

Toward a Game-Based Dialogical Pedagogy: Insights from Massively Multiplayer Online Role-Playing Games

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Abstract: Learning through dialogues enables individuals to engage different perspectives of other learners and foster wisdom. To date, researchers have dedicated themselves to utilizing games to facilitate learning engagement. From tabletop games to electronic games, the experience of gaming has encouraged dialogues and interactions between participants. The Massively Multiplayer Online Role-Playing Games (MMORPGs) introduced a new level of interacting experience in virtual worlds. They are designed to enhance cooperative experiences. Features like chat boxes, guilds, and easy grouping have afforded players opportunities for creative gameplay and facilitating teamwork. However, through the interviews with the players of Final Fantasy XIV (FFXIV), we found that the communication mechanisms embedded in the game are not always player-friendly. New players are often intimidated by the complexity of the game, and no effective channels have been in place to ask for help. Additionally, constraints associated with the private messaging system and limited communication across data centres further impede new players' abilities to learn how to play. Alternately, players would stream the gameplay on Twitch, inviting other players to chat, which facilitates open discussion and results in a superior exchange of information compared to in-game communication. Over time, this improvisation of utilizing the streaming channel as an extended tool to facilitate dialogical learning of the gameplay has made the game itself more enjoyable.

In this study, we explore how dialogical learning occurs in an MMORPG (i.e. FFXIV) and how it contributes to interactions and engagement within the game by using grounded theory approach. We conduct and analyse interviews of 10 U.S.-based FFXIV players to derive insights that will be beneficial to educators. Although video-based gamification and dialogical learning are not new concepts, they are still rarely implemented; monological structure continues its domination of school curriculums (from elementary to higher education). Through the present study, we want to call for change to this status quo.

Keywords: game-based learning, dialogical learning, MMORPG, Final Fantasy, gaming, Twitch.

1. Introduction

Studies have consistently shown that the dominant discourse remains largely monologic in today's schools. To change this status quo, education scholars and practitioners have employed dialogical learning for student development (Reznitskaya & Gregory, 2013). Dialogical learning is defined as a "process whereby learners construct new meaning and transform their collective experiences into knowledge through their conversations" (Baker, Jensen & Kolb, 2005, p. 412). This learning style offers an alternative to what Friere (1973) calls the banking model of education which presumes that establishment and authority (e.g., teachers as the authority figures who possess legitimate knowledge) and is responsible for and best equipped to create knowledge and meaning for others (Neville, 2008).

In the last two decades, game-based learning (GBL) has gained its popularity as computer games become ubiquitous. Educationalists perceive GBL as an engaging form of supplementary learning that could enhance the educational process and have employed it at all levels of education including primary, secondary, and tertiary education (Hainey et al, 2016). Commercial computer games such as The Sims, RollerCoaster Tycoon, and Second Life have been utilized to make classroom learning more enjoyable and engaging. Naismith et al. (2005) examined how playing The Sims and RollerCoaster Tycoon cultivates learners' skills and competencies relating to people, managing situations and information. Hornik and Thornburg (2010) detailed the application of Second Life in enabling an engaging learning environment within an undergraduate financial accounting course. Their results indicated that the use of 3-D objects enabled an interactive accounting equation and a T-account model, and therefore, improved students' performance in this course.

Throughout our literature review in gaming and education, we have found problems that, regardless of games researched being single- or multi-player, only a few empirical studies have considered dialogic aspects of teaching and learning with games. It is also evident that the games and features of games are not being used as relevant tools for talking and learning (Arnseth, Hanghøj & Silseth, 2018). Moreover, research identified a large diversity in the assessment of digital game-based learning effectiveness – many studies reported no benefits after implementing digital games in traditional learning. This makes the comparison of results across studies difficult (Greipl, Moeller & Ninaus, 2020; All, Castellar & Van Looy, 2016). The design problem is another prominent issue. There has not been a design model that successfully integrated educational theory and game design aspects (Kiili, 2005) and prototypes created for linking game-playing activities to transferrable social or cognitive skills are often low on real-world utility (Ravenscroft & McAlister, 2006).

The present research study aims for contributing insights as to why beneficial aspects are not consistently exhibited when integrating gaming for educational purposes. Our main research question is: why a game, at the first glance, appearing to be a good candidate for enhancing the learning experience, is not able to bring expected learning outcomes to fruition? We have adopted a qualitative approach to investigate this research question and are currently conducting interviews with our participants. We are investigating the gameplay of a popular massively multiplayer online role-playing game (MMORPG) Final Fantasy XIV (FFXIV). During the early stage of the interview process, it came to our attention that, the in-game communication channel has imposed difficulties in learning the game. As a result, players began to use Twitch (an online platform for video streaming) for primary learning activities (e.g. identifying mentors, exchanging ideas, and asking questions). Over time, Twitch has become a dialogical learning space for FFXIV players. In this context, we adapted our high-level research question to investigate: how Twitch, as a third-party streaming service, affects the learning of MMORPG and game engagement?

We expect that the study will make the following contributions: unlike most research studies emphasizing how a game might work and contribute to learning, we focus on how a game might not work and how players find a workaround to avoid difficulties inherited in the game systems to achieve better learning experience and outcome. Previous research has revealed that computer games have not been consistently adopted by teachers and instructors in a meaningful way. Some who did adopt in research environment ended up discontinuing. Thus, based on empirical evidence, the present study intends to fill this gap by offering this paper with initial thoughts on learning how to play MMORPG and how learners resolve the limitations of the game system.

2. Theoretical Foundation

This study incorporates the following two existing theoretical perspectives to investigate the phenomenon.

2.1 Self-Determination Theory

Self-determination theory (SDT) posits that three basic psychological needs must be satisfied for the psychological interest to be sustained: autonomy, competence, and relatedness (Ryan & Deci, 2017, p.10). Autonomy is the need to self-regulate one's actions. Satisfying autonomy indicates the congruence between one's actions and authentic values. Thus, the person engages his or her behaviour wholeheartedly. Competence is the need to feel that he/she can operate effectively. Satisfying this need energizes myriad behaviour. Relatedness is about feeling cared for by others; it is the need to feel socially connected. The satisfaction of these three needs enhances a person's intrinsic motivation, which is independent of any external reward or reinforcement (Ryan & Deci, 2017, p.17, p.99). Research studies adopted the lens of SDT have shown a universal pattern that, when learning conditions are supportive of autonomy, competence, and relatedness, intrinsic motivation, well-being, and high-quality learning are likely to result (Froiland & Worrell, 2016; Taylor et al, 2014; Reeve et al, 2008; Danner & Lonky, 1981). Furthermore, games and virtual spaces are increasingly being used for motivating and engaging learning. They can be designed to exploit core mechanisms that satisfy the three basic psychological needs, and thus, enabling intrinsic motivation for participating in games (Ryan & Deci, 2017, p. 530). By doing so, game designers can potentially increase people's engagement in serious pursuits such as skill and knowledge acquisition (Ryan & Deci, 2017, p. 529). Selecting FFXIV for the research purpose is appropriate because MMORPGs possess strong features that satisfy all three needs (e.g., multiplayer, open

world, dense feedback) (Ryan & Deci, 2017, p. 519), and this, in turn, leads to game enjoyment and predicts future motivation to play (Ryan, Rigby & Przybylski, 2006).

2.2 Dialogical Learning

In the literature, the terms “dialogical learning”, “dialogical pedagogy”, and “dialogical instruction”, and many others, capture the same basic idea: the creation of learning environments that are more participatory and egalitarian (Sarid, 2014). Dialogical learning and teamwork have become the principles demanded by the knowledge society (Aznar-Diaz et al, 2020). Against this background, some student-centred teaching methods like flipped classrooms are emerging. A study conducted by Aznar-Diaz and colleagues (2020) showed that developing the flipped classroom method promotes a team-based work dynamic, which generates dialogical learning and enhances creativity among students. Dialogical learning is an epistemological position that constructs knowing through social activities. It is also a common practice, challenging the traditional forms of teacher-student relations where the teacher transfers knowledge to students’ minds by telling them what he or she knows, whereas dialogical learning invites them to consciously engage in reshaping their own understanding of reality (Shor & Freire, 1987). In the United States, researchers have attributed citizens’ lack of participation in voicing for the nation’s educational discourse, which is dominated by a monological and unilateral form of pedagogy. This has resulted that students become silent entities and vehicles of domination who reinforce the status quo. In contrast, dialogical learning has the potential to develop students to become active contributors to democracy because dialogue is the fundamental basis of a true democratic process (Fernandez-Balboa & Marshall, 1994). Although research studies considered dialogic aspects of learning with games are rare, it has been argued that carefully designed digital games can provide powerful and engaging learning activities that address salient educational problems such as the development of dialogical and reasoning skills (Ravenscroft & McAlister, 2006).

In this study, we adopted the above theoretical perspectives as the sensitizing lens to examine how dialogical learning of an MMORPG is challenged and how players find solutions to mitigate the challenges. As mentioned before, MMORPGs have strong features that satisfy the three fundamental needs of autonomy, competence, and relatedness. We have also observed that dialogues between mentors (advanced players) and newbies (new players) are continual as the mentors “educate” the newbies about the gameplay, and Twitch is making these dialogues easier to take place, and therefore, players may feel that the games become more enjoyable because they are more easily bonded with others. Hence, we argue that Twitch may facilitate the satisfaction of the three needs that give rise to intrinsic motivation for participating in gameplay.

3. Methodology

3.1 Data Collection and Analysis

Our participants are selected from Twitch network. Based on their profiles, we select those who are active players of Final Fantasy XIV. We plan to recruit 10 such players to conduct interviews. Each interview is conducted virtually through teleconferencing software and takes approximately one hour to complete. We followed the best practices in qualitative interviewing suggested by Wertz et al (2011) and Seidman (2006). For instance, we focus on building an equitable relationship with our participants and conduct each interview in a semi-structured fashion that allows the conversation to be open-ended without deviating from our research topic. Open ended questions like “Could you tell a time how you communicated with others when you learned or taught others how to play? What have you done to facilitate the dialogues?”, “What do you think is the most effective means for communication in FFXIV? and “What differences has Twitch made to the outcomes of your learning (in terms of both gaming skills and real-life skills)?” were asked during the interview.

We employ grounded theory approach for analysing interview data. Following the suggestion of Glaser and Strauss (1967, p. 3), we do not approach reality as a “tabula rasa”, instead we utilize prior theoretical perspectives (i.e. Self-Determination Theory, concepts from dialogical learning) to abstract significant categories from the data. Grounded theory has proven to enable researchers to make sense of a large amount of data using

a coding method (i.e. open, axial, and theoretical coding) that progressively categorizes data into a theoretical model (Charmaz, 2006; Strauss & Corbin, 1998). We develop these codes and use them as a conceptual tool to sort, summarize, and synthesize data. Each stage of analysis informs the next stage of data collection as we intend to collect and analyse data simultaneously rather than in a sequential fashion where we would analyse data after all the interviews are completed (Glaser & Strauss, 1967). Our goal is to reach theoretical saturation where the repetitive pattern of existing concepts will surface (Suddaby, 2006). So far, grounded theory method has allowed us to inductively develop understanding related to our research question.

We transcribe each interview recording and import each transcript in a qualitative data analysis software NVivo for coding. This software has been employed in numerous qualitative studies for generating traceable and replicable analytical records, ensuring the authenticity of the findings (Wertz et al, 2011). The preliminary findings from this analysis are reported below.

4. Preliminary Findings

From the analysis of the collected interview data, players' goodwill and a welcoming environment are found to be the antecedent conditions to a more enjoyable communication in FFXIV comparing to other MMORPGs. Our participants report that, advanced players help other players because they are willing to. The game itself does have a mentoring system where novice players can be paired with higher-level players (mentors) one-on-one, but many are going out of their way to help novice players without joining the mentor network. Players who received help from others are also willing to return the favours. On the game developer side, the parent company of Final Fantasy, Square Enix Global invests a significant effort in ensuring game etiquette by quickly responding to activities upsetting the gaming experience. For instance, they have zero tolerance toward hateful or homophobic speech, which has made a lot of the marginalized communities feel better and safer in the game. This welcoming culture breaks the barrier between players and enables a tight-knit player community to be curated over time.

"The Final Fantasy XIV community as a whole is a very positive community versus like WoW [World of Warcraft] or Guild Wars or any of those kinds of things. We have a very tight-knit and very positive community so there's a lot of people out there who really want to help people, so I guess them seeing new players like 'hey I can go help them, I can, you know, improve their journey and they always do.'"

"I have met this really awesome community of people within the Final Fantasy XIV community...It's always just a fun time to be able to interact with other people and be able to chat with all of them, run content with them, and I think Final Fantasy XIV specifically just has a really good community itself that the players are, for the most part, super nice, always super helpful, and I like to also be that kind of person that likes to help other people as well. So, it's just like a nice community of helping each other out."

While analysing the data, three major challenges players faced stood out to us: communication, learning, and game engagement. There is no voice chat feature in the game, so players must type messages in the chat log. This imposes difficulties on players who use a controller to play the game. The game itself provides instructional messages to guide gameplay. However, players report that the instructional information can be overwhelming that makes them difficult to learn how to play. Most players are visual learners so that they search YouTube videos to understand how to get things done. Certain activities in the game require extra communication. For instance, during the endgame raiding, more communication is needed because mechanics have higher difficulties. The in-game chat function cannot satisfy real-time communication.

"They [the game] only have like a typing chat and it's really hard to type and play the game at the same time, especially when you're like me, and you have to hold a controller. I can't really hold the controller and type on my keyboard at the same time."

"Compared to like level 1 we only have like maybe two buttons to worry about where it's not quite as overwhelming like 'okay, I can handle this. Just one or two, maybe three [buttons].' Then you look at my screen at level 70 there's 20 different buttons, and that can be overwhelming to a new player."

“I’m the endgame breeds because they’re on a higher skill level, require a little more communication as to, okay, who’s gonna mitigate what damage, who’s going to stand where because there’s a lot of mechanics where you have to spread out from people.”

Due to these challenges, players seek other means for a better experience of communication and engagement. Twitch is a video streaming platform originally developed to allow anyone to broadcast video online. During live streaming, viewers can see and interact with the broadcaster in real-time. Any channel on Twitch has a chat feature where viewers can post messages for the broadcaster to read and respond in either text or through voice. This interactive platform has been adapted by FFXIV players as a dialogical learning space where players stream their gameplay, ask questions, exchange ideas, and learn how to play well the game together. Because of the visual component, it is easier for a player to demonstrate to others how to do things. YouTube is an archival library, whether users can find the information they need depends on what is available in the archive, whereas Twitch does not have this limitation because the information flows in real-time. Twitch users make inquiries and receive information immediately. FFXIV players report benefiting from Twitch communication when learning the game, especially when the broadcaster is an expert player who illustrates tips and tricks that save other players from investing a significant amount of time in looking for a specific answer online, enabling players to get through the game contents a lot faster.

“[When I started to play FFXIV] I quickly realized that I was a very small person in a very big world and there was like so much information being thrown to me. I could look at YouTube videos all day long and still not know how to play and I realized that I didn’t really have people to teach me the game. So, when I opened up [Twitch] streaming, it gave me an opportunity to let people in and to share their experiences a little bit more, and I feel like, having that more personal one-on-one or one-on-hundred conversation style worked a lot better for me to learn things or to really understand things.”

Twitch has augmented the satisfaction of three basic psychological needs of autonomy, competence, and relatedness in FFXIV gameplay. Twitch enhances a player’s autonomy by providing a variety of FFXIV contents to the player. Whether you are a professional gamer or a casual gamer, Twitch has a place for everybody. Twitch improves competence in the sense that a player must develop strong communication skills to convey a message, especially when explaining mechanics. It also teaches the communicator to be patient when others need time to process the information received. The most salient change is the increasing of a sense of relatedness. Twitch facilitates the search for like-minded players that lead to long-lasting friendships and more productive discussions for resolving game-related issues.

“There’s a particular [Twitch] streamer that I am good friends with whose whole channel is built around teaching savage content to casual players like me, and my friend was like ‘I’ll help you out. I’ll get you through it.’ So, we would get together and we’d be in a party together and we’d go into the content. My friend would explain mechanics and help me clear a good chunk of the raiding content.”

Although advanced players might take the role of mentor, by no means the “mentor” would dominate the conversation. Instead, participation is very egalitarian, and we have not observed a monological pattern of knowledge transfer. Contrarily, we found that FFXIV players are receptive to a variety of perspectives communicated to them. They are more willing to work collaboratively in developing game strategies with players of different backgrounds including newbies.

“I sit down and watch their content and will even do collaboration while we’re both streaming. We will be in the same group and discussing strategies and mechanics as a whole, just kind of a teaching party and that’s really cool. I don’t mind that at all.”

FFXIV players have adapted Twitch as a channel for exchanging dialogues to facilitate gameplay. Our participants confirmed that Twitch has fostered a strong community where they can hang out with people and share experiences about the game. This has made their gaming experience more enjoyable and engaging.

“I really enjoyed the game, you know, Twitch is a way for me to be the entertainer I always know, but also to spend time with people that have been very helpful throughout this pandemic.”

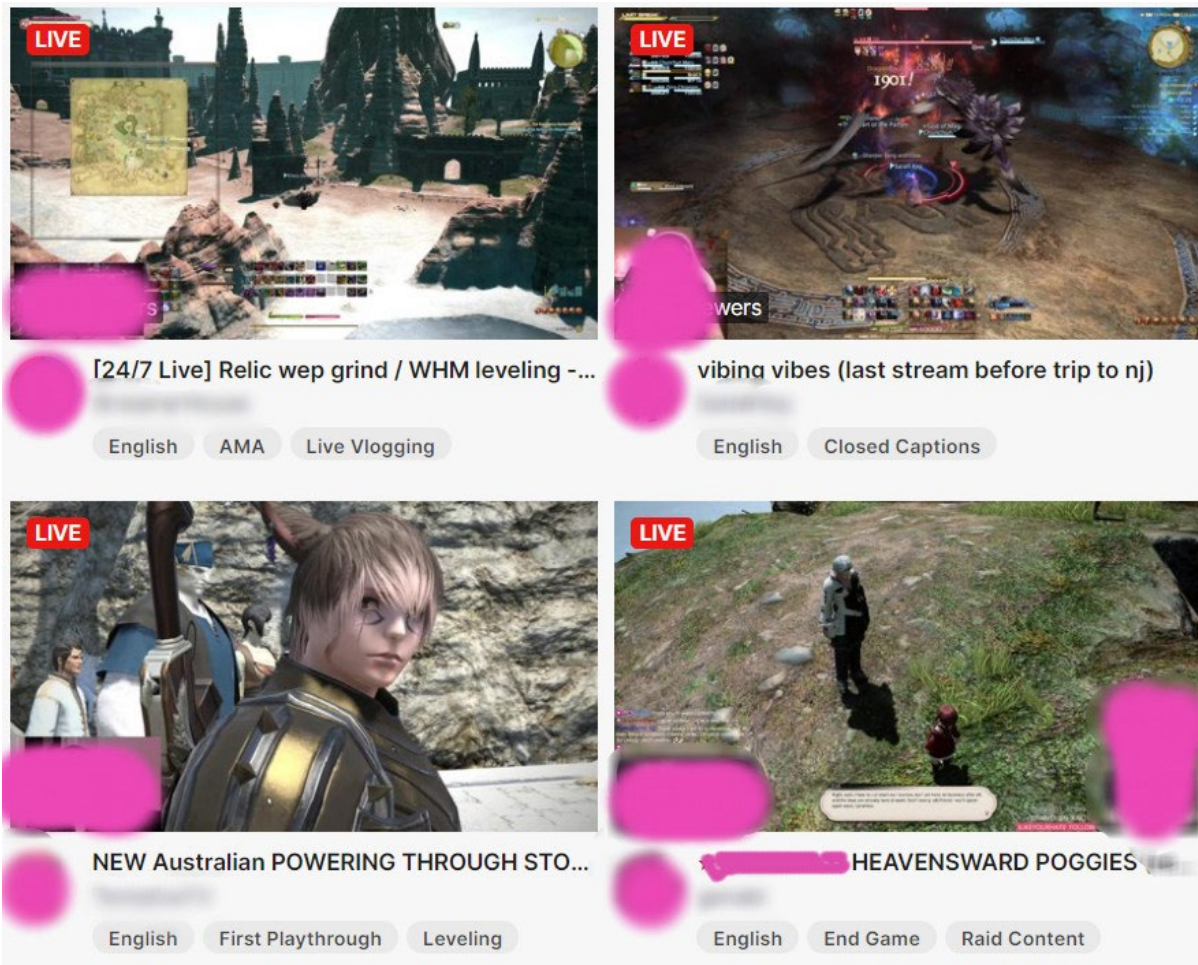


Figure 1: Examples of Live Streams on Twitch

5. Discussion

As communication technologies evolve pedagogies and practices seem to emerge in education as well (Litchfield et al, 2010), the popularity of game-based learning and the use of videos conform to this trend. However, the communication in the classroom setting overwhelmingly remains monologic nature, the teachers talk most of the time (Reznitskaya & Gregory, 2013). Dialogic approach emphasises on social context by focusing on dynamic and interactive nature of social construction of meaning within dialogues (Wegerif & Mercer 1997). Flipped classroom attempted to introduce that by forcing the student-centred course design where students engage in active learning (Gilboy, Heinerichs & Pazzaglia, 2015) and develop their metacognitive skills (being aware of thought process). Dialogical learning may be more effective in the flipped classroom environment (Aznar-Díaz et al, 2020) if students come prepared to participate in the class.

In the MMORPG environment, players have the autonomy to choose (self-select) which game contents they want to play, as a mode of entertainment. Most players turn to YouTube videos as a guide instead of instruction provided by the game and streaming platforms like Twitch to have real-time communication while playing the game to ask certain questions to the experienced players. As part of the dialogical framework proposed by Wegerif and Mercer (1997), the exploratory type of talk is one social mode of thinking. It is characterized by jointly considered, challenged, and justified statements and suggestions. Exploratory talk is a salient phenomenon among FFXIV players which takes place on Twitch platform and often relates to job class, endgame raiding, and new game contents. Evidently, the effectiveness of learning and talking would differ from person to person, depending on their individual characteristics, while evaluating the effectiveness of GBL (All, Castellar & Van Looy, 2016).

For the teaching environment, Arnseth, Hanghøj and Silseth (2018) proposed a set of guidelines and referred it to games as tools for dialogic teaching (GTDT) model, while using digital games. The model has five dimensions (learning goals and knowledge domain; reflection and assessment; digital games; learner positioning; and dialogic moves) to create a dialogic space for learning, where learners get opportunities to experience, reflect and enable other learners to take their perspectives. FFXIV players as participants in this study demonstrated the dialogic moves as they integrate Twitch to facilitate the communication in the gameplay. While faced with additional challenges in the FFXIV game, they can get tips and tricks from Twitch streamers (who are also active players of FFXIV), outside the game environment. The community of streamers for FFXIV seems to be very helpful, amiable, welcoming, and inclusive, as described by participants of this study.

Would educators be considered for this role in a classroom setting? Sarid (2014) stressed the importance of authentic authority in the dialogical education to facilitate the discussion and offer professional guidance to the learners so that not only the powerful voices will dominate the learning process. The authority is important to ensure systematic regulations and sustain order in a classroom to guarantee the protection of all learners and their rights to learn. FFXIV twitch streamers seemed to own this type of authority and handle any questions well in the real-time and continue to contribute to the community.

In dialogic classrooms, interactions are key, and the learners consistently reflect on and monitor the processes and products of a discussion (Reznitskaya & Gregory, 2013). Even in a large lecture environment for information systems, Marjanovic (2016) recommended innovative model of instruction to conduct interactive design activities in a team-based learning through scheduled reflective dialogues. The participants of this study who are also real-time streamers are also working in a team by recommending each other for specific guidance about the gameplay.

6. Conclusion

Most studies in GBL emphasized the beneficial aspects of integrating gaming in learning but have not received consistent results. We, on the other hand, focus on how a game might not improve learning engagement right away because of limitations in the game. However, learners may find ways themselves to make it work (such as using a third-party ICT to mitigate communication problems), and other possible ways to learn the next level of gaming faster.

At this stage, this study focuses on dialogical learning from Twitch, a third-party video streaming platform, while playing FFXIV beyond in-game communication and continues to investigate more concepts and practices of using real-time communication channels to improve game-based learning experiences.

While playing FFXIV and streaming to help other players, the participants have reported the learning of the following:

- Being a better communicator (e.g. explain complex mechanics in plain English).
- Being a better teacher (e.g. being patient in explaining things).
- Maintaining composure (e.g. control temper) because of being in front of a camera.

From the theoretical and practical perspective, dialogical learning while playing MMORPGs (FFXIV in this study) is helpful especially for newbies and there are plenty of advanced players (mentors) readily available to help and guide them through various game contents. In the classroom setting in education, however, poses a different challenge to facilitating the discussion and offering professional guidance in the process of knowledge construction. The study will continue to explore how educational settings in institutions differ from online gaming settings and find nuances that can be carried forward and get benefit from MMORPGs to encourage and motivate students in classroom environment. During the COVID-19 pandemic, remote learning is inevitable and implementing the digital games to improve the engagement and communication for learners is the topic of interest and will be explored in the future.

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