

Ethnography in the Minecraft Classroom

Darren has articulated the pedagogical goals of our Minecraft as classroom experiment. As he has explained, we set out to see if Minecraft could function as a platform for collaborative learning and critical thinking in an upper year undergraduate course on theories and ideologies of modernity. This is an importantly atypical deployment of a game in the context of even higher education. While videogames have been a major focus of education research at the elementary and even secondary school levels research on university level teaching with video games is rare and where there is some deployment it generally has to do with making the games themselves the object of the course or else as a simulation tool in mostly STEM courses. While our work on this is not unique we wanted to push the idea of videogames as environments for learning especially during COVID while also pushing our constructivist learning perspective by looking closely at how abstract ideas might be literally “grappled with” given the particular material affordances of a game like Minecraft; a game about moving and building with blocks that make up a world. That is the idea of the allegorical build – to what extent is moving a block in Minecraft synonymous with moving an idea... not in a literal sense where a block represents some real world corollary (it is not realism or simulation we are after) but where the blocks anchor or prompt an allegorical relationship to some specific topic or object of thought (or action in the case of the class projects).

To get at this we knew right away that survey and evaluation-based methods would not be sufficient. What we needed was to get access to students’ real-time thought processes and in-game activities. So we took advantage of the online teaching situation to log all student discussion in Minecraft and Discord as well as embedding two RAs in class as participant observers. We followed this with open ended depth interviews with students at the end of the course and this work is still ongoing. Our methods were designed to help with the inference that playing the game and making sense of the course material mattered to one another and a null result in this case would that these things – the

game and the readings were experienced as unconnected book ends despite all attempts by the professor and curriculum to make it otherwise. We were essentially pursuing a counter-factual value – what difference to students’ thought and written work does playing Minecraft as the class experience make that couldn’t be otherwise seen in the same class without Minecraft? In other words, does doing anything with Minecraft matter in terms of the core learning objectives of the course or is it just engaging (or possibly distracting) window dressing on a course that could be taught conventionally with basically the same outcomes?

For sure, our concerns about student engagement, especially during COVID, are non-trivial and are almost certainly a necessary condition of the kind of learning we were hoping to capture but they are ultimately secondary. One thing that educational research on games is clear on is that on the whole games are good for student engagement at least when compared with other conventional teaching modalities. This finding is born out in our case where even the most cursory engagement data shows better results overall than most seminar courses of this kind and especially during the pandemic when typical zoom driven seminars are reporting abysmal levels of engagement. On average students spend more time, not only with the game, but also in conversation on the discord server and with the professor, reading the course material and listening to lectures (measured via Moodle) and completing the assignments. Its an added bonus that we also see a significant amount of peer-to-peer engagement and a group-working context that seems to excite students rather than depress them. Engagement at this level is not 100% of course as some students have difficulty accessing the game platform consistently for technical and/or personal reasons and the course design and learning curve of the game make it very difficult for students to catch up if they do not remain consistently involved. We have yet to see if the course makes unfair demands on student’s time (we shall be able to gauge this with course evaluations) but we can reasonably presume that the preconditions for students to engage in the way we hope have been met.

Let me make a few further comments on the preconditions for the allegorical build as Darren has described it. Many folks will be familiar with Minecraft or the derivative Microsoft platform Minecraft Education. The basic idea of the game is fairly well known to almost all students under about age 30 worldwide and this has much to do with the ubiquity of what has become the most popular videogame of all time with a cultural reach equivalent to the Beatles or Star Wars in terms of basic familiarity. It is a game that is easy to play but difficult to master and those who play it invest great amounts of time, often returning to the game again and again over several years. It is a far more accessible mainstream commercial game for educational research than most other commercial videogames on the one hand, but also more accessible than bespoke educational technology on the other. We believe this base cultural familiarity gives us an edge in terms of engagement that we might not have had otherwise (and students less familiar with the game could more easily be helped by peers or family members).

It is important to note also though that we do not use the base game but instead use something called “modded Minecraft” which relies on the java edition of the game plus any number of additional free and open source “mods” or addons created by players/modders from all over the world. The mods add both a degree of complexity to both managing and playing the game as well as give us more freedom to adapt the game to our pedagogical goals. It also enables us to develop new mods of our own which, unlike most instructional technology, stands to have a potential user base in the millions (the current top mod has over 100 million downloads). The mods also add a level of challenge for students who have already played the base game, so we have more dynamic engagement for both experienced and inexperienced players. The other important reason to use modded Minecraft is to help break the stigma associated with Minecraft as a mere children’s game – we gave our students permission to play in this sense because the mods allow for a degree of sophistication that the games publisher, Mojang-Microsoft, would not develop for its core market of youth and children.

Now most critically for our pedagogical argument, we play the game in survival mode rather than creative mode which is how Minecraft is most commonly used in educational contexts. In creative mode there is no fighting and you cannot die; you have access to all the possible blocks in the game to build with as you like. It is this mode that is referred to when most commentators talk about the creative and sandbox elements of play in Minecraft and all of those epic creations that sometimes make it into the mainstream news are all done in Creative mode. Survival mode is the normal mode of the game and crucially it is what creates the conditions of possibility for the allegorical play we are concerned with. Students are forced to confront the affordances of the game and develop strategies for overcoming challenges (whether navigating through the world, defeating monsters, or building a house without falling) and the question becomes one of how any particular line of thought in terms of the course content might relate to those strategies. Without the need to deal with the challenge endemic to the modded survival game the experience would be entirely one-sided as players impose their visions of the world without constraint from either the game or the course material. We need a simple example.

It is easy enough to show students some images or give them readings about modernist architecture for instance. Perhaps, Moshe Safdie's Habitat '67 is apropos. This iconic brutalist housing development in Montreal is often referred to in courses on modernism and architecture. In Creative mode the students could attempt to recreate this sprawling and complex concrete structure getting a 3-dimensional sense of the use of materials, and the arrangement of space and light. Similar to an architectural maquette or digital model perhaps; it would already be a different experience from simply reading about Habitat. But in survival mode the blocks that are used to create Habitat 67 must come from the landscape and/or require various sorts of processing that turn sand and gravel into concrete. The structure must also be protected from wandering monsters (some are able to blow the house up) and so on. These practicalities of the game force the students (working in groups and discussing their

strategies) to adapt their understanding of Safdie's architectural experiment to a fictional world where the consequences are allegorically related to the actual material and cultural context that Safdie was working in. The idea is not to literally represent this context but to create the cognitive and imaginary space for the student to consider it, to research it on their own and formulate interpretations tied both to the course material (which serves as a starting place for thought) and practical experience of trying to accomplish something in the game despite the challenges.

As one student writes reflexively in a paper on the project, "Translating Habitat '67 into our Minecraft world ironically undermines almost every notable element of the real life building, beyond its iconic appearance. At the core of Habitat's modern allure is the way in which it was constructed, with modular elements assembled in a factory, then stacked one on top of the other with the help of a crane. This standardization and quick assembly were cornerstones of the building's modernism, which is completely undermined by our Minecraft homage. Forty blocks in the air, teetering on the edge of some hastily erected scaffolding, counting each L shape's outline out block by block, I wished that I had the ability to preassemble our units on the ground, and pop them into place. My teammates, blocks in hand, filled in the units, again, block by block, and then it was once again time for me to count out the outline for the next floor. This act, of placing each block by hand, felt like traditional craftsmanship, and hardly the modernist exercise this building is meant to embody. In this way, our Minecraft build is a tribute to a modern approach to home construction that it can, in many ways, never be."

This is the kind of thing we are looking for. The student here uses the feeling of building Habitat by hand in the game as a way of highlighting one of the core modernist elements of Habitat; that of industrial prefabrication. Prefabricating the modular housing of Habitat is not a literal possibility in the game but through their reading, and practical game activities, the student is able to interpret and imagine the difference that prefabrication as a facet of the modernist agenda was meant to be about. Such an interpretation would not be as forthcoming in Creative mode where the feeling of "traditional

craftsmanship” would be obviated by the pull-down menus of blocks one can place with impunity. Still other events related to the construction of Habitat; fighting off a monster invasion or travelling to a dangerous area in search of rare materials to create a modern lighting aesthetic – these all become occasions for thinking through acting in the game – always split between the concerns that playing the game as a game requires, and the course framing in which those concerns are meant to be situated.

In another class project students take on the task of modernizing a Minecraft village. One student had this reflection on her thought in an interview, “The Slack and Wise piece was about colonialism and stuff like that - it got a lot of wheels turning, because of like our proximity to the village and how I had already started going over to that village and taking their stuff. And I feel like there had already been discussions in class and in lectures about entitlement to resources. And I leaned into that, you know, I was like, I'm just gonna, like, go over to the village, I'm gonna steal all their terracotta they're not using it, they don't care. Um, and then. So yeah, we, you know, these wheels started turning about having a project that involves the village and our entitlement to the village.... But like, you know, we were talking about our plans for the village and then the prof. was like, oh, like, make sure you do all this research about, like raids and about zombies and like you're talking about including rail lines, but like villagers don't use rails, like, they'll get stuck in them, but it's not useful for them. And I was like, Yeah, no, that's the point. And I like wrote this paragraph about, like, why the fact that our improvements are useless to the people, or people, you know, to the moms that live in the village is like, kind of the point of the project.”

Here the student moves fluidly between the course reading (Slack and Wise), the comments of the professor to consider monster invasions (the need for walls) and rail transport in the context of a lecture on modernity and logistics, and the students’ experience of playing with the Minecraft village – playing as if they were a colonizer as they understand it and thinking imaginatively about the lives that the simple NPC villagers might represent... including the last bit about the “moms that live in the village”

– a direct reference to the writing of Carolyn Marvin on technology and domesticity. What is also important in this case is that the village project develops over almost half the duration of the course so the students can iterate on their intervention with the village in response to developing conversations and understanding of the course material. It is early days still and the field data from the course is rolling in now but our notes are full of stories like these so we think there is promise in both our course design and the methods of evaluation in this case.

The point to end with here for this audience is perhaps to underscore an argument that games as instructional technologies are able to do much more than engagingly deliver didactic course content. If we leverage the allegorical play element that exists in all games (because the worlds depicted in games are not real) we may open up space for collaborative critical thought and reflection on difficult and abstract course material. The idea of the allegorical build as pedagogy is to open spaces of interpretation within the game that both enrich play and are inflected by the course material. The student-player remains the key agent in this story bringing these elements together (or not) and all that we can do as instructional designers is set the conditions of possibility for the student's engagement in allegorical terms.