning to 65,000 people across its 2,600 stores. In the 11 months since the launch, e-learning has been delivered to 71 per cent of store employees, and 228,380 modules have been completed, which is an average of 3.5 modules per store employee.

There are clear benefits on sales performance:

- Cosmetics The top ten per cent of stores completing e-learning show a significant increase in sales compared with the average.
- Electrical beauty The top ten per cent of stores completing electrical beauty e-learning also show a significant increase in sales compared with the average.
- Travel insurance Stores completing e-learning show a 100 per cent increase in sales over those that have not.
- There has been a tangible improvement in the sales of vitamins just three weeks after the launch of a vitamin basic module.



	Additional examples of improvements to sales impact
Organisation	
Ford of Europe	Dealerships using e-learning outperformed those that were not. Sales people completing an e-learning programme have recorded 2.4 additional car sales per year.
Insurance company	An increased sell-through of four to six per cent was achieved via short, engaging ten-minute learning content modules accessed from the point of sale. A ten per cent increase was achieved in estate agents' commissions and transactions using a virtual classroom approach.
Sky UK	An 11 per cent increase in sales conversions was achieved in week one for new starters.
B&Q	The top ten e-learning stores produce consistently higher-than-average customer satisfaction scores, with the top e-learning store achieving 400 per cent above the budget target.
Nike	Stores that have implemented the e-learning programme have seen a four to five per cent increase in sales.
Hall & Woodhouse	Pub sales are up 12 per cent on previous year.







"Stores that have implemented the e-learning have seen a four to five per cent increase in sales. Overall, Nike has found that online training has driven a minimum two per cent increase in sales dollars since its program started." **Nike** 27

Theme 05 Tangible quality improvements for learning

Learning technologies are not only providing efficiencies to learning and development teams within business in terms of time saved (Theme 01) and cost savings (Theme 08), they are also bringing a number of measurable quality improvements.

Definition

In this theme, we considered evidence for the following tangible improvements to learning and development:

- Improved consistency.
- Quality.
- Personalisation of services.
- Increased access to CPD.
- Responsiveness to changing business need.
- Increased pass grades and a reduction in fails.

The longitudinal survey reports by Overton/Towards Maturity (2004–2009) have highlighted that the most widely reported benefits actually realised by employers are improvements in access to learning (reported by 60 per cent of 300 employers), flexibility (57 per cent), reach and consistency (over 40 per cent).

A meta-analysis and review of empirical online learning research, looking at research literature from 1996 through to July 2008, identified more than a thousand empirical studies of online learning. Fifty-one independent effects were identified and the meta-analysis found that, on average, students in online learning conditions perform better than those receiving traditional face-to-face instruction (US Department of Education, 2009).

Academic research also reflects that, in the workplace, different instructional design using technologies can provide superior learning results to classroom equivalents. For example, Macdonald found that learners respond favourably to constructivist teaching approaches such as asynchronous discussions, open-ended task-based activities, and assignments incorporating authentic real-world examples (Macdonald et al., 2007).



They like the self-directed learning approach and the in-built flexibility that e-learning brings. They can do the course at their own pace and in their own time and no longer have to wait for a place on the next available classroom course, which could have been weeks away with the old programme." **Simon Green,**

Learning and Development Advisor, Blaenau Gwent

The use of e-portfolios and a work-based learning approach improve opportunities for qualifications to be offered to staff, according to an example from the healthcare sector (Bond and Wilson, 2000).

Learning technologies do not always produce learning benefits (an analysis of content from the *No Significant Difference Phenomenon* website highlighted eight studies showing that learning technologies provide no significant difference to learning in the workplace, four that showed a significant change, and one with mixed results), but the cost and time efficiencies alone justify consideration.

Case study 07 gives an example of an organisation that reported tangible quality improvements for learning.

Case Study 07 Priory Group transforms learning to support business growth

The Priory Group is one of Europe's leading providers of independent mental health care for acute, secure, rehabilitation and specialist educational services. Since 2005, it has implemented an award-winning blended learning solution of online content, work assignments and a distance-learning programme. 'Foundation for Growth' aims to transform learning for all the group's staff in order to support business growth, and is going from strength to strength. Results are having an impact across the business:

- Improved induction processes get new staff up and running faster a process that used to take four months to gain compliance with industry regulations now takes two weeks.
- Learning and development service improvements have improved consistency, quality and efficiency of learning.
- All staff now have a personal learning record online, creating a portable CPD log.
- Savings of over £9 million have been identified (calculated from time savings and administrative efficiencies).
- Additional savings result from minimising travel and expenses for face-to-face training.

"Priory aims to deliver consistent services of the highest quality, and Foundation for Growth is vital to this. It is wonderful to go to a Priory site and see staff of all grades using Foundation for Growth as part of their work. The result is better trained staff, improved service delivery and higher patient satisfaction." Matthew Franzidis,

Chief Operating Officer, Priory Group

	Additional examples of tangible improvements to the quality of learning interventions
Organisation	
SA Brain & Co Ltd	Leaders in the Welsh drinks and hospitality market – 1,000 employees achieved 100 per cent compliance within the first three months.
Clydesdale & Yorkshire Bank	Automated compliance reporting saves time and improves the quality of reports.
Insurance company	In two months, 140 employees were certified as compliant. The results were a 99 per cent employee completion rate.
ldentity and Passport Service	Benefits quantified as: 65 per cent improvement in performance, cost benefit of £2,343 per interviewer, and overall cost:benefit ratio of 1:1.9.



"The project was an immense training challenge and the programme has delivered competent staff, trained in a cost-effective way, who have maintained high levels of customer satisfaction since the go-live date."

Sarah Rapson, Executive Director Operations, Identity and Passport Service

Theme 06 Impact of social learning

The growing use of Web 2.0 technologies is significant and is starting to influence thinking around formal and informal learning. The implication is that these technologies result in learning being put in the hands of the user not the provider; in a company, the sharing and owning of knowledge by the staff enables knowledge management and sharing, both within and beyond the organisation.

Social learning is considered to be a group of linkable, flexible and frequently open source Web 2.0 technologies, such as online videos, blogs, podcasts and wikis, RSS feeds and social networking sites. Also included in this category are peer-to-peer discussion threads, mashups and tagging tools.

Definition

In this theme, we are looking for general reported business benefits of using Web 2.0 technologies in social learning, to understand their impact in the workplace, and include evidence of improvements in:

- knowledge sharing
- cost effectiveness
- speed.

Eleven reports reflected this theme. The academic evidence provided the most evidence for impact on the use of Web 2.0 technologies in the workplace:

Successful companies are creating networked companies

Global research findings suggest that by using Web 2.0 technologies, 69 per cent of companies have gained measurable benefits within the business in relations with customers and in dealings with suppliers, partners and external experts (McKinsey Quarterly, 2009).

Benefits given include:

- more innovative products and services
- more effective marketing
- better access to knowledge networks
- lower costs
- higher revenues.

Supporting knowledge sharing among IT workers

IT workers found troubleshooting, project work and installation of hardware and software the most likely contexts to produce significant learning. The rapid pace of technological growth in the IT industry results in a different learning environment from that of traditional industries (Ha, 2008).

Small business and business start-ups

Findings stress the accelerated learning among local entrepreneurs and the importance of the regional context as a source of particular kinds of knowledge and expertise that may promote or inhibit new technology-based business start-ups (Collinson and Gregson, 2003).

Networked knowledge for improved business decisions

Learning alliances enable construction organisations to better consider business decisions and make best use of the information, which impacts considerably on transaction costs (Love et al., 2002).

Improving relationship value

An empirical study of 215 business relationships from nine high-technology companies in the UK shows that networks of relationships have a positive effect on a firm's relationship value (Eng, 2005).

There are signs that companies are responding to the research which shows that formal content learning systems work for only 20 per cent of learning needs, and benefits accrue from expanding informal learning to the company scale. In the UK, IBM, Thomson Reuters, BT, Intel and Nike are among the larger corporations leading innovation. However, measuring the business impact of supporting informal social learning is even harder and very few, apart from BT and IBM, are attempting this.

Case study 08 gives an example of an organisation that reported an impact from social learning.



If HP knew what HP knows, we would be three times as profitable." Lew Platt, former CEO, HP

Case Study **08**

IBM improves employer retention and saves millions of dollars

IBM are leaders in learning innovation including use of Web 2.0 tools to support seamless learning and working. For IBM, learning is a strategic enabler of change – an indispensable tool that supports new initiatives, re-skills the workforce and prepares the company to address key market shifts and organisational transformations in the fast-moving IT industry.

IBM spends about \$750 million annually on learning initiatives. Evidence shows that learning enhances productivity, enables development of employee potential, empowers employees and teams to innovate, and extends organisational knowledge to suppliers, partners and clients.

The results of this investment are compelling:

- Employees spend an estimated 17 million hours each year (about 55 hours per employee) in formal training, either online, through online learning activities, or in a traditional classroom. Approximately 47 per cent of IBM learning days are now conducted online anywhere, any time.
- IBM studies have linked learning with employee retention. They have concluded that, when given meaningful learning and developmental opportunities, 79 per cent of IBM employees are likely to stay with the company for at least three years.
- IBM conducts almost half of all employee training via e-learning, making a cost saving of \$579 million in only two years.

Examples of specific programme benefits include:

- The introduction of a blended learning approach has saved \$24 million annually in deployment costs of IBM's new manager training programme, 'Basic Blue', with five times as much content as that delivered by the previous programme.
- IBM's 'Role of the Manager' programme has helped 30,000 managers, leaders and executives in 70 countries to acquire additional leadership expertise, effectively lead remote and mobile teams, and create an environment that encourages continual innovation and creativity.
- The sales professionals who have trained with the IBM 'Signature Selling' programme sell two to three times more than sales personnel who have not.

IBM has also implemented an on-demand online workplace for its 320,000 employees. This employee portal environment will integrate mainstream applications with relevant learning for key client-facing roles. This will enable IBM employees to learn more seamlessly while working. It will also develop a culture that continues to promote ways for employees to be both consumers and creators of learning and knowledge, enhancing the learning culture that drives organisational performance.

	Additional example of efficiencies as a result of introducing social learning	
Organisation		
BT	The 'Dare2Share' project delivers total efficiency savings of at least £8 million per year.	







"The business case shows an exceptional financial benefit to BT Group, and Dare2Share will help us address our unmet learning and development needs. I strongly believe Dare2Share will contribute to the company's workforce transformation agenda and become the industry leader in customer service, which are the ultimate goals."

Peter Butler, Head of Learning, BT

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Theme 07 Green issues

The Government paper, *New industry, new jobs?* includes the shift to low-carbon thinking as a key challenge in skills provision in the UK. A number of organisations are proactive in this area, and we believe that this will become an increasingly important theme for learning and development (as exemplified in the 'Green training' category and the 'Best Green companies' in the Sunday Times awards).

Definition

In this theme, we are looking for evidence that highlights:

- compliance with environmental laws
- improving environmental benefits such as reduced travel costs and reduced use of paper.

Almost two-fifths (19 per cent) of the sample reflected 'green' benefits. Environmental benefits are often rated as secondary benefits of using learning technologies. In a yet-to-be-published report, a company project is reviewed to ensure compliance with new environmental legislation, but also with the view of not losing out to competitors over green credentials.

Key findings from a research paper (BT, 2009) highlighted that environmental benefits were listed as a key benefit of using learning technologies (47 per cent of staff questioned saw a reduced need for travel), ahead of improved employee productivity (43 per cent saw this as a benefit).

Case studies 09 and 10 give two examples of organisations where use of technologies has had environmental benefits.

Case Study 09 HSBC uses learning technologies to reduce carbon footprint

In its 2007 sustainability report, HSBC stated that it was continuing to roll out video collaboration technologies across the group to reduce the need for business travel. The findings of a one-month monitoring trial of the use of rooms equipped with such technology at HSBC Group's head office in London, as a way of cutting down on air travel, demonstrated a reduction of 523,000 air miles – a saving of 185 tonnes of carbon dioxide – and a financial saving of \$604,000.

In addition, as part of the HSBC Climate Partnership, online learning about climate change is being offered to over 100,000 employees worldwide over a five-year period.

Case Study 10 Cisco benefits from home working

A survey of nearly 2,000 staff revealed £168 million in productivity gains and more than 47,000 tonnes in avoided carbon emissions from home working.

Cisco surveyed almost 2,000 of its staff from across North America, Europe, Asia Pacific and emerging markets and found high levels of support for its telecommuting policy, which allows staff to work remotely and limit the number of business trips they take.

The research found that the average employee now telecommutes two days a week. Over two-thirds of respondents said that the policy resulted in higher levels of productivity and improved work–life balance.

Cisco said that the rollout of online communication technologies such as instant messaging tools and video conferencing had also delivered \$277 million (£168 million) in productivity gains and provided significant reductions in employee travel. Staff reported fuel cost savings of \$10.3 million a year as a direct result of telecommuting, while figures from Cisco show that online meetings resulted in savings of 47,320 metric tons of travel-related carbon emissions.

The company said that home and remote working could also provide less tangible benefits in the form of improved employee satisfaction and retention rates, citing the fact that more than 90 per cent of respondents to its survey said telecommuting is somewhat or very important to their overall job satisfaction.
	Additional examples of carbon efficiencies	
Organisation		
NCALT	A carbon reduction of 100 tonnes per year was achieved by reducing travel and classroom-based delivery.	
Clydesdale & Yorkshire Bank	Estimated saving of £542,000 based on 9,250 staff, with savings of 45 per cent over previous methods.	
Local authorities	Eighty-six per cent of all councils in England have bought the 'Modern Councillor' training service. A typical council with 50 elected members pays only £450 per year, with no travel or accommodation costs.	
The Dental Channel	Over 200 days away from work have been saved (a possible cost of £200,000 in lost revenue), with an additional travel and fuel cost of perhaps £20,000.	
Blaenau Gwent	E-learning management training resulted in cost savings of over £4,000 per year in delivery, and also less travel, administration and use of paper.	







"Whilst we have made actual cost savings by changing the way we train our staff, we've also made other less tangible but equally important returns on investment too", says Simon. "We're using less paper, people are away from the office less, and the admin burden associated with traditional courses has now gone."

"ROI is gained from doing things differently and more efficiently, which in turn leads to cost savings. Doing things via e-learning is a good way to be more effective and efficient with fewer resources."

Simon Green, Blaenau Gwent's Learning and Development Advisor

Theme 08 Cost savings

Cost savings are often the number one efficiency associated with the use of learning technologies e.g. see BT Conferencing 2009,⁷ but we have deliberately included this at the end because they are a direct consequence of other benefits (such as time saving, Theme 01).

Definition

In this theme, cost saving is defined in terms as reduction in costs of:

- administration
- delivery
- assessment and support
- travel and accommodation.

Cost saving is not always a given, particularly with the high start-up costs of some systems. Increasing volume and reach with the same resources can be as important (Towards Maturity, 2009). However, 66 per cent of the case studies quoted cost benefits, and these underpin the majority of the other benefits outlined in this report. The analysis of cost saving within employers should be considered with a note of caution: quoting cost saving alone could be counter-productive because the current 'mature approach' balances cost saving with other gains, as previously discussed.

Case studies 11 and 12 show how cost savings accompany strategic business objectives within the private and public sector.

^{7:} BT HR Professional survey highlights cost savings (80 per cent) as the top benefit for investing in learning technologies – and 39 per cent of HR professionals thought that use of technology would enable them to save over a quarter of their training budget.

Case Study 11 Cable & Wireless reduces operating costs

In less than eight weeks, and within the stipulated budget, a Cable & Wireless branded learning management system was designed and created.

A cost comparison was based on an example of five mandatory course modules. Via e-learning, each module took 30 minutes, or 2.5 hours for all five. Using a workshop, the same content took 1.5 hours per module, or 7.5 hours for all five.

The result was a total reduction of approximately 65 per cent in operating costs, based on:

- average costs per hour per employee, based on an average salary
- 6,000 staff
- 12 staff per workshop
- average trainer costs of £150 per session.

There were further savings on travel, and no logistical problems.

A total of £950,000 was saved by the company shifting its overall strategy from an enterprise learning management system with ILT and a training team to a customised learning management system utilising rapid development tools with a much smaller team.

Case Study 12 NCALT – Cost savings support strategic objectives in the police

The National Centre for Applied Learning Technologies (NCALT) designs innovative learning solutions and provides almost 200,000 police officers and staff with the learning they need, when they need it. Estimated savings on NCALT e-learning are based on the following parameters:

- One day's classroom training for a police officer costs from £88 to £218. (Calculations are based on the lowest figure.)
- It was assumed that four online training activities equate to one day's classroom training.

Therefore 40,000 online training activities per month represent a projected saving of £10.5 million per year – a saving ratio of 3.1:1.

Additional savings have been calculated based on travel costs for just two programmes, as follows:

- average travel time is 40 minutes per person
- average mileage saving of £5.62 per person
- travel cost savings of £223,000
- 100 tonnes per year carbon reduction.

	Additional examples of cost savings	
Organisation		
ldentity and Passport Service	Cost benefit of £2,343 per interviewer and overall cost benefit ratio of 1:1.9.	
Care UK	The company delivers home-based e-learning to employees who need it. This has cut recruitment costs by ten per cent. Costs saved over previous methods are £86,000; the original staff cost of attending previous learning methods was £288,000.	
British Airways	In comparison with delivery in a face-to-face model, e-learning projects in British Airways saved approximately 80 per cent.	
Blaenau Gwent	Cost savings through e-learning, estimated at £85 per head, totalled £37,500.	
Local authorities	Local authorities using the 'Modern Councillors' programme saved just under £1,000 per councillor, and incurred no travel or accommodation costs.	
The Dental Channel	The cost of delivery of CPD through online webinars resulting in an overall estimated saving to the industry of £250,000.	

	Additional examples of cost savings continued	
Organisation		
BT	The 'Dare2Share' initiative – conservative estimate of total efficiency savings of more than £8 million each year.	
Care Management. Group (CMG)	Costs cut by approximately 90 per cent, and is already saving CMG over £300,000 per year	
Plymouth City Council	Estimated costs of delivering a half-day classroom course on the Government Connect programme have been calculated at £85 per delegate compared with £3 per delegate for the e-learning course.	
Nationwide Insurance	Estimated savings range from \$50,000 to \$80,000 annually per contractor replaced.	
Everyday Financial Services	Offers financial services to customers of Littlewoods Shop Direct home shopping brand. Ms Williams: "We estimate that it has saved the company over £125,000 in training costs."	
Blue Cross Blue Shield of Tennessee	Ongoing savings of \$363,000 per year.	
Toyota Motor Europe	With 10–20 participants in each session, the saving on this single course averages €30,000.	
SA Brain & Co Ltd	Cost savings have exceeded £73,000.	
Sky UK	Cost savings of £700,000.	
BBC	The BBC has saved up to £2 million of licence fee money by using e-learning.	
Devon County Council	Saved £5,000 over a six-week period for one online course delivered in a virtual classroom.	



 "By ending our reliance upon classroom-based training and workbooks and embracing e-learning we have saved £73,000 from our annual training budget."
 Philip Lay, Retail Director, SA Brain & Co Ltd

Horizon scanning

This section of the report suggests some themes that may predict future trends to watch out for in the use of technologies in learning and development.

The role of learning technology in mainstream learning and development

Typically, technology has been the domain of enthusiasts, but demographic shifts coupled with increased social use of new media mean that technology is more likely to become mainstream in learning and development thinking to help staff craft learning interventions (Training Journal, 2009).

Learning and development professionals' role shifts from course delivery to facilitation and performance support

The role of learning technology in performance support and continual learning on the job will be increasingly needed in the fast-changing knowledge economy. Learning and development professionals are likely to find themselves in the role of facilitator rather than deliverer.

Cutting the carbon footprint

Environmental considerations are now at the core of many organisations' customer, brand and operation decisions (e.g. e-skills UK, 2008). As this thinking takes hold in businesses, new tools may be adopted that will also support learning and development, for example virtual meetings or virtual classrooms.

Harnessing and leveraging company knowledge

Web 2.0 provides the opportunity to connect staff members with each other, with learning professionals and with experts within the business. A number of organisations (e.g. BBC, BT, CISCO, IBM) are moving towards an online system that allows the organisation to create 'company memory' of its intellectual capital. This involves creating, capturing, organising, accessing and using 'know how', facilitating information sharing by staff.

Learning on the move and at the point of need

In the USA and UK, the use of mobile technology for training is down (we found few stories of tangible measurable benefits).⁸ However, the increase in the use of iPhones and increased confidence in accessing content via the phone may reverse this trend. A number of examples are now emerging in the workplace.

Shared services are cutting costs further

Cloud computing and the use of open source tools may add more efficiency, but this is not (yet) well established within the employer base. Coupled with this, we may see more downsizing of large learning management systems (e.g. Cable and Wireless).



Conclusions and observations

The use of learning technologies for workplace learning has the opportunity to be a recession buster. This report highlights that employers who measure and report the value of their learning technology investments are achieving both efficiency savings (primarily in time and cost savings) and a variety of business benefits such as increased productivity, sales, staff benefit and learning quality, and reduced carbon footprint.

However, the findings of this report should be considered with the following caveats:

- Evidence within this report should only be shared with emphasis on effective implementation practice, which is not covered in this report but widely available.
- Previous research has highlighted that it is the mature and effective application of learning technology (including proactive alignment to address business challenges) that influences business impact. The case studies in this report have not been analysed to reflect good practice or the technology involved, both of which influence results.
- The specific impact of learning technology on business improvement has not been isolated. If a business evaluates the impact of learning technology alone, it seems most likely to take place during the pilot phase (e.g. McDonald's).

This review provides a snapshot of business success and has created a framework that can be built on as new case studies appear. Further analysis would also shed light on the types of learning technologies that deliver efficiencies.

Business impact of funded learning technology programmes and academic research

It is interesting to note that a search of the Middlesex University academic databases and *No Significant Difference Phenomenon* website using a combination of keywords – e-learning, training, employer, efficiency – uncovered a wide range of potential resources (130 were reviewed in detail) but provided 15 resources specifically relevant to this study. Of these relevant resources, 60 per cent were concerned with effective pedagogy for delivering results in the workplace. Of the other six case studies that articulated business benefit, only two illustrated the business benefits with examples of bottom-line results.

Although time would have allowed a more extensive drill-down of the data to investigate further, conversations with the Association of Learning Technologies and the Association of Learning Providers highlight that very little work is being done by learning providers to measure the business impact of learning interventions with employers at the level investigated within this report. Where business impact is being reviewed in the public sector domain regarding skills, for example the work of the National Employer Scheme, little is mentioned of the role of learning technologies. For example, a search of the National Employer Scheme case study for McDonald's found no references to e-learning or technology, despite the considerable use of this medium within the business.

We would like to encourage more academic studies and funded learning technology initiatives to demonstrate bottom-line business value as part of their research. (Very few funded learning examples were available to include within this research, because they only comment on learning impact in terms of learner satisfaction and the ability to pass exams, not on the actual impact on the business as a result of applying skills.)

However, the academic research, in addition to supporting key themes, has highlighted the impact of learning technology in the areas of team collaboration, staff ICT confidence, employee morale and other human resource areas that are rarely quantified. While we want to see the hard evidence of business benefit, we should not forget the impact that learning technology can have on the stakeholders themselves.

Final recommendations for business and learning providers

- A mature approach to the use of learning technologies involves up-front alignment to business need, and all approaches to the use of learning technologies should start with this conversation if the results are to have an impact on the bottom line.
- It is important to invest in the skills of learning and development staff to design and implement technology-enabled learning solutions that deliver business results.
- Although programmes such as World Class Skills and the Training Quality Standard promote business alignment and measurement of success, simple tools to help both providers and employers to demonstrate the business value associated with learning technologies in the workplace would be of benefit.

Appendix 01 **Case study matrix**

Sector: Consultancy	O Theme 01 Time saving	O Theme 05 Quality improvement
	• Theme 02 Productivity gains	O Theme 06 Social learning
Company: Accenture-	○ Theme 03 Staff benefit	O Theme 07 Green issues
English language	O Theme 04 Sales impact	○ Theme 08 Cost savings
Highlight:	Saving two hours per week as a result of improved English skills resulting in \$34 million in productivity gains.	
Source:	www.learningexecutive.com/Flyer	s/2008CLLC_Abstracts.pdf
Sector:	• Theme 01 Time saving	O Theme 05 Quality improvement
Transport Company:	O Theme 02 Productivity gains	O Theme 06 Social learning
Aer Lingus	○ Theme 03 Staff benefit	O Theme 07 Green issues
	O Theme 04 Sales impact	Theme 08 Cost savings
Highlight:	Moodle replaced 50 face-to-face training courses a year to provide compliance training for pilots.	
Source:	www.enovation.ie/index.php?option=com_content&view=article&id=185: anytime-anyplace-anywhere-aer-lingus-chooses-moodle-for-online-pilot- training&catid=36:case-studies&Itemid=73	
Sector:	O Theme 01 Time saving	Theme 05 Quality improvement
Finance	O Theme 02 Productivity gains	O Theme 06 Social learning
Company: Axa PPP	○ Theme 03 Staff benefit	Theme 07 Green issues
	Theme 04 Sales impact	○ Theme 08 Cost savings
Highlight:	The total savings made using an e-learning solution were over £40,000, an equivalent employee cost saving of over 71 per cent.	
Source:	www.towardsmaturity.org/article/2009/06/15/harnessing-team-strengths-and-ld- evolving-axa/	

	Key:	
	 This theme applies This theme does not apply Not yet available 	
Sector:	• Theme 01 Time saving	Theme 05 Quality improvement
Retail	Theme 02 Productivity gains	• Theme 06 Social learning
Company: B&Q	Theme 03 Staff benefit	Theme 07 Green issues
	Theme 04 Sales impact	O Theme 08 Cost savings
Highlight:		rning modules achieved above budget targets Id higher levels of customer satisfaction.
Source:	www.cipd.co.uk/helpingpeoplelea	arn/_mel.htm
Sector:	○ Theme 01 Time saving	○ Theme 05 Quality improvement
Transport	Theme 02 Productivity gains	O Theme 06 Social learning
Company: British	Theme 03 Staff benefit	O Theme 07 Green issues
Airways	O Theme 04 Sales impact	Theme 08 Cost savings
Highlight:	In comparison with delivery in a face-to-face model, e-learning projects in British Airways save approximately 80 per cent.	
Source:	www.towardsmaturity.org/article/2009/05/21/next-generation-learning-work- british-airways	
Sector:	• Theme 01 Time saving	○ Theme 05 Quality improvement
Media	Theme 02 Productivity gains	Theme 06 Social learning
Company: BBC	Theme 03 Staff benefit	O Theme 07 Green issues
	○ Theme 04 Sales impact	Theme 08 Cost savings
Highlight:	At the BBC, 16,000 staff used e-learning modules at a cost of £20 per head, with estimated savings of £2 million.	
Source:	www.cipd.co.uk/helpingpeoplelearn/_mel.htm	

	 Key: This theme applies This theme does not apply Not yet available 	
Sector:	○ Theme 01 Time saving	Theme 05 Quality improvement
IT & Telecoms	• Theme 02 Productivity gains	O Theme 06 Social learning
Company: Bell	Theme 03 Staff benefit	O Theme 07 Green issues
	O Theme 04 Sales impact	O Theme 08 Cost savings
Highlight:	A project was named 'Blended Learning and Performance Project of the Year' by Training Magazine in the USA, with 99 per cent of learners stating that it increases their effectiveness.	
Source:	www.kineo.com/case-studies/be	ll-award-winning-blended-learning-2.html
Sector:	O Theme 01 Time saving	○ Theme 05 Quality improvement
Wholesale	Theme 02 Productivity gains	O Theme 06 Social learning
Company: Bertram	Theme 03 Staff benefit	Theme 07 Green issues
Group	O Theme 04 Sales impact	O Theme 08 Cost savings
Highlight:	This company achieved high levels of employee motivation, excellent staff retention and a reputation for being a good employer locally.	
Source:	www.learndirect.co.uk/businessinfo/training/nurturing-talent/bertram-group- case-study/	
Sector:	○ Theme 01 Time saving	Theme 05 Quality improvement
Public services	Theme 02 Productivity gains	O Theme 06 Social learning
Company:	Theme 03 Staff benefit	Theme 07 Green issues
Blaenau Gwent	○ Theme 04 Sales impact	Theme 08 Cost savings
Highlight:	E-learning management training resulted in cost savings of over £4,000 per year in delivery, and also less travel, administration and use of paper.	
Source:	www.e-learninglist.co.uk/whitepapers/137BlaenauGwentROI.pdf	

Sector: Health	• Theme 01 Time saving	○ Theme 05 Quality improvement
	• Theme 02 Productivity gains	O Theme 06 Social learning
Company: Blue Cross	○ Theme 03 Staff benefit	Theme 07 Green issues
Blue Shield of Tennessee	O Theme 04 Sales impact	Theme 08 Cost savings
Highlight:	Consolidation of mandatory training for staff into one and a half hours of e-learning resulted in savings of \$363,000 per year.	
Source:	eLearning Guild report Building th	ne business case for e-learning
Sector:	Theme 01 Time saving	Theme 05 Quality improvement
Retail	• Theme 02 Productivity gains	O Theme 06 Social learning
Company: Boots	○ Theme 03 Staff benefit	O Theme 07 Green issues
	Theme 04 Sales impact	Theme 08 Cost savings
Highlight:	A major e-learning rollout resulting in increased sales.	
Source:	www.towardsmaturity.org/article/2010/01/04/increasing-sales-improving-business-	
	performance-e-/	
Sector:	• Theme 01 Time saving	○ Theme 05 Quality improvement
IT & Telecoms	• Theme 02 Productivity gains	Theme 06 Social learning
Company: BT	Theme 03 Staff benefit	Theme 07 Green issues
	O Theme 04 Sales impact	Theme 08 Cost savings
Highlight:	Dare2Share project: a conservativ £8 million each year in employee	ve estimate is total efficiency savings of more than time as well as travel costs.
Source:	www.towardsmaturity.org/article/2009/03/20/bt-dares-share	

	Key:	
	This theme applies	
	 This theme does not apply Not yet available 	
	Not yet available	
Sector:	Theme 01 Time saving	○ Theme 05 Quality improvement
IT & Telecoms	Theme 02 Productivity gains	O Theme 06 Social learning
Company: Cable &	Theme 03 Staff benefit	O Theme 07 Green issues
Wireless	Theme 04 Sales impact	Theme 08 Cost savings
Highlight:	E-learning use has increased by 4	40 per cent year on year, with savings of £950,000.
Source:	www.towardsmaturity.org/article/2008/06/16/transforming-business-e-learning- journey-cablewire	
Sector: Health	Theme 01 Time saving	Theme 05 Quality improvement
Company:	O Theme 02 Productivity gains	O Theme 06 Social learning
Care	O Theme 03 Staff benefit	O Theme 07 Green issues
Management Group (CMG)	○ Theme 04 Sales impact	Theme 08 Cost savings
Highlight:	'Fulfilling Potential' has cut costs by approximately 90 per cent, and is already saving CMG over £300,000 per year.	
Source:	www.towardsmaturity.org/article/2009/12/14/award-winning-e-learning-care- management-group/	
Sector:	• Theme 01 Time saving	○ Theme 05 Quality improvement
Health	• Theme 02 Productivity gains	O Theme 06 Social learning
Company: Care UK	• Theme 03 Staff benefit	O Theme 07 Green issues
	○ Theme 04 Sales impact	Theme 08 Cost savings
Highlight:	Home-based e-learning supported 60 per cent growth in employees and 15 per cent increase in employee retention, cutting recruitment costs by ten per cent.	
Source:	www.towardsmaturity.org/article/2007/11/23/careuk-winning-a-return-in-the- care-industry	



Key: This theme applies O This theme does not apply Not yet available Sector: Theme 01 Time saving Theme 05 Quality improvement Finance Theme 02 Productivity gains Theme 06 Social learning Company: Theme 03 Staff benefit Theme 07 Green issues **Clydesdale &** Yorkshire Theme 04 Sales impact Theme 08 Cost savings Bank Highlight: E-learning for compliance training. Estimated saving of £542,000 based on 9,250 staff, with savings of 45 per cent over previous methods. Source: www.towardsmaturity.org/article/2009/03/13/clydesdale-and-yorkshire-banks-savecompliance/ Sector: **Theme 01** Time saving Theme 05 Quality improvement Finance Theme 02 Productivity gains O Theme 06 Social learning Company: Theme 03 Staff benefit Theme 07 Green issues Coventry Building **Theme 04** Sales impact Theme 08 Cost savings Society Highlight: A learning management system to deliver compliance learning reduces the time to prove competence and is £169,000 cheaper than delivery by previous methods. Most learners – 90 per cent – now pass their assessments. www.towardsmaturity.org/article/2009/09/08/coventry-improving-effeciency Source: Sector: Theme 01 Time saving O Theme 05 Quality improvement **Public** O Theme 02 Productivity gains O Theme 06 Social learning services **Theme 03** Staff benefit Theme 07 Green issues Company: **Devon County** Theme 04 Sales impact Theme 08 Cost savings Council Highlight: The council saved £5,000 over a six-week period in its first project working with live online sessions. Source: www.towardsmaturity.org/article/2009/08/17/devon-county-council-improves-

efficiency-web-confe

Sector: Finance	O Theme 01 Time saving	○ Theme 05 Quality improvement
	Theme 02 Productivity gains	O Theme 06 Social learning
Company: Everyday	Theme 03 Staff benefit	O Theme 07 Green issues
Financial Services	O Theme 04 Sales impact	Theme 08 Cost savings
Highlight:	New e-learning methods delivere	ed savings of over £125,000 in training costs.
Source:	www.atlantic-link.co.uk/index.php?q=customers/case_studies	
Sector:	Theme 01 Time saving	Theme 05 Quality improvement
Automotive	• Theme 02 Productivity gains	O Theme 06 Social learning
Company: Ford of Europe	Theme 03 Staff benefit	Theme 07 Green issues
	Theme 04 Sales impact	Theme 08 Cost savings
Highlight:	'Feel the difference': sales people completing the e-learning have recorded 2.4 additional car sales per year.	
Source:	www.line.co.uk/news_views/?p=features&id=28	
Sector: IT & Telecoms	O Theme 01 Time saving	Theme 05 Quality improvement
	• Theme 02 Productivity gains	O Theme 06 Social learning
Company: Fujitsu	Theme 03 Staff benefit	O Theme 07 Green issues
	Theme 04 Sales impact	O Theme 08 Cost savings
Highlight:	'360 Degree Feedback': achieved an improvement of five per cent across the organisation in managing performance.	
Source:	www.towardsmaturity.org/article/2009/09/07/using-technology-make-difference- 360-degree-feedba/	

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	Not yet available		
Sector: Hospitality	Theme 01 Time saving	Theme 05 Quality improvement	
Company:	• Theme 02 Productivity gains	O Theme 06 Social learning	
Hall &	• Theme 03 Staff benefit	O Theme 07 Green issues	
Woodhouse	Theme 04 Sales impact	Theme 08 Cost savings	
Highlight:	Following the introduction of e-learning, morale improved by 80 per cent, staff turnover reduced by 20 per cent, and like-for-like sales were up 12 per cent on the previous year.		
Source:	www.thirdforce.com/resources/ca	asestudy/HallWoodhouseCaseStudy.pdf	
Sector:	○ Theme 01 Time saving	O Theme 05 Quality improvement	
Hospitality	• Theme 02 Productivity gains	O Theme 06 Social learning	
Company: Hilton	○ Theme 03 Staff benefit	Theme 07 Green issues	
	Theme 04 Sales impact	○ Theme 08 Cost savings	
Highlight:	what they had learned to their job reported improved performance of	Improving productivity with online English learning – 92 per cent of learners applied what they had learned to their jobs. The majority of Hilton International learners reported improved performance on the job. Overall, 71 per cent of Hilton International employees have been able to save more than one hour per week because of their improved English skills	
Source:	www.globalenglish.com/m/result %20EN.pdf	www.globalenglish.com/m/results/case_studies/Case%20Study%20-%20Hilton	
Sector:	○ Theme 01 Time saving	Theme 05 Quality improvement	
Hospitality	Theme 02 Productivity gains	O Theme 06 Social learning	
Company: Hilton	• Theme 03 Staff benefit	O Theme 07 Green issues	
University	O Theme 04 Sales impact	O Theme 08 Cost savings	
Highlight:	Hilton University provides online courses for staff, with 90 per cent survey respondents finding support for personal development and 70 per cent evidencing transfer of learning into workplace performance.		
Source:			

Sector: Finance	○ Theme 01 Time saving	O Theme 05 Quality improvement
	O Theme 02 Productivity gains	O Theme 06 Social learning
Company: HSBC	○ Theme 03 Staff benefit	Theme 07 Green issues
	O Theme 04 Sales impact	○ Theme 08 Cost savings
Highlight:	Online video collaboration reduce	d carbon emissions, resulting in £600,000 savings.
Source:	www.hsbc.com/1/PA_1_1_S5/content/assets/csr/hsbc_sustainability_report_ 2007.pdf – case study, p.18	
Sector:	○ Theme 01 Time saving	Theme 05 Quality improvement
IT & telecoms	• Theme 02 Productivity gains	Theme 06 Social learning
Company: IBM	Theme 03 Staff benefit	O Theme 07 Green issues
	• Theme 04 Sales impact	Theme 08 Cost savings
Highlight:	Savings of \$24 million were made through a new manager trainer programme, 'Basic Blue', which also delivered five times as much content as previous programme.	
Source:	www.tzanis.org/Courses/ClassBlog/archives/files/learning_transformation.pdf	
Sector:	• Theme 01 Time saving	Theme 05 Quality improvement
Public services	• Theme 02 Productivity gains	O Theme 06 Social learning
Company: Identity and	Theme 03 Staff benefit	Theme 07 Green issues
Passport Service	O Theme 04 Sales impact	Theme 08 Cost savings
Highlight:	Benefits of using e-learning as part of a blended approach are quantified as: 65 per cent improvement in performance, cost benefit of £2,343 per interviewer, and overall cost benefit ratio of 1:1.9.	
Source:	www.towardsmaturity.org/article/2009/08/21/dealing-fraudulent-applications- identity-passport-/	

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Castan	Theme 01 Time and in a	
Sector: Public services	Theme 01 Time saving	Theme 05 Quality improvement
Company:	Theme 02 Productivity gains	O Theme 06 Social learning
Local	Theme 03 Staff benefit	Theme 07 Green issues
authorities	O Theme 04 Sales impact	Theme 08 Cost savings
Highlight:	1	and have bought the 'Modern Councillor' service. nore importantly, over 16,000 elected members.
Source:	www.towardsmaturity.org/article/	/2008/09/22/modern-councillor-learningpool
Sector:	• Theme 01 Time saving	Theme 05 Quality improvement
Hospitality	• Theme 02 Productivity gains	O Theme 06 Social learning
Company: McDonald's	• Theme 03 Staff benefit	O Theme 07 Green issues
	O Theme 04 Sales impact	Theme 08 Cost savings
Highlight:	In an initial pilot of integrating e-learning into McDonald's University, staff and managers agreed that: e-learning had an impact on customer service; staff were more confident; staff showed improved interactions with customers compared with those traditionally trained; e-learning will improve retention; e-learning improved the learning experience.	
Source:	www.raysvenson.com/articles/Integrating_elearning_in_McDonalds.pdf	
Sector:	• Theme 01 Time saving	○ Theme 05 Quality improvement
Transport	• Theme 02 Productivity gains	O Theme 06 Social learning
Company: Merseylearn	Theme 03 Staff benefit	Theme 07 Green issues
Her Seytedi II	• Theme 04 Sales impact	 Theme 08 Cost savings
Highlight:	Skills for Life learning provided a £200,000 saving per year from reduced absenteeism and a 50 per cent reduction in customer complaints; staff turnover reduced by four per cent.	
Source:	www.bitc.org.uk/resources/case_	_studies/afe2186.html
	www.wea.org.uk/conference2007	/pdfs/Merseylearn%202pp.pdf
	www.trainingreference.co.uk/news/qu071106a.htm	



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Sector: Retail	Theme 01 Time saving	Theme 05 Quality improvement
Company:	Theme 02 Productivity gains	Theme 06 Social learning Theme 07 October issues
Nike	 Theme 03 Staff benefit Theme 04 Sales impact 	 Theme 07 Green issues Theme 08 Cost savings
Highlight:		e e-learning have seen a four to five per cent
Source:	www.kineo.com/documents/Kineo_product_knowledge.pdf	
Sector:	• Theme 01 Time saving	Theme 05 Quality improvement
Public services Company:	• Theme 02 Productivity gains	○ Theme 06 Social learning
Office of	○ Theme 03 Staff benefit	O Theme 07 Green issues
Programme Advice and Training (OffPAT)	O Theme 04 Sales impact	○ Theme 08 Cost savings
Highlight:	E-learning has resulted in a 50 per cent reduction in group training time, and 75 per cent of staff report a significant improvement in their understanding of complex regulations.	
Source:	www.e-learninglist.co.uk/whitepapers/casedstudyoffpatinfotransfer.pdf	
Sector:	○ Theme 01 Time saving	Theme 05 Quality improvement
IT & Telecoms	O Theme 02 Productivity gains	O Theme 06 Social learning
Company: Openreach	• Theme 03 Staff benefit	O Theme 07 Green issues
	O Theme 04 Sales impact	O Theme 08 Cost savings
Highlight:	By using blended learning, the company has increased the number of female and ethnic minority employees by 140 per cent and 45 per cent respectively via this diversity awareness programme.	
Source:	www.brightwave.co.uk/case-studies/blended-learning-strategy-supports- sustainable-culture-change	

Sector: Public services Company: Plymouth City Council	○ Theme 01 Time saving	○ Theme 05 Quality improvement
	Theme 02 Productivity gains	O Theme 06 Social learning
	○ Theme 03 Staff benefit	O Theme 07 Green issues
	O Theme 04 Sales impact	Theme 08 Cost savings
Highlight:	A thousand staff have been trained using e-learning at a cost of £3 per head compared to £85 per head on previous classroom courses.	
Source:	www.e-learninglist.co.uk/whitepapers/137PlymouthROI.pdf	
Sector:	• Theme 01 Time saving	Theme 05 Quality improvement
Health	• Theme 02 Productivity gains	O Theme 06 Social learning
Company: Priory Group	Theme 03 Staff benefit	O Theme 07 Green issues
	O Theme 04 Sales impact	Theme 08 Cost savings
Highlight:	A new e-learning strategy provides consistent induction and has delivered a CPD saving of £9 million since inception.	
Source:	www.trainingzone.co.uk/topic/learning-technologies/elearning-action-building- foundations-growth	
	5	
Sector:	Theme 01 Time saving	Theme 05 Quality improvement
Hospitality	Theme 02 Productivity gains	O Theme 06 Social learning
Company: S A Brain & Co Ltd	Theme 03 Staff benefit	O Theme 07 Green issues
	O Theme 04 Sales impact	Theme 08 Cost savings
Highlight:	By using e-learning, the company trained 600 staff in 108 managed houses over a three-month period. Cost savings have exceeded £73,000.	
Source:	www.thirdforce.com/resources/casestudy/SABrainsCaseStudy.pdf	

	Key:This theme applies	
	This theme does not applyNot yet available	
Sector:	• Theme 01 Time saving	O Theme 05 Quality improvement
Public services	O Theme 02 Productivity gains	O Theme 06 Social learning
Company: Sport England	 Theme 03 Staff benefit 	Theme 07 Green issues
- -	O Theme 04 Sales impact	O Theme 08 Cost savings
Highlight:	Development of a 'Fairness and inclusion' e-learning module resulted in almost 100 per cent of staff downloading a team exercise and 50 per cent developing a personal action plan, with email support.	
Source:		
Sector:	• Theme 01 Time saving	O Theme 05 Quality improvement
Media Compony:	O Theme 02 Productivity gains	Theme 06 Social learning
Company: Sky UK	• Theme 03 Staff benefit	O Theme 07 Green issues
	Theme 04 Sales impact	Theme 08 Cost savings
Highlight:	Development of an onboarding portal has resulted in a doubling of staff retention, a £700,000 saving, a 25 per cent acceleration in time to target performance, and an 11 per cent increase in sales conversions in week one for new starters.	
Source:	www.brightwave.co.uk/latest-news-from-brightwave/brightwave-and-sky-win-cca- excellence-award-2009	
Sector:	Theme 01 Time saving	Theme 05 Quality improvement
IT & Telecoms	• Theme 02 Productivity gains	O Theme 06 Social learning
Company: T- Online (part of Deutsche Telecom DG)	Theme 03 Staff benefit	O Theme 07 Green issues
	O Theme 04 Sales impact	Theme 08 Cost savings
Highlight:	Customised web-based training saved 30 per cent of training time for busy call centre staff.	
Source:	http://ftp.stt-trainer.com/case-study-t-online.pdf	

Sector: Health Company: The Dental	• Theme 01 Time saving	○ Theme 05 Quality improvement
	O Theme 02 Productivity gains	O Theme 06 Social learning
	○ Theme 03 Staff benefit	Theme 07 Green issues
Channel	O Theme 04 Sales impact	Theme 08 Cost savings
Highlight:	The savings for dentists through over 1,500 learner hours of interactive conferences that have been delivered probably exceed £280,000.	
Source:	www.towardsmaturity.org/article/2009/04/24/dental-channel-webinar-better-and- cheaper-delivery	
Sector:	• Theme 01 Time saving	○ Theme 05 Quality improvement
Hospitality	O Theme 02 Productivity gains	O Theme 06 Social learning
Company: Thomson	○ Theme 03 Staff benefit	Theme 07 Green issues
Reuters	O Theme 04 Sales impact	Theme 08 Cost savings
Highlight:	Online books provided a £2.9 mill	ion saving (time and cost) for IT professional skills.
Source:	www.towardsmaturity.org/elements/uploads/Reuters_CaseStudy-Final.pdf	
Sector:	• Theme 01 Time saving	Theme 05 Quality improvement
Automotive	O Theme 02 Productivity gains	O Theme 06 Social learning
Company: Toyota Motor	O Theme 03 Staff benefit	Theme 07 Green issues
Europe	O Theme 04 Sales impact	Theme 08 Cost savings
Highlight:	The company introduced a learning management system for the company's expansive dealer network. Each day an employee spends on a training course costs €1,000 in billable time, and with 10–20 participants in each session, the saving averages €30,000.	
Source:	www.towardsmaturity.org/article/	2008/12/01/driving-change-toyota-motor-europe

Appendix 02 General reference

Author & Date	Bersin Associates, 2007
Title:	The high impact learning organisation: What works in the management, governance and operations of modern corporate training
Overview:	The corporate training industry in North America was worth \$60 billion in 2007. Worldwide spending is far greater than \$150 billion. Organisations spend an average of 2.4 per cent of payroll on this critical function, yet continuously struggle to measure the impact and effectiveness of this intangible investment. This research addresses the three fundamentals of corporate learning programmes and strategies: alignment, efficiency and effectiveness.
Source:	http://store.bersinassociates.com/governance.html
Author & Date	Bersin Associates, 2008
Title:	Business benefits of e-learning in high growth companies – a study of six companies
Overview:	Six companies were selected for this study, representing a total of over two million employees. The key findings were that: learning technology enables growth; learning and development is a key business investment; governance drives alignment with business goals; and by leveraging best practices, it is possible to progress through e-learning maturity stages.
Source:	www.skillsoft.com/infocenter/whitepapers/documents/Benefits_of_eLearning_ HighGrowthCos.pdf
Author & Date	Bond, C. and Wilson, V., 2000
Title:	'Bridging the academic and vocational divide – a case study on work-based learning in the UK NHS'
Overview:	This case study focuses on the development of a set of national occupational standards for information management and technology professionals in health care.

Source:	Innovations in Education & Training International, May 2000,
	Vol. 37 Issue 2, p.134–144

Author & Date	BT Conferencing (in Personnel Today), 2009
Title:	'Virtual learning key to cutting training costs'
Overview:	The majority (89 per cent) of HR professionals would be willing to use virtual learning methods such as web and video conferencing. Already, 44 per cent of those responsible for training budgets employ some sort of conferencing tool for training purposes, suggesting that the cost and productivity benefits of remote learning are becoming widely acknowledged.
Source:	www.personneltoday.com/articles/2009/09/04/52021/virtual-learning-key-to-cutting- training-costs-say-hr-professionals.html
Author & Date	Cegos, 2009
Title: Overview:	'Please Sir, can I have some more elearning, blended learning, wikis, forums, blogs?'
	Learners across Europe are more keen than training and HR departments to embrace new technologies, including e-learning, blended learning and collaborative tools such as blogs, forums and wikis.
Source:	www.trainingzone.co.uk/item/197622
Author & Date	CIPD, 2009
Title:	'E-learning progress and prospects'
Overview:	This gives a summary of findings on current trends, drawn from CIPD research, with international comparisons, plus further input from ASTD.
Source:	www.cipd.co.uk/subjects/lrnanddev/elearning/elearnprog.htm

Author & Date	CIPD, 2009
Title:	Learning and development
Overview:	Although only 7 per cent of respondents deem e-learning to be one of the most effective learning and development practices, 42 per cent say that they have used it more in the last two years.
Source:	www.cipd.co.uk/NR/rdonlyres/FFC9C11E-20A6-4E30-9F50-8E58BC9FFA1B/0/ Learnanddevsur2009.pdf
Author & Date	CIPD, 2008
Title:	Learning and development
Overview:	Over half (57 per cent) of organisations use e-learning, while nearly half tend to agree that e-learning is the most important development in training in the past few decades. The vast majority (82 per cent) of public sector organisations use e-learning, compared with just 42 per cent of private sector companies.
Source:	www.cipd.co.uk/NR/rdonlyres/3A3AD4D6-F818-4231-863B-4848CE383B46/0/ learningdevelopmentsurvey.pdf
Author & Date	Collinson, S. and Gregson, G., 2003
Title:	'Knowledge networks for new technology–based firms: An international comparison of local entrepreneurship promotion'
Overview:	This paper looks at the scale, scope and quality of ideas and business proposals in local networks in the USA, UK and Canada, and the availability of relevant expertise and experience.
Source:	R&D Management, Vol. 33 Issue 2, p.189–208
	www3.interscience.wiley.com/journal/118834847/abstract

Author & Date	Cross, J., 2009
Title:	What would Andrew do?
Overview:	How to quantify and demonstrate value of e-learning in the workplace.
Source:	www.lulu.com/content/7196453

Author & Date	Eng, TY, 2005
Title:	The effects of learning on relationship value in a business network context
Overview:	In today's intense global competition, a firm's ability to learn from its networks of business relationships is an important source of sustainable competitive advantage.
Source:	Journal of Business-To-Business Marketing, December 2005, Vol. 12 Issue 4, p.67–101

Author & Date	E-Learning Guild Research, 2009
Title:	Building the Business Case for e-Learning
Overview:	Step by step guide with detailed ROI calculations to help organisations and projects determine whether e-learning is the best delivery method using a business management and financial perspective.
Source:	https://marketplace.mimeo.com/eLearningGuild#viewId=Mimeo.Cataloging.UI. CatalogListItemView

Author & Date	e-skills UK, 2008
Title:	Technology Counts
Overview:	A review of the IT and telecoms landscape in the UK, outlining key trends including emerging trends and implications for the IT environment.
Source:	www.e-skills.com/Research-and-policy/Insights-2008/2179

Author & Date	Forrester Research, 2009
itle:	Get serious about informal learning
)verview:	Describes the informal learning approaches of BT, Intel and Nike, and describes how these innovative firms have made informal learning part of their learning programmes.
ource:	www.forrester.com/rb/Research/get_serious_about_informal_learning/q/ id/54153/t/2
uthor & Date	Forrester Research, 2009
itle:	Questions senior executives ask about elearning specifics
verview:	Research which explores the five key questions that executives ask about e-learning with supporting examples of best practice.
ource:	www.forrester.com/Research/Document/Excerpt/0,7211,54687,00.html
uthor & Date	Forrester Research 2009
	Forrester Research, 2009
Author & Date Title: Overview:	The ROI of elearning Online learning earns companies a 69 per cent return on investment (ROI) in less than a year. If you have a business that is spread across many locations, it makes good business sense to implement an online learning programme as a replacement
itle:	The ROI of elearning Online learning earns companies a 69 per cent return on investment (ROI) in less than a year. If you have a business that is spread across many locations, it makes
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tle: verview: ource:	The ROI of elearning Online learning earns companies a 69 per cent return on investment (ROI) in less than a year. If you have a business that is spread across many locations, it makes good business sense to implement an online learning programme as a replacement for some face-to-face learning and as a complement to other instructor-led training
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itle: verview: ource: Author & Date	The ROI of elearning Online learning earns companies a 69 per cent return on investment (ROI) in less than a year. If you have a business that is spread across many locations, it makes good business sense to implement an online learning programme as a replacement for some face-to-face learning and as a complement to other instructor-led training www.forrester.com/rb/Research/roi_of_elearning/q/id/53282/t/2 Ha, T.S., 2008

Author & Date	IBM, 2008
Title:	Unlocking the DNA of the adaptable workforce: The Global Human Capital study 2008
Overview:	More than 400 human resource executives from 40 countries participated in a structured interview designed to capture insights on workforce transformation. A further IBM study polling more than 750 CEOs from around the world identified collaboration as a key tenet to fostering innovation and growth.
Source:	www-935.ibm.com/services/us/gbs/bus/html/2008ghcs.html
Author & Date	JISC InfoNet, 2008
Title:	Tangible benefits of e-learning: Does investment yield interest?
Overview:	Examples of some tangible benefits of e-learning include cost savings at Leeds Metropolitan University – assessments for a cohort of 350 students were completed within three hours versus 120 hours of staff time at £3,000 per cohort. At the University of Nottingham Medical School, the time taken to record the marks of a cohort of 330 students reduced from ten hours to two seconds. At Hull, for the MA in legislative studies online, the proportion of students who finished with an 'A' grade increased from one per cent to 15 per cent with e-learning, and the number of fails dropped from 12 per cent to five per cent.
Source:	www.jisc.ac.uk/publications/documents/bptangiblebenefitsv1.aspx
Author & Date	Kirkpatrick, D., 2009
Title:	Kirkpatrick four levels: A fresh look after 50 years
Overview:	A description of the original model of four levels of learning evaluation with widest employer awareness. Levels include reaction, learning, application and business impact.
Source:	www.trainingzone.co.uk/downloads/kirkpatrick-partners/aug09/122073

Author & Date	LMMatters and Training Zone, 2009
itle:	LMMatters elearning survey results
Overview:	Almost half (47 per cent) of respondents who have seen their training budgets reduced have increased their use of e-learning. Drivers for continued or increased use of e-learning are time savings and financial savings. Only 2.4 per cent of respondents expect the use of e-learning to decrease as the business climate improves. All other respondents expect the use to remain the same or increase.
Source:	www.trainingzone.co.uk/files/siftmedia-trainingzone/LMMatters%20eLearning%20 Survey%20Results.pdf
Author & Date	Love, P. E. D., Tse, R. Y. C., Holt, G. D., Proverbs, David G., 2002
Fitle:	Transaction costs, learning, and alliances
Overview:	Alliances in construction, whether in the form of partnering arrangements or strategic commercial relationships, provide a mechanism that can improve inter-organisational relations and project performance.
Source:	Journal of Construction Research, September 2002, Vol. 3 Issue 2, p.193–207
Author & Date	Macdonald, I. S., Bullen, M., Kozak, R.A., 2007
Fitle:	Identifying effective Pedagogical Approaches for Online Workplace Training
Overview:	A case study of the South African wood products manufacturing sector.
Source:	International Review of Research in Open & Distance Learning, Vol. 8 Issue 3, p.1–15
Author & Date	Masie Centre, 2009
Title:	Learning resources barometer in uncertain times
Overview:	The data indicates that 62 per cent of organisations are experiencing a reduction in their enterprise learning budget. Only 12 per cent are experiencing an increase.
Source:	www.masie.com/barometer

Author & Date	Masie Centre, 2009
Title:	Masie survey of social learning
Overview:	Three-fifths (62 per cent) of more than 1,000 global learning professionals believe that social learning has value in business; only 18 per cent believe it is a fad.
Source:	www.masie.com/social1

Author & Date	McKinsey Quarterly, 2009
Title:	How companies are benefitting from Web 2.0
Overview:	This report summarises the results of a three-year research project with 1,700 senior executives around the world. Questions focused on benefits from Web 2.0 deployments in three main areas: within the executives' organisations; externally, in their relations with customers; and in their dealings with suppliers, partners, and outside experts. Two-thirds (69 per cent) of respondents report that their companies have gained measurable business benefits, including more innovative products and services, more effective marketing, better access to knowledge, lower cost of doing business, and higher revenues.
Source:	www.mckinseyquarterly.com/Business_Technology/BT_Strategy/How_companies_ are_benefiting_from_Web_20_McKinsey_Global_Survey_Results_2432

Author & Date	Holliday, M., 2006
Title:	Refreshing the parts other learning cannot reach
Overview:	This article includes examples of organisations using mobile learning.
Source:	Training Journal, December 2006

Author & Date	Phillips, P. and Phillips, J., 2005
Title:	Return on investment basics
Overview:	This book gives an overview of five levels of ROI for measuring the value of learning.
Source:	Published by ASTD Press

Author & Date	Prieto I. & Revilla E., 2006
Title:	Assessing the Impact of Learning Capability on Business Performance: Empirical Evidence from Spain
Overview:	Exploring the link between learning capability and the improvement of business performance by comparing how the main dimensions of learning capability impact on performance, it shows that those organisations with the highest levels in their knowledge stocks and learning flows obtain a superior performance.
Source:	http://mlq.sagepub.com/cgi/content/abstract/37/4/499

Author & Date	Towards Maturity, 2009
Title:	Driving business benefits
Overview:	This report looks at the more mature organisations achieving greater business benefit.
Source:	www.towardsmaturity.org/article/2009/01/28/driving-business-benefits-towards- maturity-researc

Author & Date	Towards Maturity, 2007
Title:	Linking learning to business
Overview:	Business benefits from sixteen organisations.
Source:	www.towardsmaturity.org

Author & Date	Training Journal, 200
Title:	L&D2020: the future of workplace learning
Overview:	Research project (with the institute of Employment studies) looking at how learning and development may change over the next five to ten years.
Source:	www.trainingjournal.com/research/ld2020/index.php

Author & Date	Unionlearn, 2009
Title:	Unionlearn – Year Three Moving On annual report
Overview: Source:	Annual report outlining results of Ofsted inspection review of impact of U-Net on skills for life learning.
	www.unionlearn.org.uk/about/learn-2877-f0.cfm

Author & Date	US Department of Education, 2009
Title:	Evaluation of evidence-based practices in online learning: A meta-analysis and
Overview:	review of online learning studies
Source:	A systematic search of the research literature from 1996 through to July 2008 identified more than a thousand empirical studies of online learning. Fifty-one independent effects were identified that could be subjected to meta-analysis which found, on average, that students in online learning conditions performed better than those receiving traditional face-to-face instruction.
	those receiving traditional face-to-face instruction.

www.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf

Author & Date	Video Arts (in Personnel Today), 2009
Title:	Shift in the provision of learning
Overview: Source:	A survey found that 81 per cent organisations provide in-house training – 58 per cent use digital video clips and 50 per cent provide e-learning and interactive self-study courses.
	www.personneltoday.com/articles/2009/09/15/52195/survey-reveals-a-shift-in-the- provision-of-learning.html

Appendix 03 Methodology

This report reviews the concrete evidence that the use of learning technologies within the workplace contributes to bottom-line business benefits.

The methodology used is secondary research – a desk-based review of literature, reports and case studies from recognised UK and international sources – which included the summary, collation and synthesis of existing research.

The following parameters were used to identify suitable research:

- **Employers** The review focused on the business users of learning technologies (not learning providers) and aimed to include small and large companies encompassing the private, public and third sectors.
- **Technology** The definition of technology-supported learning/e-learning used in this review includes the application of learning technologies across the learning process from assessment of organisational and individual need to delivery of learning, learner support, management and administration, and formal and informal learning. This definition allowed us to include a range of technologies and tools, including collaborative Web 2.0 technologies as well as mobile devices.
- Evidence of success Primary consideration was given to resources where evidence of value was backed with hard numbers. We looked for savings and gains represented by both tangible evidence of business improvement (e.g. measurable bottom-line improvements in sales, or savings on cost or time) and intangible evidence (measurable improvements for important business indicators that do not necessarily have a bottom-line number allocated, such as confidence and customer satisfaction). The report does not review Kirkpatrick level one, two or three findings that look at user acceptance, learning or application of learning unless they support business impact findings.

To identify information resources that address all of these three parameters, the research team approached an extensive network of global providers, experts (academic and non-academic), and employer membership groups in addition to conducting traditional literature research.

The following is a sample of organisations that the team considered and approached to identify appropriate literature:

- American Society for Training and Development
- British Institute of Learning and Development
- Chartered Institute of Personnel development
- e-Learning Network
- Institute of IT Training
- Learning and Skills group.

A team of five researchers carrying out the study revealed reports from 79 sources. Thematic responses were included only where data was available as concrete supporting evidence. Responses from reports and cases studies were collated in a master repository using thematic analysis.

The sources were handed to academic staff, who had carried out a parallel review of academic literature, which was then cross-referenced to the grid data. Counting occurrences using keyword analysis revealed emerging patterns. The case studies were then ranked, matching four criteria:

- 1 Was there good statistical evidence?
- 2 Did the case study have any quotes to illustrate the topic?
- **3** Did the case study use specific vocabulary linked to the topic?
- 4 Did the case study appear high on other topic lists?

The team then reviewed the draft and reflected on emerging patterns and new issues not framed by the pre-designated themes. Themes and trends were given priority and focus. The final report was structured as a coherent storyline, supported by case studies, cross-cutting themes and relevant data to assist the reader to comprehend the current range of issues and future trends.

Notes	

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