Game- Based Learning- Why Does it Work?

Forty years of research[i] says YES, games are effective learning tools. People learn from games... and they will learn MORE from a game than from other forms of learning.[ii] However, most people don't get WHY games work, which causes them to dismiss games as frivolous.

If you want to defend games as a laudable learning strategy, you need to be able to explain how the fun of games links to the essentials of effective learning design. Let's start with the fun.

Fun can be...

Winning!

Most of us like to win at things even though some of us might say we don't like competition. Games don't necessarily have to be competitive, though. Cooperation can still lead to a "win" state in a game if you beat the game or achieve the game goal.

Triumphing

Triumphing might mean vanquishing an opponent, or it could mean mastering something really, really hard (such as a level in a game or an in-game challenge). People love triumphs and the sense of emerging victorious over a human opponent or opposition of any type.

Collaborating

Think of times you've played a game as a team – and the enjoyment you got out of working together as a team toward the game goal.

Exploring and building

How many of us got a kick out of checking out all the rooms in Clue as kids and making suggestions? Millions of players enjoy the online game, Civilization, and the ability to explore new territories and build cities. Not convinced? How about all the people who enjoy wandering around the New York Metropolitan Museum of Art or any other museum? It's a love of exploring that makes these visits enjoyable.

Collecting

Ever play Pac Man? As your expertise in the game builds, you collect more and more achievements. If you play Backgammon, you collect your opponent's markers. Lots of card games allow you to collect cards (Rummy, Canasta). Many folks make hobbies out of collecting memorabilia. Lots of people find collecting fun.

Problem solving or strategizing

Crossword puzzles, word searches, and strategy games are popular because people like to solve problems, and they like to formulate strategies that can help them build things, achieve, collect, triumph, etc.

Role-playing or imagining

Getting to be someone or something you're not in the real world is fun for many people. It's also a very safe way to try on new behaviors.

Surprise

Lots of us enjoy the element of surprise or the unexpected. Often, the biggest fun is in initiating the surprise, not receiving the surprise.

Now, let's identify essential elements[iii] needed for learning to happen.

To learn, we need...

- Motivation.
- Specific, timely feedback.
- Relevant practice.
- The ability to retrieve what we've learned when we need it.[iv][v]

Finally, let's map the fun in games to elements needed for learning to occur:

Learning Element	Game elements that meet these needs:
Motivation 	1. **Game goals:** Games tend to have well-defined goals for success. Decades of psychology research shows that most people are goal-oriented and will perform better with goals. 2. **PBLs - points, badges, leaderboards:** PBLs are highly motivating to players who will play to earn points, collect achievements, and obtain top position on leaderboards. Recognition is a common motivator, and PBLs are a way to give it. 3. **Levels:** The ability to master things or triumph is another common motivator. Levels provide motivation to keep playing. 4. **Flow:** In a great game, time seems to either stand still, or it goes incredibly fast. We keep playing because it's fun; the more we play, the more we learn by playing. 5. **The "fun" in problem-solving, strategizing, and collaborating:** People find all of these motivating.
Relevant practice	In a game, the entire "play" is practice. In traditional training, there is often a ton of "tell" before you get to any "do." Fun factors in here, too, as problem solving, strategizing, mastering things, etc. all can tie in to providing relevant practice. Also, learning games tend to be designed in context. In a simulation, for example, the simulation is set up to mimic the real-world challenges. This provides relevance. In quiz-style games such as Knowledge Guru, relevance can be mirrored via scenarios that match those the learner will enounter in the job. Game rules and game resources can also be designed to mimic real-world constraints.
Specific, timely feedback that is continuous	Games offer continual, immediate feedback. Good performance gets rewarded with increasing points, escalating achievements, or advancements to new levels. Poor performance typically results in the opposite and causes the player to immediately adjust behavior to try and improve. The "turn" nature of games gives players lots of opportunities to adjust and refine performance.
Ability to retrieve what we need when we need it	Games are often repetitive in nature, and repetition cements memory. Repetition builds mastery. In games, we often repeat the same sequence of steps over and over, with the level of difficulty escalating as we progress in the game. In games, we can also replicate real-world context without real-world risk. This replication gives us context, and context makes it easier to retrieve information later.

To learn more about using games for learning, meet me at **http://theknowledgeguru.com.**
I'll be waiting...

-The Guru