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# Co-Management: A Ludic Language Pedagogical approach

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**Key points**

- **What is this?** This is an LLP approach called Co-Management.
- **Why did you make it?** I made this to illustrate how teachers could design lessons around games in unique ways.
- **Who is it for?** Teachers interested in applying a new way to teach with games and researchers looking for new avenues to explore in game based research.

**Tweet synopsis**

How do you play games in your language classroom with 20+ students and only one game? How do you avoid complete and total chaos? Take a Co-Management approach! This playground discusses Co-Management as a Ludic Language Pedagogy.

**View at the LLP Playground**: https://www.llpjournal.org/2021/04/27/fred-poole-co-management-llp-approach.html

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## 1. Introduction

To prepare a lesson, language teachers often look for extra materials to either supplement or facilitate instruction of the targeted concepts and topics in their course. Even teachers who are provided with textbooks will scour the internet, library, and other sources for supplemental material. These materials may include additional books, YouTube clips, movies, realia, among others. The teaching materials that we bring into the classroom contain affordances. Affordances, first defined by Gibson (1979), provide individuals with opportunities to act, and emerge once an individual perceives them. Affordance is a key construct in the ecological framework. An ecological framework in the language classroom places an emphasis on the relationship between the learner and the environment in which learning occurs (van Lier, 2004). Researchers who apply an ecological framework to language learning tend to take a holistic approach to learning and explore how integrating new tools, curriculum, and/or pedagogical approaches into a learning environment interact with other elements and/or factors in the environment to shape how learning occurs (e.g. Liu & Chao, 2017). Thus, affordances are opportunities to act that emerge from an environment as a result of interaction with the environment and subsequently perception of such opportunities to act (Thoms, 2014).

As a simple example, by using a textbook a teacher can tell students to 'turn to page 7 and read the text aloud', or a student can point to a word in the book and ask, 'what is this?', or students can look ahead and prepare for future classes. The point is that without this textbook or this shared object, many of these ways of acting and being in the classroom that we take for granted would not exist. We can also apply this perspective to other classroom materials. For instance, when teachers bring movies into the classroom, they not only provide their students with the opportunity to ask questions, but they also provide an environment in which students can hear opinions and thoughts about the film from their classmates. Movies also provide learners with visual and auditory stimulation in contrast to a textbook. Teachers can similarly rewind and play important parts of a film. If a menu from the target culture was brought into the classroom, learners can feel the material that the menu is made from, or they can make assumptions about the restaurant from which the menu came. Each of these materials may have affordances that may be unique from other materials and thus provide new ways of acting, behaving, and/or teaching in the classroom.

◺◺◱ **Affordances**
"without this textbook or this shared object, many of these ways of acting and being in the classroom that we take for granted would not exist."

Games, both analog and digital, likely offer unique affordances for both language teachers and students. However, while many scholars have argued that the interactive and contextualized nature of games make them ideal learning environments for language learners (Gee, 2003; Morton et al. 2012), research has largely focused on how games promote learning as stand-alone tools. In other words, research has explored how manipulating game-design enhances student enjoyment, motivation, and learning vocabulary sans external support (Cobb & Horst, 2011; Fotouhi-Ghazvini et al., 2009; Müller, 2012). The implicit message often sent to those reading such articles is that games can make learning vocabulary fun. Missing from this research is how teachers can use games in a classroom setting for instructional purposes and further the affordances of bringing games and unique approaches around such games into the classroom. Similar to games, pedagogical approaches also have affordances. Thoms (2014) argues that teacher reformulations in a whole class discussion (a pedagogical approach) served as an affordance for learning literary texts. In this playground I will discuss a Ludic Language Pedagogy that can emerge once games are brought into the classroom environment, and further the affordances of the approach.

Past research involving foreign/second language learners and games have typically explored solo-play or one person playing the game at a time (Calvo-Ferrer, 2017; Cobb & Horst, 2011; Müller, 2012), and how the game facilitates learning vocabulary (Ansteeg, 2015; Bytheway, 2014; Yudintseva, 2015). While some studies have looked at how collaborative or cooperative gameplay facilitates language learning, these studies tend to focus on learning in the 'wild' with Massively Multiplayer Online Role-Playing Games (MMORPGs) like *World of Warcraft* (Bytheway, 2014; Newgarden & Zheng, 2015;

Thorne et al., 2012; Vosburg, 2017; Zheng et al, 2012). Such studies are interested in how learners are afforded opportunities to use their language skills outside of the classroom in an immersive environment. Finally, it's also important to note that there is a difference between collaborative gameplay and cooperative gameplay. Cooperative gameplay is a style in which players must work together to complete an objective or task within the game, compared to collaborative, in which players can work together, but it's not necessary to work together to complete a task or an end game objective (Zagal, et al., 2006).

## 2. Inspiration for the Approach

In this playground piece I will introduce a Ludic Language Pedagogical approach called Co-Management. I first started using this approach when I was teaching English as a Foreign Language in China. At the time I wanted to play the game *Risk* with my learners in the classroom but I was unable to purchase an English copy of the game and even if I could have gotten my hands on four copies of the game for my class, I wouldn't have had enough space in the classrooms for my students to spread out and play. So, instead I created one *Risk* board on the whiteboard for the whole class (See Figure 1).

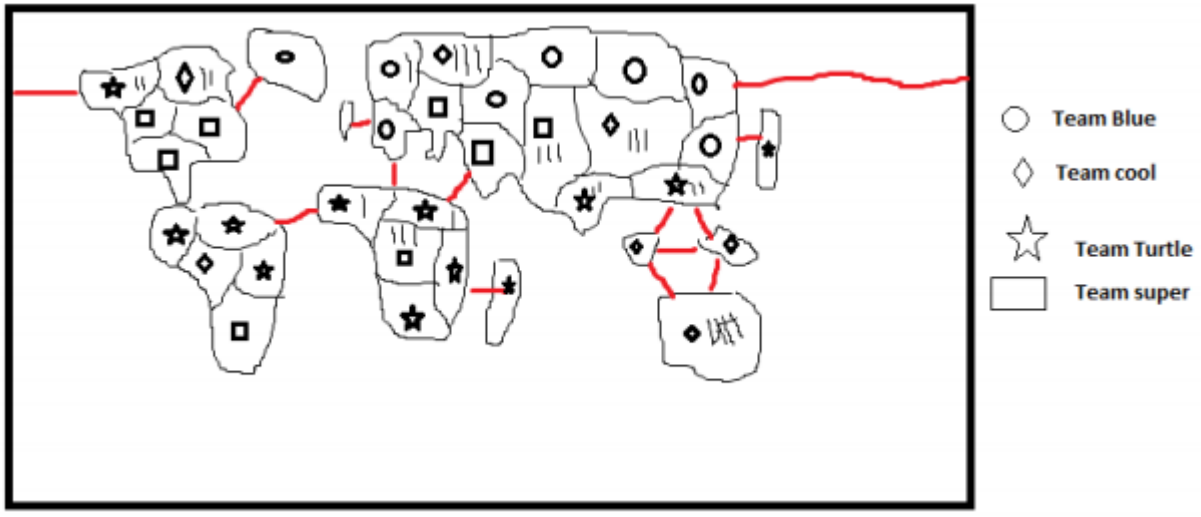


**Figure 1** Adapted Risk Game

For those of you who have not played *Risk*, the objective of the game is to conquer the world. Usually 5 to 6 players start by claiming territories. Once every player has a territory, they are allowed to reinforce the territories they control with additional armies (e.g. the roman numerals in Figure 1). Then in each turn players can choose to attack other territories by rolling dice. The game involves a lot of collaboration and communication between players to create and break alliances. In the classroom, I changed the game in a few ways. When I first started playing this game I was using it as a reward for completing sentence-creation tasks. Each territory had a target English word, and if students could use the word in a sentence then they could attack the territory. To attack the territory they would play rock-paper-scissors with the owner of the territory. The winner would claim the territory as their own.

Now, the primary issue I had at the time was that I could not simply allow everyone to have their own army. If I did, students would have to wait for a very long time as I cycled through all 20 students' turns. To solve this issue, I created four teams of five and students would then 'co-manage' their army as a team. Using this approach led to many affordances within the classroom. I noticed very quickly that while groups were waiting for their turn to attack they were engaging in very detailed conversations around their next move. They discussed which words they could make a sentence with, they practiced their sentences multiple times, they discussed which groups should be attacked, how to create a stronghold, and which groups they should try to create an alliance with among other things. Looking back on these lessons I could have leveraged this game even further by adding pre- and post-gameplay discussions that involved creating roles for each of the players in the teams, having teams meet with and discuss tactics with other teams, create background stories for the teams and so on. After leaving China, I played this game a few more times in my Chinese as a foreign language class, but have not thought about this approach until a recent discussion in the LLP Discord forum.

I was reminded of this approach more recently while discussing strategies for teaching languages using the role playing game *Dungeons & Dragons* with other members of the LLP Community. We were trying to find a solution to adapt the four to five player game into a classroom setting with 20+ students. *Dungeons & Dragons*, or *D&D* for those in the know, is a storytelling RPG in which a dungeon master tells a story and provides the setting, the situation, and a set of options available to other players. Players then can make choices about how they will react to the precarious positions they are put in and then are often forced to roll a dice that coupled with their fictional character's profile (e.g. strength, will power, intelligence) will determine if their move is successful or not. I expect a future playground or journal article will be appearing on the topic sooner than later (ahem!), which can provide more details on the game and the approach. The issue with bringing this type of gameplay into the classroom is, as I mentioned earlier, the number of players (students) involved. For a dungeon master, designing a story for four players can be quite laborious, not to mention designing a story for 25 middle schoolers. Further, in a typical *D&D* session the dungeon master will set the stage and then take responses from each of the players. After receiving a response or action from each of the players the dungeon master will then provide a brief description of the results of the action and then if a player is successful provide additional information related to the story.

You may start to see how this could get out of hand for 25 students. On one hand a teacher, playing the dungeon master, would have to keep track of 25 different stories, but also, the teacher would have 24 impatient middle schoolers waiting for their turn to respond! My solution was Co-Management. Put the players into groups of 5, each group is responsible for 1 character. Now instead of creating story lines and managing 25 stories, the teacher/dungeon master only needs to manage 5 storylines. Further, given that these 5 characters are being co-managed there is a need for the managers of these characters to come to a consensus on what they will do with their character. This not only provides the groups who are not currently responding to the dungeon master with a task to complete, but it also provides them with an opportunity to use their language skills in a meaningful discussion. Quickly it was pointed out that this approach could be used for more than just *D&D*. This paper focuses on the Co-Management approach as a pedagogical tool that can be used when teaching with games, rather than on how it would be applied to *D&D*.

## 3. Defining Co-Management

Thus, like any good manuscript, let me begin by first defining the approach. The Co-Management Approach (CMA) involves the creation of groups to assume the role that one player typically holds in a gaming situation. In this approach, players must make decisions collaboratively about the creation and fate of their character. While students may have different roles within their groups (to be further defined later) and they may take turns actually 'playing the game' or 'moving the piece', they are all equally responsible for the outcome of the character. It is important to note here that Ranalli (2008) conducted a study in which two students played a game together. He labeled one student as the driver and the other as the 'manager.' In this scenario the manager was in charge of the language support database and gave the driver instructions on how to control the in-game character. This is a bit different from Co-Management in that each member of the group should strive for equal power dynamics in terms of controlling the in-game characters. Co-Management shares some similarities with the cooperative play and player/observer approaches in that players must cooperate to accomplish goals and some players will be observers at times. However, it differs from these approaches in that every in-game choice should reflect a group decision. In past player/observer approaches the observer is not necessarily invested in the outcome of the character. In Co-Management, although one player may take the control from time to time, the player controlling the in-game agents enacts the will of the group. Teachers can leverage and support this dynamic by both designing lessons that promote group work and providing scaffolded prompts that encourage discussion within the group.

## 4. Principles for Implementing Co-Management

In section five I am going to provide an example of what Co-Management might look like. But first I want to provide a series of bullet points for how a teacher can successfully take advantage of this approach.

1. Slow Down

By having four or five students play one character in a game, it will require that gameplay slows down. However, it has been argued that teaching with games in general should take a slower approach (York, 2020). Slowing down involves taking time to introduce the game, spending extra time on character stories and other narrative associated with the game. It means having discussions between each break in gameplay, considering all options before making a decision, developing valid reasons for a potential path and being reflective on the strategy or option that was enacted. Simply stated, many of these aforementioned tasks would be out of place or even difficult to accomplish if students played the game alone. Further, all of this can lead to meaningful dialogue and engagement between language learners as they work towards a common goal.

2. Define roles for each group member

Like any good activity involving group work, giving everyone a role to assume will increase the likelihood that a) everyone participates and b) everyone is invested. Roles may include the gameplayer, someone who records the text in the game, someone who records the moves taken, someone who leads the discussion, among many other possibilities. However, I should make it painfully clear here that there are no hard and fast rules for developing and defining roles. Roles will vary depending on the goals of the lesson, the type of game being played, and factors associated with individual differences. Finally, if you are going to have established roles, give everyone a chance to play the game and to see the game from different perspectives. This way players can see the game as more than just an attempt to solve a puzzle and possibly see the game as all the complex parts that it is composed of. Afterall, no one wants to just watch the game!

3. Design opportunities for reflection and sharing into your lesson.

Part of the slow down approach is designing activities that allow your students to reflect and share what they have learned from participating in the different roles. This means creating tasks where students in different roles have to collect information to be shared. Ideally, they are sharing information collected as a means to accomplish a common goal (such as beating a personal best, or accomplishing a difficult in-game task). In addition, it is important to design discussion questions to facilitate conversation around the game. Periodically stopping gameplay and asking learners to discuss what they saw, how things went, what they learned, will not only provide learners with a chance to reflect on language used in the game, but it will also improve the chances that they notice recurring language themes when they begin playing again.

4. Look for stopping points.

Because you'll want to slow down and design tasks around games that leverage the group play, you'll need games that allow for stopping points. For example, turn-based games generally involve players choosing between a series of attacks or moves, enacting those moves, and then watching how the computer or NPCs react. These games provide natural stopping points between each of the moves… I mean they are called TURN BASED GAMES! Nearly all board games have stopping games and let's be honest, most games be it digital or analog have natural stopping points. Even games that seem action packed like many rogue-like games, have stopping points. Take a game like *Hades*. Sure, you are engaged in a non-stop action-packed battle with Hell's most fierce baddies, but the game is designed for you to lose (die), and to lose a lot. And it is through your loss that you learn. You learn new and better strategies and incrementally get better. But each time you lose, these could be opportunities for reflection and sharing.

To be clear, much like defining roles, there are no clear ways of defining stopping points, and stopping points will likely vary depending on the game you use, the goals you have for the lesson, and the gaming atmosphere when actually playing. That being said, there are some principles for identifying stopping points.

a. Stopping points should come after some in-game task has been completed. This may be a quest, a student-defined objective or a teacher-defined objective. The key is that completing a task means that students will have something to reflect on.

b. Stopping points should be consistent and transparent. Your students should know what the stopping point is before entering the game. This will facilitate discussion around strategies and will improve discussions that may occur while playing the game.

c. Stopping points should be spaced in appropriate time intervals. This will vary by the game and the tasks that you have designed around the game. Some games will allow for longer intervals, but given the ultimate goal to improve language proficiency, shortening the gameplay intervals will mean more time to engage in discussions around the game. That being said if the gameplay intervals are too short there will be less to discuss in between gameplay intervals. This is a balance that will likely be achieved through a trial and error approach.

I'm sure as this approach gets integrated into the classroom many more suggestions and tips will come forth. Next, I want to share a brief example of what this might look like in practice.

## 5. Co-Management Example

If I were still in the Chinese as a foreign language classroom or in the English as a foreign language classroom, I would love to put this into action. Alas, my classroom these days is less amenable to trying out new games for foreign language learning. So, I will have to live vicariously through you all. If you do put this into practice, I'd love to hear about it and would love to help facilitate in any way possible.

That being said, I would be interested in trying this approach out with **Stardew Valley**. You can click on the link and learn more about the game, but in a nutshell in the game you take on the role of a character whose uncle suddenly dies and leaves you a farm. Feeling tired of the city life you decide to accept the farm and forge a new way of living.

**Figure 2** Farming

*Stardew Valley* is a farming/life simulator and tightly controlled by a time management system. Each day you only have 24 hours of game time… about 12 minutes to complete a series of tasks. Further each task that you engage in takes different amounts of energy. Work on your farm for 4 hours straight and you'll have no energy to do anything else. So you must have balance and find the right mixture of tasks to take full advantage of your days. Now it's not just a farming simulator (see Figure 2), you can engage with the community (see Figure 3), explore dungeons, go fishing, or just learn about the area that you are now inhabiting. This game also comes in several different languages and comes complete with a tutorial for modding the game. Modding a game for those who do not know, means you can change the code in simple ways to customize the game for your purposes. *Stardew Valley* also comes with a multiplayer version that allows you to control a farm with three other players. However, for this example I will focus on just one player being controlled by multiple students.


**Figure 3** Chatting with Town Folk

I chose this game as an example for several reasons. First, *Stardew Valley* has several natural stopping points. A stopping point could simply be at the end of each day. Or you could make it at the end of every three days depending on how long the cycles take. Second, this game offers several unique ways to play. You can farm, fight baddies, complete tasks, engage with NPCs via dialogue, craft, collect items, fish, among others. This means that if you have multiple students controlling one character, you have multiple avenues for players to explore parts of the game that are interesting to them. In other words, the kid who likes fighting games can fight, the kid who likes dialogue can chat up the town folk, the kid who likes crafting can craft. Finally, this game has a ton of content.

Co-Management is ideal for games in which it would be difficult for any language learner to capture all that is going on. This makes it easy to define multiple roles for your groups. By having two, three, or four observers at any one time you increase the chance that something gets noticed.

Ok, so how would I teach with this game?

1. Slow Down

First, before even starting the game, I would frame this unit around community building. I would develop a series of questions and lessons around what it means to be part of a community and the values of communities in general for individuals. This would lay the groundwork for playing *Stardew Valley* as *Stardew Valley* is very much about community.

2. Define Roles

Next, I would divide students into groups of four. The four roles would rotate and would be as follows:

a. **Player**: This person plays the game and enacts the will of the group.

b. **Vocabulary Recorder**: The vocabulary recorder's job is to write down new words/items that are found in the game.

c. **Action Recorder**: This player records the actions that were completed by the current player in the game. This is not a fast-paced game and thus this is very doable.

d. **Task Recorder**: This player records new opportunities for action that may occur in the next cycle of the game. New actions may be tasks on a bulletin board, tasks given by other NPCs, a new area to explore and so on. This will lead future discussions.

3. Design opportunities for reflection and sharing into your lesson.

To design opportunities for reflection and sharing, I would create a physical resource center in my room around the game. Much like the wiki that is online. I would have students from each group periodically add content to a physical resource center in the classroom that would support their game play. This would include study cards for in-game vocabulary, notebooks that have information about

each of the characters, fact sheets about how to use and where to find items, and so on. After each gaming session one group member would be in charge of adding new information to the physical resource center that could be accessed at any time by other groups. Thus, if one group found the solution to a particular quest, or found a particular item, they could update it in the physical resource center…probably brag about it to other classmates, which would then likely lead to other classmates reading what was written to catch on.

4. Look for stopping points.

I would probably use a 24 hour day (which is ~12 minutes of real time) as a stopping point. At the end of each cycle members of the group would work together to translate any of the new words that were encountered in the game. Then a review of the actions taken in the game by the player would be discussed. Specifically, the players should consider if an action taken produced the desired results and whether or not there is a better sequence of actions that could be taken going forward. Next a discussion around the tasks identified by the task recorder will take place. This should focus on what potential actions should be added to the queue for the next cycle of game play. This should be followed by a discussion and decision about the next action to be taken by the new player of the game.

After each group has discussed what happened within the game, groups would then share a report with the class and describe the actions they plan to take going forward. It is likely at this point that new ideas will come from other ideas, so after sharing thoughts with the class, one last meeting with the group will take place to discuss any further changes to their plan. Following this final discussion, the players will engage in another round of playing the game and the cycle will commence.

There could be several variations of this game, but I imagine the final project to this unit would be the creation of a website using google sites in which the players from each group create a strategy guide to playing the game. Players could draw from their gameplay session notes, the physical resource center, and the knowledge that they acquired from gameplay and discussions around the game. In the next section I'll discuss what some of the research implications might be from using this approach in the classroom.

## 6. Research Implications

Taking this approach means making several assumptions about the learners, specifically what motivates them and how they work in groups. These assumptions are rich in areas that may be ideal for research. Specifically, I'd be curious about students' investment level with their character and the outcome of the game and how that level of investment persists over time. When I speak of investment I am thinking mostly of the Proteus Paradox (Yee, 2014). Yee argued that when we play immersive games at some level we are able to reinvent ourselves within our in-game characters. But to do this requires a level of investment in the character and the in-game identity. This is easier to see and understand if you think about a player taking on the identity of a character in a game like World of Warcraft. However, this concept becomes more murky once you have four people who are vying for the identity of one character. This becomes even more intriguing the longer the group stays together acting as the controller of one entity. In other words, if you are the only person controlling the character, you make the decisions, you are likely going to be invested in the outcomes of your decisions. However, once control is shared across multiple students investment may increase, lessen, or simply change into an amalgamation of the group identity. These may impact how much one engages with the language via the game. Second, does the role one takes affect the amount of learning that occurs. Even though we are rotating roles, it is likely that some students will take on some roles more than others. We actually could manipulate this to make it so that some students do in fact take on some roles more than others. Then we could explore to see if certain roles lead to higher levels of learning. Another area of interest is the level of immersion or flow that students experience when playing games in this way. By being a member of a team rather than THE player, it will likely change the experience that one has with the game in a fundamental way. This can have a large impact on enjoyment, motivation to play, and potentially learning within the game. Finally, and probably most importantly, how do learners support each other or not support each other when co-managing a character? Does this lead to deeper, more meaningful conversations around the game with the target language? Or does this just lead to students getting pissed off at each other? All questions worthy of further exploration.

## 7. Conclusion

During the review process two questions really stuck out to me. One asked how this approach was related to other learning theories (e.g. project based learning, group-based approaches) and the second one inquired about how the Co-Management principles mentioned above were connected to the core essence of the Co-Management approach. I think both of these questions are best answered by returning to the ecological framework, and more specifically, the construct of affordances discussed in the introduction. When the teacher chooses to take a Co-Management approach in lieu of playing the game in a solo configuration, multiple teaching affordances emerge. The possibilities for language teaching increase exponentially because much of the cognitive activity that would have occurred in the 'black box' of the learners brain during solo play, now must be verbalized. Learners must share their thoughts, they must verbalize their inner language systems to have a say in what happens with their shared character. Thus, what pedagogical approaches can be tied to Co-Management? Really, you could make an argument for just about anything. However, I would likely tie this to literature on cooperative learning and sociocultural based approaches. I would be very interested in seeing how the character becomes a shared artifact that mediates learning and language use by the group. Finally, as to what is the essence of Co-Management? I would argue it is simply that every member of the group truly has an equal portion of power in the decision making of a shared in-game agent. The rest is adaptable and malleable to one's teaching goals and context.

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**Further Discussions**

**Discussion #1 --On using this approach in other fields**

**Niall: "I believe that with your approach you are focusing on second language learners, but, as I read I couldn't help to think of classroom teachers who are teaching vocabulary, reading, writing, thinking skills, or more traditional "language arts" classes. So I guess, what I am asking is if you envision Co-Management as solely an approach for second/additional language learners, or if you view it as something that language arts teachers (or others) could be using as well?"**

I think this absolutely could be used for other subjects outside of the languages. But in such subjects the main advantage of this approach would be more similar to other group based projects in that the primary benefit would come from sharing/learning new perspectives and reflecting on one's own beliefs when sharing via group discussion. In the language classroom it is a bit more unique in that language is the primary driver of all action once you are put into a Co-Management group.

**Discussion #2 -- On other D&D Lesson Plans**

**Niall: There are teachers who have used D&D in their classes, I believe that there are some lesson plans online and some research articles as well. Do you think a citation of previous teaching work with D&D would help support your argument?**

I would love to add links to those lesson plans. I'm not sure they fit the actual argument of this paper. D&D, in my mind, was simply the catalyst to thinking about this approach.

**Discussion #3 -- On uneven groups**

**Ben: Thoughts on what happens if there are too many students in a group? In your case you have 5 students to a group, but if you have a bigger class and want to restrict the number of characters in a game, you'd have more students in one group; making it more difficult to define clear roles.**

Yes, large classes are always a thorny issue for teachers. I don't know that I have any generic large class solutions, but I would imagine that some roles could use multiple students. For example, if you have a vocabulary recorder… you might also have a grammar or useful phrase recorder. Or you could simply have two vocabulary recorders and ask one to record a particular type of vocabulary (farming words).

**Discussion #4 -- On stopping points**

**Ben: While I totally agree with the point, I feel like this is extremely subjective and can vary wildly based on lesson structure. I think if you could delve more into this, it'd be easier to grasp. There are some turn-based games with natural narrative stopping points, while other have better gameplay design stopping points. Right now I'm a little confused by this point.**

Agreed! But teaching is super subjective. I removed ‘natural’ from this title and then added a few guiding principles for choosing stopping points.

**Discussion #5 -- On using the L1**

**Fabio -- I feel that talks around the game (giving each other advice/directions) would naturally happen in the L1. Would you put a rule against it?**

**Blair -- I was thinking this - if the task was to play a game, how would you ensure students used their L1?**

I think the discussion on when and why teachers should use the L1 is a debate that will happen with just about any approach. My personal thoughts are that well designed lessons and courses scaffold language use so that learners can almost always remain in the target language. This would lend itself to the vaperwave approach. If you are moving through the unit at a pace in which students think they need the L1...it probably means you are moving too fast. In a similar thought, I would imagine that this is a lesson that is probably more appropriate for Novice-High to Intermediate-Low and above learners. Meaning I would not do this with first year, first semester learners.

**Discussion #6 -- Measuring Questions**

**Ben -- How would you measure this? [Investment in one’s character]**
I expanded on this a bit to discuss the proteus paradox. Yee has some measures for this, but I would also probably adopt Bonnie Norton’s measures for investment related to one’s identity.

**Adam -- How do you measure this? Haha~ Serious question, but also funny. [Measuring someone getting pissed off]**

There are several surveys out there for measuring in-game experiences. One of the common constructs is frustration. I imagine this could be adapted to measure annoyance … or getting pissed off.

**Discussion #7 -- On Pedagogical Approaches**

**Jonathan - are there other connections to other approaches?**
**- project based learning?**
**- group learning?**
**- roles in classroom groups?**

**Adam- Yes, I would really like to see this point fleshed out. For example, "my solution was to implement co-management, a ZPD and reflexive learning-inspired approach where 5 students would be responsible for a single D&D character." It would be really be helpful if you could connect this with existing approaches/theories.**

I discuss this a bit in my conclusion. I think a Co-Management approach could be associated/connected with all of these theories/approaches mentioned, but personally I would be more interested in taking an SCT approach and looking at the shared creation of a character's identity.

**Discussion #8-- On Stardew Valley**

**Adam -- I was really looking forward to a D&D example since you led with that, a little sad that it's a different game. That being said, I also have difficulties envisioning your co-management strategy being used in Stardew valley as the freedom in terms of what the character can do versus what you can do in D&D is severely limited.**

Character freedom will be limited in any game compared to D&D

**For example, in D&D the group decides that the character will pull out his knife and throw it at the feet of the monster, missing it narrowly because of his vision difficulties coupled with his affinity for all living things and his family history with that race of monsters which.... blah blah.**

**Meanwhile in Stardew valley, the group decides to plant 100 radishes in front of the house. Decision is done, now one player spends 5 minutes planting radishes, what do the other 4 people do in the meantime? You get what I'm saying? Stardew Valley and games that primarily revolve around long tedious labor activities might not be suited to this co-management strategy. Even with the community engagement, it will be increasingly difficult to milk out conversable topics out of this game in my opinion.**

A cycle in Stardew valley is 12.6 minutes. It may not be action packed...but I'd hardly say it's long, tedious labor :) .
In Cycle 1: Group 1 plants 10 corn and removes 15 rocks, Group 2 plants 20 corn and removes no rocks. Group 3 plants 15 corn and meets a person in town. Which group did better? What should they have done? What goals should they finish first? Should they explore more or build their farm first? If they build their farm, what crops are the best? There are a number of ways to discuss strategies in this game as well. And in some ways having less options and more visuals can better direct conversations for more learners. This is not to say that SDV > D&D just different games and different ways to manifest a similar approach.

**Discussion #9 -- On Paper Organization**

**Jonathan- what do you think about organizing your example according to the 5 points so that the reader can really clearly see how to organize/lesson plan according to the approach?**

Thanks for this suggestion!