

CORPORATE LEARNING IN A VIRTUAL WORLD

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ABSTRACT

Corporate training professionals led the explosion of e-learning solutions in the 1990s. Yet in 2008, as new generations of technology-savvy, computer games-oriented employees are entering the workforce, corporate training departments are far behind universities in exploring the use of virtual worlds like Second Life or Protosphere as platforms for corporate learning. Virtual world learning early adopters like IBM and Intel are laying the groundwork for what promises to be a critical shift in the education of younger employees to collaborative, constructivist learning within increasingly sophisticated online worlds. In the meantime, the development of new pedagogies that address virtual world learning should help corporate learning organizations begin to embrace the inevitable incorporation of virtual worlds into their learning strategies.

Keywords : Corporate Learning, Employees, Virtual World.

INTRODUCTION

Metaverse. MMORPG. MUVE. The terminology of virtual worlds may not be rolling off the tongues of most corporate trainers in the early years of the 21st century. But the existence of these 3D online worlds is becoming better known as university educators, in particular, seek to develop a new pedagogy for learning and teaching via 3D online environments. IBM was an early adopter of *Second Life* as a training and development vehicle, and many other forward-thinking, technology savvy companies have been experimenting with training approaches in *Second Life* as well as other virtual worlds. The successes and failures experienced by innovative companies moving learning and development into a virtual environment that is easily and inexpensively accessed via the internet are laying the ground work for addressing training for the members of a workforce raised playing computer games. The combination of media hype and questions of stability and meaningful application of these environments will keep many companies from exploring the possibilities in the very near future, but the explosion of possibilities for using virtual worlds in certain areas of corporate training is inevitable. The powerful impact of growing numbers of employees

for whom training via technology is second nature will drive the increasing exploration of virtual worlds for collaborative, constructivist learning -- something corporate training and development professionals cannot ignore.

The Growth of Learning Technologies

Since the 1990's, the growth of technology-enabled training, usually referred to as online learning or e-learning as it moves to the Internet, has been driven by the demands of business and rapidly improving technology solutions. Corporations require that their geographically dispersed employees learn new skills and knowledge quickly and inexpensively in order to address competitive pressures in the marketplace. Increasing bandwidth and faster computers helped traditional corporations move online learning from computer-based training (CBT), loaded on individual computers, to web-based training (WBT), deployed via the internet and frequently accessed from a learning management system. Over time, however, the lack of human interaction and feedback found in many e-learning courses has resulted in some companies moving to blended learning solutions and on-the-job learning to incorporate a more personal, human element into technology-enhanced learning.

Other forces in the workplace have added to an ever-increasing need to address not only business expenses and global workforce demands, but the changing learning styles of new generations of employees. The growth of use of the internet as a means of communication and connection -- a means of *social networking* -- coupled with the entry into the workforce of people raised on computer games, is bringing about a fundamental shift in the way education and training need to be conceptualized and deployed. The need for the kind of immediate communication not found in traditional e-learning, but found online via chat and instant messaging as well as cell phone text messaging and social networking sites like *My Space* and *Facebook* is a critical component of learning for younger generations entering the workforce. Along with social networking, the learning styles of those brought up with computers in school and at home have been molded by immersion in computer games of all kinds. Educators and trainers have known for decades that incorporating a game into a learning situation engages students; what is becoming increasingly obvious in the beginning of the 21st century is that imbedding learning in game-oriented, online environments holds great promise for engaging future generations.

The corporate world has, for the most part, held back from exploring the technologies emerging from the evolution of the internet (commonly referred to as *Web 2.0*), while universities are exploring with enthusiasm the innovative approaches found in wikis, blogs, and virtual worlds. While e-learning was embraced wholeheartedly by the corporate world, and to a much lesser degree by universities, "the rise of virtual world learning seems to have caused a more noticeable split; those on the education side of the fence have shown themselves prepared to innovate and experiment, while the organizational training community adopts a far more cautious stance" (Helmer, 2008, p. 2). What are the reasons for this split? The answer is fairly clear: most corporations are not prepared to support the latest innovations from a technology standpoint or a social standpoint. Hardware and infrastructure requirements of virtual worlds are prohibitive

for many companies, and the open (in other words, generally unmonitored) environments like blogs and wikis run counter to many companies' positions on security and privacy (Gronstedt, 2007, p. 4).

Virtual World Terminology

Before discussing the current and future state of virtual worlds on corporate training, it is important to be aware of the terminology that has grown out of virtual worlds, specifically *metaverse*, *MUVE* and *MMORPG*. It is also critical to understand that while these virtual environments grew out of computer games, some of them cannot be defined strictly in terms of games.

Metaverse

A *metaverse* is an online environment inhabited by avatars controlled by real life counterparts (Kapp, 2007, p. 1). *Second Life* is an example of a metaverse. Access to *Second Life* at a basic level is free. Members choose a basic avatar (an online "inworld" representation of the person) that can be changed to appear in any way the person behind the avatar desires. The avatar enables virtual world participants to engage in behaviors they might not in the real world -- to be someone very different from themselves, or in some cases, simply a slight variation of who they perceive themselves to be. While a virtual world may appear to represent a very complex game, there is far more to a metaverse than games. "Although many online games take place in such environments, the concept of a virtual world does not require the elements of a game, such as rules or an explicit objective. Residents of a virtual world have the freedom to do and be nearly anything they want, limited only by the design of the environment" (Educause Learning Initiative, 2006, p. 1). A metaverse can be used for training, where well-known metaphors such as classrooms, boardrooms and lecture halls can be created if desired, but most importantly as an environment that encourages informal learning, where "learners invest the amount of time appropriate to what's to be learned" (Cross, O'Driscoll, Trondsen, 2007, p. 4).

MUVE

Multi-user virtual environment (or MUVE) is another name

for a metaverse. MUVE is becoming a commonly used term to describe "a neutral and changeable environment that is co-created by the environment's designers and its users" (McKerlich & Anderson, 2007, p. 1). MUVes do not require a purpose for their participants, but rather offer an environment in which to experiment and experience anything they create or encounter as they move about the world mainly as a social platform.

MMORPG

Massively Multiplayer Online Role Play Game (MMORPG) is an online environment in which players engage in a quest. Players assume a role typically unlike their real-world selves, and embark on adventures with a team, guild or clan. These worlds are inhabited by other non-player characters that are actually computer programs designed to look like game characters but that perform certain tasks or roles, such as providing a clue to the treasure. The best known MMORPG is *World of Warcraft*, in which players with different skills unite to defeat a common enemy. (Kapp, 2007, p. 2). From a training perspective, MMORPGs can be used to learn or enhance teamwork skills, but "the fantasy aspects of most MMORPGs make it difficult to apply the use of these games within a work setting" (Kapp, 2007, p. 3).

What of the corporations that have embraced *MUVes* like *Second Life* for their training and development efforts? IBM is the most visible and vocal of the large corporations using *Second Life* to train and collaborate. Among the latest evidence of their commitment to *Second Life* is an IBM press release on October 10, 2007, in which the company announced that they would be collaborating with Linden Labs, the creator of *Second Life*, "to develop new technologies and methodologies based on open standards that will help to advance the future of 3D virtual worlds." While many companies that have established a presence in *Second Life* have done so for marketing purposes, IBM has invested millions of dollars to create an in-world *Second Life* presence for employee orientation and mentoring and sales training, among other training and development needs. On April 3, 2008, another IBM press release announced that Linden Labs and IBM are collaborating on deploying a version of *Second Life*

behind IBM's firewall. This will address the concern about security and stability that keeps many corporations from exploring *Second Life*.

While the early adopters like IBM are forging ahead to exploit the open, collaborative environments found in virtual worlds, most companies regard such exploration as premature if they consider virtual worlds an option for exploration at all. One of the first questions corporate trainers tend to ask when hearing about *Second Life* is: why would anyone want to move to an imaginary space to learn when they can do the same thing in reality? This is usually followed by an observation that it looks like a game, so it cannot be viable for corporate training.

However, there is a growing number of training and elearning professionals talking about using virtual worlds for training and development. Some of the many benefits touted by those who look to virtual worlds for the future of education and training are: the ability to inexpensively create an online community that fosters collaborative learning; immersion in a persistent, 3D environment in which learners create the content and much of the context in the virtual world (Cross, O'Driscoll & Trondsen, 2007).

Sense of Community and Collaboration

The power of social networking and its impact on learning has exploded with the growth of Internet technologies. Social networking tools from chat to wikis and blogs offer an opportunity for anyone with a computerized device that can connect to the Internet to share ideas, opinions, information and resources instantly. Virtual worlds have the potential of becoming another piece of the collaborative learning approach for an organization: "Virtual worlds provide learning organizations with a powerful, unique ability to engage and empower employees in ways that accommodate their digital and mobile lifestyles, adapt to their individual learning needs, and encourage collaboration" (Gronstedt, 2007, p. 5). How does a sense of community develop in virtual worlds, and how likely is a company to encourage such a sense of community? Of course the answer to that depends on where the company stands is in terms of their network

infrastructure, the use of technology-enabled learning approaches, and the nature of the business they conduct. While high-tech companies like IBM, Apple, Intel and Cisco are at the early adopter end of the technology spectrum willing to explore open virtual worlds, pharmaceutical companies are using more enterprise-focused and closed environments like *ProtoSphere* for sales training and onboarding (Cross, O'Driscoll & Trondsen, 2007). Many other industries are starting to deploy podcasts, wikis and blogs as a first step into the social networking and constructivist learning approach, but are less likely to explore virtual worlds until security and stability issues are resolved, and clearer uses for employee learning and development are demonstrated.

Digital Natives

The first decade of the 21st century is presenting huge changes and challenges for companies in terms of the composition of their workforce. The generation of learners, those Prensky (2001) called *digital natives*, who began playing Pac-Man in the early 1980's, or Nintendo in the mid-1980's is now part of the global workforce. As more people raised on newer computer games are entering the workforce, the exodus of the baby boomers from the workforce has begun and will continue over the next 15 years. The juxtaposition of these two forces means that learning organizations (typically managed by baby boomers) must incorporate substantially new approaches in order to train and develop employees with diverse learning styles. Baby boomers grew up in front of the television, where they formed the basis for many of their opinions and perceptions of the world. Similarly, the generation raised on video games have formed their own views of the world based on games. Interestingly, as games have grown more sophisticated, learning styles have continued to evolve.

The level of complexity, realism, and cognitive engagement of video games has changed dramatically over the past few decades. Kids playing video games in the early 1980s played considerably different games from kids in the year 2007. The influence of games on learning style, expectations, and business acumen is just now becoming visible. As today's gamers start to enter the

workforce, the differences will be even more profound and accelerated. (Kapp, 2007, p. 14)

Learning organizations will not be able to ignore the influence of computer games on generations of employees, while still engaging other employees who are less comfortable with technology or who do not learn easily via technology-enhanced learning solutions. So, while virtual worlds are just beginning to attract interest as immersive learning environments, other kinds of computer-generated games are already used by many companies, typically imbedded in elearning modules.

Empathy- and Encounter-Based Learning

Efforts to create a new pedagogy for virtual world learning environments have begun, particularly in the academic world. LaChapelle (2007) proposes that *SecondLife* is well suited for two specific types of learning approaches: empathy-based learning and encounter-based learning. *Empathy-based learning* design "requires the instructional designer to create a habitus, consisting of physical markers and parameters, position markings, behavioral options and the like that enable someone undertaking the lesson to experience social or instrumental interactions in a way that allows them to experience reality from a perspective different from their own" (LaChapelle, 2007, p. 1). While this empathy-based approach points to use by those in fields like sociology and psychology, the concept of empathy-based learning has a place in many corporate environments where customer service, for example, is critical to the business.

Encounter-based learning can flourish in *Second Life*, where learners can transcend physical geography and diverse people are brought together. LaChapelle suggests that foreign language practice is an ideal application of this approach. Global corporations can benefit from conducting such interactions in a virtual world, allowing employees to help one another learn new languages in a psychologically safe environment.

The Pervasiveness of Practice

Cross, O'Driscoll and Trondsen (2007) have identified several virtual world "sensibilities", one of which is "the

pervasiveness of practice". *Second Life* characteristics offers people an ongoing opportunity to try out concepts, test understanding, seek information or instructions while under the cloak of anonymity of their avatar. Experienced participants in *Second Life* typically want to help others who are new or seeking information or directions. Within this collaborative environment, a learner is able to truly learn by practicing and experiencing situations through their own avatar's activities and interactions. When a learner enters his or her company's learning environment in *Second Life*, the opportunities to learn-by-doing abound. This includes not only interaction with others or situations, but simulations as well. Medical schools are using *Second Life* avidly to simulate medical environments and scenarios that allow students to practice being an emergency room doctor, a family practice doctor, or any other type of clinician. Governmental agencies are using *Second Life* to simulate terrorist attacks so first responders can execute and experience procedures in a real-life manner. Another twist on experiential learning through a virtual world is offering opportunities for participants to experience entirely different realities from their own: "Maybe you are confined to a wheelchair and suddenly you can dance the night away, or perhaps you want to interact with your design colleagues around the world to check out a virtual prototype of a car, a chip layout, a battlefield situation. . . ." (Cross, O'Driscoll & Trondsen, 2007, p. 3).

Conclusion

There is no question that there are significant barriers facing corporations interested in exploring a MUVE like *Second Life* (Berge, 2008). The technical barriers will diminish over time. But until they do, learning organizations need to at least begin to consider how virtual worlds can address their training needs in the future. Many corporate training organizations are fighting for their lives, trying to avoid being outsourced, maintaining a low (minimal cost) profile. Training is still undervalued because of the inability to convince executives of the contribution to the bottom line. Given this difficult scenario, it is highly unlikely that a learning organization leader will feel compelled to present a virtual world solution when the

concept is so new and the game-like appearance of it suggests a lack of seriousness. Add to this the reality that there are few, if any, guidelines for how virtual world or other Web 2.0 learning technologies are going to be evaluated, designed and assessed.

What could the future hold for effective deployment of virtual worlds for learning organizations in the next few years? When will the technology challenges no longer be a barrier? When will virtual worlds go from being a novelty to most corporate trainers to a viable solution for everything from new employee orientation to sales training to leadership development to skills development? Innovators who are already using virtual worlds for training and development purposes are sharing best practices, which should help familiarize corporate learning organizations with the potential uses of virtual worlds. Along with best practices, sound research needs to be planned and conducted to understand how and when these learning environments can help performance improvement. Combining virtual world strategies with other web tools and real-world events or even traditional face-to-face courses is a viable approach to make sure appropriate solutions are being used (Brandon, 2007). New pedagogical approaches are being developed that will make their way to more mainstream research literature, making the deployment of training and development within virtual worlds more justifiable for corporate training departments. Finally, if history repeats itself in terms of technology cycles, the most likely motivator will be the sheer numbers of people engaging in activities within virtual worlds, signaling widespread acceptance. At that point, corporate training organizations that have held back, waiting for the "hype" to blow over, will realize they need to jump on the virtual world learning bandwagon.

References

- [1]. Berge, Z.L. (2008, May-June). Multi-user virtual environments for education and training? A critical review of *Second Life*. *Educational Technology*, 48(3): 27-31.
- [2]. Brandon, B. (2007, October). Virtual world-building: Designing environments for learners. *Learning Solutions e-*

Magazine. Retrieved from www.elearningguild.com

[3]. Cross, J., O'Driscoll, T., & Trondsen, E. (2007, March). Another life: Virtual worlds as tools for learning. *eLearn Magazine*. Retrieved from <http://www.elearnmag.org/subpage.cfm?section=articles&article=44-1>.

[4]. Educause Learning Initiative. (2006, June). 7 things you should know about. . . virtual worlds. Retrieved from <http://net.educause.edu/ir/library/pdf/ELI7015.pdf>.

[5]. Gronstedt, A. (2007, August). *Second Life* produces real training results. *Learning Circuits*. Retrieved from http://www.astd.org/LC/2007/0807_gronstedt.html.

[6]. Helmer, J. (2008, January 25). Educators lead the charge in virtual world learning: Who's getting serious about games? *ALT Newsletter*. 11. Retrieved from http://newsletter.alt.ac.uk/e_article000993848.cfm.

[7]. Kapp, K. (2007, May). Defining and understanding virtual worlds. *Learning Circuits*. Retrieved from <http://www.learningcircuits.org/2007/0507kapp.html>.

[8]. Kapp, K. M. (2007). *Gadgets, games and gizmos for learning: Tools and techniques for transferring know-how from boomers to gamers*. San Francisco: John Wiley & Sons, Inc.

[9]. LaChapelle, N. (2007, July 18). Some foundations for Second Life pedagogy. *Educause Connect*. Retrieved from <http://connect.educause.edu/blog/HiredEd/somefoundationsforsecondl/44785>.

[10]. McKerlich, R., & Anderson, T. (2007, December). Community of inquiry and learning in immersive environments. *Journal of Asynchronous Learning Networks*, 11(4). Retrieved from http://www.sloan-c.org/publications/jaln/v11n4/v11n4_mckerlich_member.asp.

[11]. Prensky, M. (2001). Digital natives, digital immigrants. Retrieved from <http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf>.

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