

Playing to Learn and Learning to Play in the Online Classroom

By James Proctor

I. Introduction

A mother lion lies dreamily dozing in the heat of the Serengeti Plain. Her two cubs have awakened after their post-meal nap and, fortified by the meat they have consumed and the energy of youth, begin a game of chase. They grab and tumble, then notice their mother's tail as it swishes away the flies. Both jump with teeth bared onto her back and slide head first onto the ground. The tail has become, in their minds, prey and they have to catch it to eat. The tolerant mother knows that her offspring must practice if they are to become successful adults, so she does not complain about the bites and scratches she receives. She even teases and entices them to continue by swiping their faces with the cottony tip of her tail.

Play is the method youngsters have for developing the skills they need as adults. This article will discuss play, online gaming and learning.

There are many definitions for the verb "play." The Random House College Dictionary defines it as "to exercise or employ oneself in diversion, amusement or recreation." Another definition is "to act the part of a character in a dramatic performance..." Both of these definitions involve pretense and put the player in unusual roles.

Fun is "something that provides mirth or amusement; enjoyment; playfulness." Learning is defined as "the process of acquiring knowledge or skills." In terms of psychology, it is "the modifications of behavior through practice, training and experience." Therefore, play might be thought of as training.

II. The relationship between Gameplay and Learning

What is so different about learning by having fun and the formal classroom learning of our society? Marc Prensky (2002) refers to engagement as the motivation to play games. Joseph S. Renzulli (2005) goes further and says, "there is a... characteristic of playground

pedagogy that should be infused into at least some of our formal learning situations... That characteristic, pure and simple, is enjoyment, engagement, and enthusiasm." (p. 2)

When children are young, the three E's are a natural part of their existence. There is a notion of the *tabula rasa* in which children are born with no mental content and that all knowledge is derived by experience. In the first few years, children have to learn an extraordinary amount of information that includes language, motor skills, and the beginnings of culture. As soon as they enter the school system, "learning is regimented, homogeneous, and based more on rewards and threats than curiosity and interest," according to Lloyd P. Rieber.

III. Categories of Games

The use of games for learning is a method to break the regimentation of school and bring the three E's back to the learning process. The games must be challenging and goal oriented. There are several types of games including strategy games, building simulations, quests and adventures, sports games, war games, puzzles, and role playing. According to a study done by the Department of Defense, simulation games are best used for learning for the following three reasons:

1. They can foster strategic thinking
2. They use technology available to the general public
3. They can use fictional and non-fictional events

According to Yasmin B. Kafai, educational game designers fall into two broad categories, the instructionist and constructionist philosophies. The followers of the former philosophy build games that teach directly by implanting the learning skills directly into the game. For example, the multiplication tables could be part of a game and the student passes by answering questions that require that knowledge. Unfortunately, there is not enough evidence to provide a list of features that will make a game successful both in terms of sales and learning. What players want are games that are both intriguing and challenging.

The theory for the constructionists comes from watching very young children at play. The children often begin by establishing a scenario, create rules and decided on a leader. As the game progresses, the scenario changes, the rules change and the leadership is taken over by another. Each element of the game continuously changes as the game continues. The constructionist educational game designers also allow students to construct their own games and rules and give them the flexibility to continue making changes as they proceed.

IV. Online Games designed for Learning

The students who are playing online games belong to the “wired generation” and possess skills and attitudes that are different than their predecessors, according to Michael Macedonia. They include:

1. Multiprocessing skills
2. Attention span variation exhibiting fast context switching.
3. Information navigation changes
4. Shift from passive listening to discovery-based experiential learning.
5. Shift from deductive and abstract to concrete reasoning.
6. Intelligence organized in easily accessible databases.

Two common types of online educational games that are currently available are business and military games. Both are usually simulation games that create a virtual environment that require the skills necessary to be successful in the real environment.

In a business simulation game, the individual or team must make decisions that affect the company’s financial position. One business simulation game has been created by PriSim, (<http://www.prisim.com/>) and is described in the following manner:

“The heart of a business war gaming exercise is the computerized business simulation. This simulation challenges teams to make decisions that will affect their “virtual” company’s bottom line and standing within the market. Over a period of several simulated years, participants establish corporate strategy and execute tactical decisions. Teams apply the concepts of strategic planning, economic value creation, and cross-functional decision making to the practical operation of a business. In this risk-free environment of the

business simulation, a business war gaming exercise helps executives literally see the effect that their actions and decisions have on business results.”

The key phrase here is “risk-free environment” and is analogous to the play of the lion cubs. The players learn without having to be concerned about making errors that will have dire or even fatal consequences. Their concentration can be on learning the skills without being distracted by the worries of the results even though the challenge, engagement, focus and goals are there.

The military has been interested in electronic war games since the 1970’s until, now, every war college uses them. The United States military has adopted many commercial strategy games for training of its commissioned and noncommissioned officers. The Air College even sponsors an annual conference called Connections for the military and commercial games creators to exchange ideas.

The military has a history of using commercial projects for training extending back to Edwin Link who created the Link Flight Simulator before World War II. He sold the trainer to amusement parks while he was waiting for Naval contracts. It was so successful, it changed the attitude of military personnel about the use of games for training tools. The Navy now issues a customized version of Microsoft’s Flight Simulator to all student pilots enrolled in Naval Reserve officer training at many colleges.

V. Conclusion

Players are not restricted to their physical location as far as playing with others. Play known as Massive Multiplayer Online Games (MMOGs) allow users to play against others anywhere there is internet access. Many people in the gaming field believe that that is the direction of gaming in the next decade. As the technology allows, MMOGs become more graphical, more 3-D, and more real. And the next generation will have better access to them.

Marc Prensky, in *The Motivation of Gameplay*, suggests more gaming should be added to lectures. He advises that a classroom instructor might tell his students that what they are about to hear may not be true. By adding uncertainty into the lecture, students will be compelled to participate by actively listening.

In the future, according to Prensky, courses will be standardized by assessment and individually accredited. Students can get course credit from many institutions by choosing their online classes from any college or university they want. Courses will be rated by students and published online for all to see. The student will be able to select any class from anywhere in the world by using the rating to decide.

If students are not required to enroll in an institution, but can take classes where they like, to attract them the classes will have to be filled with interest and challenge. Those classes will have to contain the three E's - enjoyment, engagement, and enthusiasm.

VI. Bibliography

Prensky, Marc (2002). The Motivation of Gameplay or the Real 21st Century Learning Revolution, Published in *On the Horizon*, Volume 10 No. 1. Retrieved from the Web October 24, 2005.

<http://www.marcprensky.com/writing/Prensky%20-%20The%20Motivation%20of%20Gameplay-OTH%2010-1.pdf>

Renzulli, Joseph, Lessons Learned From Playground Pedagogy, Retrieved from the Web October 23, 2005. <http://www.spuconn.edu/~nregt/sem/playpeda.html>

Rieber, Lloyd, Designing Learning Environments That Excite Serious Play, Retrieved from the Web October 26, 2005. www.nowhereroad.com/seriousplay/Rieber-ASCILITE-seriousplay.pdf

Aarseth, Espen, (2003). Playing Research: Methodological approaches to Game Analysis, Retrieved from the Web October 23, 2005. www.ruhr-uni-bochum.de/lidi/GameApproaches2.pdf

Kafai, Yasmin, (2001). The Educational Potential of Electronic Games: From Games-To-Teach to Games-To-Learn; Retrieved from the Web October 24, 2005. <http://culturalpolicy.uchicago.edu/conf2001/papers/kafai.html>

Macedonia, Michael, (2001). Games, Simulation, and the Military Education Dilemma. Retrieved from the Web October 25, 2005 <http://www.educause.edu/ir/library/pdf/ffpiu018.pdf>

The PriSim Web Site
<http://www.prisim.com/>