Title?

Introduction

E-learning refers to a wide set of applications and processes such as web-based learning, computer-based learning, virtual classrooms, and digital collaboration (Arth, 2011). As a result of advancing technology e-learning has become one of the fastest moving trends which aims to provide a platform that facilitates the integration of learning content, tools and services to create and deliver training content quickly effectively and economically (Zhang, Zhou, Briggs, & Nunamaker, 2006). As organisations look to more efficient ways of updating employees' knowledge and skill the role of e-learning as a method of training delivery has become increasingly more important (Wargnier, 2010) while Rosenberg (2006) recognises e-learning as an important structure that supports both formal and informal workplace learning. Newton & Ellis (2005) highlight the issue that research into e-learning in workplaces is limited and tends to consist of anecdotal accounts from organisations with a US focus. They contend there is a need for more exploratory research into the processes involved in adopting e-learning in different learning contexts, and suggest it is important for research to identify the distinct traits of work place learning and the aspects which may influence effective e-learning implementation. This case study on the implementation of new learning technology within an Irish insurance company provides a perspective on the challenges encountered during implementation and how issues affecting the production of high quality e-learning content were overcome.

Context

The case study examines the introduction of web conferencing software as a means to facilitate the delivery of training both synchronously and asynchronously in an Irish based Insurance Company. The Insurance Company was set up in Ireland 40 years ago to support the Insurance requirements of Irish farmers and has grown to become one of the largest insurance companies in Ireland providing insurance for over 500,000 customers. Currently the company employs approximately 1,000 people, two-thirds of the workforce are based in Dublin, and the remaining employees are located in 32 sales offices around the country. The age profile of the workforce varies considerably from school leavers and college graduates to employees with over 30 years' service with the company. Training in the

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organisation has been delivered using asynchronous e-learning modules or by departmental trainers who teach in classrooms or provide one to one coaching. There is a core Learning and Development (L&D) team of three people who support four departmental trainers.

Internal and external factors have combined to drive the introduction of new learning technology within the organisation. Since the successful implementation of e-learning as a means to deliver compliance training in 2009, the demand for training delivered through e-learning has grown, as managers from all departments recognise its ability to facilitate skills and knowledge development without the need to take employees away from their work. Externally the economic climate has resulted in a requirement for the organisation to restructure and implement a programme of change in order to remain competitive. As Taran (2006) suggests the challenge for organisations as they aim to sustain competitive advantage is the need to move quickly as employees' jobs are in constant change leading to short learning times with a requirement for immediate proficiency. The impact for the Learning and Development (L&D) function has been similar to that described by Harward (as cited in Jennings 2012) who contends there is an expectation on learning and development departments to deliver solutions at speed reaching peak intensity. It was decided to take an innovative approach to rapid e-learning design and implement learning technology which could facilitate the delivery of synchronous and asynchronous online content. It was also anticipated the solution would provide the L&D function with an opportunity to explore a more blended approach to training delivery.

Methodology

The research was undertaken using an exploratory case study approach. This approach was adopted as it allows the researcher to study a contemporary phenomenon in depth in its natural context, Yin (2009). As suggested by Swanborn (2010) the ability to study the phenomenon in its natural surrounding means that the researcher does not remove the participants from their normal life situation thus allowing the researcher to focus on social interactions and the meanings that are developed by participants. Critics of the case study point to its lack of objectivity and generalizability. Simons (2009) argues that case study researchers do not seek to be objective suggesting it is the interaction between the researcher and the object of investigation that leads to the discovery of deeper meaning

while particularisation provides a vivid depiction of a single context that informs practice and adds knowledge to a specific topic.

The case study was undertaken during the eight month period prior to the planned launch of the technology by the researcher who was a member of the L&D function and part of the project team assigned to implement the technology. The research questions which guided the data collection for the study were

1. What are the steps taken to ensure successful implementation of new learning technology in the organisation
2. When creating content using the new learning technology, what are the factors that affect quality

Data was collected through direct observation, participant observation and interviews with trainers and managers who were directly or indirectly involved with implementation of previous and current e-learning strategies. Creswell (2013) proposes the researcher who is studying "in their own back yard" (p.151) may find it convenient to collect data but there is a need to employ validation strategies to keep the researcher "honest" (p.251). He proposes eight strategies and argues researchers should utilise at least two. In this case the researcher employed 'peer review' (p.251) of data with a colleague who was a member of the project team and 'member checking' (p.252) with participants who were interviewed during the research process.

Literature Review

The literature review will explore why organisations implement e-learning, then will continue by discussing the barriers that may prevent the successful implementation of e-learning within organisations and finish by focussing on the theme of quality within work based e-learning.

Why organisations implement e-learning

Gunasekaran, McNeil, & Shaul (2002) discuss the reasons for implementing e-learning within corporate organisations and suggest they centre around its cost effectiveness, consistency, flexibility and convenience to users. Macpherson, Homan, & Wilkinson (2005) agree but propose the reasons for implementation in organisations can be discussed under two main themes which are cost reduction and flexibility.

Within the area of cost reduction organisations can experience savings through learning compression Kineo (2012) which is a reduction in the actual time taken to deliver training. An example of this is reported by Mallon (2009) as he relates that Toshiba American Business solutions (TABS) transformed a seven-hour, instructor-led session on Six Sigma8 for management into three, 45-minute, self-paced online training modules. For companies with geographically dispersed employees there can be huge costs saved in travel expenses and time away from the workplace, Hopp (2012) relates the experiences of Xerox who cut travel expenses in Europe by as much as 10% while Weinstein (2011) indicates similar results for Emerson Network Power Liebert Services where the implementation of a virtual instructor led training programme saved over $100,000 in travel costs. Other areas where cost savings may be experienced are in the reduction of the number of trainers required (Macpherson et al. (2005), and Mallon (2009), a reduction in the organisations carbon footprint through presenting learning content online or providing alternatives to paper based forms of communication Kineo (2012) and the ability of e-learning to deliver training to large numbers of employees Arth (2011). While corporations may implement e-learning to reduce costs, this is not always the outcome. Rosenberg (2006) recalls the end of the 90s when enthusiasm for e-learning coincided with the internet bubble bursting and suggests many managers looked at their e-learning investment and wondered what value had been achieved. Challenges affecting return on investment are long implementation cycles and investment in systems which do not integrate with the existing infrastructure Pack (2002). While London & Hall (2011) highlight the challenge of corporations investing with a vendor who subsequently stops developing their product and suggest investment in web 2.0 technologies for learning may not run smoothly and unanticipated costs may occur.

Turning to the theme of flexibility MacPherson et al. (2005) suggest the discussion on flexibility tends to focus on two aspects; flexibility in delivery and flexibility in the pace and dissemination of learning. Jones & McCann (2005) posit the traditional definition of the

workplace as being a single location with normal daily hours is being replaced by global organisations and communication networks that change the notion of standard work hours and incorporate multiple geographical locations. They contend technology provides the answer to providing the flexible learning environment that employees now require. Rosenberg (2006) supports this argument contending e-learning "conquers" (p. 4) time and location and facilitates immediate content updates and interconnectivity. Wargnier (2010) highlights its flexibility as a medium that works across all areas of work based learning such as induction, new product information, career development training and updating work knowledge and skills. From an employee perspective employees often have different needs for information and want to learn at a time and pace that suits their own ability and lifestyle, e-learning provides organizations with a medium that can be adapted to different trainees without modifying the actual training content Long & Smith (2004).

Barriers to the effective implementation of e-learning

While the use of appropriate pedagogical design is imperative for effective training through any medium, literature highlights other factors that may impede or increase the effectiveness of e-learning within the corporate context. Waight & Stewart (2005a) propose the success of corporate e-learning is reliant on "championing factors" (p. 338). These factors are defined as leadership, learning culture, technology infrastructure and financial support and are explored here in further detail.

With regard to leadership factors, research ~~carried out by~~ MacPherson et al.(2005) indicated a higher level of resistance to e-learning from more senior levels in the organisations. Hopp (2012) suggests senior management need to lead the way and embrace new ways of learning, warning if they fail to do this there is no encouragement for the rest of the workforce. This view is supported by Weinstein (2011) who contends that employees judge the importance of a training initiative by their managers' reaction to it. She suggests that this reaction will either promote or discourage participation by employees. The study by Cheng, Wang, Moormann, Olaniran and Chen (2012) supports this view with their findings indicating that supervisor and manager reinforcement act as a motivator for employees expectations of gaining a beneficial outcome from using e-learning.

Turning to learning culture, Arth (2011) defines learning culture as "a collective set of values, processes and practices that influence and encourage self-sustaining and continuous learning in the organization" (p. 26). Tynjälä & Häkkinen (2005) propose e-learning is not a "miracle remedy" (p. 325) to workplace learning and contend the success of e-learning is reliant on the learning culture. Roy (2010) agrees and argues that the development of an e-learning culture is a requirement to ensure an effective transition to e-learning. Both Roy (2010) and Masie (2001) highlight the responsibility of the manager in creating a learning culture by raising awareness with employees of the role of e-learning in their own individual development and in organisational development. The difficulty that exists for organisations however is that different units within the same organisation may have different learning cultures (Hodkinson and Rainbird (2006) which adds to the complexity of implementing an e-learning strategy.

Moving on to information and communication technology, MacPherson et al. (2005) comment that while technology enables e-learning it can also be a barrier within organisations to the achievement of its possibilities. Medárová, Bureš, & Otčenášková (2012) highlight barriers such as poor connectivity, inadequate software and a lack of technical support. Sun, Tsai, Finger, Chen, & Yeh (2008) argue that as e-learning needs the internet the learning environment is more complex and slow response times or regular technical difficulties deter learners from taking online courses. Roy (2010) proposes the need to upgrade employees skills in technology, ensure technical support is available and increase bandwidth where needed is required to overcome the barriers identified while Sun et al. (2008) remind us that flexibility is an important factor in e-learning satisfaction and system administrators need to ensure all system functionalities are always available to ensure it accommodates learner needs.

The final factor is financial support. Waight & Stewart (2005a) advocate that as financial resources support the learning culture and the technology infrastructure, they are a key component in creating relevant and authentic learning experiences. Newton & Ellis's (2005) case study emphasises the need for policies supporting on-going infrastructure funding. They contend where e-learning projects were not centrally funded development was "erratic and often inadequate" (p. 388) and suggest strategic support resulted in e-learning

acceptance and a coordinated approach to course development, training methods and infrastructure requirements.

The evolution of e-learning within organisations

In his book Beyond E-Learning: Approaches and Technologies to Enhance Organizational Knowledge, Learning, and Performance Rosenberg (2006) refers to the thoughts of a colleague who suggests that organisations go through three stages with e-learning. The first stage is "we need to get into e-learning" (p.2) the focus during this stage is on producing as much content as possible as quickly as possible. For learning and development departments new to the concept of e-learning the use of learning technology to deliver training can prove difficult. Ketter & Pace (n.d.) acknowledge the pace of change in technologies is challenging for learning professionals and Holcombe (2005) acknowledges they struggle to create innovative content using technology. Littlejohn et al. (2008) suggest understanding how technology may be used is evolving and they contend teachers are in the position of learners as they explore how technology may be used effectively to deliver training. Holcombe (2005) argues there is a tendency to use a technology oriented approach to training rather than the use of technology in tandem with other strategies to deliver training. Wang et al. (2010) suggest this focus on technology has led to a perception that e-learning content is poorly designed and lacking in quality. It could be argued that it is this realisation that technology itself will not deliver effective training that leads organisations to move to the second stage that Rosenberg describes as "we need to get better at e-learning" (p.2). For many organisations pedagogy is not viewed as a relevant issue as there is an expectation that effective learning will automatically occur once the technological infrastructure is in place, Welle-Strand and Thune (2003). They propose there is a need for a corporate learning strategy that combines technological and pedagogical considerations for the use of e-learning. By ensuring the appropriate pedagogical approach is taken organisations are laying the foundation for effective e-learning Mitchell & Honore, (2007) which is more likely to achieve its full potential MacPherson et al (2005). Anderson (2009) illustrates the inter relationship between technology and pedagogy through the metaphor of dance, comparing technology to music and pedagogy to choreography. He argues technology and pedagogy "reveal and develop our human creativity and responsiveness and allow us to learn effectively and enjoyably". (p. 2)

The final stage discussed by Rosenberg (2006) is "we need to support workplace learning and performance across the organisation" (p.2). During this stage the aim is to move from formal learning to both informal and formal learning and organisations design e-learning solutions that encourage knowledge sharing, collaboration and performance improvement within the context of work itself. With the move towards informal training (Unknown 2007) contend L&D departments need to change their role to that of support with a thorough understanding of technology as it becomes more central to the learning experience. Mallon (2009) agrees with the need for change and suggests L&D departments require new skill sets to cultivate social learning and manage the level of content creation within the organisation. This new skill set includes becoming "system architects/designers" incorporating learning theory into the use of technology, London & Hall (2011, p. 112), becoming facilitators of knowledge and guides, Ketter & Pace (n.d.), having business and financial skills to align learning with work (Unknown 2007) and the ability to communicate and interact with other professionals and interest groups Slotte & Herbert (2006) and Pack (2002).

Case Study

The case study begins by reflecting back on previous e-learning experiences before exploring the current implementation of learning technology to support synchronous and asynchronous online learning. It uses the championing factors for successful e-learning implementation defined by Waight & Stewart (2005) as a lens to explore the elements which were present or absent during early implementations and the current implementation.

Previous e-learning experiences in the organisation

The first attempt to introduce e-learning into the organisation was in the early 2000s. It was seen as a means to deliver training cost effectively, to the network of geographically dispersed sales employees. This attempt failed and an examination of the championing factors illustrates none were present. Firstly there was a lack support for the solution from senior management. Data indicates management were not fully aware of the affordances and benefits of the solution. The team proposing the implementation reflect that this may have been because they were unable to align the e-learning solution to the organisation's

needs. Secondly the training culture within the organisation at the time was such that there was a tendency not to explore external training options with a perception that the expertise within the organisation was sufficient to meet all training requirements. Thirdly the existing technology infrastructure was insufficient to support e-learning requirements; broadband was not widely available and ~~finally~~ there was no appetite to invest in technology to deliver training.

With the launch of the Irish Financial Services Regulatory Authority (IFSRA) in 2003 the increasing regulation of the Irish financial sector led to the implementation of Minimum Competency Requirements (MCR) on 1st January 2007. The organisation was confronted with the need to deliver and track compliance training in order to remain compliant and trade within the Irish market. E-learning was identified as a solution and the decision was taken to implement a customised version of the open source Learning Management System (LMS) Moodle as a platform to deliver and track compliance modules designed using the Articulate software package. An analysis of the championing factors indicates this time all were present. Firstly there were significant changes in the leadership of the company which opened the door to investigating new possibilities. The appointment of a new CEO from within the organisation together with changes to the executive team began the transformation. Newly appointed heads of Information Technology (IT) and ~~Learning & Development~~ (L&D) brought innovation and knowledge of open source e-learning tools into the organisation. Schein (1999) contends it can be difficult for insiders to recognise their own cultural strengths and limitations and suggests projects for cultural change work best with a combination of "outsiders and insiders working together" (p. 342). This combination of outside and inside expertise led the way to ensuring the leadership support required for e-learning implementation. Secondly in terms of the learning culture, Shapiro (1999) discusses the concept of "Infectious Commitment" (p. 344) suggesting if employees can catch the infection of advocating change it has the potential to become an epidemic within an organisation. A prototype system was built and piloted at a two day training course attended by over 200 employees. The prototype engaged employees with the system, generating confidence in the system's ability to deliver training and in the employee's own ability to use the system without any technical difficulties. These early advocates engaged other employees with their experiences of e-learning and contributed towards a successful

launch and uptake of the new system. To ensure continued use and create ownership of the LMS and the content, e-learning modules were designed using input from employees and managers from all areas of the organisation. Thirdly, the existing technology infrastructure was inadequate to support e-learning, in view of the urgent need to implement a solution, medium term infrastructural issues rather than long term infrastructural issues were prioritised to ensure delivery of the technology requirements within the project timescale. This led to the installation of dedicated e-learning PCs across the organisation. Finally in the area of finance, it was recognised that there was a need to improve the existing technology infrastructure to support e-learning implementation. A budget was made available to support the upgrade in hardware that was necessary. It can be seen that the presence of all championing factors ensured appropriate leadership support was present, employees were prepared for a new form of learning, the infrastructural changes deemed necessary were completed and finance was available to ensure successful completion of the project.

New Challenges

The success of e-learning as a means to deliver training generated further demand for e-learning content from all areas of the business. To manage this increased demand an Instructional Designer was appointed to design bespoke e-learning material and in 2010 over 8000 hours of online training were delivered. With an ever increasing demand for e-learning from within the organisation and external economic factors leading to constant change in employees' roles and thus a constant requirement for immediate training, it was decided to implement new learning technology which would facilitate synchronous and asynchronous online training. It was anticipated the technology would lead to quicker content development and enable a more blended approach to training within the organisation. To influence leadership support for this new form of training, it was decided to prepare a short broadcast for all senior managers and executives to demonstrate how the technology worked. Managers agreed the technology provided a viable solution to not only training requirements but also to the organisation's new communication strategy. Evaluation of the championing factors indicates that although leadership and financial support were present, the existing technology infrastructure was unable to support the increased demands of the new technology. A decision to upgrade the infrastructure had been put on hold but in view of what could be achieved through the technology it was

decided to initiate the project to upgrade. The required upgrade took 18 months to complete and when finalised a project team consisting of a member from the organisation's IT department, two members of the L&D team – one of which was the researcher – and other employees as required, began to work on implementing the original solution identified to deliver synchronous and asynchronous online learning.

The implementation stage

~~To explore this stage of the study the championing factors will be reviewed individually.~~

Technology

The impact of the infrastructure upgrade was that, all citrix terminals across the organisation were replaced with new citrix terminals which could support audio and video. The was quite significant as now all employees could complete e-learning modules or access live webinars at their own desk instead of booking time on one of a small number of dedicated e-learning PCs. The decision was taken to implement the system first used for the pilot broadcast. This technology is currently used by several third level institutions to deliver lectures through live webinars and includes a text chat facility to allow students pose questions. Live broadcasts are recorded and may be accessed through the institution's LMS. Although this solution does not include several features of other applications such as white boards, polling or breakout rooms it was decided the ability to broadcast live with text chat and prerecord training sessions met the immediate requirements of the project and the system would be reviewed after a year to discuss if it continued to meet the needs of the organisation. Several layers of testing were required, firstly proof of concept testing to ensure a high level of audio and video quality and secondly load testing to ensure any training or communications delivered using the technology would not impact on the business critical applications required for day to day business. The level of testing required proved to be significant as the vendor had never implemented the system in a corporate setting using a citrix network. The impact resulted in delaying the launch of the technology; however parameters for the number of users accessing the technology and for the quality required for audio and video have been identified which would reduce test schedules for

any similar type technology in the future. In view of the high level of investment which had already been made it was agreed that any compromise on quality standards would negatively impact the continued use and acceptance of the system.

Leadership

At all stages during the test period and before launch, opportunities were taken to involve senior management in discussions about how the technology could be used in their business area. Short recordings were made using the technology to enable managers visualise the possibilities and what could be achieved. Some managers felt the medium demanded a higher level of presentation skills and it was agreed to engage a media expert to provide coaching. In general managers were very positive about how the technology could be used and promised their support in promoting it. — (This sounds a bit lukewarm) "Wait and see"

Culture

Similarly opportunities were taken to leak the technology to small groups of employees with a view to creating a link with early adopters and engaging them as proactive advocates of the technology. Early reaction was positive, with employees particularly favouring the interaction online with a trainer without the need to travel. Initial interviews with the core L&D team and departmental trainers indicated all with the exception of the L&D manager, the researcher and one other trainer had no experience with synchronous online training either as a student or a facilitator. Reaction to delivering online whether recorded or live was generally positive with trainers realising it was a natural progression from what had already been achieved online though one trainer did suggest it was not for her and there may be a need for trainers to design content with the aim of it being delivered by a "broadcaster". This sentiment was echoed by the L&D manager who although she was the project sponsor felt she would not be part of the team in front of the camera, preferring to act in the role of "producer or director" behind the camera. The provision of media training for trainers was viewed as a positive addition by everyone, with trainers regarding the workshops as a safe environment where they could practise and receive feedback from a media expert. They also felt the workshops would allow them to interact and become familiar with the technology which would increase their levels of confidence when using it in the future.

how many?

Finance

The early sign off on the business case for the technology indicates the level of financial support for the implementation. During implementation additional costs arose in the area of the purchase of additional hardware and the provision of media training. Whilst there is no open ended budget the feedback from senior management has been there is a preference that the project be launched with high quality content, the significant investment will be lost if the content is not high quality and employees have a negative experience during initial usage.

Creating content and using the technology

It was decided the initial use of the technology would be as part of a 14 month Management Development Programme (MDP) which was due to commence in March 2013. The programme consisted of a blend of face to face workshops and online synchronous and asynchronous e-learning modules. The content for online delivery was designed using appropriate instructional design principles, the aim was to ensure the presenter, the content and the technology combined to achieve high quality engaging content. Initially pre-recorded modules would be used with a move to synchronous online modules as the programme progressed. With short lead in times before the recordings were required, it was decided to take an agile development approach and engage an external media expert to provide advice to presenters during the recording sessions. For the first online module 12 short recordings were required. During this content creation phase the challenges experienced were in the areas of scripting, trainers' presentation skills, technology constraints and lack of appropriate equipment. The issues experienced led to three iterations of the 12 short recordings before the appropriate level of quality was achieved. Once again deadlines imposed an additional level of urgency, however senior management were prepared to withhold the launch of the online modules until the required quality levels were achieved. Firstly it was felt that a significant investment was made in the MDP programme to bring about change in the management culture of the organisation. The first workshops were highly successful with managers energised and enthusiastic to implement new ideas. It was felt that high quality training content in the monthly online modules was vital to embed and build on the learning achieved during the workshops. Secondly with the

investment made in both a new LMS and in the learning technology a high level of quality in the content generated was expected and would be required to ensure employees engaged with the content.

Discussion — Needs re-working

The initial implementation of e-learning within the organisation as it endeavoured to deliver large amounts of compliance content, as quickly as possible reflects the first stage of e-learning implementation in organisations as discussed by Rosenberg (2006). During this stage the appointment of an instructional designer was regarded as a means to design and deliver content faster. It could be argued that at the time the decision was made to implement this technology in 2011, the organisation was still in that first stage with the web casting system viewed as a means of delivering more e-learning as quickly as possible, and little regard was given as to whether the system chosen would deliver quality e-learning content. However it may also indicate the start of the organisation's move to stage 2, as the system was regarded as a method of facilitating a more blended approach to delivering training. Rosenberg describes the elements which indicate an organisation has moved to stage 2 with e-learning. There is experimentation with new ways of design and delivery. Online learning is blended with class room learning, the focus is on quality and impact and success is based on innovation and return on investment. The case study has illustrated that the availability of this new technology has led to the experimentation described by Rosenberg as it was identified as a method to support and embed the learning initiated at the organisation's management development workshops. The focus has been on quality and impact at each stage of the implementation. Beginning with the test phase, and continuing on to the content design and delivery phase, quality and impact were the main reasons why the test phase was extended and why it took three iterations of content creation to achieve the level of quality required. During the content creation phase the key elements which affected quality and impact were technology constraints, poor scripting and the trainers' lack of presentation skills using the new medium. Firstly the technology system chosen was selected for its ability to facilitate a synchronous online classroom and as a method to pre-record asynchronous training modules. Its strengths lie in the area of live broadcasts or in creating pre-recorded modules where the trainer is seated close to a webcam and microphone. When creating the pre-recorded modules for the management

development programme it was decided that the trainers and presenters would stand throughout the delivery, the system was unable to record the audio satisfactorily in this case. This led to the decision that the best usage of the web casting system was for live broadcasts and it would be necessary to use other methods for pre-recorded modules. As Rosenberg (2006) contends, success in stage 2 is based on innovation and the decision was made to continue to use pre-recorded modules but to record them using a camera and microphone. The finding is that appropriate audio equipment and autocue were instrumental in delivering the quality required as they facilitated the trainer to deliver with a more engaging manner. The second key element which affected quality and impact was the scripting used. The scripts developed for the presentations were written to be read rather than spoken. Feedback from the media expert indicated how the scripts could be changed and this feedback will be implemented for all future recordings. Finally and perhaps most importantly the research has illustrated the need for trainers and presenters to have high levels of presentation skills when recording modules. During the content development phase a number of presenters and trainers with no experience of delivering content through this medium were employed. The engagement of a media presenter to provide feedback to them as they recorded their modules ensured their delivery was engaging and contributed to building their confidence in delivering training in this format. It was interesting to note that initial test recordings were made using a trainer who although she had no previous experience using the technology was comfortable with the format. The result was that it was not anticipated that high levels of support would be required for trainers and presenters. The support provided through the media expert has changed the perception of all presenters in particular the L&D manager who stated she was confident that she had gained the skills required to feel comfortable in front of a camera and deliver in an engaging manner. The high quality of delivery has set a benchmark within the organisation, and this in itself could be seen as a deterrent to others who may feel that they could not produce similar results. To ensure that the high level of quality is maintained all managers and trainers who will record training or communications will attend media training.

While the research indicates the organisation has moved to Rosenberg's (2006) stage 2. There are indications that the foundations are being laid for the organisation to move to stage 3 where the aim is to design solutions that encourage knowledge sharing and

collaboration leading to performance improvement. The provision of training on how to use this technology appropriately to as many people as require it so that they can design and create their own training with the support of the L&D department is a first move to creating more informal training. A strategy will be drawn up to drive and support the use of the technology in training delivery

Although it was anticipated the webcasting system would support live broadcasts by guest speakers and trainers throughout the management development programme, experience gained during the design and recording of the initial modules has led to a decision to introduce these new methods of delivering training on a phased basis starting with the asynchronous modules recorded by trainers and eventually moving to synchronous online broadcasts. It is anticipated that the skills acquired during the development of asynchronous modules will provide a solid foundation for the progression to synchronous online broadcasts.

Conclusion – needs strengthening

This case study has illustrated the actions taken to ensure the successful implementation of new learning technology within the organisation. It has also explained the issues encountered which affected the quality of the e-learning content which was created. Creswell (2013) suggests these findings can be thought of as "general lessons" (p.99) and add to existing research on the subject. Due to time constraints it was not possible to assess the content created for its level of quality and effectiveness. Further research is needed to study learner interaction with the content, what have they learnt and how is it adding value to the business. Rosenberg (2006) alludes to the fact that we always want immediate results but suggests it takes time to embed new ways of learning. As the L&D team and the organisation's learners become more familiar with this new learning technology some experimentation will be required to discover how the technology can be used to its best advantage and encourage a culture of learning supporting employee's immediate learning requirements and the organisation's business strategy.

References

Anderson, T., 2009. The Dance of Technology and Pedagogy in Self-Paced Distance Education. , pp.1–8. pub. details

Arth, B., 2011. *The Business Impact of Next- Generation e-Learning How Today's e-learning Drives Business Results,* pub. details

Cheng, B. Wang, M. Moorman, J. Olaniran, B. and Chen, N., 2012. The effects of organizational learning environment factors on e-learning acceptance. *Computers & Education*, 58(3), pp.885–899. Available at: http://linkinghub.elsevier.com/retrieve/pii/S0360131511002582 [Accessed November 7, 2012].

Creswell, J. (2013), *Qualitative Inquiry and Research Design Chosing Among Five Approaches,* (3rd ed.), Sage, California.

Gunasekaran, A., McNeil, R.D. & Shaul, D., 2002. E-learning: research and applications. *Industrial and Commercial Training*, 34(2), pp.44–53. Available at: http://www.emeraldinsight.com/10.1108/00197850210417528 [Accessed February 17, 2013].

Evans, K. Hodkinson, P. Rainbird, H. & Unwin, L. (2006). *Improving Workplace Learning*. Oxford: Routledge.

Holcombe, D. (2005), Foreward, Rosenberg, M. (2006), *Beyond E-Learning Approaches and Technologies to Enhance Organisational Knowledge, Learning and Performance,* Wiley & Sons Inc., San Francisco (pp. xix-xxiv).

Hopp, A., 2012. Soft steps towards digital learning. *Training Journal.com*, pp.51–54.

Jennings, C. (2012) Learning at the Speed of Business. *Training Industry Quarterly,* Spring 2012, 9. Retrieved May 20th, 2012 from http://www.nxtbook.com/nxtbooks/trainingindustry/tiq_2012spring/#/8

Jones, S. & McCann, J., 2005. Virtual learning environments for time-stressed and peripatetic managers. *Journal of Workplace Learning*, 17(5/6), pp.359–369. Available at: http://www.emeraldinsight.com/10.1108/13665620510606779 [Accessed February 24, 2013].

Ketter, P. & Pace, A., Keeping Up With the Pace of change. *T+D*, pp.62–66.

Kineo, 2012. *5 Trends and Directions in Learning Technology The Bigger Picture So What ' s the L & D Development Opportunity ?,*

Littlejohn, A., Falconer, I. & Mcgill, L., 2008. Characterising effective eLearning resources. *Computers & Education*, 50(3), pp.757–771. Available at: http://linkinghub.elsevier.com/retrieve/pii/S0360131506001254 [Accessed February 17, 2013].

London, M. & Hall, M.J., 2011. Web 2.0 support for individual, group and organizational learning. *Human Resource Development International*, 14(1), pp.103–113. Available at: http://www.tandfonline.com/doi/abs/10.1080/13678868.2011.542902 [Accessed March 27, 2012].

Long, L.K. & Smith, R.D., 2004. The role of Web-based distance learning in HR development. *Journal of Management Development*, 23(3), pp.270–284. Available at: http://www.emeraldinsight.com/10.1108/02621710410524122 [Accessed April 6, 2012].

Macpherson, A., Homan, G., & Wilkinson, K. (2005). The implementation and use of e-learning in the corporate university. *Journal of Workplace Learning*, *17*(1/2), 33–48. doi:10.1108/13665620510574441

Mallon, D., 2009. *Providing Learning at the Speed of the Business : Using an Integrated Rapid e-Learning Development and Bulletin*,

Masie, E., 2001. *E-Learning : " If We Build It , Will They Come ?,"*

Medárová, V., Bureš, V. & Otčenášková, T., 2012. A Review of Obstacles to Successful e-Learning Deployment in SMEs. *Journal of Innovation Management in Small & Medium Enterprise*, 2012, pp.1–9. Available at: http://www.ibimapublishing.com/journals/JIMSME/2012/715039/715039.html [Accessed January 20, 2013].

Mitchell, A. & Honore, S., 2007. Criteria for successful blended learning. *Industrial and Commercial Training*, 39(3), pp.143–149. Available at: http://www.emeraldinsight.com/10.1108/00197850710742243 [Accessed November 20, 2012].

Newton, D. & Ellis, A., 2005. Effective implementation of e-learning: a case study of the Australian Army. *Journal of Workplace Learning*, 17(5/6), pp.385–397. Available at: http://www.emeraldinsight.com/10.1108/13665620510606797 [Accessed February 17, 2013].

Pack, T., 2002. Corporate learning goes digital.pdf. *econtent*, pp.23–27.

Rosenberg, M. (2006), *Beyond E-Learning Approaches and Technologies to Enhance Organisational Knowledge, Learning and Performance,* Wiley & Sons Inc., San Francisco.

Roy, A., (2010), SMEs: How to Make a Successful Transition From Conventional Training Towards e-Learning. *International Journal of Advanced Corporate Learning (iJAC)*, 3(2),

pp.21–28. Available at: http://online-journals.org/i-jac/article/view/1322 [Accessed February 17, 2013].

Schein, E. (1999), "How to set the stage for a change in organisational culture", Senge, P. Kleiner, A. Roberts, C. Ross, R. Roth, G. and Smith, B. *The Dance of Change The Challenges of Sustaining Momentum in Learning Organisations,* Brealey, London, (pp. 334-342).

Shapiro, A. (1999), "Infectious Commitment", Senge, P. Kleiner, A. Roberts, C. Ross, R. Roth, G. and Smith, B. *The Dance of Change The Challenges of Sustaining Momentum in Learning Organisations,* Brealey, London, (pp. 344-346).

Check See p. 2 Spelling

Simmons, H. (2009), *Case Study Research in Practice,* Sage, London.

Slotte, V. & Herbert, A., 2006. Putting professional development online: integrating learning as productive activity. *Journal of Workplace Learning*, 18(4), pp.235–247. Available at: http://www.emeraldinsight.com/10.1108/13665620610665836 [Accessed January 15, 2013].

Give in full here

Sun, P.-C. et al., 2008. What drives a successful e-Learning? An empirical investigation of the critical factors influencing learner satisfaction. *Computers & Education*, 50(4), pp.1183–1202. Available at: http://linkinghub.elsevier.com/retrieve/pii/S0360131506001874 [Accessed January 31, 2013].

Swanborn, P. (2010), *Case Study Research : what, why and how?* Sage, London.

Taran, C. (2006). Enabling SMEs to deliver synchronous online training – practical guidelines. *Campus-Wide Information Systems*, *23*(3), 182–195. doi:10.1108/10650740610674193

Tynjälä, P. & Häkkinen, P., 2005. E-learning at work: theoretical underpinnings and pedagogical challenges. *Journal of Workplace Learning*, 17(5/6), pp.318–336. Available at: http://www.emeraldinsight.com/10.1108/13665620510606742 [Accessed December 2, 2012].

Unknown, 2007. The future of workplace learning: Training and responsible business practice. *Development and Learning in Organizations*, 21(2), pp.31–34. Available at: http://www.emeraldinsight.com/10.1108/14777280710727398 [Accessed November 20, 2012].

Waight, C.L. & Stewart, B.L., 2005. Valuing the adult learner in e-learning: part one – a conceptual model for corporate settings. *Journal of Workplace Learning*, 17(5/6), pp.337–345. Available at: http://www.emeraldinsight.com/10.1108/13665620510606751 [Accessed December 18, 2012].

Wang, M. Ran, W. Liao, J. and Yang, S., 2010. A Performance-Oriented Approach to E-Learning in the Workplace. *Educational Technology and Society*, 13(4), pp.167–179.

Wargnier, J., 2010. The drive to share ideas and information. *Training Journal.com*, (February 2009), pp.28–32.

Weinstein, M., 2011. Is Technology fulfilling its promise. *Training Sep/Oct2011, Vol. 48 Issue 5*, pp.32–34.

Welle-Strand, A. & Thune, T., 2003. E-learning policies, practices and challenges in two Norwegian organizations. *Evaluation and Program Planning*, 26(2), pp.185–192. Available at: http://linkinghub.elsevier.com/retrieve/pii/S0149718903000065 [Accessed March 16, 2013].

Yin, R. (2009), *Case Study Research: design and methods*, (4th ed.), Sage, California

Zhang, D. Zhou, L. Briggs, R. and Nunamaker jnr, J. 2006. Instructional video in e-learning: Assessing the impact of interactive video on learning effectiveness. *Information & Management*, 43(1), pp.15–27.