6. Interests, Relationships, and Opportunities Within the 2018 Global Minecraft Mentor Program

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Abstract: *Minecraft: Education Edition* (Microsoft, 2016) has become a critical tool for learning for many classrooms, connecting students and teachers in game-based activity (Dikkers, 2015; Kafai & Burke, 2016). On the *Minecraft: Education Edition* website, a teacher can connect with mentors, review shared lessons, and download maps of generated worlds. In 2017 Microsoft Education launched the Global Minecraft Mentor Program to support teaching, learning, and innovation with the game. This research explores and describes this mentor space from the perspective of the participants. It seeks to understand the experiences of mentors within this space, entry points to onboard teachers who have little or no background in adapting *Minecraft: Education Edition* to their classrooms, and the extent to which connected learning principles manifest in the mentoring space. Research followed an explanatory sequential mixed-method design. The 2 phases of data collection in this study begin with quantitative data collection and analysis; the quantitative findings will inform the development and deployment of the qualitative data collection and analysis (Creswell, 2015). Data included survey responses, interview responses, artifacts provided by interview participants, and artifacts related to the Global Minecraft Mentor Program website.

Introduction

Passionate teachers have adopted the video game *Minecraft* into a variety of classroom disciplines (Dikkers, 2015; Kafai & Burke, 2016). An open-environment sandbox of interactive virtual building blocks, "like typing paper, [*Minecraft*] can be used to represent ideas effectively and in a 3D space" (Dikkers, 2015, p. 101). As a teaching tool, *Minecraft* has become more pervasive in classrooms around the world (Dikkers, 2015; Ito et al., 2019; Kafai & Burke, 2016). *Minecraft* is a game that can be played in two distinct modes: Survival Mode, in which players collect and manage resources with the goal of surviving in a sometimes-dangerous virtual world (Dikkers, 2015), and Creative Mode, which is constructionist in nature, as players are afforded unlimited resources with which to build and create (Kafai & Burke, 2016). Both of these game modes can engage players in creativity, innovative thinking, and problem-solving abilities, while at the same time teaching necessary content and skill knowledge (e.g., Butler, Brown, & Críosta, 2016; Qian & Clark, 2016).

To support teachers' best practice in using *Minecraft*, Microsoft Education launched a mentor community known as the Global Minecraft Mentor Program in 2017. (Microsoft had purchased *Minecraft* in 2014 and then published an educational modification, *Minecraft: Education Edition*, in 2016.) The Global Minecraft Mentor Program is a competitive program that pairs teacher experts with new community members and features several entry points to onboard teachers who have little or no background in adapting *Minecraft* to their classrooms ("2018 Global Minecraft Mentor Program," 2018). For instance, on the *Minecraft: Education Edition* website, a teacher can connect with mentors, adapt shared lesson plans, and download maps of mentor-published worlds (e.g., a map set in ancient Egypt).

Much of the research and literature around classroom game-based learning practices has pertained to teacher attitudes about games and learning (e.g., Fishman, Plass, Riconscente, Snider, & Tsai, 2014), learning outcomes from game play (e.g., Anderson, Dalsen, Kumar, Berland, & Steinkuehler, 2018), and game-based assessment strategies (e.g., Kim, Shute, & Ventura, 2013; Shute, Moore, & Wang, 2015). However, there is a deficit of literature that describes how game-based learning teacher educators peer-mentor one another, particularly in online spaces. In this paper, the experiences of

mentors within the 2018 cohort of the Global Minecraft Mentor Program are explored. The Microsoft's Global Minecraft Mentor program in 2018 included 341 educators from 70 countries ("2018 Global Minecraft Mentor Program," 2018). This paper explores and describes this mentor space from the perspective of the participants. We sought to examine how those mentors interacted and peer-mentored one another in this affinity space, guided by the following research question:

- What are the lived experiences of mentors within the 2018 Global Minecraft Mentor Program?

Theoretical Framework

This study sought to understand the lived experiences of an affinity group of the 2018 Global Minecraft Mentors. The theoretical foundation for this study was built on the principles of connected learning, a framework that includes three learning principles—academically oriented, interest-powered, and peer supported; and three design principles—production-centered, openly networked, and shared purpose (Ito et al., 2013). The principles of connected learning stem from interest-driven and peer-supported practices that can occur in school, but more typically are found informally outside of school such as in online communities of practice (Ito et al., 2013). Connected learning harnesses digital media learning "to more easily link home, school, community and peer contexts of learning; support peer and intergenerational connections based on shared interests; and create more connections with non-dominant youth, drawing from capacities of diverse communities" (Ito et al., 2013, p. 4). Connected learning can increase youth's "access to knowledge, providing timely feedback and individualized learning experiences, and connecting youth to a network of individuals who have expertise in an area of shared interest" (Davis & Fullerton, 2016, p. 98).

As Garcia (2014) observed, connected learning historically focuses on youth in out-of-school settings, yet "the principles of connected learning (e.g., it is interest-driven and collaborative) apply to teachers, as well as their students" (pp. 5–6). For example, pedagogy at the Quest to Learn public school in New York City is guided by the principles of connected learning, as well as a "game-like" teaching philosophy (Ito et al., 2013, p. 35). Quest to Learn has evolved to include student game production in its approach to connected learning, which is production-centered (Kafai & Burke, 2016).

Connected Teaching

Members in online communities of practice can provide or get access to both informal and formal knowledge, learn to problem solve, collaborate, communicate, discuss important topics, and explore ideas (Wenger, White, & Smith, 2012). A community includes collaboration with people who share similar passions and believe in the overall mission (Kraut & Resnick, 2011). Participants who "have existing social ties to be members of the community increase their bonds-based commitment to the community" (Kraut & Resnick, 2011, p. 89). The purpose of the community of practice is to share ideas, whereas an affinity space is slightly different, as it focuses on the "space" where community members meet; communities of practice pertain to group affiliation (Gee, 2005).

Educators who meet and peer-mentor one another in affinity spaces are a form of teacher professional learning (Baker-Doyle, 2017; Cantrill, Smith, West-Puckett, & Zamora, 2016). Teachers who adopt novel teaching approaches such as game-based learning may not necessarily be co-located in the same school building and may be temporally separated; therefore, they may join and participate in online communities of practice, which are learning spaces where members learn "from and with each other" (Wenger et al., 2012, p. 7). For example, in a connected learning massive open online course (CLMOOC), teachers met online to discuss and develop pedagogy around the remix of digital media (Cantrill et

al., 2016). In this context, remix became the "shared language for playful democratic learning wherein meaning was made in the act of remixing among peers" (Cantrill et al., 2016, pp. 14–15).

Both Twitter and Facebook are examples of social media platforms that are also online affinity spaces where a system of apprenticeships enable members to cement relationships (Baker-Doyle, 2017; Wenger et al., 2012). Teachers have self-organized on these platforms into what is known as personal (sometimes called professional) learning networks (PLNs), which are an "egocentric (personalized) network of people and groups that an individual trusts and connects with online and offline" (Baker-Doyle, 2017, p. 76). In PLNs teachers may engage in peer-to-peer co-learning on topics that speak to specific proclivities, affinities, or shared teacher interests. PLNs enable "educators to forge, and move towards, new conceptions of their professional identities. Despite some vague and teacher-centered answers, many other teachers were able to extend the benefits from and in PLNs to their students in numerous ways" (Carpenter, Krutka, & Trust, 2016, p. 31).

Affinity spaces center on the notion that interest-driven engagement is key to learning, whether formal or informal, online or face-to-face. While this connection has not previously been studied in depth, research suggests that when a teacher intentionally decides to teach with games, it may be because he or she has a proclivity to play games. Takeuchi and Vaala's (2014) report on levels of proficiency of teachers who taught with games indicated 82% of surveyed teachers were self-described game players, and 78% of that group taught with games (n = 694; Takeuchi & Vaala, 2014). Takeuchi and Vaala (2014) stratified the groups of teachers, further sorting game-using teacher participants as "dabblers" or "naturals." Non-game-using teachers were not totally resistant to teaching with games; however, the percentage that used games to teach was smaller, at 55% (Takeuchi & Vaala, 2014). Thus, Takeuchi and Vaala's (2014) findings suggest that a teacher who has experience playing video games may be more apt to teach with them.

Methodology

This research followed an explanatory sequential mixed-method design. The two phases of data collection in this study bega with quantitative data collection and analysis; the quantitative findings informed the development and deployment of the second phase of qualitative data collection and analysis (Creswell, 2015). Data included survey responses, interview responses, artifacts provided by interview participants, and artifacts related to the Global Minecraft Mentor Program website.

Data Collection

Theoretical sampling was used to study "incidents, slices of life, time periods, or people on the basis of their potential manifestation or representation of important theoretical constructs" (Patton, 2001, p. 238). This type of sampling is built upon the seminal work of Glaser and Strauss (1967) pertaining to the discovery of grounded theory. Potential participants were contacted through email addresses that were obtained from Microsoft Education's program officer. The target population of this study were the 2018 cohort members of the Global Minecraft Mentor Program.

Phase 1. An online survey was administered using the researchers' password-protected account in Qualtrics, beginning on April 16, 2018, and concluding on May 21, 2018. The call to participate was initially posted privately to Global Minecraft mentors, shared by Microsoft's manager of Minecraft Education. Interested participants were directed to the consent form and the online survey. The consent form was the first segment of the survey and only people who agreed to participate were directed to the survey questions. Participants were asked to answer both close-ended questions and

open-ended questions about their experiences in the mentorship program, their collaborative learning knowledge, and demographic information. There was participant attrition, with 35 beginning the survey, and 28 completing it.

Phase 2. Interview questions were developed based on the findings of the qualitative phase of the research. Of the 24 of the 28 survey participants who agreed to participate in the qualitative phase, 14 participated in a semistructured interview. Interviews, which took from 45 minutes to one hour to conduct, took place synchronously using Zoom video conferencing; the interview phase began on September 12, 2018, and concluded on October 3, 2018. During the interview, the participants responded to questions about their experience in the Global Minecraft Mentor Program. Artifacts related to the teaching before and after *Minecraft* integration, such as participants' lesson plans, social media shares and public blog posts, and assignment instruction documents, were also collected from the interviewees. Interviews were then transcribed before data analysis and shared with the participants to ensure trustworthiness through a member-check process.

Data Analysis

The qualitative strand of this mixed-method research uses data analysis procedures consistent with an interpretivist model of qualitative research. Software was selected and used to create memos, code, sort, and analyze transcripts from the structured interviews, as well as the responses to the open-ended student survey questions. Memos and coded data were reviewed to make comparisons about the participant responses. Analysis of qualitative data also included use of the constant-comparative method of coding, which affords flexibility to focus on data before analyzing and making sense of the observed phenomena (Charmaz, 2014).

The qualitative strand of this mixed-method research used data analysis procedures consistent with an interpretivist model of qualitative research. Using a constant-comparative analysis of the data being collected (Strauss & Corbin, 1998), artifacts, screen shots, and process notes were read as they were collected and again at the end of the data collection period. The three-step process of open coding, axial coding, and selected coding as described by Strauss and Corbin (1998) was conducted to construct assertions and understand the relationships among sets of data. The quantitative survey data was analyzed using appropriate descriptive statistics. Descriptive statistics were also used to summarize demographic data.

Preliminary Findings

While the 2018 cohort of the Global Minecraft Mentor program included 341 educators from 70 countries, participants represented 10.3% of that population in Phase 1 of data collection. There was further attrition in the second phase, the semistructured interviews. The findings herein may not represent the entire population, and we are not suggesting that these results can be statistically generalizable.

Of the surveyed participants (N = 35), 68.57% self-reported themselves as teachers; 5.71% as school administrators; 8.57% as consultants; and 17.14% selecting "other" as their role in education. No participant identified as a school librarian, higher education faculty, or as corporate. Fifteen participants were based in the United States, and three were in Canada. As this is the Global Minecraft Mentor Program, other responses included a participant from Israel, as well as Hong Kong, New Zealand, India, Italy, Mexico, South Korea, and Russia. These were generally seasoned educators, with a minimum of three years of teaching experience and a maximum of 25 years. Of N = 35, 17.14% reported teaching with *Minecraft* for more than five years; 42.86% self-described their expertise as intermediate, while 17.14% stated that they considered themselves to be beginners, and 14.29% as expert users.

In addition to other versions of *Minecraft* available in the market (e.g., the mobile version, the commercial off-the-shelf edition), all respondents (N = 34) of the question regarding game edition reported using *Minecraft: Education Edition.*

Growing Pains in a Peer-Supported Community

The first year of the Global Minecraft Mentor Program consisted of 60 educators; Year 2 exceeds 300 members. Some frustrations were expressed to the researchers in the semistructured interview phase of data collection regarding the differences between Years 1 and 2. The significant increase of mentors in the community within the short timeframe created divisions among the mentors. Those who have shared experiences or similar experience levels with *Minecraft: Education Edition* would talk among themselves within the online community.

> But what we are now in Teams is growing into its shoes and becoming quite big. … It's a bit like old friends talking to each other and it felt like expert people just having conversation amongst themselves. So, the second year with the expanded numbers has really made it multinational so you know what people from all over the world who are leaders in their countries are popping up and commenting and speaking and sharing and it is really getting a more global sense in its current expanded version because I think in the first year was like 60 something in the second year there's over 300. (Participant C1)

> When it was a smaller community it was a lot easier to really stay involved and engage with the rest of the mentors. Now it's definitely lost that part. So, I feel like it's a little more challenging to stay really connected as part of that mentor community. (Participant T1)

Transition from Slack as an asynchronous communication channel to Microsoft's proprietary Teams application was a challenge for the original mentors. However, it held value for those who entered the program in 2018. "Like, in the Teams group there are subgroups where people have specific interests and passions and like mindedness," Participant T1 explains about their ability to connect with other mentors doing similar projects.

Experienced mentors commented on the overload and irrelevance of information. "some people would post questions about basic stuff like installing the software" (Participant M1). Mentors who had less experience with *Minecraft: Education Edition* commented on the value of the interactions, quick responses, and the ability to join specific conversations about one topic.

Peer Support Within Mentors

All of the interview participants talked about their mentoring activities with excitement. Their passion for sharing *Minecraft* and active learning gave testament to why they are mentors in this program.

> It was kind of interesting to me that Minecraft hadn't quite made it to India. I don't know that she originally knew what she was seeking mentorship in, but she was very excited. Her students when I started showing her some things in Minecraft, they did start to use it. She changed what she was teaching and I Interacted with her students too. She was getting into it and her class- they would share some things that they were doing and that was very exciting to see them come from just being this totally new thing to something that they really saw value in and were able to embrace a way of learning. Then there were others, you know a lot of times the mentoring came in the form of a school district that had decided to let a teacher use it. So, I mentored teachers that wanted to get started and didn't really know where to start. (Participant T1)

A majority of mentors engage with their own play in *Minecraft*; of respondents (n = 31), 77.42% strongly agreed that they were self-initiated learners. Approximately half of these respondents have engaged in learning about teaching and/or *Minecraft* in informal settings (e.g., afterschool program, museums, Internet). Just over two thirds of respondents strongly agreed that their passion for *Minecraft* increased because of participation in the community. This supports interest-driven and shared-purpose principles of connected learning. The Minecraft Global Mentor Program created a space for mentors, who might have been the only one they knew integrating *Minecraft*, to support each other through the interest-driven opportunities it afforded by creating a space for mentors to come together.

Conclusions and Next Steps

Peer-supported, interest-powered, and academically oriented learning are principles of connected learning, and they were evident in our findings from respondents from the 2018 Global Minecraft Mentor Program. Broadly speaking, these teachers also shared a similar pedagogical approach to implementing game-based learning in their classrooms. Some participants differentiated themselves as part of a "core group" of mentors in the community as a whole. A few were in the original pilot of five mentors (this preceded Cohort 1, in 2016). Regardless, Microsoft is a corporation and *Minecraft* is a product. The purpose of the mentor community might be to onboard new teachers, or it can be to connect large networks globally. Participants identified both frustrations and benefits of the mentor community and asynchronous collaboration space, Teams. It is notable that the growth of the program from 60 to more than 300 mentors embraced global collaboration. There was a sense that some mentors felt ownership in the program. This could also be a catalyst for collaboration and growth of the program, but it might also be detrimental to the community as a whole if an in-group and out-group mentality fully develops; it was expressed by some participants through their frustrations or affordances of the mentor group. This research gives insight into the program and experiences of the mentors in a community that may have scaled too quickly. Nonetheless, these growing pains can be harnessed as opportunities for the program to improve in future iterations.

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