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OLTD 508 – Assignment #4
March 2014

<u>**ASSIGNMENT #4**</u>

A) **Comparing how schools are set up to teach students (in general) vs. how a videogame is designed around the players is markedly different. Using any five of the thirteen principles that James Paul Gee talks about describe how a school (with examples from your own assignment/workplace) functions in terms of "learning" and contrast that with how game designers structure or teach learning.**

James Paul Gee (2013) discusses 13 principals of learning through games. It is interesting to compare how learning is occurring in brick and mortar schools to how it could be occurring with the use of game based learning. The notion of 'personalized learning' is a term teachers hear often, but has yet to be truly implemented. Game designers have been creating games that implement personalized experiences through what James Paul Gee calls the "Customization Principal". With this principal in mind game designers create games that players must solve problems, use strategies and try new styles of learning. This is all explored in a safe environment where the chance of failure is low. Where in a brick and mortar school do teachers create this type of environment for their students? Classrooms are structured learning environments and often "exploration" time is limited to primary grades. And by "exploration" time I mean "free-choice" playtime. Is this enough exploration for our students? Are teachers giving their students enough space and opportunity to use strategies to problem solve in their explorations? I'm not convinced they are.

Through the "Identity Principal" set forth by Gee (2013) game players need a sense of understanding of why they are learning a particular set of skills. They want to know why it's important to them individually and how the skills will help them in their future

goals. Classroom teachers often have some answer for students when they inquire why they need to know what they are learning, but they are often superficial answers and incredibly generalized to the point where the student realizes the skills will never aid them in their future endeavors. I can distinctly remember asking my Grade 11 Math teacher why on earth I needed to learn quadratic equations. I can't recall his answer, but I knew once I completed that class I would never use those skills again. The grade I received was simply a ticket into my University program. Games on the other hand allow players to create individual Avatars, give their Avatars roles to play, try new identities, set goals to achieve in the game and attain those goals all while learning skills to aid in the next level of play. This again, is all created and tested in a very safe environment. There is no test to fail it is simply empowered learning, where the player accepts a challenge and practices the skills to further build their skills base all while feeling a sense of a personal experience.

Leading off of the "Identity Principal" is the "Cycle of Expertise". In classroom based learning students aren't often given enough time to master skills. This may not always be the fault of the teacher, as the school year is only so long, therefore course lengths are only so long. Teachers find themselves cramming enough information into students to meet the required learning outcomes and/or prepare them for Provincial Exams. With game based learning students are presented with a challenge that they then take time to practice, then they are presented with a new problem that requires them to change their approach from the last challenge, which they then practice and this all leads to mastery of skills. I guess the old saying of "practice makes perfect" really is true. I think if teachers were given all the time in the world they too would give their students

the time needed to practice skills in order to master them, however it's not an ideal system and they have to work with what they have. However, I can see game based learning aiding in this issue and providing teachers with a tool to begin the process of implementing this type of learning principal.

This next principal is very important to me; it's called "Information Language Principal". How many times has a teacher given information overload to their students? I have been on the receiving end of that teaching style and it's incredibly frustrating as a learner. As a learner I can only make sense of what I can relate to or have background information about. The gamer's way of addressing this is by only giving information that is needed at any specific time. Gee (2013) refers to it as "just in time information". This makes incredible sense to me! Information on demand is slightly different, but also addresses what the learner needs to know and when they need it. This idea allows students to seek the information when they need it and it's always readily available when they do. Giving students "big blocks" of information Gee (2013) explains, will only overwhelm them and turn them off of learning and paying attention any further.

The majority of learners are visual learners, which makes this next principal so important. "Situated Meaning" or "Meaning as Action" is associating words with images, actions or experiences in order to understand meaning. Asking a student the meaning of a word will simply get you a return of words in the form of a definition, orally or written. Most times in traditional learning environments Gee (2013) states that, "words are simply being exchanged for words". However in game based learning images and actions are being associated with learning and experiences are being had by the game players (learners) to further their understanding and associated learning. I'd have to say that

classroom teachers are trying to implement portions of this principal in that they often

have students making connections to personal experiences. This in turn no only

addresses adding meaning through experiences, but also a personalized aspect.

B) "Videogames have a lot to offer and should be used and leveraged in classrooms in order to help teach students." Support this statement by providing four reasons taken from any of the resources I provided or other sources of information that you discover.

There is a definite divide among teachers when it comes to implementing videogames

into teaching and learning, however "[v]ideogames have a lot to offer and should be

used and leveraged in classrooms in order to help teach students." (Lewis 2014) When

learning through videogames, students have a safe place to learn and the cost of failure

is low. According to Trybus (2014), students are able to "make mistakes in a risk-free

setting, and through experimentation, [they] actively learn and practice the right way to

do things". This kind of safe place learning is known as a "**sandbox**" and Trybus (2014)

states, it "keeps [students] highly engaged in practicing behaviors and thought

processes that [they] can easily transfer from the simulated environment to real life".

Students can feel comfortable and confident exploring their surroundings and trying

new things in the game knowing it's acceptable to fail and try again. This type of gaming

also allows students to learn at their own pace, not having to move on to the next level

until they're ready.

Students are also able to create a "**customized space**" where they solve problems,

use strategies, invite other players, try new styles and again the cost of failure is low.

They can create their own avatar, set personal goals within the game and try new

roles/identities. This helps students to build confidence, as they are able to try new

things and explore where perhaps they normally wouldn't. Trybus (2014), shares the idea that learning through video games can "draw [students] into virtual environments that look and feel familiar and relevant", which makes them able to connect and relate the experience to real-life.

The term "personalized learning" is thrown around schools so much, but when has it truly been implemented? Gaming is one way to offer students the ability to learn in a personalized manner. Through "**possibility space**" students are offered a unique experience based on their choices throughout the game. No two players will play the game in the same manner – they will start and end in very different manners. Trybus (2014), understands that students "work toward a goal, choosing actions and experiencing the consequences of those actions along the way", which creates a personalized path to their goal. Equally personalizing is the concept of "**non-linear storytelling**"; this is where players have the option to complete challenges in the game in a number of different sequences. Again no two players will choose to play the game in the same manner, making it incredibly personalized.

Trybus (2014) created this chart to compare *Traditional Training*, *Hands-On*, and *Game-Based Learning.*

	Traditional Training (lectures, online tutorials)	Hands-on Training	Game-based Learning
Cost-effective	X		X
Low physical risk/liability	X		X
Standardized assessments allowing student-to-student comparisons	X		X
Highly engaging		X	X
Learning pace tailored to individual student		X	X
Immediate feedback in response to student mistakes		X	X
Student can easily transfer learning to real-world environment		X	X
Learner is actively engaged		X	X

C) Briefly explain and contrast educational or serious games with that of commercial off the shelf (COTS) games. Provide examples of each in your answers.

The definition of "Educational Games" according to Wikipedia is, "games explicitly designed with educational purposes, or which have incidental or secondary educational value." Commercial off the shelf (COTS) games are defined by Wikipedia as, "goods available in the commercial marketplace that can be bought and used under government contract." So what is the real difference? COTS games are those that one

would purchase from a computer or video game store and are meant to solely provide entertainment for the player, not any type of learning goal. Educational video games however are produced with the intention of the player learning from the game. So could students ever learn from COTS? Of course! Students most definitely can learn valuable skills from COTS. COTS are simply created with the intent of being entertaining and engaging to their players. Teachers tend to choose these types of games over educational games because they know their students are familiar with them (it's what they most likely play at home) and are eager and enthusiastic about learning through the games. Reports from Becta (2001) and TEEM (2003), (as cited in Sandford, 2006) "highlight the many strengths of COTS games and their ability to promote collaboration, foster engagement and motivation, and to develop students' thinking skills." According to Van Eck (2009) teachers "must also understand that it is not just the content that makes GBL a good idea in classrooms; it is what learners are *doing* with that content as they interact with the rest of the game." Therefore if teachers are choosing COTS games over explicitly produced for education games they must be cognizant of the tasks students will be performing throughout the game. Both choices, educational or COTS are acceptable for use in game-based learning; there simply may be more of a vetting process needed if using COTS games in an educational setting.

References

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