Serious games: A new route to training, fun and cultural change

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Executive summary – Despite its power in learning, play is not usually considered within bounds for business activities. We all want to be "on point" and serious. So, taking lessons from gaming and bringing them into the corporate world might raise an eyebrow. However, there is no doubt that some of the critical success factors for education and effective collaboration are clearly available in simulation and gaming arenas. These include: Clear and Compelling Goals; Frequent Decision Points; the use of an Intuitive and Responsive Interface; evidence of processes that make the system Easy to Approach and Learn; Frequent Rewards; Challenges and Competition; and Rating and Rankings. So it's no surprise that very serious researchers are looking closely at the possibilities of gaming for orienting employees, providing them with new skills and making changes to the corporate culture.

In this Executive Technology Report, Peter Andrews interviews Chuck Hamilton, who works in the IBM Centre for Advanced Learning (CAL) in Vancouver, British Columbia on a team dedicated to learning excellence. Chuck’s team supports the drive toward the On Demand Learning Strategy set forth by Learning Leaders at IBM.

Peter Andrews How does the Centre for Advance Learning bring excellence to education at IBM?

Chuck Hamilton This involves everything from development of state-of-the-art learning programs, content and tools to advising on what will come next, when it will get here and who will be affected. The folks at CAL all have a passion for learning innovation and they are driven by the On Demand Learning mission: A significant shift in the way IBM sees learning evolve within our business and those of our clients.
Peter Andrews  One of the "what will come next" areas I know that you've been looking at is gaming and simulation. Could you tell me a bit about what is happening in this space?

Chuck Hamilton  We are finally beginning to see some data and feedback from the explosive growth in gaming over the last 15 years. People are learning a lot from games, and we are learning to see play as a tool in the learning process. Not to mention that the technology itself is continually pushing the boundaries.

Peter Andrews  Can you offer some examples?

Chuck Hamilton  Yes. What we are seeing in the research is a worldwide investigation of the practices and habits behind social play, as the academic community begins to dissect the processes and learning objectives hidden within technology and a growing community of participants. This has yielded some new projects like Serious Games and a new batch of simulation tools based on standard game engines.

Peter Andrews  What is Serious Games?

Chuck Hamilton  The Serious Games Initiative (see http://www.seriousgames.org/) is focused on uses for games in exploring management and leadership challenges facing the public sector. Part of its overall charter is to help forge productive links between the electronic game industry and projects involving the use of games in education, training, health and public policy.

Peter Andrews  Can games do things for business and government that other training and education cannot?

Chuck Hamilton  The short answer to that is that we are not sure yet, but we are buoyed by the prospect of testing that theory in current business environments. This is new territory for all concerned and previous attempts at the introduction of games in business have not always been successful. So we need to learn from new practice and previous experiences.
What we do know is that the new work landscape is changing rapidly: New demographics, presence awareness (application functionality that provides realtime notification of the availability of other users or systems, such as when IM users immediately see that a chat buddy has logged on), new time restrictions, search engines and a dearth of content are changing the way we think about gaining knowledge. We know people want greater learning engagement and challenges that permit trial and error, rather than just being vessels for all this incoming content.

Peter Andrews By new demographics, do you mean the "Internet natives"?

Chuck Hamilton Yes, the natives (those born after 1985), are coming and they have almost always been connected and in front of a computer. They are also aware of alternative personalities, role games and immersive communities that many of us don’t play in. They also know just how important the role of presence awareness is in their daily lives – a trend that IBM has grown to adopt in tools like Lotus Sametime®.

Peter Andrews Clearly, there is a pool of rapid adopters out there, but what about the old guard? I imagine you must get an "interesting" reaction when you bring up gaming to many executives.

Chuck Hamilton I think for some folks the word “game” is synonymous with terms like “trivial” and first person shooter experiences. “We are not here for fun or to play, we are employed at serious work” and frankly, who could blame them for this attitude? There is plenty of data to support the darker nature of that growing gaming industry.

However, when we love what we do, many would say their work is their play and that they are having fun. They desire connection to others who feel the same. Underneath the surface of online massively multiplayer games (MMPOGs), this same view persists. The experience of meeting, sharing, collaborating and growing within an alternative environment is often seen as preferable to the real world. It is often a risk-free space to explore any subject. The older guard also has these special places and roles, but they are not normally the virtual places we see on the Web.
Peter Andrews Those characteristics seem to fit in well for a company that emphasizes innovation and teaming.

Chuck Hamilton Yes, and collaboration underpins all we do.

Peter Andrews It sounds like we are in a new phase of using computers and gaming for education. How does this wave differ from previous waves?

Chuck Hamilton Generally, we need to understand the intersections of a broad number of trends. Today, we have (in most geographies) a whole lot more network bandwidth to play with, [and] the video industry has evolved to develop extremely efficient rendering tools, data compression techniques and delivery formats. Rich media of every sort has permeated the Web, and that world has permeated our lives. We are forever changed by these trends and many are champing at the bit for more.

Peter Andrews So the biggest difference is more resources?

Chuck Hamilton More resources and a better understanding of what has worked before and what we can try to reapply. We have learned or observed the art of the possible and we are now backing up that view with evidence from applied research to build a new space.

Peter Andrews What engages you about this area?

Chuck Hamilton First: GOOD GAME DESIGN = GOOD INSTRUCTIONAL DESIGN. Such principles are:

- Clear Compelling Goals
- Frequent Decision Points
- Intuitive and Responsive Interface
- Easy to Approach and Learn
- Frequent Rewards
- Challenge/Competition
- Rating and Ranking
The idea of application of play within learning contexts inspires us to think “outside the box” and innovate. The space opens up a new level of remote engagement that I feel has been missing for some in the PC generation. We can and should bring you, the learner, more. …And hey, it’s sort of fun!

**Peter Andrews** Have you seen any great instances of gaming or simulation in business or government?

**Chuck Hamilton** Yes, there are many from the very simple to the very complex, with a growing list that is building out the space. Too many to list, but serious games are touching serious issues.

**Peter Andrews** As you've been doing your work, have there been any surprises?

**Chuck Hamilton** I’m surprised just how many people are interested in this topic and how many different organizations have contacted us about options for play and learning. There is a growing demand, it seems.

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Knowledge Management: Capturing a company's collective expertise wherever it resides – databases, on paper, in people's minds – and distributing it to where it can yield big payoffs

Pervasive Computing: Combining communications technologies and an array of computing devices (including PDAs, laptops, pagers and servers) to allow users continual access to the data, communications and information services
Realtime: "A sense of ultracompressed time and foreshortened horizons, [a result of technology] compressing to zero the time it takes to get and use information, to learn, to make decisions, to initiate action, to deploy resources, to innovate" (Regis McKenna, *Real Time*, Harvard Business School Publishing, 1997.)

Ease-of-Use: Using user-centric design to make the experience with IT intuitive, less painful and possibly fun

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