

THE MULTIPLAYER CLASSROOM: THE DESIGNER AND THE COLLABORATION

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Abstract

This article describes the steps needed to design and teach a successful game-based online course using the techniques of The Multiplayer Classroom model. It outlines the pre-production, production, and executive phase of the development process, and defines the key components of each phase including executive summary, story, theme, setting, characters, game mechanics, milestones, testing, and team work.

KEY WORDS: multiplayer, non-playing characters, play testing, pre-production, production, execution, storytelling, online, games, education games, team work, collaboration, game design, course design

1. INTRODUCTION

I am going to start with three warnings. These are not meant to scare you off. On the contrary, they are meant to be an encouragement.

The first warning I give to an instructor or instructional designer interested in making a class into a game is “Don't try to do everything possible your first time out.” Be aware of scope, and what we call “feature creep” (also known as biting off more than you can chew). Your initial enthusiasm can quickly become buried beneath a mountain of unrealized possibilities and unsuccessful attempts to bring all your hopes to fruition. A few good ideas properly developed and polished is much better than a pile of brilliant, but broken dreams.

The second warning is: time your launch appropriately. Give yourself the summer for a course to debut in the fall. Don't attempt to put together a multiplayer classroom over your winter break. There are simply too many pieces in the process. Of course, once it's all captured on video, this concern goes away. But keep it in mind. Give yourself enough time to create the online course, more than you would need for a regular online podium and slide deck presentation.

The final warning is simple. You may find yourself working much harder to prepare your course as a game, caught up in some detail, and losing sight of the goal to teach in a new and exciting way. In an adventure game, the player is tasked with solving puzzles to move forward. If a player is stuck on a puzzle, the best adventure games give the player other places to explore and other puzzles. Move on to another piece of the game. Come back later and discover that fresh idea you needed.

Still interested? Excellent, let's begin! Creating a new online multiplayer classroom (or any new game for that matter) requires three main stages, all of which can be active multiple times throughout the process: pre-production, production, and execution. All three translate into stages an instructor goes through preparing for any new online course (or any new course for that matter): lesson plan, production, and class.

Now you may be that rare superhuman who is able to fill all of the various roles necessary on a production team, but for the moment let's pretend collaboration will be required. Who are the members of the team? First, if you will be teaching the course, it may be assumed you are the subject matter expert. However, if you're an instructional designer you may be more at home with the assessment of outcomes. There also will need to be someone to create assets necessary for design and delivery of the material. This may be a single game designer, but the designer often will need to be supported by a videographer, a web designer, an artist, and others, depending on the scope of the enterprise. These experts can often be found on a university campus, or in a company with expertise in developing online content.

At the very least a videographer is essential, but be wary of online course experts whether down the hall or in a professional online course development company. Make certain they understand that you will be headed outside the box they usually work within. Determine if

they are willing to broaden their horizons as you are willing to broaden yours. They may find themselves journeying outside of that little room with the green screen, to boldly go where no online course developer has ever gone before.

Finally, please keep in mind that if you are the professional teacher, the other members of the team are professionals as well. Be guided by their expertise, just as they should be guided by yours. Too many promising courses end up badly because experts decided that because they were expert in X, they could handle Y or Z just as well. That's human nature but it can be calamitous. The best working relationships I've ever had on a team like this were those where mutual respect was the rule. Opinions should always be welcome from others on the team. Respectful discussion is always the sign of good teamwork.

2. PRE-PRODUCTION

Once the team has been identified, the first stage of pre-production begins: the development schedule. In the form of a Gantt chart, a simple table or some equivalent timeline for production will be laid out. Milestones will be established, deliverables will be determined, and team members will be assigned to produce all of the necessary components of the class.

Game development is a process: iterate, test, iterate, test, etc. Where do you begin? With a theme. A theme for a game that is meant to teach should embody both sides of that coin. Narrative and gameplay support the concepts taught in the course, and the subject matter supports the game. The theme can be as simple as "Learning math will help you to live within your means." The game that supports that theme can abstract it into a fable about geese that lay golden eggs, but at heart the message should be clear. Reinforce the theme throughout the course, even if it evolves as you develop the game. Let it. It does not have to be universal, but you should believe in it.

Storytelling is one of the two oldest ways of teaching. (Yes, gameplay is the other!) Don't turn your back on it. Over the decade that I've been designing classes as games, I have included more and more storytelling into each design. For example, in a recent course I wrote and designed to teach cybersecurity at Cal Poly (San Luis Obispo, CA), the reasons behind a hacker's attacks on the school's servers were grounded in family loyalties and loss. This is a far cry from the simplistic stories I began with in the beginning. Believable characters and story pull students into the world of the game to the point where they learn by their desire to see the next step in the stories, and what they can do next in the game to take that step.

Pre-production is where the concept for the game and the story are born. You'll need a script that will include teaching and storytelling. The ratio of one to the other is up to you. You'll need to begin laying out a structure for the game that mirrors the most natural

progression through the subject matter. That concept will be expanded into a game design document, a roadmap of the course, the equivalent of a lesson plan.

What the design document includes will vary, depending on both the nature of the course and the nature of the game. It should be as detailed as necessary. Some topics it could include are the following:

- Executive Summary: This is a few paragraphs giving an overview of both the class and the game, and how they will be integrated to teach. It is intended as an introduction for your employer or administrator who may not have the time to read the entire design document.
- Theme: A succinct statement of the theme. This illuminates the purpose of the course/game.
- Setting: Yes, you're online, but there's a big world out there you can reach from online: news organizations, websites, puzzles, and games. All can be real or fictional.
- Game Interfaces: These can include a learning management system (LMS), instructor videos, websites built for the game, etc.
- Game Mechanics: These are the transmedia environments that go way beyond simply interacting with the instructor through LMS. They include interactions between students and other media such as Facebook, Pinterest, Twitter, YouTube, Vimeo, Flickr, Foursquare, Google+, LinkedIn, Tumblr, Blogs, Forums, Email, Texts, Voice Calls and Voice Mail, Skype, Google Hangouts, etc. All of these and more can be used for narrative and gameplay.
- Characters: Characters bring a story to life. Creating characters with opposing views, which is called “orchestration,” can be a stimulus for discussions between students of course material.
- Dialogue: The instructor may not be the only “character” with a script. Here's a portion of the first non-instructor video from *Secrets: A Cyberculture Mystery Game* (see Fig. 1):

AUDRA

Greetings from the future! [laughs apologetically] I tried for quite a while to figure out how to open this video. I wanted to be impressive and welcoming. But when I finally said it on camera it sounded kind of silly. Oh well, hopefully you're still watching!

My name is Audra Casey. And I am speaking to you from ...get ready for it ...the year 2084! I kid you not!

Unfortunately, if you're looking for Lotto winners or pictures of what your

grandchildren will look like, I can't oblige. There's a big reason for this, trust me! The future ...even a minute from now ...is not predictable. Your choices, the choices of those around you, your classmates, even random occurrences, are constantly affecting what happens next.

And this natural law is why I am reaching out to you now.



FIG. 1: Audra from “The Collective”

- Story: This could be anything from a simple backstory, to a structure tied to every course video.
- Episodes: I combine teaching, gameplay, and storytelling into a single series of events I call episodes. For example, in the Cal Poly cybersecurity game the escalating attacks on the school servers “luckily” follow right after students gain the knowledge to neutralize them, and launch counterattacks of their own.

Surprise is your friend. Vary the length of videos. Don't spring plot twists every second class. Look up the variable ratio and variable interval schedules (see Fig. 2). They are conditioning techniques that will keep your students alert and on their toes. All through the process of creating the design keep the game rules as clear as you do your syllabus and rubrics. We do not want participants to wander or get lost as either students or players.

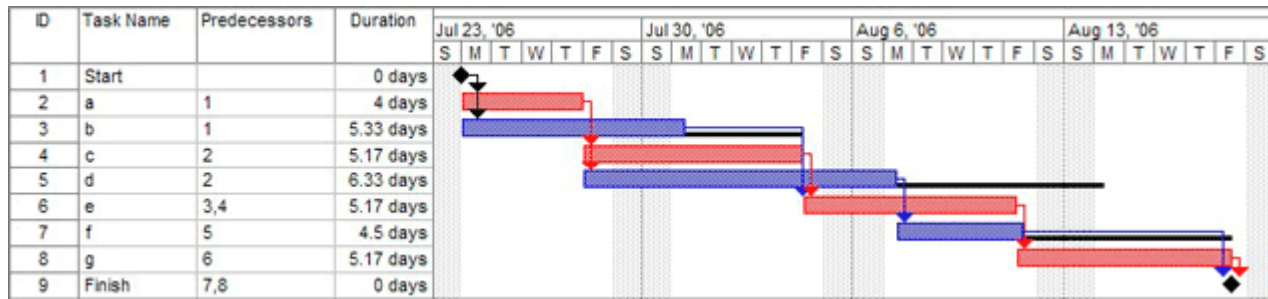


FIG. 2: Example of a course development schedule

One last pre-production item should be addressed: tools. Some are obvious like video and audio. When I design for a school, I always use their LMS. It is a familiar tool for students, and it allows me to integrate gameplay and story more tightly with the lessons. I can embed portions of the game fiction in the LMS to bring that fiction alive, and make it seem more real. I use both real websites and websites created just for the game.

Understand that the students should always know the class has been designed as a game. This is important for all sorts of reasons, not the least of which is to reassure them that the subject matter will be there to learn. It avoids protests later. Also, it enables me to insert more of the game and story, and even characters, into the course without harm. We as a species know the experience Coleridge called the “willing suspension of disbelief.” Even knowing it is a game will not prevent students from entering its world, any more than a movie audience has difficulty separating the real world from the world within the screen.

To help students willingly suspend their disbelief, maintain what they call in theatre the “fourth wall.” Your fictional websites must look like the real deal. Whenever you address the fiction, don’t do it with a wink. Maintain the reality of the fiction. You will encounter a few members of your “audience” who will want to show how superior they are to the experience. Every time a student goes meta like that, you can gently ask them privately to go along with the fiction of the game (that’s a decent ego feed), or you can remind students in general to focus on what happens in class.

Now you know the subject matter, the theme, and possibly the beginnings of a story. You have a team, a schedule, a design document, and some tools. Time to build the online course as a game.

3. PRODUCTION

The game design must include both intrinsic and extrinsic rewards. Too much “gamification” is still focused on extrinsic rewards such as levels and leader boards. I make sure my designs allow students to experience as many intrinsic rewards as possible. In an online multiplayer game like *World of Warcraft*, each character class has different skills.

The game then makes certain that each player can use those skills to contribute to the success of their team. With the help of the instructor, I try to get a good idea of who the game's players will be. What are their skills, their interests? What do they enjoy? We will then give them opportunities to team up with other students and use those skills to aid them. I will tailor moments in the game to give each player a chance to shine. The gratitude and praise from other teammates is worth far more than getting an extrinsic grade. It makes them want to learn more to feel they're accomplishing something, to give their efforts worth.

The production period is when you meld the gameplay and course into an integrated whole. Your team will find cast members and create or collect art assets like logos, maps, or the sketches one of your characters will draw; establish websites, shoot the videos, and test the multiplayer classroom. Remember the first warning I gave you: beware of scope. Watch the clock. Follow your production schedule. When in doubt, keep it simple!

There are thousands of templates for websites online. I've found blogging tools like WordPress to be flexible enough to become just about any website you may need. There are other web design tools as well, and many of them are free. Remember to give a different and appropriate look at each one. For security don't have all of them on a single server a student might find. A little security goes a long way to keep what the students learn under your control.

Don't worry about elaborate sets. Find backgrounds for videos when necessary in real life. For the most part talking heads are fine, but consider at least one or two videos with a wider angle to balance those a bit. Talking heads can get boring quickly. Watch how TV news switches camera angles, adds videos, etc.

Actors can be found everywhere. You do not need Hollywood stars. You'll find actors at a local theatre group, a drama club at a nearby high school, even in your own family. Remember these are characters, not instructors. If you are the instructor you can be either a fictional character or yourself; but you should conduct yourself as the instructor both to keep the teaching clear and the world of the game alive.

Testing is essential. You are testing whether the subject matter is being communicated to the player, whether the assets are believable, and whether your fictional websites are bug free. Games go through two major stages of testing. Alpha testing occurs at a stage when most of the pieces of your game/course are in place. They may not be in a final form. There may be placeholders for some assets. You may need to read aloud some messages or teaching that have not yet been captured on video. Alpha testing is traditionally done by the team building a game. I would recommend bringing in outside testers as well. Let them play the game in a setting that mimics as closely as possible how the students will play it. You will be tempted to give hints or guide them. Don't! They are the best chance you have

of discovering sections of the game or course that are not quite working properly. Listen to them!

Beta Testing occurs when you believe all of the elements of the course/game are in place. Any changes to the design should be incremental, little more than a tweak here or there. Look, there's a signpost up ahead. What does it say? It's show time!

4. EXECUTION

You're done, right? Everything is ready, just push the starter button. Well, not exactly: just as in many online courses there will continue to be interactions with students, adjustment of content, and so on. Also, you will have one more important job. Watch carefully how your students are learning the subject matter and how they are playing the game. Both observations will be important to the success of the course.

Testing their comprehension should be built into the gameplay whenever possible. As in the Cal Poly course, measure their progress within the fiction of the game to maintain the fourth wall. This is what I call "collateral learning." It is possible for players to be so caught up in a game—any game—that they learn without realizing it. So, if the course is algebra, present questions as challenges. In a game I designed a few years ago players used algebra to help star-crossed lovers, find a lost child, and solve a mystery that had been haunting a small town. That particular game was a bit too obvious in how it presented the problems, but it helped that they were integral to the player's purpose of helping the town.

Be prepared to alter the game on the fly. Not in any critical way that would mean some assets might go unused, or the story might take a new improvisational jog that will have you losing sleep while rushing to keep up with it, but if a student is having difficulty mastering a concept give him/her a secret mission or an extra puzzle. Remember, you've learned what the students' skill sets and interests are. Place the new challenge in a realm where it matches that skill set or interest.

Intrinsic rewards are personal. If you notice a gameplay element or subject matter that students really like, beef up that component a little. Present a similar challenge or incident. Again, not enough to damage the overall game or story or character, just a little twist that keeps the spirit of the fiction.

Students love it when something they've done is acknowledged and responded to by the game fiction. In every multiplayer classroom I've designed, I've done this. I make note of student comments and have fictional characters respond. I single out players who help others by rewarding them with in-game recognition. I found the thinking on my feet that this requires is not a burden and can be invigorating.

Hopefully, this short article can give you a glimpse into how an online multiplayer classroom can be built. I will leave you with just one final suggestion. Give it a try. You will be surprised at how effective, and how much fun, it can be.