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Learning by Gaming: Extramural English Gaming Effect on Indonesian Senior High Students' Pragmatic Competence

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Abstract
Several studies have found that learning English outside of school through Extramural English (EE) activities such as online gaming can enhance students' English language ability. However, not many information exists on whether this so-called extramural English gaming activity has implications on students' pragmatic competence. To answer that, this study aims to explore the effect of extramural gaming activity toward students' pragmatic competence. The research was done by employing a task called the Multiple-Choice Discourse Completion Task (MCDCT) on 60 second-grade students interested in extramural gaming activity (male = 26, female = 34) in Luwuk, Indonesia. Students were divided into two groups, 30 gamer students and 30 non-gamer students. The students were instructed to answer several real-world communicative situations given in the MCDCT task. The data analyzed using statistical descriptive methods. The results of the study revealed that students who frequently played online games (M=3.523) were slightly better at doing the MCDCT than non-gamer students (M=3.220). Thus, it concluded that extramural gaming activity positively affected students' pragmatic competence.
Keywords: *Extramural English; Online Gaming; Pragmatic Competence*

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INTRODUCTION

In recent years, the relationship between language learning outcomes and gaming activity has attracted significant attention from researchers (Jabbari & Eslami, 2019; Xu et al., 2020; Sundqvist & Wikström, 2015). This comes from the fact that the development of digital games has expanded to the point where they can also become a media for language learning (Wu & Huang, 2017; Casan-Pittarch, 2017). However, various society groups, including parents and teachers, were apprehensive about some of the content in games and their potential to be addictive. On the other hand, Kao (2020) suggested that online gaming can also be a potential media for contextual language learning needs. This raised an issue whether playing online games can increase or might decrease students' productivity in learning, especially in language learning.

The popularity of playing online games comes from the reasons that digital games are attractive for many people across all ages (Gee, 2007). In Indonesia, data from *Reportal* claimed that 94% of internet users aged 16 to 64 from Indonesia play video games on any device they have (Kemp, 2022). This is because most online games can be accessed through various platforms, such as computers, game consoles, and mobile devices using the Internet, which therefore contribute to why most people like to play online games on any occasion. This can be seen where teens who are mostly students preferred to play online games after school. Students who then play online games may meet and interact with native English players using English as a default language of gaming communication (Stenberg in Sylvén & Sundqvist, 2015). Consequently, this gaming activity can accidently lead them to learn English beyond the traditional classroom setting, which can be called as Extramural English Activity (Sundqvist & Sylvén, 2016).

The term *Extramural English* (EE), refers to the engagement of English learning activities outside of school (Sylvén & Sundqvist, 2012). In this case,

researchers pick the term "gaming" as the focus of the EE activity on this research. Sylvén & Sundqvist also pointed out that online gaming is more effective for language learning compared to other activities like listening to music or watching TV and movies. Moreover, Toufik & Hanane (2021) pointed out that online gaming is very beneficial and useful for learners of English as a foreign language.

Online video games provide its player with instantaneous and continuous feedback related to the game content that can be received through the interactions (Reinhardt, 2018; Ryu, 2013). Gaming also can make students observe the use of target language by in-game characters and other players, which can enrich player comprehension of language use (Calafato & Clausen, 2024). However, in-game interactions are more impactful for the acquisition of language skills, especially English pragmatic skills. Calafato & Clausen suggested that interaction in gaming activity can help a person to learn English. In line with this, Peterson (2012) suggested that many games are embedded in cultural narratives that expose players to sociocultural norms, aiding in understanding pragmatic norms in intercultural communication.

Despite the increasing attention being paid to the educational value of extramural activity such as gaming, until now only few researchers have ever studied the impact of EE activity on pragmatic or intercultural communicative ability. For instance, Nugroho et al. (2022) in their study of how EE influences learners' English communicative competence suggested that both receptive and productive EE activity (e.g. listening to English music and chatting in English with others) does indeed can develop the English learners' communicative competence. Additionally, study by Rezai (2023) about the association of EE with EFL learners' intercultural competence also concluded that EE has a significant positive association with EFL learners' intercultural communicative competence. Moreover, Pla-Ángel & Nightingale's (2018) suggest on their study regarding the impact of extramural media contact on the foreign-language pragmatic competence indicated

that the amount of time spent on EE activity is an important factor that significantly can improve learners' pragmatic competence

While other empirical research has shown the positive impact of EE gaming activity on learners' communicative competence, until now, no research has ever studied specifically the impact of EE gaming on language learners' Pragmatic Competence. It is also worth mentioning that one of the fundamental constituents of language competence is pragmatic competence (Timpe et al., 2015, p. 8). This highlighted the important reason to study the EE gaming impact toward pragmatic competence. In addition, according to Mao & He (2021) pragmatic competence emphasizes the context of language use, which is based on its social and cultural functions. Several studies have shown that learners who are aware of the target language's sociocultural norms and pragmatic rules are more willing to communicate and participate in conversations (Yashima et al., 2004; Kang, 2005). EE gaming activity provides an immersive environment that may allow language learners to engage in several interactions with non-playable characters (NPCs) and native English players while using English.

As already explained above, several previous studies showed positive impact of EE gaming activity for the language ability Piirainen-Marsh & Tainio; 2009; Sundqvist & Wikstrom 2015; Jensen, 2017; Puimège & Peters, 2019). However, prior studies have not yet addressed the impact of EE gaming activity towards Students Pragmatic Competence. Therefore, in order to fill the gap of previous studies, this research compared the impact of EE gaming activity on the students who frequently and not playing digital games on their English Pragmatic Competence. Additionally, this study is restricted to students who play online games on several different gaming platforms.

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Extramural English Gaming

Extramural English (EE) can be defined as the informal and typically refer to voluntary use of English by learners in both online and offline environments. EE can become an alternative way to learn English informally in a language-learning context. According to Calafato & Clausen (2024) learning English through gaming is aligned with the theory of interactionism. In other words, learning English through EE gaming can be acquired through some interaction during gaming (Peterson, 2012). This can be happened when the players encounter several opportunities to adapt their language skill, such as interacting with native or more proficient speakers and game content in practice the target language (Pasfield-Neofitou, 2014; Ibrahim, 2022). In line with this, Thorne (2008), in his study regarding the commercial digital game called World of Warcraft, he discovered that in-game and game-related interactions between English and Russian speakers in World of Warcraft can make its players form supportive relationships and encouraged collaboration for language learning.

Gaming also facilitates interesting ways to learn the English language. For example, in massive multiplayer online role-play (MMORPGs) games which can make the players exposed with target language in the case when they are required to engage in a dialogue with non-player characters (NPCs) and other players. Therefore, through these interactive elements, students are exposed to a variety of language functions, such as making requests, expressing opinions, and negotiating meaning which can contribute toward pragmatic competence. In line with this, Chotipaktanasook & Reinders (2018) argued that engaging in an online gaming activity, such as playing multiplayer role-playing games can improve its players' English communicative skills.

Online games often serve as platforms for social interaction and community building. According to Yee (2006), massively multiplayer online games (MMOs)

provide environments where players engage in complex social interactions, forming communities that extend beyond the game itself. These virtual communities offer spaces for collaboration and social bonding (Steinkuehler & Duncan, 2008). As for language learning context, online games represent a dynamic and promising avenue for enhancing English language learning outcomes. Online gaming can facilitate vocabulary acquisition and language skill development, promote cultural understanding, and support innovative pedagogical practices (Thorne, 2008; Calvo-Ferrer & Belda-Medina, 2021).

In the case of EE gaming activity, Rama, Black, Van Es, & Warschauer (2012) in their study regarding out-of-school interaction in an online game, called World of Warcraft. They pointed out that the game's environment can affect its players' pragmatic competence as the participants were required to use English language in a manner appropriate to the game's particular culture. In addition, study by Sykes & Reinhardt (2013) suggest that games often require players to communicate with peers, strategize collaboratively, and solve problems using English, thereby enhancing communicative competence of the players. In addition, Sundqvist & Wikstrom (2015) also studied EE on students' vocabulary, in which they compared non-gamer female students with male students who frequently played video games. They discovered that male students had more advanced vocabulary knowledge than non-gamers female students.

Pragmatic Competence

Pragmatic competence refers to the ability to construct meaning through linguistic and non-linguistic within the ongoing interactive context (Ishihara & Cohen, 2022, p. 2). In the same line, pragmatic competence refers to the ability to effectively express and interpret meaning of specific language terms while using language appropriately within specific contexts. To develop this competence, language learners need to understand the structure of the language (its form) and

how it is appropriately applied in various situations or contexts. (Canale, as cited in Nguyen, 2011). Furthermore, other definitions related to pragmatic competence also described that pragmatic competence as the ability to produce and comprehend utterances or discourse in the sociocultural interaction, this included knowledge of the sequential aspects of speech acts and knowledge of the appropriate contextual use of the particular language's linguistic resources (Barron in Mao & He, 2021).

According to Bachman' pragmatics is a subcomponent of language competence and is composed of sociolinguistic and illocutionary competences, which is defined as "*the knowledge of the pragmatic conventions for performing acceptable language functions*,". Austin (as cited in Borchman, 2024) described that illocutionary act refers to the ability to produce an interactional effect through utterance. Illocutionary act can be divided into five primary groups: declarative, expressive, representative, commissive, and directive (Searle in Maskuri, 2024); Declarative speech refers to a form of speech aimed at altering a situation (stating, affirming, and rejecting); Representational speech involves expressing the speaker's belief about truth or falsehood of a statement (swearing, providing information, denying, claiming, and reporting); Expressive speech refers to the speaker's emotions (sympathy, praise, gratitude, sadness, criticism, and vows); Directive speech refers to efforts by the speaker to influence another individual's actions (asking, inviting, commanding, requesting, and suggesting); and commissive utterance denotes a speaker's commitment to undertake a future action (refusal, promise, and commitment).

In line with previous explanation, Kohen (2008) argued that one of the effective tools to measure a language learner's pragmatic competence or knowledge is by using discourse completion task (DCT). In this current study, researchers employed the Multiple-Choice Discourse Completion Task (MCDCT) developed by Hudson et al. (1995). As suggested by Bardovi-Harlig (2001), employing multiple

DCTs can provide a comprehensive assessment of pragmatic competence by presenting learners with a variety of speech act scenarios. In line with that, Carsten (2005) also suggests that MCDCT scores can be used to measure pragmatic competence with real-world communicative situations by choosing the most contextually appropriate response in a given situation. Furthermore, some researchers pointed out that MCDCT can be a valid measure in testing interlanguage pragmatic competence (Liu, 2007; Xu & Wannaruk, 2016).

RESEARCH METHOD

Participants of the Study

The participants in this research were 60 second-grade students from two different upper-secondary schools (male = 26, female = 34) in Luwuk, Indonesia. The number of female students is higher than male students, as female students dominate the percentage of the school cohort. However, the imbalance of gender does not affect the research process. These male and female students were then divided into two groups. The first group included 30 students (male = 17, female = 13) with frequent EE gaming experience (categorized as gamer students) who volunteered and were selected based on their durations of playing video games after school. In comparison, other groups are students who did not have a high amount of experience and interest in playing English video games.

The first group of students represented a data of students who have a high amount of gaming experiences. These students were all from two different schools in Luwuk Indonesia and were selected because there were only 30 students who met frequent gamer criteria in this small region. Hence, researchers had to gather these students in one class to be given a task. Moreover, the criteria of frequent gamer students selected in this research as according to Sundqvist & Wikström (2015), refer to students who played English based video games on various

platforms (not just one platform) for more than 5 hours a week. Based on that, the researchers selected 30 students who matched the current research criteria.

The second group was the opposite of the previous group, which included 30 students (male = 9, female = 21) from the same school. The chosen purpose of these 30 students was based on the criteria of non-gamer students by Sundqvist & Wikström (2015), who suggested that non-gamer students as students with less experience and no interest in playing a video game. In simple terms, this current research categorized non-gamer students as those who either did not play English video games, had limited gaming experience (below 5 hours a week), or had only one or limited device to play a game. Thus, based on the criteria, researchers selected 30 volunteers who matched with the criteria to represent the data comparison with the previous frequent gamer group of students.

Data Collection

The data of this study were collected by employing a task called Multiple Choice Discourse Completion Task (MCDCT) developed by Hudson et al. (1995). Before applying the methods, the researchers first asked the participants about their experience with digital games and daily gaming hours. Based on their responses, participants were divided into two groups: frequent gamers (above 3 hours EE gaming activity) and non-gamers. The data collection was administered on one class which lasted for 60 minutes. One of the researchers was present to monitor the data collection process, answer any student questions, and resolve any issues that arose.

The data collection involved frequent gamer students completing a task called MCDCT in the form of a questionnaire, followed by the non-gamer students. The questionnaire included participant information (sex, class, and name) and 10 illocutionary speech act situations. These 10 situations reflected the actual real-word conversation in the form of directive, expressive, commissive, and

representative illocutionary act, with each situation containing multiple options. The questionnaire then will be shared to all participants (including gamer and non-gamer students). Following is the example of the situation in MCDCT:

> **You are attending a festival in the city when you suddenly see someone you recognize, who turns out to be your old friend named Boby. However, you still intend to greet him, Boby doesn't seem to notice you.*
> *You will say:*
> *A. Hey Bob! How are you?*
> *B. Hey Bob! How've you been?*
> *C. Bob, my friend, long time no see!*
> *D. Hello Bob, do you still remember me?*
> *E. Bob, good to see you!*

As can be seen, the MCDCT contained multiple options, each of which contained an appropriate score. Answers that are most appropriate to the situation according to its cultural norm presented in the paper will receive a score of 5. Answers that are appropriate will receive a score of 4 and answers that might be appropriate will receive a score of 3. At the same time, almost appropriate answers will receive a score of 2, while answers that are not correct will receive a score of 1.

Data Analysis

The data in this study was analyzed using descriptive statistics. According to Rose et al. (2019), the use of descriptive statistical analysis serves to describe and characterize a given dataset. In addition, statistical data will be used to compare the MCDCT data between frequent gamer students and non-gamer students.

RESULTS & DISCUSSION

Frequent Gamer vs. Non-Gamer Students' Pragmatic Competence

Table 1 contains descriptive statistics of the MCDCT results by the students who frequently play online digital games. Overall, the data indicated that gamer students have average scores of 3.523. Most gamer students have the highest

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average scores in situation 5, which involved an expressive illocutionary act (M = 4.467, SD = 0.973). Whereas, the lowest average scores can be seen in the situation 2 which also reflected expressive illocutionary act (M = 2.433, SD = 1.501). Meanwhile, in directive speech act reflected in situations 1 (M = 3.767, SD = 1.131), 3 (M = 3.133, SD = 1.008), 9 (M = 3.767, SD = 1.104), and 10 (M = 3.867, SD = 1.252) showed that students got average score of above 3. Furthermore, both commissive (M = 3.383, SD = 1.117) and representatives (M = 3.4, SD = 1.329) also have average scores of above 3.

Table 1. Descriptive Statistics of Gamer Students' MCDCT Scores

Situations	Illocutionary	*N*	Minimum	Maximum	*M*	SD
1	Directive	30	1.000	5.000	3.767	1.331
2	Expressive	30	1.000	5.000	2.433	1.501
3	Directive	30	1.000	5.000	3.133	1.008
4	Expressive	30	1.000	5.000	3.033	1.066
5	Expressive	30	1.000	5.000	4.467	0.973
6	Commissive	30	1.000	5.000	3.833	1.117
7	Representative	30	1.000	5.000	3.400	1.329
8	Expressive	30	1.000	5.000	3.533	1.358
9	Directive	30	1.000	5.000	3.767	1.104
10	Directive	30	1.000	5.000	3.867	1.252
Total = 3.523						

The same measurement was applied to non-gamer participants (students) using the same method, and the results showed that most non-gamer students have average scores below gamer students (M = 3.220). The highest scores obtained by most non-gamer students were in situation 10 which contained directive illocutionary act (M = 4.267, SD = 1.081. Whereas, the lowest average scores can be seen in the situation 2 which also reflected expressive illocutionary act (M = 1.500, SD = 1.075). Meanwhile, in directive speech act reflected in situations 1 (M = 2.767, SD = 1.194), 3 (M = 2.400, SD = 1.354), and 9 (M = 3.133, SD = 1.279) showed that

most students got average score of above 2. Furthermore, both commissive (M = 3.867, SD = 1.137) and representative (M = 3.667, SD = 1.322) also have average scores of above 3.

Table 2. Descriptive Statistics of Non-Gamer Students' MCDCT Scores

Situations	Illocutionary	*N*	Minimum	Maximum	*M*	SD
1	Directive	30	1.000	5.000	2.767	1.194
2	Expressive	30	1.000	5.000	1.500	1.075
3	Directive	30	1.000	5.000	2.400	1.354
4	Expressive	30	1.000	5.000	3.300	0.702
5	Expressive	30	1.000	5.000	3.800	1.349
6	Commissive	30	1.000	5.000	3.867	1.137
7	Representative	30	1.000	5.000	3.667	1.322
8	Expressive	30	1.000	5.000	3.500	1.432
9	Directive	30	1.000	5.000	3.133	1.279
10	Directive	30	1.000	5.000	4.267	1.081
Total = 3.220						

The findings indicated that the pragmatic competence performance of frequent gamer students who engage in EE gaming activities was slightly higher in terms of the average score than non-gamer students (see Table 3). This data was gathered from the results of various situations presented by the Multiple Discourse Completion Task (MCDCT), involving 30 gamer students, predominantly male, and 30 non-gamer students, predominantly female. In line with the findings, Sundqvist & Wikström (2015) suggested that non-gamer students generally have lower vocabulary scores than their gamer counterparts. It can be concluded that EE gaming can have a beneficial impact on students' pragmatic competence. Furthermore, as shown by the findings, gamer students better understand expressive speech act situations (see table 1). In line with this, Balogh & Veszelszki (2020) highlighted that players often use expressive speech acts, such as mocking

and taunting to other gamer when interact with other gamers during online gaming. Therefore, this frequent use of language in interactive contexts during online gaming helps reinforce linguistic skills and encourages practical language use.

These results underscore the complexity of how the extramural gaming has a positive link towards students' pragmatic performance. This is shown from how most gamer students have better average score. These finding pointed out two important point. First, it reveals that gaming activities can affected students' pragmatic language skills. As suggested by Thorne (2008) that online gaming can be an alternative media in vocabulary acquisition and promote cultural understanding, which in this case is pragmatic competence. Such cultural understanding can be found during gaming activity. Second, students who frequently play video games have a slightly better understanding of the context of language use, as shown from the situations provided by the MCDCT.

These findings collectively underscore the potential of online gaming as a significant tool for language learning and cultural enrichment, which are also important elements to develop students' pragmatic competence. As suggested by Peterson (2012), the interactions that occur within online games provide players with opportunities to practice and refine their pragmatic skills in English communication. Hence, by engaging in the gaming environment, learners can experience a form of contextualized learning that goes beyond traditional classroom settings. This indicates that the interactive and immersive nature of online gaming can also play a crucial role in enhancing language proficiency and cultural awareness among students.

Male Gamer vs. Female Gamer Students' Pragmatic Competence

Below graphic displays a comparative data representing the average scores for MCDCT results between male and female gamer students on their pragmatic performance. The analysis of the data reveals that male students (M = 1.980)

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outperform female students (M = 1.543) across nearly all situations assessed in the MCDCT. However, there are specific situations, such as 3, 6, and 7 where female students showed better performance than male gamer students. These findings underscore that the male students who engaged in an EE online gaming have better pragmatic competence than female gamer students.

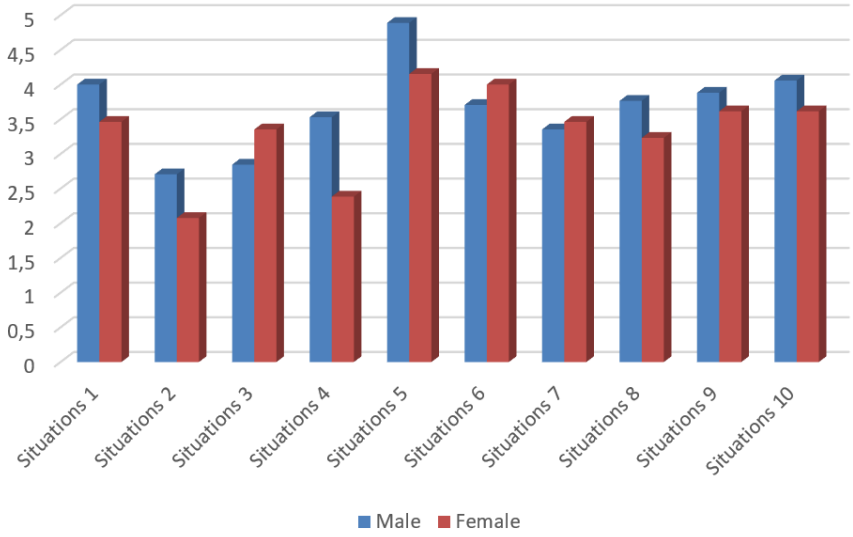

Image 1. Graphic of comparison between male and female gamer students

Based on the data, it can be concluded that male gamer students got better average scores in most situations provided by MCDCT than female gamer students (see Table 2). This indicated that male gamer students have better pragmatic competence than female gamer students. However, researchers believed that this may be due to the limitations of the research, which does not specifically explain the differences in the duration of each student's playing games. Sylvén & Sundqvist (2012) regarding their research on EE Gaming effect toward L2, pointed out that male students who spent most time gaming have better scores in terms of vocabulary than female students. In addition, Cobb & Horst (2011) argued that longer periods of time in EE activity, especially in playing online games, is essential

for better language acquisition, specifically pragmatic competence. Indirectly, this explains the reason that the male students have better performance scores in pragmatic competence than their female counterpart, since they spend more time in EE gaming activity than female students.

The illocutionary acts reflected in the MCDCT task used in the current research refer to real-world communicative scenarios that generally occur during social interactions. Social interaction relates to intercultural communication, which allows for the presence of specific informal terms that are not part of formal English but are instead part of the everyday language used by native English speakers. Therefore, the use of formal English differs in formal communication contexts. In the case of the data above (Image 1), the data pointed out that male students have a better understanding in terms of choosing the appropriate responses to the illocutionary acts reflected in the MCDCT task.

CONCLUSION

Extramural English (EE) gaming experiences can positively influence students' English language acquisition. One linguistic skill that gaming can help develop is pragmatic competence, which includes understanding cultural nuances in language use. This aligns with Thorne's (2008) work, which notes that online gaming can serve as a platform for language learning and intercultural communication. This study's findings show that students who frequently engage in EE gaming activities scored higher on average in pragmatic competence compared to non-gamer students. Based on that, EE gaming activity has a beneficial effect on students' English pragmatic skills.

This study suggests that male gamer students outperformed female gamers in average scores across various situations. However, this disparity may be due to the study's limitations, particularly the lack of data on differences in gaming duration. Previous research, including studies by Sylvén & Sundqvist (2012) and

Cobb & Horst (2011), suggests that longer gaming sessions improve language skills, such as vocabulary, which may explain the higher scores among male students due to their longer gaming sessions. Furthermore, the current study suggests that there are pedagogical implications of integrating online gaming activity for foreign English learning activity. This can be done via teachers' instructions or assignment to collect cultural specific terms in English while students playing online game and interact with other players in English

As this study reveals positive effects of the EE gaming activity on pragmatic competence, other research can highlight the sociocultural awareness that might be influenced by playing online games. In addition, the limitation of this study did not account for the specific gaming duration for each student, preventing a clear link between gaming time and pragmatic competence. In addition, future research also can highlight these limitations. Future studies should consider additional variables, such as the students' overall gaming time and students' academic backgrounds.

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