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Digging Deeper: Learning and Re-learning with Student and Teacher Minecraft Communities

*** * * On the Internet * * ***

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The Minecraft Community

From the very beginning, Minecraft has been much more than a simple game. When Markus 'Notch' Persson posted an early alpha-build of the game on TIGSource.com on May 17, 2009, he gave few details beyond the inspiration for the game (Smith, 2012). Players were left to figure out the gameplay and explore the possibilities for themselves. Within mere minutes, the first feedback comments appeared and in under an hour, the first screenshot of a player-made bridge was posted. Over the following days and weeks, the thread would turn into a vibrant community of people exchanging ideas, seeking and offering help, and sharing their creations.

In the eight years since, this has been amplified on a global scale. Entire websites devoted to the game exist as do countless hours of YouTube footage of player's adventures and creations. Socially, Minecraft is a hot topic on school playgrounds and online forums. Commercially, there are official Mojang Handbooks (Farwell, 2013; Milton, 2013) as well as unofficial adventures set in the game world.

The Education Community

Minecraft has also become well established in the world of education. MinecraftEDU, https://hosting.teachergaming.com/, a special version of the game with added teacher controls, was developed and released in 2011 and has recently been superseded by Microsoft's Minecraft: Education Edition, https://education.minecraft.net/. Around the world, the game is being used in a variety of educational settings for virtual project work and as a virtual world for collaboration and social interaction.

This is where the game becomes of interest for language teachers. Minecraft is an activity players want to talk about. It is a game they want to learn more about. In order to do these

things, the player has a strong motivation to communicate and interact with the multitude of resources at their disposal. In a research project with ESL students using MinecraftEDU in Finland, Uusi-Mäkelä (2015, p. 65) identifies "researching from online resources" and "asking for assistance from someone else in the classroom or using the game chat" as two of three frequent sources for finding new information.

The third source identified by Uusi-Mäkelä, "experimenting by trial and error" (2015), further emphasises the learning properties of games. This is also reflected in other studies of games in a language learning context. Investigating the use of the massively-multiplayer online game (MMO) World of Warcraft with Spanish learners, Rama, Black, Van Es and Warschauer (2012) highlight how the game world offers a safe space for learning through failures and how in-game communities provide an authentic but welcoming environment in which to communicate. When players fail in a game, they do not see it as a setback. Instead, they re-evaluate the situation and persevere. Uusi-Mäkelä uses the example of Flappy Bird to highlight how despite the fact that "most players do not make it past the first obstacle on their first try… this is not perceived as critical and players have come to expect it from the games" (2015, p. 15). If they still cannot progress, they seek advice from fellow gamers, in person and online, and usually receive positive responses. As Chik (2014) notes, gamers go to "their immediate social circle of family and friends for learning support, but sooner or later…, seek help from online communities through discussion forums and blogs" (p. 92).

Learning to Play

It was this desire of English language learners to learn more about the game that first attracted me to Minecraft as a potential educational tool (Dodgson, 2016a). While working in Turkey, I noticed that several of my students were bringing Turkish translations of the official *Beginner's Handbook* to school (Milton, 2013). My son had started to become interested in the game at the time and asked me to get him a copy. I obliged and was happy to discover that the English version was also on sale as was a second official title *The Redstone Handbook* (Farwell, 2013). My son also took these books to school and during the afternoon lunch break, a crowd of students from different year groups came to me asking where I had found the new book. I told them and before the end of the week, several other students had the English original of *The Redstone Handbook* in their possession. Despite their elementary level of English, they managed to read it by working in collaboration to reach a common understanding of the text, using their background knowledge of the game as an aid. I soon came to realise that they were also engaging with English-language sources about the game at home through YouTube and sites like Minecraft Wikia (http://minecraft.wikia.com/wiki/Minecraft_Wiki).

Minecraft was soon appearing in-class as the setting for short stories and a space for project work such as showing and describing different animals and natural features (Dodgson, 2014a). At this point, I had not touched the game myself and was simply marvelling in the creative constructions and language my students were producing. In my school in Turkey, there were simply not the resources to play the game in class so I

encouraged students who had the game to use it for homework projects and started referring to Minecraft as "the greatest game I've never played" (Dodgson, 2014b).

Figure 1. Excerpt from a student story set in Minecraft

That all changed when I moved to an international school in Gabon and had the opportunity to start an after-school Minecraft club. MinecraftEDU licences were purchased and I would need to learn the basics of the game to act as an effective teacher and moderator. As Petrov (2014) notes with Minecraft, and indeed any game-based learning programme, "teachers need to play the game or to at least be comfortable within the game environment in order for [it] to work" (p. 49). However, I would have to be wary of imposing ideas on the students as "gamers like to test rules and find different ways to reach their goals" in digital worlds (Gee, 2009, p. 66). This is highlighted by one participant in Petrov's study into Minecraft in education:

Deb believes that 'kids have better more cool plans than we do and they have all these amazing ideas' that limiting them in their expression or setting strict guidelines for what they could and could not do would limit the effectiveness of the program (2014, p. 41).

The group that came together in the Minecraft club in Gabon was very much mixed ability, both in terms of their experience of the game and their level of English. There were expert players with elementary English, Minecraft novices who were highly proficient in their

language use, and many other levels of gamer and language student ability in between. Grouping myself among the novices, we began by asking the experts to prepare a guide to how to survive our first day in Minecraft while we brainstormed questions we had about the game and researched some of the basics of gameplay online (Dodgson, 2016b). We followed this up by pairing the new players with the more experienced ones who were tasked with mentoring their colleagues by guiding them through their first play sessions until they felt comfortable enough to play on their own.

This process echoed the findings of Rama et al. (2012) whose investigation into World of Warcraft with Spanish language learners reports that "the game space provides multiple contexts in which experts and novices interact, which opens up opportunities for collaboration between less and more experienced gamers and language users" (p. 332). I did not direct the students to use specific language such as imperatives or semi-fixed phrases for offering advice. Instead, I simply encouraged them to communicate in English as part of an authentic language use activity. This meant the game was less about "drill-like repetition and memorisation" and more about "the unique experiences players create and take part in" (Uusi-Mäkelä, 2015, p. 19).

As the learners grew in confidence in their game world, they self-organised to start working on projects together. Again, the more experienced players took the lead and the novice players joined them. This echoed Uusi-Mäkelä's findings with language students using Minecraft in Finland: "As an open virtual world, Minecraft did not enforce collaboration. Rather, the students organically came together to cooperate on a project together" (2015, p. 56).

My role was to act as an enabler, using my teacher controls to help students in difficulty and using my teacher presence to talk to the students about their projects and plans and how they were evolving. This helped them play "thoughtfully [and] explore the digital world in ways that add value to their language learning experiences" (Sykes, 2013, p. 35).

The EVO Community

Electronic Village Online (EVO) is a series of online sessions started by the TESOL CALL Interest Session in 2000 (see http://evosessions.pbworks.com). It has taken place each year since then from mid-January to early February featuring concurrent workshops and discussions that focus on different areas of interest for English language teachers. Each year, both existing and new groups of moderators are invited to answer the call for proposals.

It was around the time that I was starting the Minecraft club in Gabon that the first EVO Minecraft MOOC was proposed. Vance Stevens brought together a group of moderators, myself included, not only to offer participants the benefit of our expertise but to create a community through which we could explore the possibilities of the game together in what he called a "flipped syllabus" (as related in Kuhn, 2015, p. 3). Vance identified himself as a novice player who had been "messing around… for too long with MC" (Stevens, 2015) and used the session to engage with a community.

As the 5-week session progressed, it became less about the academic potential of Minecraft and more about learning with and from each other with student-aged participants like Filip Smolčec leading the way (Kuhn, 2015). Vance later reflected that the course aided him "in coming to grips with the toy and learning to appreciate how it might impact **our learning** and that of our students" (Stevens, 2015 – my emphasis). EVO Minecraft MOOC was evolving into a community focused on professional development, going beyond simply learning how to play the game by becoming enthused about the game. Returning to Petrov's study, interview participants stress the importance of "trying the game, playing it yourself and getting lost in it" not to become an expert but rather to develop "the curiosity to try and explore in order to successfully implement Minecraft into their curriculum" (2014, p. 50).

Essentially, EVO Minecraft MOOC had created what Gee and Hayes (2012) define as an 'affinity space': a group of people had come together for a shared purpose (to learn more about the game) in a space where novices and experts could interact (much like the environment my students in Gabon had collaborated in). Participants could 'consume' or 'produce' with interaction driving production of content, both in the game world and on the central Google+ Community page, and this allowed for the distribution and consolidation of knowledge while also allowing participants and leaders to learn from each other. This all created a vibrant and active community of educators.

Figure 2. Entering the EVO Minecraft game world

Learning about learning

I returned to EVO Minecraft MOOC this year eager to once again enter the game world and reconnect with the community. The 2017 rendition of EVO was, as ever, an intense learning experience. Approaching the session this time with an expectation to engage

with a community meant my main focus was on my own learning rather than what I can teach my students through the game. Throughout the five weeks, there were plenty of chances to reflect further on what Minecraft can teach us about learning and my thoughts are summarised in the remainder of this article:

1. Re-learning – The first learning block to overcome was to become familiar with the game once again. When I first entered the server created for the EVO, I was lost. I couldn't remember how to do basic things like make a door for my shelter and smelt iron (Dodgson, 2017a). I was not alone in this. Shortly before the course began, Vance Stevens communicated to the moderators issues he was having finding the materials for torches, a simple but essential item in the game:

"I'm burrowing in a cave near the spawn center but not finding any coal so far. I need coal to make torches or it gets too dark to go too deep. Any suggestions on how I can identify where I'm likely to find coal?" (Stevens, personal communication, January 14, 2017).

Much like language learners who had neglected their studies and active use of the language for so long that they had regressed to an elementary level, we had to go back to basics. In both cases, we resorted to web searches to rediscover 'lost' knowledge. In my case, I needed to make a crafting table, which then opened up a plethora of further items I could craft, doors included. For Vance, it was the reminder that charcoal would serve the purpose for a torch until coal was found.

2. Learning from mistakes – as discussed above, games offer a safe space for trial and error learning. Players expect to fail, especially early in the game and Minecraft is no different. Failure offers an opportunity to reassess, rethink, and readjust our approach to the game, a thought process that parallels scientific inquiry (Gee, 2007). In my case, an arrow in my virtual side acted as an early reminder that even once the sun comes up, enemy mobs such as skeleton archers may still lurk in the shadows of trees. In another incident, a participant known as 'Dakotah Redstone' shot and killed me in a 'friendly fire' incident. This prompted Dakotah to recall the tactic of positioning yourself at right angles to the enemy when involved in multiplayer combat, something he shared via voice chat for the benefit of the whole group.

3. Learning through perseverance – as much as we learn from mistakes, I discovered another important factor in making progress in the early stages of a game. A high degree of perseverance is required to keep going, especially when we face numerous setbacks and recurrent death and loss of items. Jane Chien, a new player in the world of Minecraft, spoke of the need for resilience in her reflections on our Google+ Community. She related how she had "laughed about the much needed resilience as a newbie, respawning too many times that I lost count" (Chien, 2017) before later sharing how she had started to enjoy the game once she had reached a point where she was able to survive for longer periods.

Perseverance and resilience are just as important as what we learn from the mistakes made in the game. They help us reach breakthroughs, points when one action, event or crafted item opens up many more possibilities. One of my early breakthroughs (after the crafting table) came when I was able to make a furnace. I could now produce charcoal for torches, smelt iron for better quality tools and armour, and cook food, all essential items

for mining deep underground. Once I was able to go on extended expeditions, I found more resources such as redstone (a mineral found in-game that provides power), explored the map more and experienced more of the game. This gave me the enthusiasm to keep coming back every evening for more learning and play.

4. Learning from the community – a key factor in being able to learn, relearn, experiment, and fail repeatedly without anxiety was the strong community that was already present from the two previous EVO sessions. During my first foray into the server, I was initially the only person online and I struggled to get going. It was a great relief when moderator Rose Bard joined the server and was able to show me key locations such as her treehouse base.

Vance Stevens also shared an experience of collaborative learning when a group of participants attempted to travel on minecarts along a rail system in the game in tandem with each other. Operating the minecarts at the many transfer points was a complex task and presented the group with a considerable challenge, especially when more than one person was coming down the tracks, and malfunction from one player causes the car behind to bounce off it and reverse back down the tracks (striking other players, causing them to reverse, resulting in a chaotic situation).

"Getting 4 people to move down the tracks in this way was a complicated process (not unlike getting a team of players to overcome obstacles in moving a ball down a field). It was pure gamification. Rose had to explain to us what to do. We had to do it and deal with consequences of any departure from the only procedure that would ultimately work. Imagine doing this with foreign language learners. It required focus and perseverance. It was challenging and great fun." (Stevens, 2017). This was a prime example of how games can be used for "promoting goal-directed, collaborative action between experts and novices" (Rama *et al.*, 2012, p. 336).

Figure 3. The terminus for the rail system described above, showing the complicated double minecart mechanism that had to be mastered by all players on the journey

As the participants made their mark on the game world by creating elaborate structures and starting collaborative projects, it also became apparent that we all approached the game in different ways. Reflecting on the session, 'Dakotah Redstone' (2017) commented that "each person I met, 'was playing a different game' while in the same world". Some built simple bases and explored the environment around them. Others engaged in elaborate projects such as building walls around villages to protect the computer-controlled residents and trade with them. There were even 'mob farms' created to generate, trap and kill in-game monsters and collect their loot. Such variety exhibits several of the features of 'good learning' in games like production, customisation, challenge and consolidation, exploration and lateral thinking (Gee, 2005).

Figure 4. Dakotah Redstone's walled village where players can trade with villagers

5. Learning beyond the community – as mentioned earlier, the learning potential of games is greatly amplified by the instant availability of online resources (Chik, 2014; Uusi-Mäkelä, 2015). Several participants shared websites and wikis they had found useful for finding crafting recipes and learning more about the game. Even experienced players such as Rose Bard mentioned using video guides for more complex structures. Books were also referred to for more detail and background on the game (Dodgson, 2017b; 'Dakota Redstone', 2017).

Going beyond the confines of our community was an important factor in greater learning for three reasons: first of all, it allowed for personalisation of the individual playing experience (Gee, 2005), contributing significantly to the variety of play and creation that was evident on the server; secondly, it allowed for declaring and sharing of new-found knowledge with the whole group (Gee & Hayes, 2012); and finally, by 'lurking' in other online spaces, we were able to enhance our own affinity space by connecting the wider world of Minecraft knowledge with our own community (Gee & Hayes, 2012).

6. Learning through reflection and planning – the final but perhaps most crucial point about learning whether in a virtual game world like Minecraft or a more traditional educational setting is the importance of planning and reflection. Early in the EVO session, I did not always know what to do and relied on web searches or the presence of more experienced players to help me along. As the session progressed and I learned and relearned more about the game, I started to plan my play ahead of time. Often this was done mentally but at times, I made lists with paper and pen of tasks to undertake or new ideas to try out. This helped me focus my gameplay and enjoy a smoother experience without a need to leave the game to look something up.

Things did not always go according to plan of course. Unexpected problems, emerging needs, and interactions with other players all caused changes to the plan on a reactive basis. Taking time after each play session to review my plan and reflect on what went as planned and what proved more challenging or different to expected also became a valuable part of my playing and learning routine. These reflections would then inform my next plan. This cycle of probing the game world through play and research, hypothesising while planning, reprobing when back in the game, and rethinking when something caused the plan to change brought me back to Gee (2007) and his identification of reflective practice in gaming.

Conclusion

EVO Minecraft MOOC has been a rewarding and multi-faceted learning experience. I did not simply learn how to play a game. I learned about engaging in a virtual community and how that can enhance learning. I learned about the way in which virtual platforms can bridge the gap between novice and expert to promote further learning for both. I learned about how as individuals we can create and explore within a game environment and how as a community we can bring our experiences together as a shared narrative.

As course participant 'Dakotah Redstone' (2017) put it: "I see education…as storytelling. We are all storytellers. I see Minecraft as… a storytelling tool where a user can create a 'world' in which they can fairly easily create a space to tell their story."

I hope you have enjoyed mine.

Figure 5 . Digging deeper still

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