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Practicum in Virtual Teaching and Learning

Final Reflection Paper

The Givercraft project (www.givercraft.com/) is a virtual learning experience in MinecraftEdu, designed for students and their teachers to explore the plot, characters, and themes of "The Giver," by Lois Lowry. As one of the initial designers of this experience, I have been able to support both teachers and their students, to engage with the content through this innovative and interactive gaming environment. At the start of the school year, we had several teachers who expressed interest in returning to this project, after participating with their students in either one or both of the previous iterations of Givercraft over the past year.

I chose to facilitate the teacher training for Givercraft as my practicum experience because I have seen the positive outcomes for students and teachers alike as a result of their participation. I am interested in continuing to mentor teachers in the use of emerging technologies such as MinecraftEdu as they design meaningful and innovative learning environments for their students. The Givercraft team this fall, consisted of myself, Scott Roleff, and Aleta May. There were several pre-existing teacher training tools that have been used in previous Givercraft projects including an online training course site and a Google Community. One of the first steps that our team took in

preparing for the fall experience, was to examine these tools to determine if the content was still relevant and whether the course design was appropriate for our purposes.

In examining current research about best practices in course design, there are several important elements that were relevant to our project - our use of the Quality Matters Rubric to inform our design of the teacher training website, our facilitation and support of the online learning community through the Google Community, and our learning and design approach to online learning.

In the previous Givercraft projects iterations, an online course site was developed to provide teachers with a home base or anchor point to access information and resources related to facilitating the Givercraft experience as well as a location for training modules to orient them to the knowledge and skills needed to design a meaningful MinecraftEdu experience for their respective students. We recognized early on that there needed to be a course site that was designed less for an external audience (one that gives an overview of the project) and more for the intended audience - the teacher who would facilitate a Givercraft experience in their classroom.

The course site design was heavily influenced by the Quality Matters rubric (www.qualitymatters.org). Shattuck (2010) spells out the process for utilizing the rubric in course design but also suggests that it can also serve as an important tool for "establishing and improving the quality of the design of the course" (p. 52). Because the rubric examines the course design from a student-centered perspective, it keeps the learner's experience in the forefront as an important priority in the design process.

At the same time, other research (Legon, 2015) suggests that using the QM rubric to measure course design effectiveness in achieving course outcomes is not as simple as it may seem. While a number of challenges to the rubric's effectiveness can be

attributed to the diversity in course objectives , designs or formats, and intended audience, Legon (2015) recommends selecting specific clusters of standards to measure the a more defined outcomes, although he recognizes that this is also problematic since oftentimes learning outcomes can apply to several standards at a time - a very common dilemma in any assessment tool.

The significance of online learning communities has been a widely explored feature of online teaching and learning, Yuan and Kim (2014) have compiled an extensive look at guidelines for best practices in developing and facilitating an online learning community. They suggest key considerations involve "(1) when to build a learning community; (2) who to be involved in the process of building a learning community; (3) where to build a learning community; (4) how to build a community;" and lastly, why these are all needed for online learning communities to be effective and successful (Yuan & Kim, 2014, p. 223). A table compiling their summary is included in the Appendix.

The significance of the guidelines developed by Yuan and Kim (2014) is to help instructors prevent learners from becoming isolated from others and to mitigate dropouts. In our case, we were able to use these guidelines to support the online learning community to engage in an ongoing, engaging, and meaningful dialogue about the course content:

(1) the Givercraft teachers were encouraged to join a Google Community at the beginning of the experience, while we were still facilitating registration and enrollment. We continued to utilize the community to share progress, resources, and ideas, to resolve issues, and to connect teachers to one another in a collective.

(2) Each of the instructors monitored the community and facilitated discussions and throughout the course of the experience, all of the teachers participated in dialogue with instructors or other teachers.

(3) The interactive time in the MinecraftEdu game environment became the synchronous experience for instructors to interact with teachers and their students, whether it was through training sessions leading up to the experience or throughout the three and half week period of Givercraft. The Google community remained the asynchronous part of the ongoing dialogue in the course.

(4) Our team of instructors utilized a range of strategies to support discussions which included asking questions about process and content, providing resources to supplement the unit plan, making recommendations to resolve issues, and soliciting expertise and feedback from teachers. I built on my prior experiences and relationships with teachers to also support social interactions in the game and on the Google Community; some discussions were promoted through the instructions for transitioning from one game scenario to the next.

As teachers were tasked with taking steps to transition their students and the game environment to the upcoming scenario, this prompted more discussions and interactions in the game and on the Google Community. As teachers began to allow interaction between and among their students in the later scenarios that required students to visit or enter other communities, it became increasingly important to support the online learning community's discussions and encourage teacher collaboration both in the virtual learning environment, in the wiki pages where students shared their products of learning, and of course in the Google Community.

Research into frameworks and models for learning and design cover a broad range of unique learning environments. For our purposes, we were holding important pieces of the course in several locations or formats (online course website, Google Community, and virtual game environment). Research by Makri, Papanikolaou, Tsakiri and Karkanis (2014) point out that Communities of Inquiry serve to support a learning environment that is characterized by collaboration and reflection (p. 185). As learners interact they build new knowledge and gain experienced based on their examination of content.

From the Learning by Design model, the researchers were able to design appropriate learning activities (tasks that were grounded in the teachers existing practice) that complemented the elements of the Communities of Inquiry model. This particular research is relevant to our Givercraft project because of the unconventional nature of the experience (using MinecraftEdu). In their study (Makri et al., 2014), the researchers viewed teachers as designers, who used utilized technology through individual or collaborative means in addition to their interactions with instructors. While their research included both online and face to face interactions, it is still relevant as a framework for understanding how a hybrid of theories and frameworks can be blended to fit the unique characteristics of our course and the Givercraft experience.

Makri et al. (2014) argue that using an e-learning design supports the growing theory and practice of flattened and open learning environments where learners are creating and sharing knowledge in a network or rather, a community not unlike our Givercraft experience. By combining the strengths of both learning frameworks, a

blended strategy was used to facilitate the e-learning experience and support a collaborative community of learners.

From the beginning of the Givercraft experience, our instructor team has used different tools to assess the needs and interests of the teachers. While several teachers had already expressed interest in returning to the project, we went ahead and created a registration form to collect important logistical information about their students and ask teachers about their expectations for student and personal takeaways from the project. This data helped us revisit the content on our teacher training course site (http://survivalcraft15.weebly.com/) and to revise the training modules to meet the needs of the cohort.

Of the eight (8) teachers who registered, all but one (1) teacher had previous experience using MinecraftEdu and in fact it was these teachers who had previously participated in the Givercraft project. The individual teacher who reported not having any experience with MinecraftEdu eventually chose not to participate in Givercraft and one previous teacher was not able to procure computers for the students to use. Another Givercraft team member also chose to participate with her own class and she had not previously participated in Givercraft and was inexperienced with using MinecraftEdu. Her participation then served as the baseline for our content development; her questions helped us to provide the basic information needed for any teacher to begin implementing MinecraftEdu and we reasonably expected that other teachers would only benefit from a review of information and skills they had learned or used in previous experiences.

Based on our review of the teacher expectations shared during enrollment, in our team discussions we chose to provide basic information about MinecraftEdu and the

menu options, teacher tools, and gameplay commands on the course website and use synchronous training sessions in the game to demonstrate application of the information provided on the course site.

In some instances during Givercraft, the absence of data also provided some indications about what teachers may or may not need from us. After sending the course site to teachers, we did not receive any requests for additional information or resources related to using MinecraftEdu. We also did not get any questions about the unit plan and the Givercraft teacher's guide which was also a major component of the training website. Another indicator was that only two (2) teachers attended our teacher game sessions in the MinecraftEdu world, these teachers merely stopped by to check in on the session and to see if there were teachers in the game. When they saw that it was only instructors, they spent time exploring and then logged off shortly thereafter.

Another time that a teacher logged in to check on who had joined the session, it proved to be a useful opportunity to discuss the technical issues and progress that had been made in using the new client software; in this case, it was an unplanned but significant opportunity for important dialogue to take place. The only teacher who spent significant time in the game sessions was the member of our instructor team who was also participating as a teacher; we used the game sessions to help her and her husband learn how to use the game and sent them additional resources as needed throughout the experience.

Despite the lack of expressed interest or apparent need for additional support in preparation for Givercraft, this did not necessarily mean that teachers were doing well and were familiar or confident in their ability to use MinecraftEdu commands and

teacher tools. The lack of discussion about the training website content could have also indicated that teachers were relying on their previous Givercraft experiences, perhaps they had not invested time in reviewing the course site, or maybe they were not at the stage of implementation and therefore did not have a context for dialogue about the training site content.

Our team had a reasonable expectation that as the start date for Givercraft approached, we may see an increase in activity on the Google Community and in the MinecraftEdu gameworld. This began to occur the week prior to Givercraft, as teacher began posting screenshots onto the Google Community of their progress in the training course objectives and teacher responsibilities. Five (5) out of seven (7) teachers who participated in Givercraft completed their post-experience assessments. In their reflections at the end of the experience, **all** teachers reported that they did in fact use the training site, the wiki pages or a similar tool for creating and sharing student products, the Google Community, email or chat communications with the instructor team, and recommended MinecraftEdu resources.

Three (3) teachers reported using additional MinecraftEdu game sessions with their students to prepare for Givercraft, which was suggested as an optional activity to allow for a more seamless start on the first day of the experience. Teachers reported that the most significant challenge related to facilitating the game came from creating zones which was referenced but not demonstrated on the training site. Since teachers did not attend the practice game sessions prior to the experience, there was limited time to offer assistance and they experienced considerable struggle in the days leading up to the first scenario, as they began learning and using teacher tools to create their class zones or communities.

The Google Community was a significant tool as the primary venue for dialogue and focused discussions that all participating teachers and instructors could easily access. This type of open environment to facilitate discussions was an important aspect of this Givercraft experience for teachers as they were encouraged to participate and regularly contribute their ideas, report issues, and collaborate with others to facilitate the experience for all students. This became a particularly active forum as the experience went on and it was useful to have one location for all discussions to be shared rather than continuing to update the course training site. In the future, that would be a good way to archive resources, however, the discussion in the Google Community became the main forum for dialogue during the course.

By modeling the knowledge creation and sharing that was expected of students, as instructors, we were able to support them to demonstrate their own learning through similar actions:

In starting out the preparations for Givercraft, we revived the Google Community and I posted a welcome message with a brief introduction of my previous experiences. Teachers began posting their own introductions (Teacher 1, Teacher 2, Teacher 3) and I made sure to comment and welcome each teacher into the community.

I shared logistical information, announcements, articles or resources related to the course or using MinecraftEdu in the classroom. I also posted reminders about our teacher practice sessions in the game each week leading up to the start of Givercraft.

When teachers would post progress updates and questions, I would address their questions and reinforce responses by other teachers to encourage the dialogue and idea

sharing between teachers. Then teachers would also <u>post screenshots</u> or images of their own issues or progress, which was a good indicator that they were using skills that would be needed by students during Givercraft.

As we neared the start of Givercraft, I frequently checked the game to see if teachers had created their zones. I created <u>a post</u> with some instructions and considerations for creating zones to serve as a reminder for teachers who had not created a class community zone and to also provide some important tips that would save them time and ensure they provided the minimum elements needed for students to enter and begin using a community. I created a Home Spawn area and <u>posted screenshots</u> so that teachers would be familiar with the area that their students would appear in when they logged into the game.

When we began seeing teachers post screenshots and updates about their progress in the training site (<u>Example 1</u>, <u>Example 2</u>, <u>Example 3</u>), then we knew they were working on reviewing all the information provided and beginning to work on their checklist of teacher responsibilities.

Sometimes teachers would start a topic or report an issue in <u>one post</u> and we would exchange dialogue to discuss solutions, then I would also <u>post a screenshot</u>, and continue the thread in <u>a different post</u>, as well as share additional resources. By tagging these posts, it would send a notification to the teacher who posted the initial question but a new post would also show up for everyone to follow the conversation. Screenshots and tagging members of the Community always ensures that everyone sees a visual

along with the written description of help that was provided and members who are awaiting a response would be alerted.

As the experience kicked off, I managed transitions between scenarios by posting instructions and relevant information prior at the end of one scenario and the beginning of the next one. I regularly updated student resources on the Givercraft wikispaces site and posted a direct link so that teachers could quickly access relevant information to share with their students. I also emphasized flexibility in pacing and directing their own students through the scenarios as needed. With the constant flow of information, I found it necessary to pin a quick reference list of important links (teacher training site, wikispaces site, game settings information, class rosters, and the game schedule.

Examining the literature about the Quality Matters rubric was a good reminder for me that there are all these aspects of the course design that might not necessarily live on the training course site. Future Givercraft teams would benefit from using the rubric on a much broader scale to evaluate all aspects of the course and to consider what tools and processes would make the experience seamless or at least maintain a flow of knowledge creation and sharing. One teacher did report on her survey that there seemed to be more new technologies included in this Givercraft iteration compared to her previous experience. This feedback only highlights the importance of considering the learner's perspective as course design and learning activities are developed.

In the unique training course model and experience that is Givercraft, the dialogue is almost more important as the content. Even with a Quality Matters rubric it is impossible to accurately predict what teachers (learners) will need in the course and

what their interests will be in directing their learning experiences. There can however be a reasonable prediction of elements that are needed based on previous iterations of this experience.

The tool or forum used for dialogue, in our case, the Google Community became the primary location for knowledge creation and sharing; the teacher reflections indicate that while the teacher training site provided the basic foundation for facilitating the Givercraft experience, the dialogue and interactions in the Google Community as well as the MinecraftEdu gameworld became a significant source of content creation over the course of the project. Through this open forum, teachers were encouraged and supported to share their knowledge and understandings, demonstrate their skills, provide moral support, report issues, collaborate with one another, access resources and guidance for implementation of the unit plan, and to socialize with their peers and the instructors. The Givercraft project continues to evolve and future iterations will benefit from the data collected and tools that have been used and shared as a result of this unique and interactive learning experience.

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Appendix

Guidelines and Rationales for the Guidelines

Table 2. Guidelines and Rationales for the Guidelines

Guidelines	Descriptions	Rationales: List of studies	Rationales: Short descriptions of representative studies
Guideline 1 (When): The effort to build a learning community should be made from the beginning of the course and continue throughout the semester.	• Arouse students' awareness of creating learning communities. • If possible, arrange an orientation at which students can meet face-to-face.	Lewis 1997, Tolmie and James 2000, Lock 2002, Falvo and Solloway 2004, Snyder 2009, Koh et al. 2010.	Falvo and Solloway (2004) employed various strategies to help students develop learning communities. The strategies include informing students of the course expectations and requirements, stating explicitly the objective of creating learning communities, arranging a face-to-face meeting at which students familiarized themselves with technical tools that would be used and interacted with the instructor and other students, and also requested students to read a paper about online communities and then reflect on the paper. Students felt a sense of community throughout the course. Students participating in a study on collaboration conducted by Koh and her colleagues (Koh et al., 2010) suggested having a technology orientation and face-to-face meeting. Both Lock (2002) and Snyder (2009) proposed identifying the goal of creating learning communities.
Guideline 2 (Who): Both students and instructors should be involved in building the learning community.	• Encourage students to enhance their social presence. • Instructors should project a high level of teaching presence.	Garrison et al. 1999a, Tu and McIsaac 2002, Shea et al. 2006, Bangert 2008, Whipp and Lorentz 2009, Jahng et al. 2010, Shea et al. 2010, Weinel et al. 2011, Wei et al. 2012.	Bangert (2008) demonstrated that students in the social presence combined with teaching presence group outperformed those in the social presence group and those in the group without social presence and teaching presence. Students felt they were well supported in a learning environment with a high level (Whipp & Lorentz, 2009). Instructors need to provide clear project instructions, pose challenging questions, share resources and respond to students' questions in a timely fashion.
Guideline 3 (Where): Use both synchronous and asynchronous technologies to create the shared space in which students and instructor interact.	• Synchronous tools include Acrobat Connect Professional, Wimba Classroom, Skype, etc., • Asynchronous tools include learning management systems and tools for social networking, blogging, instant messaging, and collaboration.	Bannan-Ritland 2002, Lock 2002, Beldarrain 2006, Liu et al. 2007, Schullo et al. 2007, Snyder 2009, Kearns and Frey 2010, Schroeder et al. 2010, Hwang et al. 2011, Kassens-Noor 2012, King 2012, Strang 2012.	Strang (2012) showed that compared with students who had discussions in online discussion fora, the students who had synchronous Skype meetings were more active in discussions and achieved better learning outcomes. MSN fostered a sense of community and enhanced student learning achievement (Hwang et al., 2011). Twitter made it easy for students to share information and facilitated the process of knowledge construction (Kassens-Noor, 2012). Twitter could also enhance student learning engagement and learning outcomes (Junco et al., 2011). Lock (2002), Liu et al. (2007) and Snyder (2009) suggested using various technologies for the development of learning communities.
Guideline 4.1 (How): Employ various strategies to stimulate discussions.	The following strategies can be used to stimulate discussions: (1) assigning roles to learners; (2) posing provocative debates; (3) inviting experts to give presentations or join online discussion; and (4) creating a case study that requires learners to define problems, search for resources, and discuss ways to solve the problems	Pilkington and Walker 2003, Tu and Corry 2003, Schellens et al. 2005, Kanuka 2005, Kanuka et al. 2007, Wang 2008, Woo and Reeves 2008, Farruggio 2009, De Wever et al. 2010, Richardson and Ice 2010, Shea et al. 2010, Darabi et al. 2011, Hou 2011, Wise et al. 2012.	Table 3 lists a representative study on each of the four discussion strategies.
Guideline 4.2 (How): Encourage both task-oriented discussions and social interactions.	• Instructors can provide social feedback, share feelings and experiences, and encourage students to comfort and motivate each other. • Optional task-oriented discussion fora and optional social discussion fora might not encourage student participation.	Jung et al. 2002, Hewitt 2005, Liu et al. 2007, Chen and Wang 2009, Pate et al. 2009, Snyder 2009.	In a study that explores different types of interactions (Jung et al., 2002), students in the social interaction group demonstrated better learning performances than those in the task-oriented group or the collaborative interaction group. Social talk among high school students in online discussion fora transmitted 'soft power' that exerted pressure on students to participate in discussions (Chen & Wang 2009). Social interaction also directed group discussions toward solving problems. Liu et al. (2007) and Snyder (2009) suggested encouraging social interaction. Optional discussion fora might not be useful, for optional fora do not tend to draw participation (Pate et al., 2009).
Guideline 4.3 (How): Assign students tasks that require collaboration.	• Use the following strategies to facilitate group work: (a) Provide a timeline for group projects; (b) Check project progress to see whether the group is on track; (c) Check to see whether groups encounter collaboration problems; (d) Present criteria that will be used to assess collaborative work and individual contributions before students start their project; (e) Ask students to submit individual work samples; and (f) Help students form groups. • In addition to group projects, give students individual assignments.	Jung et al. 2002, Ke and Carr-Chellman 2006, Koh and Hill 2009, Jahng et al. 2010, Koh et al. 2010.	In a study that explores different types of interactions (Jung et al. 2002), compared with students in a task-oriented discussion group and a social interaction group, students in the collaborative interaction group showed a higher level of satisfaction about their learning experience. Ke and Carr-Chellman (2006) conducted a study on solitary learners' online learning experience. Their findings show that solitary learners gain the most from readings and their own reflective and critical thinking.