In the Classroom 16
Games and Gamification in the Classroom

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Stan Skrabut: Welcome back. Thanks for taking time to listen to this podcast. As always, I recognize the fact that you could be doing something else but you're hanging out with me and I really, really appreciate it. Thanks for joining me. This week, I'm pretty darn excited because we're going to be talking about gaming, game-based learning and gamification in the classroom. Each has a slightly different twist on the idea but really, it's about using games and game design to improve learning and engagement, one of my favorite topics.

A lot of people say that they're not into gaming but when you really dig down, they are gamers. They think that when they talk about gaming, they think video games. Well, there's all types of games. You have crossword puzzles, Sudoku, Jumble, all kinds of those little puzzles. Once people figure out, "I do those," well, then you're a gamer. That you may be using other programs like Fitbit and you're challenging other people online with your Fitbit on how many points that you can get for the day, how many steps, how many of anything, then you're probably doing some gaming.

Businesses use gaming all the time. If you're out there collecting your reward points for your credit cards, then you are being affected by game elements that business are intentionally using to keep you in involved. Other games are board games, chess, checkers, Tic-Tac-Toe, Monopoly. Those are all different types of games. If you are ever play hide-and-seek or tag maybe with your kids, you're into gaming, all kinds of different types of games.

I like playing all these type of games but I also enjoy video games. My favorite video games happened to be from Blizzard such as World of Warcraft, StarCraft II and Diablo III. I play Diablo III with my wife. It's a game that we both enjoy. She's not a fan of World of Warcraft. She actually thinks it's too slow but Diablo III, she's totally into. We go out and just cause havoc but we have a great time doing it together. The reason I like World of Warcraft is I like the social aspect. I like to go team up with other people and explore areas. There's always something to do.

We see with teenagers, for example, kids, young kids, teenagers, that they're totally immersed into these virtual games and these games. Why? What makes it that they will spend hours doing that but you can't get them to spend five minutes doing an assignment for your class? What if we could tap into those gaming elements and make your classes just a little more engaging? Well, it's possible through this idea of gamification. Before we get that, let's talk about a couple of definitions.

First of all, game-based learning. Game-based learning is a type of game play that has defined learning outcome that you could be using a game, maybe Civilization or some other type of games but it has a learning outcome really designed into it and

you're trying to get the most out of your subject matter with the use of a game. There are what are called serious games and they're really designed for a specific purpose that is related to training or education that also happen to be fun. For example, learning about business. There's a game out there called The Beer Game. Basically, it's designed around the supply and demand of selling beer.

You have distributors and you have wholesalers and each has to order beer in order to meet demand and that demand changes and how do you react to that where you're not over on your inventory but you also are meeting the demand. The game can be really intense but it drives home a point that's really just hard to do in a normal classroom. Those are serious games but these other games are using games to teach a concept.

Now, some of these games are drill-and-kill programs that have a game wrapped around them. I'm not necessarily a fan of those. I like more open-type games. Gamification, which is another term, is using game design elements and principles in non-game context. I use the idea of gamification in my classes a lot that I have what are called quests which are really just assignment. I use these, I have all these different types of quests where they have to complete these and they can complete them in any way that they want as long as they complete the quests successful. They have to meet the minimums of the challenge but how they do it, I really don't care.

In the end, they have to accumulate so many points in order to get the top marks of the grade. I put that out in front of them. The deadline, I only have one deadline in my courses and that's the last day of class. They have all the time in the world to do these quests and they're based on a go-no-go system that I will kick them back. If they're not done to the standard that I want, then they get to do it over. I will certainly provide feedback. Other parts of the game elements- and we'll get into a lot more of that, is this rapid feedback, this ability to do quests out of order and things like that.

It really changes how the classroom works and so far, I've been getting positive results out of it. You can take this to another level where they can take on roles and this imaginary world that they're involved in and also work in a team-based modality if they need to in order to make this all work. You're using game elements in order to do your class. There is a book out there that I really like. It's called *The Multiplayer Classroom* by Lee Sheldon and he really talks about this. That helped me build the classes the way that I wanted.

Why does this idea games, why is it so attractive to me? It really taps into this is how your brain work that your brain likes a couple things. One, it likes success and it also likes when it has a problem to solve. Sometimes, that problem comes from a failure or lack of success that your brain gets really excited and it wants to figure out this problem and get it solved.

When it solves it, you get a shot of dopamine that your neurotransmitters are out there firing on all cylinders and gives a little reward when you have this type of success.

With creating a game environment, the reason I have multiple quests is I try to fire on this dopamine as much as possible that I give them a little successes along the way,

keep them engaged, it basically helps with learning. It keeps them involved. Instead of having only one or two projects for the whole term, I have these small projects that keeps them moving and they get rewarded all along the way and it fires this dopamine and they get hooked on it. They want this feedback as they work along. Now, there's certainly more that I can do in my classes. I can weave in these ideas of levels and achievements and badging and all that.

Those are certainly other additional game elements that I can weave in, I just haven't done it yet and I'm figuring out how to do it appropriately but keeps them along the path. There's some programs out there that do this especially well. There's a language program called Duolingo and it uses these ideas of rewards as positive reinforcement and it has these small challenges that have only five or six different elements to them. You get through them pretty quick and then you get a reward. You do this multiple times and you get an achievement.

It just keeps building up but there's always this opportunity to do something new, do something extra that will keep reinforcing and feeding this dopamine monster. It'll just keep firing along and it just keeps you engaged in the learning. I keep talking about game elements that you can use. There's all kinds of different game elements. Here's some of the things that I have found extremely useful when I think about game elements for my class, but there's a really strong recommendation that you can't just throw game elements on your class and make your class better. You have to start with strong instruction at the beginning that you cannot, as I say, put lipstick on a pig.

If your class sucks, it just sucks. No matter how much you try to dress it up, you first have to take care of the fundamentals of your class and put together good instructional design before you can add these other elements. Once we get past that, what are some of these elements? One is that it's very easy to repeat things, that games are repeatable, that if you did not get it right the first time, you can do it again and over and over. Especially with a video game, a video game does not get tired of you. You can repeat things over and over and over again, but you may get new scenarios.

That's also possible in the classroom that you can develop that. For example, Khan Academy, that will give you continuously new problem sets. It just built them in and will continuously feed you new problems. We'll never get tired and makes it something that's repeatable. With a a normal game, you can also increase or decrease the challenge. Now, this can be done on a personal level that if I want to do a quest, I may zip through the quest and it's like, "Wow, that wasn't really that hard," but I can make it harder on myself.

I can bring it to the next level that if I was asked, for example, to create a presentation, I can knock out a very basic presentation but I can also then take it to the next level by maybe introducing animation or better imagery and things like that. I can do it on my level but as an instructor, I can also change the levels. I can set the level where this is at the very basic level, what I want you to know, but for some additional points, if you could take it to this level, I can give you those additional points. I can always increase the complexity. As you continue through, everything scaffolds that as you're building skills, the skillset becomes more and more complex.

As you go to higher levels, you are expected to be able to apply those skills in more complex ways that really makes this idea of gamification significant because I can start from a very basic set of skills but then rapidly ramp you up where you're handling something very complex. There're other ways that you can weave gamification into your classroom. The use of progression bars or leaderboards will let you compare where you sit to yourself but also, to other people that are in the game, if so desire.

Now, naturally, you want to keep FERPA in mind so you may want to use pseudonyms for names, but the idea is that you can see where you sit in relation to where you're at and what you need for the next level or what you need to do to complete that particular quest and that can be all weaved into your program. Games do that extremely well. World of Warcraft, it's always letting you know where you're at, what you need to do, what you need to collect, what you need to do to get to the next achievement, all kinds of things. Games do this very well to let you know.

The reason is is they want you to-- By knowing what your progress is, if you see that you're getting close, then you will stick with it until you get that but then, there's something new to do and it just keeps you hooked. The way that I typically try to design my class is- also game-like, is that you are always earning points where a normal class is, you start with a hundred and you go down. In my classes, you start at zero and go up. You can always keep working on a better score. The game is not over until the deadline is done where in other classes, because it's reducing points that at a certain point, you look at your score and say, "Well, there's nothing I can do and it's over. It's game over."

In my course, you look at, "Well, I'm always improving my score so there's always a way to get better." I think this is really one of the more powerful pieces of that is this idea that you're always getting points. You can always be better and you can always get that coveted A and it's simply by continuing to put in the work. A typical course, you take a test and you get a 70 on it, it's really hard to get that A later in the course if you screw up the first major test and so I designed it a little different. Always add additional challenges. You can always add additional quests. World of Warcraft, they're always adding new things to do and that's the same with my class.

In this particular class, I did not have anything dealing with virtual reality, which we talked about in episode number 15, but I was able to add some items that dealt with virtual reality. I now need to add some stuff dealing with animation, some programs that will help me add some animation, so I can continue always building on my course and giving additional quests and this gives more variety to the students and which each quest, I can have a very simple quest or a very complex quest which I give additional points if it's more complex. Students can look at that.

Nice thing about games that there's always achievements. There's always something else to earn, something else to do, something else to keep moving forward, keeps you invested into the course or in this case, the game because there's always that next thing to do. For example, my wife and I looking at Diablo III, we already have some quests that we have to work on next time we get into the game. We already know this, we're looking forward to it, to dive right in and go knock those out.

With games is that you can also compete with others, not only against yourself, but you can have this little competition. It's either cooperative or competitive but basically, you can work with other people and see where you sit with other people and help each other get to the next point. One of the important things about game is it treats failure different than normal classes. In a normal class, it's one and done that you complete the assignment, you turn it in, it gets graded, that's it, you're moving on. With a quest-based approach, not done. If you were not successful, it gets handed back and you try again.

You get a little feedback to help you figure it out but you get to do this all over again and you can still earn those points. In my class, I've kicked back I don't know how many different attempts. That's okay. "I didn't realize this. I fixed it, here it is again," and they do fine. There's always multiple attempts. Very often in the classes that I've seen, it's one and done. Learning doesn't happen that way. Learning is through, very often, trial and error. By allowing this flexibility to turn in assignments multiple times, it gives you an opportunity to dial it in, to get it, to be the way that it needs to be. I get to be a little more particular when I'm doing those types of assignments.

One of the things dealing with this idea of failure, that this idea of gamification can change the relationships students have with failure. Right now, I see often, students are very hesitant to fail that they really get unnerved by that. That's because we condition them that way but you can change that relationship. Researchers found that when kids use a trial and error approach, when they use that while they're gaming and they understand in gaming that you can screw up, all you do is when you mess up, you try it again, but you try it a different way and you keep going at it.

I find students very hesitant to try new things in a class because they are afraid to fail. They're losing that sense of creativity. I'm a huge fan of allowing them to fail. Things that you may want to try in your classrooms, try this idea of backward grading. Instead of starting at a hundred and working your way down, start at zero and have them work their way up. Even attendance, for example, in my course, my face-to-face course, that they earn points for attending. If they attend for all the classes, I give them bonus points. If they miss one, they don't get the bonus points, but they can always make up the point some other way.

In the quests, I have my quests organized by different categories and if they get so many quest points in a category, I will also give them bonus points. They have the ability to go in and try things in all these different categories and earn those bonus points. If they're smart about it, I may have nine quests in one area, in one category, but if they complete three of them, they get the bonus points. Rather than do not all nine- and I encourage them to do all the quests anyways, they may go to the next category, get those three in order to get the bonus points. That's just being smart about how you play the game.

I weave that in there too, that they can do this, that with these quests, I can keep making quests that are more and more challenging that will have higher point. Now, some will pursue these, others will say, "No, that's not for me yet," and they'll go pursue a different quest and that's totally fine. Each person has their own interests so they get to bounce around. As I noted that levels and other achievements, that you can reward

them with badges, that maybe they have developed a skillset around a particular program or something like that, that you can reward with a badge that they can take with them after the course is done. That's certainly possible. It's another way to get that dopamine hit if you want to.

Having a system where students level up that having this backward grading allows them to get to these different milestones and you can give a shoutout when they got to those milestones that there's always an opportunity to go recognize them, to give them positive feedback, to tell them that they're on track and, "You can do this, I believe a lot easier with a leveling up system than you can otherwise."

In your course, you can also include leaderboards, progression bars in order to let them know if they're on track or not. There is a bendsome games that I have tried or gaming programs that I've tried that are out there. One is called Classcraft and this allows you to turn your lessons into quests and it can be used for classroom management. Based on what I saw, this is really more applicable to elementary and secondary schools than I would say probably for college level students, but it allows you to control this classroom management and it's a pretty good program.

One program I have used is Rezzly's 3D GameLab. This was built by Dr. Lisa Dawley and Chris Haskell from Boise State University. I have built out some quests, I've participated in their program. It's pretty cool that you can build these quests in this program and students go in there and participate in these quests. You can create adaptive learning in this that once they complete this quest, it opens up these quests. There's the whole structure but it's cool. For one of the classes I teach, I use this 3D GameLab as part of it and it's really quest-based learning. They've put together a really good program that I really enjoy working out of.

There's a library of quests that you can go kind of mine. You can go through and find, "That's the quest that I want to do," and then you can add it to your library. That's a great way to get started, or you can contribute to the library and let other people use the quests that you've created. A really, really cool program. In my current versions of classes, I've built them using Blackboard in our learning management system. Well, I built them in Blackboard, but also Canvas. I built a series of quests that I used Google Doc for the instructions and I grade them using the learning management system.

If I wanted to, I can also weave in some badging and leaderboards and things like that and also adaptive learning. I just haven't got there yet but I'm working in that direction. Games and gamification, I'm a huge fan. In our future episode, I'm going to talk about this program that they've built a curriculum all around World of Warcraft. I'm excited to talk about that because I was involved in a program for the Association of Talent Development and with some of the members, we created a guild in World of Warcraft. Around that, we built instruction, how to use World of Warcraft for conducting training. I thought it was a great opportunity.

Games and gamification, I didn't talk a lot about games. I really focused on this idea of gamification because I think you can turn your classroom into a game. Education as a whole is a game. We have assignments to do which you can consider quests, there's leveling ups, so going from a freshman to a sophomore, sophomore to junior,

those are level ups or going from fifth grade to sixth grade, that's leveling up. Graduating, fighting the boss, the big monster as you're doing your-- You've got to pass that major task or you figure out how to game the system. How does your instructor work? What's the game?

Every course is a game that there's so many things dealing with education that's games, that there's a whole point system that's involved. Let's just recognize that education, not just higher ed, but education as a whole is a game. What we can do is just make it a little more fun. We can recognize the fact that it is a game and let's use the game elements right to make the course more engaging. Anyways, that is my spiel on gamification in education. I really appreciate you coming out and hanging out with me but before I let you go, here's a quick plug for my book.