MinecraftEdu Teacher Tools and Strategies

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Abstract
This case study examines how teachers use tools and strategies in MinecraftEdu to monitor and moderate student behavior and to support meaningful knowledge construction among students. The study utilized data collected over a three-week period from four teachers whose students participated in the Givercraft experience. Students attended elementary and middle schools in Alaska and Minnesota and were enrolled in this virtual learning experience. Teachers were given a Community Agreement to adapt and enforce during the experience. Overall, the research data showed minimal behavior management issues due to the highly engaging nature of the game and that students effectively created meaningful knowledge construction within the virtual learning environment of the game.
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Introduction

Last fall, I helped to design the first Givercraft experience, a MinecraftEdu MOOC for students in 6th – 12th grade. Due to unexpectedly high levels of enrollment, 25 teachers and nearly 800 students participated over a three-week period; students were from elementary, middle, and high schools from Alaska and across the United States and included one class from Canada. With the high enrollment, we experienced difficulty in managing some interactions among students in the game due to increasing instances of griefing, trolling, spamming, and other misbehavior in the game. Most of the teachers were inexperienced Minecraft players and were unable to effectively monitor and moderate student behavior in the game. This spring, we hosted another Givercraft experience with much smaller numbers and while two teachers are returning from the previous experience in the fall, all teachers have limited experience managing students in the game. Teachers will participate in a training course that will prepare them with the basic knowledge of MinecraftEdu teacher tools and have been provided with a Community Agreement to use in supporting their students in the game.

Review of the Literature

Technology is no longer a tool to simply enhance or supplement learning in a traditional or physical classroom setting. Classrooms have evolved from the teachers as the primary user of a technology tool, to groups of students using various tools to demonstrate mastery and learning, and now to individual student use of digital tools and personalized tracking of progress. Today we are in a period of virtual learning environments, some of which have replaced the physical and traditional classroom setting. My review of the literature shows that virtual learning
environments can foster meaningful student learning and interactions through a variety of theoretical frameworks that support students to construct and interact with others.

Virtual learning environments help students to understand how they (and others) learn, how they contribute to a learning community of their peers, and how they perceive themselves. There is no assertion or assumption that virtual learning environments can (nor should they) replace traditional or physical learning environments, but they can be designed to meet specific learning objectives in complex ways that go beyond a classroom. Because the purpose and design of each learning environment meets different objectives, different learning theories can inform teachers how to foster meaningful student learning and interactions. “The philosophy behind the software matters, as does the context of its usage” (Bers, 2001). There are two contrasting approaches to how students construct and interact within virtual learning environments. The first is that students have voice and choice in how they participate in the virtual learning environment as far as making decisions about how to spend their time, what to construct, and how to interact within the community. The second approach is that the teacher guides student learning and behavior by scaffolding tasks until the students gain independence and can accomplish increasingly complex tasks.

There are several strategies used in studies where students have ownership over their learning choices (within the learning objectives) that demonstrate how they construct and interact with others in a virtual learning environment. A “microcommunity” (Bers, 2001) can be a safe space for students to explore choices and direct their learning with peers who interact within a virtual environment. However, the students should also have "face time" outside of the virtual microcommunity to discuss and reflect on their process and progress, not necessarily as individuals reflecting, but meta-cognitive group discussions and interactions. Each student is
then able to construct their own experiences and products but within the context of the microcommunity as well as alongside their peers. When students have the power and flexibility to choose what products to create, they learn from their own process and choices as well as establish their identity and place within the community through these choices. A virtual microcommunity also provides an opportunity for students to explore and experiment in a safe and supportive environment. Virtual environments also allow students to try new things, ideas, and strategies that cannot be replicated in a classroom (due to time, space, and resources). This virtual microcommunity becomes a construction in and of itself by its members. The visual and cultural landscape of the community changes and evolves as its members construct new knowledge, products, and experiences (Silseth, 2012). If the students return to the community with a new lesson or topic, even the new constructs would build on existing or previous knowledge, products, and experiences with a new context. The possibility of more complex problem solving and critical thinking (and reflection or metacognitive skills) will increase because students have more confidence in building on their previous experiences.

An important factor in the virtual learning environment is the identity construction of each student - how they look (character or avatar), their username, what they do, how they interact or communicate with others and with the content. There is a unique quality of a virtual learning microcommunity for teachers and students to make connections between dialogue and interactions. Dialogue takes places in various forms (chat, products, game mechanics, discussions, etc.) and influences the interactions that students have with each other, their teacher, and with the content. Student behaviors are just as important as the products and dialogue in demonstrating learning and knowledge construction (Silseth, 2012).
The construction of products or objects is often seen as the obvious learning objective in a virtual learning environment. The student’s objective is usually to demonstrate learning through an observable and measureable product (a structure, a town, a book, navigate a maze and solve a puzzle, etc.). However, objects in virtual learning microcommunities can also be constructed to represent ideas, concepts, values, identity, or anything else that can be interpreted with a visual product (Bers, 2001). A product created outside of the virtual environment, can demonstrate context and application of knowledge construction, but should not replace the assessment of what is created within the virtual microcommunity. Otherwise, the learning experience did not take advantage of the three-dimensional experience and could possibly be replicated by watching a video, visually examining an object, or looking up information online.

While the average teacher is not going to examine the meta-data from the virtual learning environment, there are other ways to capture and reflect on the learning within the virtual microcommunity (observations, interviews, screencasting, chat transcripts, time-lapse screenshots, etc.).

While there are effective strategies for this approach, there are gaps and questions to consider. There is very little discussion or studies about behavior management in virtual learning communities; no learning environment is conflict-free and with the various learning styles, needs and interests (differentiation) of students, this approach can be problematic for a teacher to keep up with the students within the virtual learning environment. The classroom culture will carry over into a virtual learning environment, but is made more complex because the teacher does not have a line of sight with all of the students in the various ways that they can move and interact within the game. Another problematic area is the amount of data generated and collected from students in this approach; even if a teacher is targeting specific objectives for
assessment, the many formative assessments that can be used are varied and deserve attention but can create a virtual mountain of evidence for a teacher to sift through. A third important question in this approach is the technological infrastructure and expertise needed to implement this virtual learning environment. Most teachers need to spend significant time learning new technology tools and ensuring that they are used appropriately and effectively to assist or enhance student learning. Many technology tools used in education already have game design and mechanics that make them easier to use or allow the teacher to have a relatively simpler role in managing or utilizing the tool. It makes sense that a virtual learning environment that enables more complex learning experiences for students, will also involve more effort from the teacher to initially learn and manage the environment. The research is based on technology tools that are designed for specific content and learning objectives; while this might make it easier to implement, it doesn't justify a teacher spending a lot of effort to learn one tool if it cannot be used to study other content. On the other hand, this might actually support future research for MinecraftEdu because the game lends itself to any content that a teacher wants to use; learning the technology tools and related strategies will still happen initially as with any other tool, but the teacher can improve skills and use in other content areas with minimal effort after an initial implementation.

The research supporting an approach where the teacher is a guide for students examines strategies from sociocultural and cognitivist learning theory frameworks. Scaffolding is an overarching theme in these studies and strategies used include fading, collaborative learning and peer tutoring, cognitive apprenticeship, and reward mechanisms based on internal and external motivations. With scaffolding and fading, students are supported with specific tools and methods that allow them to practice and gain confidence and proficiency to eventually take
ownership of their own learning. With this approach, it is important that technology tools are easy to use if the goal not necessarily to learn the tools, but instead as the means to accomplish tasks. The tools can actually be a scaffolding technique to guiding the students and could possibly be taken away or changed to let the student move on to more complex tasks.

A distinction is also made in the use of scaffolding; “blanket scaffolding” (Obikwelu, Read, & Sim, 2013) is the typical method of guiding a group of students through a uniform process of scaffolding tools. So while the tools can help students appropriately build to more complex tasks, they do not acknowledge the individual levels of skills, knowledge, and experiences of students. Instead, the scaffolding is implemented in a way that is easier but not necessarily appropriate to the individual learners. Collaborative learning and peer tutoring are other strategies with a scaffolding approach (Obikwelu, et al, 2013). The distinction made here in comparison with the constructivist approach is that there are distinct roles for students to guide how they interact and construct knowledge in the virtual learning environment. Similar to a group project in the physical classroom or a peer-tutoring group, there are individual roles for students that help them understand what is expected and how they should contribute to the learning of others. A cognitive apprenticeship model is also used frequently to illustrate scaffolding between an expert (teacher) and a novice (student). This can also be applied to the peer tutoring strategy where an expert peer helps a notice peer to gain or improve skills where the novice student can improve their skills, knowledge, or proficiency, and the expert student can improve their skills for modeling, synthesizing, and mentoring. In the cognitive apprenticeship between the teacher and student, the teacher scaffolds learning for the student with clear benchmarks or learning objectives that demonstrate mastery or proficiency (Ramdass, 2012). As the student progresses, the teacher fades in the scaffolding role, until eventually, the student
becomes a peer to the teacher in the learning process. The student should be able to "equally" contribute in the learning process with the teacher, and be able to direct their own learning.

And finally, scaffolding is also used through rewards that reflect intrinsic and extrinsic motivations. In this model, gamification is used to engage learners in a process of learning based on earning badges and rewards for proficiency or completion of assigned tasks (Vassileva, 2012). Gamification as its own method has much research to support its use in training programs, business marketing strategies, and consumer related technologies. The same principles of appealing to a social context for earning badges and rewards also apply in virtual learning environments. Motivations are also impacted by an individual's connections with their own social circles at school, home, and in their communities.

There are also several important questions and gaps in a scaffolding approach in supporting student learning and interactions in virtual learning environments. As with the constructivist approach, how do teachers manage the scaffolding across different learning styles, needs, and interests? How is student learning supported within a virtual learning environment with such different levels of scaffolding? Does scaffolding address differentiation or is it an individualized approach to supporting students. The question of technology and game design expertise of the teacher is also an important factor in whether this approach is practical and can be implemented after an initial training period. The final question that should be noted with scaffolding in virtual learning environments is to evaluate whether the technology used is appropriate for the learning objectives if it requires too much individualization or technology expertise from the teacher.

The constructivism approach to virtual learning communities supports students to construct knowledge, identity, meta-cognitive skills, personal and meaningful products of
learning, experiments, new experiences, and a context or foundation for continuing to build through learning. Interactions in this approach support construction by allowing students to determine how they want to explore the content, impact the learning or behavior of others, establish their identity within their peer learning community, reflect on their learning, and demonstrate learning needs and interests to their teacher. A socio-cultural and cognitivism approach can be applied using scaffolding through fading, peer tutoring, cognitive apprenticeship, gamification, and use of reward mechanisms. Students are motivated intrinsically based on their own perceptions of self, gamer type, learning style, and personality; external motivations can be peer recognition and reputation, identity and standing within the learning environment, grades, etc.

My research will focus on teacher tools and strategies within the MinecraftEdu virtual learning environment through the Givercraft project. Teachers will learn the teacher tools to manage the student environment and will decide which strategies to implement with their students. I will observe and document the teacher’s role in managing the game environment and supporting meaningful and effective student interactions; my research will examine what strategies were effective and what conditions and factors contributed to meaningful and effective student interactions.

**Theoretical Framework**

The literature included in my research study focuses on three overall themes about learning in virtual environments. First, constructivist and social learning theories can and should guide game design and mechanics within virtual learning environments in order to support students to achieve desired learning outcomes. Second, game design and mechanics determine how students construct knowledge in a virtual learning environment; knowledge is a general
term that can indicate identity, meta-cognitive skills, personal and meaningful products of learning, experiments, new experiences, and a context or foundation for continued knowledge construction. Third, game design and mechanics support meaningful, effective, and appropriate student interactions or dialogue; interactions or dialogue occurs between student-content, student-student, student-teacher, and student-environment.

The purpose of this research study, will be to examine constructivist and social learning game design and mechanics used by teachers in the Givercraft experience. What teacher tools and strategies support students’ meaningful knowledge construction in MinecraftEdu? How can teachers use tools and strategies within MinecraftEdu to monitor and moderate student behavior and interactions?

**Research Design**

In this study on teacher tools and strategies for supporting, monitoring, and moderating student behavior in MinecraftEdu, I take a qualitative inquiry approach examining a real world situation in the Givercraft experience, without manipulating it.

I take both an interpretivist and constructivist approach (Mackenzie & Knipe, 2006) in this research through an observational case study design, “an intensive analysis of an individual unit (as a person or community) stressing developmental factors in relation to environment” (Merriam-Webster, 2015). Teachers participating in the Givercraft experience will be managing their students in a virtual learning environment through MinecraftEdu. Individual classroom management tools and strategies used by Givercraft teachers will need to be adapted to accommodate this additional or extended learning environment. The teachers will attend a teacher training focused on tools and strategies used for supporting, monitoring, and moderating students in the MinecraftEdu gameworld.
Participants

Participants are four (4) 6th, 7th, and 8th grade teachers at elementary and middle schools in Anchorage, Alaska and Duluth, Minnesota. Participants are chosen because they registered their respective classes in the Givercraft experience, a MinecraftEdu online course facilitated by graduate students at the University of Alaska Southeast.

Interviews

Individual teacher interviews consisting of four (4) questions about classroom management, Teacher Tools and strategies used in the MinecraftEdu game world will take place during the first week of data collection based on individual times set up with each teacher (See Appendix A for Interview Protocol for Teachers). The interviews will happen after teachers have completed the teacher training because it will include an overview of MinecraftEdu tools and strategies for teachers to use with their students. Individual interviews will be used because teachers have limited time to prepare for the Givercraft experience and coordinating a group interview will be difficult to arrange.

Observations

Observations will occur in the MinecraftEdu game world during weekdays from March 2 – 27, 2015 between 7:00 a.m. – 3:30 p.m. These times are chosen because each class is in the MinecraftEdu game world at a different time based on their class schedule (See Appendix B for the Observational Protocol for the MinecraftEdu game world).

Field Notes

Field notes are completed immediately following the observations (See Appendix C for the Field Notes Template).

Documents
The documents to be analyzed are records of teacher strategy, student behavior and student products. The daily teacher Google Hangout chat history will be analyzed for the entire Givercraft experience (See Appendix D for the sample Google Hangout chat history). The Givercraft Teachers have joined a Google Group, *The Givercraft Community*, which is a forum for participating teachers to share progress, successes, issues, concerns, and questions throughout the Givercraft experience. The topic threads on teacher strategy and use of teacher tools will be analyzed during the data collection period (See Appendix E for a sample topic thread history from The Givercraft Community Google Group). The in-game MinecraftEdu chat tool is used by any player (teacher or student) to communicate with others in the game. The daily history from the MinecraftEdu game world will be analyzed for the data collection period (See Appendix F for a sample chat from the MinecraftEdu game world). Students participating in Givercraft will post screenshots and reflections of their work to individual student Wikispaces pages. These pages will be analyzed for references to and reflections of teachers’ use of strategies and tools within the MinecraftEdu world (See Appendix G for a sample student Wikispaces page). These documents were chosen because teachers will use these tools to share and reflect on their use of tools and strategies within the MinecraftEdu game world. Individual student Wikispaces pages were chosen because students will post reflection from their experiences in the Minecrafted game world.

**Analysis**

Internal validity in this study will be accomplished through triangulation, the analysis of multiple sources of qualitative data (Merriam, 2009). Content analysis is used by researchers to “quantify and analyze the presence, meanings and relationships of such words and concepts, then make inferences about the messages within the texts, the writer(s), the audience, and even the
culture and time of which these are a part” (Busch, et al., 2015). A content analysis of interviews, observations, and documents will be conducted to examine the effectiveness of teacher tools and strategies used by teachers during the Givercraft experience to support, monitor, and moderate student behavior in MinecraftEdu.

Data/Results

Interviews

Overall, interview responses demonstrate that Givercraft teachers believed that minimal behavioral management issues were a result of the engaging MinecraftEdu experience.

- “During one of the scenarios, my principal observed the students' interaction with the Givercraft experience. She wrote the following in my observation notes:

  ‘A mom was picking up one of her younger children on Thursday, but did not pick up her sixth grader, because her child told her she had an important project she was working on in Mr. Williams's class and did not want to miss it or leave early. That is evidence that students were engaged in the project! Nicely done.’

  In addition, I had also received a number of positive feedback from parents, themselves! Overall, this was truly a great experience all around. Thank you for allowing me to be a part of the Givercraft experience, and I hope to utilize it again the future.”

- “There weren't many surprises or problems. I had some issues in the round I am currently in with one student. I thought it was a matter of gamer differentiation, but it turned out he was frustrated by a group member who was too controlling. :)

- “There were very few behavioral issues when utilizing Givercraft, and I credit the lack of issues to the overall engagement of the program! I have a handful of students who have either chronic behavior issues, anger management issues, and/or are on a specified
behavior plan. With Givercraft---and I bragged to my colleagues regarding this---I viewed these students in an entirely different light. Those students were actively engaged in the program, positively engaging and communicating with their peers, and took on positive leadership roles that made our scenarios successful.”

Teachers reported that they used the Givercraft Community Agreement to set expectations for the experience but did not have to enforce the steps for removing students from the game.

- “Each student received a copy of the agreement, which was signed and collected. During our experience, I did not need to refer to the agreement, because the expectations were clear from the very beginning; therefore, any behavior issues were almost non-existent.”
- “Yes, I did use the agreement and will continue to use it in future iterations of this project.”
- “In addition, the lack of behavioral issues was also due to the Givercraft Community Agreement, overall engagement with the program, and mutual respect between the students, teacher, and those from the university who were engaged with us in the experience.”

Teachers varied in their approach to classroom management within the game but agreed that their presence in the game was needed.

- “I manage my classroom based on mutual respect with all of my students. That expectation continued in the Givercraft world. Students knew that in order to be successful with the Givercraft experience, we had to maintain our focus, work as a team to successfully complete our scenarios, and---above all---have fun with the experience!”
• “[Being in the game] was different in that [in my classroom] I usually go around from group to group and talk with them about what they are doing/discussing, making etc. [During Givercraft] I spend very little time with whole group instruction outside of going over directions. However, it's sometimes challenging to not grade or answer email when they are engaged and working in class. With Givercraft, there's no way to do anything other than to be present and in the game with them. That's how it worked for me. “
• “Working behind the scenes without saying much if anything worked very well.”
• “I used the [challenge] maze a couple of times and suspect I'll get asked by s[tudent]s to get "sent" there. They liked it and asked for it as a break from what they were doing, I only used it once as an experiment in refocusing a student who was having trouble with his group. “
• “With the scenarios that we completed, I found that grouping students into small groups to tackle a specific structure in the community and/or memory worked best for time management.”

Teachers also reported that students who were experienced Minecraft players had a significant role and impact on teaching others how to play the game.

• “The other thing that is different, is that it is much easier to not only see, but use the other experts in the room. There were always s[tudent]s who could help me with something and also s[tudent]s who needed my help. It was a natural environment for all of us learning and teaching as we went.”
• “Prior to beginning MinecraftEDU, I also called on students who were self-designated "Minecraft Experts" to help those students who had never played Minecraft in the past. This proved to be useful in many ways, including shared responsibilities between teacher
and student, engaging those students who are typically not keen to leadership roles, and
promoting peer relationships between students who wouldn't normally engage with each
other.”

One teacher referenced the ability to use specific teacher tools as an enjoyable aspect of
managing students in the game.

- “I loved the ability to give, mute, freeze, chat and teleport. “

**Observations/Field Notes**

All four teachers were observed for entire class periods on random days throughout the
three weeks. Class periods ranged from 50 – 120 minutes, although classes did not stay in the
game for entire class periods, presumably due to classroom protocols at the beginning and
ending of each class period (announcements, distribution of laptops, logging in and out of the
game, writing on wikispace pages, etc.). All teachers logged into the game in Teacher mode,
allowing them access to the Teacher Menu and tools. Teachers were always in Creative mode,
even when students were switched to Survival mode during the second and third scenarios during
the experience. I usually observed teachers in Spectate (invisible) mode, however, when they
would teleport and I would have to “follow” them, my Spectate mode would be disabled until I
enabled it again once I had “arrived”.

**Table 1. Teacher Tools & Strategies Used by Each Teacher in MinecraftEdu**

<table>
<thead>
<tr>
<th>Teacher Tool or Strategy</th>
<th>Teacher A</th>
<th>Teacher B</th>
<th>Teacher C</th>
<th>Teacher D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teleported students</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Used the Chat tool – to engage and monitor progress</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Used Build Tools</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Used Special Blocks – border, teleport, home, etc.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Froze or Muted students</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Flying, Teleporting or Walking in the game to observe or check in with students</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
Time management – student teams or grouping, reminders, exit protocol, 5-10 minute warning, etc. ✓ ✓ ✓ ✓

Made items or objects to give to students ✓ ✓ ✓ ✓

Helped students build, repair, or break structures ✓ ✓ ✓ ✓

Used “Give” option to distribute items/supplies ✓ ✓ ✓ ✓

Used the challenge maze/secret communities ✓ ✓ ✓ ✓

Managed game environment – world or student game mode, weather, daylight time, animals, etc. ✓ ✓ ✓ ✓

All teachers used their ability to fly and teleport to students but also walked around their zones, particularly to be able to enter buildings or structures and to read signs. Each teacher had a particular routine and strategy for participating in the game. Teacher tools and strategies were used to engage students, monitor progress, mediate behavior, assist or help students, change or manage the game environment, and make announcements or reminders to keep students on task.

**Documents**

Only one teacher used the Google Hangout chat to communicate questions and issues related to managing the game or implementing the unit plan. The same teacher reposted some of the same issues in the Google Group forum; the other teachers did not use this tool to communicate with each other or to relay any issues or questions.

The in-game MinecraftEdu chat tool yielded the largest amount of data; the chat history spanned the entire three-week Givercraft experience and was most actively used by students. The chat tool served as the main form of communication in the game and unless players used a “whisper” command (/tell username), their messages were viewable by anyone in the game.

Teachers used the chat to engage students, give directions, answer questions, offer or ask for help, check on progress or status of each team, make announcements, troubleshoot game or technical issues, moderate behavioral issues, and to communicate with specific students. Teachers used the chat almost exclusively to communicate with students and occasionally with
Students used the chat primarily to exchange dialogue with other students including students who were from other classes or schools; they also frequently chatted with game designers who were present in the game. Student used the chat to socialize, collaborate, ask for help or offer assistance to others, discuss build tasks or details about tools or supplies needed and used, and to update others about their progress in building.

Two teachers used the Wikispaces site for their students to host individual pages, while the other two teachers used Google Drive, which did not allow me access to their pages. There were 132 individual student Wikispaces pages and only one teacher created a class home page (Figure 2) that was used for giving instructions.

Figure 2. Teacher’s Home Page on Givercraft Wikispaces Site

Welcome to Ms. Oliveri-Barton’s wiki page!

Students: Your "warm up" will be to look at this page before logging into Minecraft every day.

- Make sure you look over the news of the day as well as what questions you need to answer in your own daily journaling. Make sure you set up your daily heading like I did with the day number and date (Day 1: March 2, 2015). If you are absent, you need to still create an entry for that day and put "Absent" under the day's heading.
- Every day I will set an alarm to log off at 10 minutes before class. If you want to have enough time to journal, you MUST log out of Minecraft at that time.
- Although you are graded on your work in Minecraft, your mastery grade will be coming from the daily journaling!

Day 5: March 16, 2015

1. Any missing signed Parent Letter/Student Agreement forms need to be turned in.
2. If you still need to take The Giver Final Review, please finish that before seeing me about getting onto Minecraft.
3. The world has turned into something new and different now that Jonas and Gabriel have left the community. The Giver is still around to help those who start having memories, but as you find memories you will want to build those to make sure everyone has an understanding of how the world has changed. Good luck!
4. I will stop you at 10 minutes before the end of the hour to write about your new experiences. Make sure you take the perspective of one of the community members who is seeing these things for the first time.
On the wiki pages, students were tasked with reporting what they had done in the game by posting screenshots of their work and writing a reflective journal entry. Students were graded on this page according to the ISTE NETS, Alaska State, or Common Core Standards selected by their teachers. The students whose teacher did not create a home page, did not appear to have finished updating their wikispaces pages by the end of data collection. For some students, the writing only seemed to go far as an introduction or the first scenario (the first week of Givercraft). After the experience ended the following week, when I checked the pages again, there were many pages that had been updated. This teacher used a mobile lab for the three classes that participated and most likely this left very little time outside of the game to write on the student wiki pages. The teacher who created a home page, included page formatting instructions, daily tasks and instructions (organized by date), and links to all student pages, organized by class section. Student wiki pages were titled by each student’s username in the game. Many students posted screenshots of their building and playing in the game, interesting structures or locations that they saw or visited, and memories they built as part of their tasks in the last scenario. Most of the writing is explanatory but several students wrote journal entries in character from living the story in the game (see Figure 3).

Figure 3. Student Wiki Page Entry Written In Character Perspective
Several themes emerged from examining the content in the MinecraftEdu game chat history and the student wiki pages. Words that were closely related were grouped together and the most frequently used words in both sets of documents (Figure 4) became the basis for developing the themes.

Figure 4. *Most Frequently Used Words From Game Chat & Student Wiki Pages*
Themes expressed as word groups were evident in most of the data (Table 2) except for the Google Group forum which was minimally used by teachers.

Table 2. Word Group Themes Found In Data Documents

<table>
<thead>
<tr>
<th>Data Document</th>
<th>Build</th>
<th>Built</th>
<th>Made</th>
<th>Word Group Themes</th>
<th>Find</th>
<th>Look</th>
<th>Made</th>
<th>Go</th>
<th>Teleport</th>
<th>Help</th>
</tr>
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<tr>
<td>Google Group Forum</td>
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<td>Google Hangout Chat</td>
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<td>✓</td>
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<tr>
<td>Teacher Observations</td>
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<td>Student Wiki Pages</td>
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</tbody>
</table>

The data documents indicated four themes, (1) building as the primary task for students allowed them to create visual structures and objects and gave students ownership over their work; (2) An important aspect of interaction between and among students, teachers, content, and game world was the ability to search, discover, and view within the game; (3) Mobility and access to specific areas in the game allowed students and teachers to experience a virtual community in the setting.
of the story as well as opportunities for collaboration and interaction with others throughout the
game environment; and (4) Students and teachers developed a culture of helping, supporting,
assisting, and collaborating within the game environment.

Discussion

Several significant factors contributed to the lack of behavioral management issues
during the Givercraft experience and the capacity for students to meaningfully construct
knowledge in the game. First, the virtual and engaging experience of playing MinecraftEdu to
demonstrate understanding of the book was appealing to students. While teachers reasonably
expected that MinecraftEdu would be engaging for students, they did not realize the extent to
which students would be motivated to learn in a virtual game environment. One teacher reported
in the interviews that the game was so engaging that the teacher only needed to be present and
that students went about their tasks with minimal direct supervision or instruction.

In addition to the enticing nature of “playing” a game to learn, the experience was shared
with students from other schools which added to the novelty of the experience. Participating as
one class among a virtual community of learners created a dynamic where students were not
competing with others necessarily but rather contributing to a shared learning experience. At
first the students did not interact much with other classes and due to the nature of the first
scenario, were primarily focused on their building tasks within the confines (borders) of their
respective communities in the game. They worked in small teams to build structures that
reflected their understanding of the book; they also helped one another (and their teachers) learn
how to use the game controls, items and tools in their player inventory, and strategized how best
to use the time, space, and tools available to complete their tasks.
As the experience progressed and the scenarios required students to “leave” their communities, they were able to interact with other students and explore communities built by other classes. These later scenarios required students to survive, build, and interact with others throughout the game as they experienced the setting of the novel within the game; as students demonstrate on their wiki pages (Figure 5), it was the interaction with other student in the game that provided engagement in living out the plot themes from the story.

Figure 5. *Student wiki page shows engagement through interactions with others*

---

3/30/2 015 Givercraft - BartWILLIAM

Day: 1 March 2015  The quiz said my type of gamer was aggressor which I dont think describes me and it dose which I think I am part of about most of the type because there is no way you are only one. That would be saying that someone is only part of one ethnic group. I cant wait to play minecraft and build memories. I have played this game before so I know were to start and what to do when i start and what to do.

Day: 5 March 2015  I had a weird experience there was this bright light rising it is a beautiful sight to see. I also felt pain and hunger for the first time but luckily I got food from a tree a thing called a tree, I broke. My house I made in the side of the house. I watched a thing called a sun set it was beautiful. I feel lonely because there is no other people that I know of that got out.
Day: 6 March 2015  I found a memory about a thing called a dessert. I also found more people some were friendly and some also took items from me. It sucks that they took items from me but I can still at least get items. I am glad that I have found some one it feel great to explore with more people. I trust him which is good because trust out here matters and it is better to be in a group so people will leave you alone.

Day: 7 March 2015  I have encountered more people and they were Friendly. We are now in a cave and traveling we have lost one person on the way and went into a thing called a cave. We plan on finding him so we can be greater in numbers. I finally found more food and we have been living off of mushroom stew. To make it I need to different color mushrooms brown and red.
I have found Iron in a cave. It goes under ground and goes really far down and sometimes you can find stuff called lava and it is orange. If you touch it, it will burn you and can kill you. One of my friends almost touch it but got burned by the heat before he had the chance to touch it. It also has water in it and it pushes you and if it is close to lava it can push you in the lava.

Day:9 March 2015  I made a thing called a swimming pool but I made my own design instead of a square or circle. I made a stair looking pool so you can sit and just let the water flow down to the bottom. The water looks different then it did in community its blue its a thing called a color there is more then one. The main colors are blue,yellow,black,white,red.
Day: 10 March 2015  I found a thing called a maze and it was very tricky for me to get out of. I was lucky to find my way out but there were some people who didn't make it out. My friends also got out to. There was water that I had to swim threw and had to find air pockets. A couple of people died in the water and one that died they pick up all of his stuff in the water. That shows how desperate people are and how greedy they are.

Second, the Givercraft Community Agreement (Appendix J) clearly articulated the behavioral expectations for students, consequences for misbehavior, and the fair process for addressing those actions. Having parents give consent for students to participate also reinforced the importance of the agreement; and while the agreement specified behaviors that were unacceptable in the Givercraft Community, it also focused on what was expected and needed from students as important members of the community within and outside of the game. Students
were asked and expected to contribute ideas, knowledge, experience, and their understanding of the story through this experience; this laid an important foundation for developing the game culture of collaboration and shared learning, not just between and among students, but with teachers as well.

Third, teachers used the game tools to manage the game environment in much the same way they would in their respective classrooms. Teachers maintained a “physical” presence in the classroom as well as the game, they were able to give students “elbow” room in each community (to explore and build with as much room as needed), and they provided supplies and instructions (through the game chat). The use of teacher tools was especially significant, because there was not a uniform way to manage students or the game environment; each teacher developed a strategy over the course of the Givercraft experience and used the tools to complement their own teaching styles.

While the virtual learning environment was a new experience for many students, the presence of their regular classroom teachers meant that the “same” classroom rules and expectations applied in the game. Student misbehavior in the game environment was not without consequences, teachers could still limit the abilities and mobility of students (freeze and mute tools), which seemed to be an effective deterrent to misbehavior in the game. Those few students that did misbehave, were usually testing boundaries and use of items in their inventories (potions, weapons, fire/lava, water, etc.), and the incidents were minor and short-lived. One aspect of the game management that

A fourth factor in minimal student misbehavior that also contributed to meaningful knowledge construction among students, was the positive, collaborative, and social game culture that evolved throughout the Givercraft experience. The in-game chat history demonstrated how
students communicated positively in the game in order to socialize and to help or receive help from others. Table 3 (Appendix K) lists the top ten most frequently used words in the MinecraftEdu game chat during the three weeks of the Givercraft Experience. The word “hi” and other forms of greeting (hello, what’s up, greetings, bye, etc.) were the most commonly used words in the game chat. Socializing became a natural aspect of the game culture through the chat; students “talked” while they worked at building structures, mining, paving roads, and other tasks related to each scenario.

The use of “please”, “thank” you, “you’re welcome”, “no problem”, were all very common in the game; when help, advice, or compliments were given or received, students were polite and appreciative in the chat. In the interview responses, Teacher A reinforced this positive and collaborative game culture by reporting that “I manage my classroom based on mutual respect with all of my students. That expectation continued in the Givercraft world. Students knew that in order to be successful with the Givercraft experience, we had to maintain our focus, work as a team to successfully complete our scenarios, and---above all---have fun with the experience!” These are all indicators of the positive and social community that evolved throughout the Givercraft experience.

Another important aspect of this game culture was the high value placed on collaboration with or helping others. In my observations and through the chat history, it was apparent that students benefitted from working in small teams; the work was easier and sharing ideas helped less experienced builders to have confidence in contributing to the team effort. Students used the chat to report their progress on building, to offer help to anyone who needed it, to request help when a project was too difficult or time consuming, and to ask specific questions about game
play when they were stuck (what tools or materials to use, how wide to make the road, how to cook food, etc.).

The most significant discovery that I made through examination of the chat history, was that the game culture and virtual environment redefined how meaningful class discussions and collaboration could be supported in the game. The game chat is open and available for any player to participate or view once they have logged into the game. When a question is asked or a statement is made in the chat, even if the message is directed at a specific student or team of students, every player in the game is able to see the conversation; not only that, others could choose to participate in that conversation, particularly if they had knowledge or experience that could inform the discussion. In fact, it was very common for multiple conversations to be taking place simultaneously in the game – social chatting, teachers asking for team updates, someone asking for help in crafting, a team member giving instructions about what materials to use and where help was needed, someone offering help while yet another student was asking to be teleported.

If you imagine a classroom where all of these conversations are taking place, not to mention the actual physical behaviors of each student in the room, it can be quite a chaotic environment not only for students to learn but for teachers to be able to adequately and effectively support learning. However, in the game, these simultaneous conversations became the norm rather than distractions; students quickly learned how to “play” and build while chatting and they could easily participate in several conversations if they wished. Students were able to multi-task or simply tune out the conversation and teachers could easily monitor the conversations and collaboration taking place within and among various teams. In the absence of physical “noise” that would typically accompany these conversations in the classroom, the
students were able to openly discuss, collaborate, and socialize with any and all players in the game. For students who worked well in a quieter environment, they could easily ignore the chat; for the socializers in the game, they were highly engaged in the chat while they went about their work. When some students would try to “spam” the chat, they were often ignored or confronted by others and asked to stop spamming; if the behavior became too disruptive or a student would complain in the chat, the offending student could easily be muted by the teacher and the chat would go on.

When you consider the skills required to multi-task in the game - building, chatting, planning, moving, decision-making, problem-solving, etc. it is impressive to see how quickly students could adapt in the virtual learning environment compared to the challenges of performing all of those skills in the physical classroom. This open dialogue and shared “space” that occurred in the chat was a major influence in the game culture but also an indicator that students can self-regulate and very quickly develop norms and habits that are conducive to productivity and meaningful interactions.

Conclusion & Next Steps

This research study has expanded my understanding and perspective about teaching with MinecraftEdu and other virtual learning environments. The focus of this research study was to examine what tools and strategies teachers use in MinecraftEdu to monitor and moderate student behavior, and how those tools and strategies support meaningful knowledge construction by students within the virtual environment of the game. I will be presenting a summary of my research in a Google “un-conference with my peer learning community as well as the teachers that I observed and other Givercraft/Survivalcraft teachers that I have worked with using MinecraftEdu. My peers in my other graduate courses that worked on teacher training (OLTAK)
and in developing differentiation tools (Diffi-Mooc) for the experience might be able to use what I learned from my research to reflect on their own work with MinecraftEdu during this both the Givercraft and Survivalcraft experiences. To extend the impact of this research study, I will also share the results with the Google Group for teachers using MinecraftEdu.

Through this study, I discovered that teachers can effectively maintain a physical presence in the game similar to one in their physical classroom. The Teacher Tools in MinecraftEdu allow teachers to manage the game according to their own classroom management styles and allow monitoring of student progress within the game. The opportunities for formative assessment within MinecraftEdu demonstrated how students were constructing their understanding of the content as a virtual learning community, they were developing a positive, dynamic, and engaging culture of collaboration, and were communicating through the in-game chat to solve problems and share their skills and knowledge in an open discussion accessible by all students.

Teachers would are currently using MinecraftEdu with their students can benefit from continuing to study effective use of tools and strategies in exploring other content areas. This research could also include a study of how learning and behaviors constructed within the game impact interactions and collaboration in the physical classroom. Another topic to explore is how students can effectively and meaningfully translate what they learn in the game, to create artifacts of learning outside of the game, particularly in sharing with other stakeholders (parents, friends, and other students). And finally, it would be worthwhile to study student behavior, interactions, and knowledge construction in MinecraftEdu as a way to inform game designers and developers about what elements are needed to engage and support learners in virtual learning games. This could be particularly helpful in recommending future improvements or
modifications to MinecraftEdu; if teachers can study, determine, and articulate tools or capabilities that could be added to the game, allowing them to better support their learners.
References


Appendix A

Interview Protocol for Teachers

Date of interview:

Time of interview:

Interviewer:

Interviewee:

(Thank the interviewee)

(Briefly describe the project)

Questions:

1. What is your classroom management style?

2. How will you use the Givercraft Community Agreement with your students?

3. Do you anticipate any behavioral management issues during Givercraft? Why?

4. Which tools and strategies will you use in the MinecraftEdu game world?

(Thank the interviewee)

(Assure the interviewee of your confidentiality)
Appendix B

Observation Protocol for the MinecraftEdu game world

Date of observation:

Time of observation:

Observer:

Place/participants observed:

What will be observed?

1. Teachers’ participation as a character in the game world.

2. Teachers’ process for managing student behavior and/or enforcement of the Givercraft Community Agreement.

3. Teachers using MinecraftEdu tools to manage students in the game world.
Appendix C

Field Notes Template

<table>
<thead>
<tr>
<th>DATE</th>
<th>TEACHER</th>
<th>TIME</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

Teachers’ participation as a character in the game world.

*Descriptive notes* | *Reflective notes*

<table>
<thead>
<tr>
<th>DATE</th>
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<th>TIME</th>
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</table>

Teachers’ process for managing student behavior and/or enforcement of the Givercraft Community Agreement.

*Descriptive notes* | *Reflective notes*

<table>
<thead>
<tr>
<th>DATE</th>
<th>TEACHER</th>
<th>TIME</th>
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</table>

Teachers using MinecraftEdu tools to manage students in the game world.

*Descriptive notes* | *Reflective notes*
Appendix D

Sample Google Hangout Chat History

Hangout with Lee Graham PhD, Megan Morton, Nathan Adams and 12 others

December 12, 2014

J Mia Kuartei - 8:45 AM Good Morning Everyone!!!! Webinar starts in 15 minutes!!!

Jessica Roodvoets - 8:47 AM did you send the link?

Lori Durant - 8:47 AM no link yet

J Mia Kuartei - 8:47 AM https://plus.google.com/u/0/events/ck3e6dcnh3vliond91mebghf4q8

Lori Durant - 8:48 AM is this the student participation link or the view link?

J Mia Kuartei - 8:48 AM sorry this is for everyone else participants will get one from Dr. Lee any minute now

Lee Graham PhD - 8:50 AM We have 5 students in

Lori Durant - 8:51 AM we still don't have the live link

our student is wired and ready - no live link er student participation link

Lee Graham PhD - 8:51 AM

https://plus.google.com/hangouts/_/hoaevent/AP36tYcVtkWJY1Cfz115UmHfHF2XSb

fuD_1yiCvkAj0oVUTByKIHA Live link here I have sent it 3 times!

I am hoping we are not having an issue

Jessica Roodvoets - 8:52 AM my student is almost in

J Mia Kuartei - 8:52 AM looks like you sent it to Matt Whittaker did you sent it to Lori?

Lori Durant - 8:52 AM ah - I was hoping to get it too just in case
Appendix E

Sample Topic Thread History from The Givercraft Community Google Group

Google Groups

Re: screenshots question

mwalker <mwalker@caldwellschools.com> Nov 16, 2014 10:06 PM

Posted in group: The GiverCraft Community

screenshot info if you press print screen, it will copy the current screen to the clipboard, at whichpoint students would need to paste it into paint or another image editing program to save it. If they take another screen shot without saving the first, it is replaced. pressing F2 in the game will take a screenshot and save it to the screenshots folder within the minecraft folder; whether or not students will be able to access that folder on their computers will depend on how securities/permissions are set up at your school.

However you end up taking the screen shots  F1 will hide everything for a cleaner picture, and F5 will show your character's avatar if you want them in the picture (press once for behind, twice for in front, and three times resets the camera to 1st person)

On Sunday, November 16, 2014 6:50:20 PM UTC5, rebecca.hartwell wrote: Hello,

I was teaching my students how to take screenshots and save them in a folder on their desktop using the snipping tool for PCs, and many of my experienced Minecraft students said that there is an easier way. They said that in Minecraft, you can just press "F something (I forget which number)." They also said that it automatically saves in this one spot (that I also forget where, but many of them knew). Will these functions be the same in GiverCraft, or should I have them take a screen shot the way I know (using the snipping tool) and save it to a folder that they make on their desktop?
Appendix F

Sample Chat from the MinecraftEdu Game World
Appendix G

Sample Student Wikispaces Page

RooJasiel

My GiverCraft Page

I am RooJasiel. I liked the ending of the book The Giver. my favorite part was when Jonas became the new receiver. Yesterday RooJoshua and I were building the Giver's room. We almost finished the room but we didn't have enough time to build. Today RooJoshua and I finished the lobby and the room. We then decided to help RooOscar, RooBrandon, RooLyes, RooAlessandro, and RooAlexander build the assignment hall. We didn't get to finish it all but we got a good portion done.

Today I helped make the school and recreation center. The school is made of netherbrick and is very tall. I helped in the classrooms by making the desks and making the smart board. I helped make the roof of the recreation center and fixed the entrance. The entrance wouldn't open so I fixed the redstone. I finished the assignment hall too.

Today I gave the bike path power so that it would work, but Antony said I was destroying it. Everyone said I was breaking stuff but I wasn't even there. I was fixing the giver's room and the whole building the whole time because I wasn't allowed to help. So today I added more detail to the outside of the giver's house. I did nothing else but make the outside of the giver's house so I didn't really get to build anything.
Appendix H

Google Group Topic Threads

On Friday, February 27, 2015 at 8:16:58 AM UTC-9, Mia wrote:  Post questions and issues related to use of Teacher Tools in MinecraftEdu

ghanigirl Mar 1

What is the teacher password for Minecraft? I did not see it in all the paperwork, nor any of the areas we're working in (ie. google groups, etc.). I did not write it down the day of the webinar. Can we post it in one location?

Lee Graham PhD Mar 2

It is xxxxxxxx  Lee

Mar 8 2015 Fwd: help - not sure if you saw this? - Google Groups

What should I do for my group in survival?  Is there a place I let them go or an area I open up to them?  Is there an area that I should just have my classes go to so that we don't interfere with the other groups? I was going to make some books with memories, but am not sure where to put the chests. I was thinking of putting my students into survival mode on Friday, the 13th for a little extra fun

--  Lori Durant

me (Mia) Mar 8  There is no "right" answer, here are some options that I think would work:

1. Basically they are no longer "safe" or confined to their community. They should be allowed to explore beyond their borders. Either open a gap in the border, one whole side or remove the border completely.

Each teacher can take care of their own borders so you don't have to worry about your students accidentally getting into another zone (until they open them up).

2. Change Gamemode to Survival (this will turn on hunger and energy - prompting students to find/make food to survive) an change Difficulty to Normal

3. Allow Weather Effects, Animals, and Villagers  4. I would disable "Keep Inventory"  5. Unlock "Time" so that you have day/night  6. Books can be stored anywhere that you want; just have to make sure it's a place that only you can get to?

7. Since you gave Home blocks to your students, you can also decide if they should be able to "easily" return to the community, or if you want to remove them. If you do, you can always give them out again, now that your students know how to use them.

I'd be interested to hear from others what they recommend. Mia
Appendix I

Hangout Chat History – Givercraft Support Line

Friday, February 27, 2015 8:14 AM  J Mia Kuartei changed the topic to Givercraft Support Line :

J Mia Kuartei
Hello Everyone!! This is our Givercraft Support Line (Hangout chat) during the Givercraft experience! Please continue to use Google Groups for updates, highlights, issues, questions, etc. but this is another way for us to connect quickly on questions or clarifications during the game! I have sent invites to all participating teachers and our OLTAK team (teacher trainers), so we can keep in touch over the next couple of weeks!

Lee Graham PhD
Also - remember that people will be monitoring the helpdesk at http://liveminutes.com/en/home/error/chid/R8JN5E  https://space.liveminutes.com/m/R8JN5E/chat rather

Monday, March 2, 2015 8:38 AM

Lee Graham PhD
How are things going this morning?

J Mia Kuartei
im helping williams with his zone right now

Lee Graham PhD
k very good

Lori Durant
Would anyone object to my joining your classes/going into your communities to observe?

Doug Brandner joined the conversation Erica Barbosa joined the conversation

Lori Durant
To that end, any teacher who would like is more than welcome to come hang out in GiverCraftMarshall - we are there around 9:50 - 11:05 CST tomorrow - and every other day after that

Lee Graham PhD
Silence means consent I think!

Tuesday, March 3, 2015 7:13 AM

Lori Durant
we are getting disconnected and can't log in being told our user names are already in use

Lee Graham PhD
very strange  okay it is showing 21 people in  is it possible that you have another client open that is signed in on the machines that are getting kicked off  OR that people signed in at another location  and are still signed on there?

Lori Durant
it is not  I keep getting kicked out and my user name is already being used and I can't see all of
my students

Lee Graham PhD
I think if you are kicked out then close the whole client down before logging back in it is showing some of you are still in there but just hanging Just quit the client then open it again and log back in

Lori Durant
I still can't log on as ElderDurant keep quitting client

Lee Graham PhD
Strange I hate to say this - but try restarting the machine? It is hanging up somewhere

J Mia Kuartei
did you log in once already today? i didn't see this yesterday I keep getting kicked off

Amanda Shaw
I'll check with Doug this morning too and make sure his kids aren't getting kicked off.

Lori Durant
very strange this morning- have never had these problems - however have had trouble finding kids on the player list who I can clearly see are logged in

J Mia Kuartei
do you know if each client file (on the student computers) is saved locally to that computer or in a networked folder?

Lori Durant
I just can't "see" them - just had one kid log back in with the wrong name - he could not see our community on the teleport block so I moved him saved locally mine is as well

J Mia Kuartei
getting kicked off and two identities might be separate issues

Lori Durant
yes agree I suspect the instability is on our end as we are unstable lol

J Mia Kuartei
on another note, i see the home blocks! nice work!

Lori Durant
our network, that is they love the home blocks more than I thought they would 😊

J Mia Kuartei
ownership! and very practical/helpful

Lori Durant
what are your thoughts of sending someone to the maze for the challenge? I have a couple who are already ready for such a thing

J Mia Kuartei
it's supposed to replace the "jail" concept but it is still very much a challenge

Lori Durant
I want to go through it myself first though - hope to have time to give it a try tonight

J Mia Kuartei
it takes a bit of time and patience but for the kids I will be curious haven't heard of anyone being "sent" there yet have them time themselves or you can time them, just curious,

Lori Durant
sounds good you sure won't be able to tell anything by the time it takes me to get through! lol

J Mia Kuartei
i don't know, you might just have to try i sent thomas through because he's the most skilled
person i know in our group
Amanda Shaw
I went through it. It's tough and challenging. Especially the under water part!
J Mia Kuartei
yes i probably could have made it shorter and mostly underwater
Amanda Shaw
I'm in the world and not getting kicked off Anyone else?
Lori Durant
we had the same problem this morning
Doug Brandner left the conversation
Lee Graham PhD
Lori was it ever resolved?
J Mia Kuartei
What happened to Barbosa's teleport block/station?
Thomas Mellen
nothing that i have heard...
J Mia Kuartei
I see it in their zone but can't click on it and it doesn't show up on the stations list
Lee Graham PhD
I have no idea
Lori Durant
It seems resolved now - no idea what happened. I can log on now with my name now - I'm guessing it's another case of time healing all
Lee Graham PhD
Good! I am glad!
Lee Graham PhD
If you have favorite builds from the day send them to me drlee.graham1@gmail.com and I will stick them up on the Wiki page
Amanda Shaw
Williams class was just kicked out of the world server says it's not connected
Lee Graham PhD
Just messaged them Yes - I see it it is saying that for me too Welp Lori - time doesn't solve everything!
Amanda Shaw
hmm we can't here
Lee Graham PhD
yes well it's just down
Amanda Shaw
Lori can you get into MinecraftEdu? Wondering if it's just us... IT maybe...
Lee Graham PhD
no it's dead down and dead
Amanda Shaw
oh no
Lee Graham PhD
server's back
Lori Durant
MINECRAFTEDU TEACHER TOOLS AND STRATEGIES

sorry - just seeing this now
Tuesday, March 3, 2015 6:57 PM

Lee Graham PhD
well it is back - and hopefully whatever was glitching it solved with the reset.

Amanda Shaw
It seems to work fine now.

Lee Graham PhD
of course  grrr well - other than the time I restarted the server, that is the only time it's been
down so that is really not bad.

Wednesday, March 4, 2015 7:00 AM

J Mia Kuartei
Server is down; logged in 15 min ago and it was down to 2-3 green bars, and lagging very
badly... now it's just out

Lee Graham PhD
it's up  I restarted it  I have emailed and asked them to look into it

J Mia Kuartei
cool

Lee Graham PhD
keep me updated if there are issues is anyone supposed to be in now?

J Mia Kuartei
9:10 am is the first class

Lee Graham PhD
okay

J Mia Kuartei
very slow to render and teleport and it’s out again  or i got kicked out rather  keeps timing out

Lee Graham PhD
Anything they can do will take it offline  so either we need to live with the slowness for a little
while or we are going to be without server. That is me saying that not them - they haven't
emailed back yet  I seem to be moing around fine  haven't been kicked out yet  but we'll keep
watching

Lee Graham PhD
The thing is if we enable villagers the kids can and will spawn them they've already spawned
some gollums

J Mia Kuartei
yes, no worrie  i will add them next week

Lee Graham PhD
k - then if we enable then disable your villagers will disappear!

J Mia Kuartei
yes, it's okay, don't need them

Lee Graham PhD
Lee Graham PhD
Lee Graham Ph.D
Everything going okay in the world?
Thursday, March 5, 2015 10:48 AM

J Mia Kuartei
Thomas, kids are getting through the maze in 5-7 minutes guess i'm not that worried about it
anymore
Lee Graham PhD
Thomas Mellen

Amanda Shaw
Awesome! I love the maze
Monday, March 9, 2015 6:54 AM

J Mia Kuartei
Lori, are you starting Scenario 2 on friday?
Monday, March 9, 2015 4:33 PM

Lori Durant
I am leaning towards it, but might not be ready - is that okay? I have a student who I can't get to engage in the game. Do you think an alternate assignment connected to one of the hidden communities would be an appropriate use of that space?

Lee Graham PhD
absolutely! that is what they are for! yes it is okay - I think we are on survival now tho. Will that be bad for your scenario 😊😊😊
you could put all of your students in creative manually

Lori Durant
that'd be great! I tried the maze with him today and it worked for a while, but didn't hold him for long

J Mia Kuartei
you're the only class in the game this week so you don't have to be in survival until you want to

Lori Durant
thank you

Lee Graham PhD
cool

Lori Durant
He couldn't get through the maze - but he wouldn't build either - just wanted to bother his group mates-

Lee Graham PhD
but he won't be productive in problem solving just bothering? sounds like a lot going on there!

Lori Durant
and I really don't want to push him too hard for fear of shutting him down - he is not invested in school - and it's worse now as his family won't let him return next year - and to complicate matters it's probably the best experience he's ever had in school

Lee Graham PhD
Ah yes a lot going on I see He has reason to be agitated it seems

Lori Durant
he really does - I don't want to shut him down, but am mindful of the others who are not appreciating his disruptive behavior

Lee Graham PhD
Bless his heart. Well maybe some of Mia and John's complex communities can help

Lori Durant
that's what I'm thinking too, Lee - I'm going to check them out - thanks for your ear
Lee Graham PhD
my pleasure!
Wednesday, March 11, 2015 7:41 AM

Lori Durant
Mia - what is the name of the zone that borders our Community - the forrest closest to the end with the HUGE auditorium? I am planting chests there. The other question I have is: is there a way to make a bunch of books all at once?
Wednesday, March 11, 2015 2:58 PM

Lee Graham PhD
I am so sorry we didn't see this! I can say there is no way to make a whole bunch of books at once - but Amanda is the bookmaking expert. She may have some good tips for you. I am not sure what the name of the forest is - did we name them?

Amanda Shaw
Lori I made a video on how to make a book. Lee do you have the link to the tutorial?

Lori Durant
I am making books - one at a time - is there a faster way?

Amanda Shaw
When you have the cursor over the book and quill click on 1-9 this will load up your tool boxes with books. Then you will have to open them up one at a time to write a memory in them. You can only make a book one at a time. There's a fast way to get books in your inventory, but not to make them. Are you making memories? If you go to Memories Released there are three houses filled with books already made.

Lori Durant
yes - making memories thank you

Amanda Shaw
You can use those books, that's what it was designed for give to students if they can't think of a memory to create.

Lori Durant
I saw those but thought those were for the other classes - I need to learn how to do this stuff at some point. Thank you!

Lee Graham PhD
Amanda it would be good to make a video of that for the teacher training site.

Amanda Shaw
I did. I placed the link in the diffi tool guide. I'll try to find it.

http://www.youtube.com/watch?v=is882YG7uUQ

The end of the video explains how to build a book. It also shows where to find the memory books... The books are for every class to use if they need to.

Lori Durant
Thanks, Amanda - I should have looked for the video - I appreciate your generosity in sharing your books - I may need to use a couple, but I'm going to try to make them. Are teachers hiding them in chests or just giving them to students?

Amanda Shaw
If a student can't think of a memory to create, they can get the book from the memories released station and give them the book to use.

Lori Durant
last time they were in chests - so I'm putting the ones I'm making in chests just outside of our
borders in the forest ah - okay - sounds good

Amanda Shaw
Yes, whatever works best for you and your students. It's also up to the students, I believe to make their own memory and only use the books you have if they can't think of one to create. The books in memories released is a differentiation tool available for scenario 2.

J Mia Kuartei
not sure what the forest is near you, if it has a border than it is a zone; i took out the teleport blocks for the different biomes so every station now is labeled, if what you see is within a border then i would look for the teleport block in there to find out which zone it is.

Lori Durant
sounds good - thanks MIa  this is how I learn - I appreciate your help

J Mia Kuartei
You're welcome. Did you figure out if you'll be in survival for Fri the 13th?

Lee Graham PhD
lol

Lori Durant
I'm pretty sure I do -provided I can switch them over to survival mid-stream on Friday - they have another assignment to do first - they'll finish at different times. I thought I'd flip the switch after they all get in the server in creative, would that work?

J Mia Kuartei
sure, still just you in there on Friday; change world not individual settings right?

Lee Graham PhD
yes

Lori Durant
yes then change it back when we leave for the day?

Lee Graham PhD
no need to change it back it can stay!

Thursday, March 12, 2015 3:18 PM

Lori Durant
sounds good! I wanted to "plant" my animals but I'll just have to do that on the fly after I switch over - if I let them loose while still in creative, I'll lose the class before we start.

Lee Graham PhD
I hear you!

Friday, March 13, 2015 7:10 AM

Lori Durant
were in survival

how do I change time? the teacher resource area is not protected my children are in the teacher resource area

Lori Durant
get the time figured out -thanks to Mr Bishop what a crazy day too much fun

Lee Graham PhD
Is it the day before spring break for you all? I am glad you got it figured out!

Lori Durant
no - we are here next week I haven't told my ss that we will have others in the game next week we will only be in on Tuesday - as we are off Thurs and Fri for conferences can't wait I was
inordinately excited for them to find the things I had hidden today

Lee Graham PhD
lol Did they! That is fun when they do find the things we have placed for them!

Matthew Stark left the conversation
Monday, March 16, 2015 11:46 AM

Lori Durant
How is it that kids in Barbosa's class can fly in survival? I didn't think it was possible didn't*

J Mia Kuartei
she sets it manually for each students since they are still in scenario 1
Lori Durant whew! thought I was missing something
their community is awesome!

J Mia Kuartei
yes sounds like they are writing citations now

Lori Durant
yes I saw that - very impressive building

Lee Graham PhD
We made the Washington Times - and a lot of other papers it seems! The AP picked up on

J Mia Kuartei
Cool!!!!

Thomas Mellen
schaweeet

Lori Durant
wow!!!!
Appendix J

The Givercraft Community Agreement

The Givercraft Community Agreement

I, __________________________________, agree to be an active and positive member of the Givercraft Community and give my best effort in learning new skills. I will read the assigned book (The Giver, by Lois Lowry), cooperate, share my ideas, and give helpful suggestions to other players. I will respect other players and not use foul or offensive language, including swearing, racist or sexist remarks, or any other form of discrimination (inside and outside of the game).

I will support other players to build and enjoy the game by NOT grieving (disturbing other players’ work without their permission) and NOT harassing other players. Examples of this include:

- breaking items or building on other players’ property
- taking items owned by other players
- entering buildings owned by other players without their permission
- creating “traps” or placing dangerous blocks in public property
- spawning unwanted animals to bother other players
- “spamming” the chat with repetitive or unwanted messages
- killing a player, even indirectly, outside of designated areas.
- following, sending messages, or otherwise harassing another player after they have asked you to stop

I understand that if I break this agreement, I will be given warnings and asked to change my behavior and my parent(s) or legal guardian(s) will be notified. I understand that if I continue to break the agreement after I have been warned, I will be suspended from the game and expected to discuss my participation and expectations with my teacher before being allowed to return. I will agree to create an additional contract to guide my participation in order to return to the game.

I agree to be banned from the game if I break the additional contract and I understand that I will not be able to complete the game. I understand all of the expectations described above and I agree to participate in the GiverCraft Community.

_________________________________________________________________________  _____________
Student Name                          Date

I have read and understand my responsibilities as a member of the GiverCraft Community. I will hold my students responsible for the contract they have signed.

_________________________________________________________________________  _____________
Teacher Name                          Date

(Adapted from http://makersfactory.com/classes/mc-online/code-of-conduct/ Minecraft Online Code of Conduct)
Appendix K

Table 3. *Top Ten Most Frequently Used Words in the MinecraftEdu Game Chat*

<table>
<thead>
<tr>
<th>PLACE</th>
<th>GAME CHAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hi</td>
</tr>
<tr>
<td>2</td>
<td>Teleport</td>
</tr>
<tr>
<td>3</td>
<td>Thank</td>
</tr>
<tr>
<td>4</td>
<td>Please</td>
</tr>
<tr>
<td>5</td>
<td>Help</td>
</tr>
<tr>
<td>6</td>
<td>House</td>
</tr>
<tr>
<td>7</td>
<td>Food</td>
</tr>
<tr>
<td>8</td>
<td>Go</td>
</tr>
<tr>
<td>9</td>
<td>Build</td>
</tr>
<tr>
<td>10</td>
<td>Come</td>
</tr>
</tbody>
</table>