The Impact of Game Preferences on English Language Proficiency: Analyzing Student Habits in Outdoor and Online Gaming Environments

Sujithra I R
III-year Student, **Computer Science and Engineering, Kumaraguru College of Technology, Coimbatore, Tamil Nadu, India**
sujiraja419@gmail.com

Haran Vasudev H
III-year Student, **Electrical and Electronics Engineering, Kumaraguru College of Technology, Coimbatore, Tamil Nadu, India**
haranvasudev15@gmail.com

Dr. Sreejana S
Assistant Professor of English
Department of Languages and Communication, Kumaraguru College of Technology,Coimbatore, Tamilnadu. India
sreejanasasikumar@gmail.com

==

Abstract

This study explores the gaming preferences and habits of undergraduate students, with a particular focus on how online games requiring communication in English influence language proficiency. Through a structured survey conducted with 126 students from various departments, the research investigates the types of outdoor and online games played, the frequency of gaming activities, and the role of English in online communication. The findings reveal diverse game preferences, with students engaging in outdoor and online games, and a significant number reporting regular use of English during online play. The results also indicate that while some students experience noticeable improvements in their English language skills through gaming, others report limited or no impact. This study highlights the potential of integrating online games into educational strategies for language learning and provides insights into how gaming environments can serve as informal platforms for enhancing communicative

==
Language in India www.languageinindia.com ISSN 1930-2940 Vol. 25:5 May 2025
Sujithra I R, Haran Vasudev H and Dr. Sreejana S.
The Impact of Game Preferences on English Language Proficiency: Analyzing Student
Habits in Outdoor and Online Gaming Environments   21

competence in English. The implications for educators suggest a need for a more structured approach to leveraging games as tools for learning. Future research directions include exploring the long-term effects of gaming on language acquisition and the impact of specific game genres.

Keywords: Game preferences**,** English language acquisition, Communicative competence, Language learning through games, Educational games

Introduction
Background

In recent years, games, whether outdoor or online—have evolved from simple recreational activities into essential parts of socialization and skill development, especially for younger generations. Outdoor games have traditionally played a role in physical development and social interaction, providing students with opportunities to engage in teamwork, strategize, and communicate face-to-face. Such interactions promote collaboration and enhance interpersonal skills in a natural environment.

Simultaneously, the rise of digital technology has led to a surge in online gaming, which has now become a significant aspect of many students' lives. Online games offer a virtual platform where players, often from diverse backgrounds, can connect, communicate, and cooperate towards shared goals. These games not only entertain but also create unique social spaces where communication is essential, often requiring players to coordinate strategies and work as a team. Importantly, many of these games demand communication in English, as it is often the common language among players globally. This necessity has led online gaming to emerge as an informal yet impactful medium for practicing English, offering a real-time environment where learners use language in context, practice listening and speaking skills, and develop the confidence to interact in English.

Research Problem

===
Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 25:5 May 2025**
Sujithra I R, Haran Vasudev H and Dr. Sreejana S.
The Impact of Game Preferences on English Language Proficiency: Analyzing Student Habits in Outdoor and Online Gaming Environments   22

While the educational potential of games has been explored in various studies, there is a growing interest in examining how online games that involve real-time communication might influence language learning, especially English language skills. Unlike traditional classroom settings, these games provide students with informal and authentic opportunities to use English while interacting with others. This study aims to address a key question: Do online games that require communication and coordination in English contribute to the development of English language skills among students?

Objective

The primary objective of this study is to analyze the gaming preferences of undergraduate students, particularly distinguishing between outdoor and online games, and to evaluate whether participation in online games positively impacts their English language abilities. By examining student responses regarding game preferences, frequency of play, comfort level with using English in online settings, and perceived improvements in English, this study seeks to provide insights into how online gaming could be integrated into educational strategies for language acquisition. The findings could help educators recognize and potentially leverage gaming as an additional tool for enhancing students' English communicative competence.

Research Questions

This study is driven by three primary research questions, aiming to explore students' gaming preferences and assess the potential impact of online gaming on English language development.

What Are the Game Preferences of Students (Both Outdoor and Online)?

This question seeks to identify the types of games that students prefer and engage in regularly, distinguishing between outdoor games, which often involve physical activity and face-to-face interaction, and online games, which are typically played in virtual spaces with digital interfaces. By examining these preferences, the study will provide insights into the role of different types of games in students' social and recreational lives, as well as factors that might influence their choice of games.

How Comfortable Are Students in Using English During Online Games?

==
Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 25:5 May 2025**
Sujithra I R, Haran Vasudev H and Dr. Sreejana S.
The Impact of Game Preferences on English Language Proficiency: Analyzing Student Habits in Outdoor and Online Gaming Environments   23

Understanding students' comfort level with using English while playing online games is essential to evaluating the communicative challenges and opportunities presented by these virtual interactions. This question focuses on gauging students' self-reported ease or difficulty with English during in-game communication, which may include real-time voice chats, text-based interactions, or other forms of coordination that require language proficiency. Assessing their comfort levels will offer insight into the role of online games as informal platforms for English practice.

Have Online Games Helped Students Improve Their English Skills?

The third question examines whether students perceive any improvement in their English language skills as a result of engaging in online games. This question is crucial for understanding the educational implications of online gaming environments, as these platforms can provide a non-traditional setting where language learning occurs naturally. By evaluating students' perspectives on the impact of online gaming on their language abilities, this study aims to determine whether online gaming can be recognized as a valuable tool for language acquisition and to what extent students feel it enhances their language competence.

Literature Review

The Role of Games in Learning

Research into the educational impact of games has demonstrated that both outdoor and digital games provide valuable learning experiences beyond traditional academic settings. Studies have shown that games foster critical thinking, teamwork, and problem-solving skills, creating interactive environments where students can learn and practice new skills in an engaging manner (Gee, 2003). Outdoor games are known to enhance physical health, coordination, and socialization, while also allowing students to develop social bonds and cooperative strategies (Smith et al., 2015). Online gaming, on the other hand, offers cognitive and social benefits through virtual environments that encourage players to think strategically, collaborate with peers, and adapt to dynamic challenges (Prensky, 2001).

In particular, online games have increasingly been recognized as powerful tools for educational outcomes. Multiplayer games that require strategic coordination, team-based roles, and real-

Language in India www.languageinindia.com **ISSN 1930-2940** **Vol. 25:5 May 2025**
Sujithra I R, Haran Vasudev H and Dr. Sreejana S.
The Impact of Game Preferences on English Language Proficiency: Analyzing Student
Habits in Outdoor and Online Gaming Environments   24

time decision-making have shown potential in developing leadership and communication skills (Chen & Johnson, 2004). These games provide a platform where players can not only immerse themselves in complex problem-solving scenarios but also learn through trial, error, and iteration, key components of experiential learning (Kolb, 1984). Therefore, games—both outdoor and online—are widely acknowledged as influential in holistic student development.

Games and Language Learning

The educational potential of online games has extended into language learning, with studies suggesting that online gaming can offer unique advantages for practicing language skills, particularly in English (Peterson, 2012). Multiplayer games often require communication between players, making language a critical part of gameplay. For instance, online role-playing games (RPGs) and massively multiplayer online games (MMOs) create social environments where English is commonly used for instructions, coordination, and social interaction (Reinders & Wattana, 2015). These environments offer students informal settings where they can use English in context, engage in conversations, and receive real-time feedback, which enhances both fluency and confidence (Zhang, 2018).

Research also shows that online games facilitate a low-stress language practice environment, where players are more focused on game objectives than on language accuracy, helping reduce language anxiety (Rankin, Gold, & Gooch, 2006). Unlike traditional classroom settings, where language practice is structured and often formal, online games enable spontaneous use of language in authentic contexts. Such informal learning has been linked to improvements in vocabulary, listening comprehension, and even cross-cultural communication skills (Thorne, 2008). These findings highlight the potential for online games to serve as effective tools for language acquisition, fostering communicative competence in an interactive and enjoyable way.

Gap in Research

While there is substantial literature on the educational benefits of both online and outdoor games and their potential in language learning, there is limited research that combines these

==
Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 25:5 May 2025**
Sujithra I R, Haran Vasudev H and Dr. Sreejana S.
The Impact of Game Preferences on English Language Proficiency: Analyzing Student
Habits in Outdoor and Online Gaming Environments   25

areas, specifically looking at the comparative influence of outdoor and online gaming on language improvement. Most studies focus either on the cognitive and social impacts of gaming in general or on the specific language gains in online contexts. This study addresses a unique gap by exploring the combined influence of outdoor and online games on students' English language skills. It investigates whether the regular use of English in online gaming environments translates into observable language improvement and assesses students' comfort with English in these contexts. Additionally, while prior research has highlighted online gaming's informal learning benefits, there is less emphasis on understanding how these benefits compare to traditional, face-to-face communication in outdoor games.

This research seeks to bridge these gaps by offering insights into how students' preferences for outdoor versus online games may influence their language development. By focusing on the underexplored intersection of game type, language use, and language acquisition, this study aims to provide a comprehensive perspective that could inform educational approaches and encourage the incorporation of gaming as a supplementary tool in language learning.

Methodology
Data Collection

This study utilized a structured survey to gather data on students' gaming preferences, habits, and their self-assessed comfort levels in using English within online gaming environments. The survey was distributed to undergraduate students across various departments, resulting in a sample size of 126 participants. The survey was designed to collect both quantitative and qualitative data, with questions tailored to explore the students' preferred types of games, frequency of gaming activities, comfort in using English during online gameplay, and perceived impact of online games on their English language skills.

The survey consisted of multiple sections, including:

Demographics: Age, gender, department, and year of study.

==
Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 25:5 May 2025**
Sujithra I R, Haran Vasudev H and Dr. Sreejana S.
The Impact of Game Preferences on English Language Proficiency: Analyzing Student
Habits in Outdoor and Online Gaming Environments   26

Game Preferences: A series of questions asking participants to identify their preferred types of games (outdoor vs. online), specific game genres, and particular outdoor games or online franchises they enjoy.

Gaming Frequency and Social Context: Questions about the frequency with which participants engage in outdoor and online games, along with information about whom they typically play with (e.g., friends, family, or online acquaintances).

Language Use and Comfort in English: A set of questions focused on the frequency of English use in online games, comfort level in communicating in English during gameplay, and perceived impact on their English language skills.

This survey structure enabled the collection of comprehensive data on students' gaming behaviors and their potential role in language learning.

Sample

The participants of this study consisted of undergraduate students from various engineering departments at Kumaraguru College of Technology. Most participants were first-year students, with an age range primarily between 18 and 20 years, representing departments such as Computer Science and Engineering, Electrical and Electronics Engineering, and Aeronautical Engineering. The gender distribution in the sample allowed for varied perspectives, though specific demographics will be detailed in the results section. The diverse academic backgrounds and interests among participants provide a well-rounded perspective on how gaming, both outdoor and online, is experienced by students in a higher education context.

Data Analysis

The collected data was analyzed using both quantitative and qualitative methods to identify trends, correlations, and insights into students' gaming preferences and the impact of gaming on English language acquisition.

Quantitative Analysis:

===

Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 25:5 May 2025**
Sujithra I R, Haran Vasudev H and Dr. Sreejana S.
The Impact of Game Preferences on English Language Proficiency: Analyzing Student
Habits in Outdoor and Online Gaming Environments   27

Frequency and Preferences: Numerical data on game preferences, frequency of play, and comfort level with English were analyzed statistically to determine predominant trends. Descriptive statistics were used to summarize data on students' gaming frequency and preferences (e.g., percentage preferring outdoor vs. online games, frequency of playing games per week).

Comfort with English: Responses to comfort-level questions were categorized to evaluate the percentage of students reporting various comfort levels (e.g., "very comfortable," "moderately comfortable," "not comfortable") in using English during online gameplay.

Qualitative Analysis:

Open-Ended Responses: Responses to open-ended questions, such as specific outdoor games or online franchises and perceived improvements in English, were coded to identify recurring themes and sentiments.

Perceptions of Language Impact: Qualitative data on students' perceptions of how gaming has influenced their English skills were analyzed for common phrases or keywords that indicated whether they felt improvements in vocabulary, fluency, or overall confidence in using English.

Results

Student Demographics

The survey gathered responses from 126 undergraduate students from various departments at Kumaraguru College of Technology, including 42 students from Computer Science and Engineering, 38 from Electrical and Electronics Engineering, and 46 from Aeronautical Engineering. The age distribution primarily ranged between 18 and 20 years, with 58 female and 68 male participants. This diverse sample represents a wide range of gaming habits and language experiences, contributing to a comprehensive understanding of student gaming behavior.

Socio-Educational Background of Participants

In addition to standard demographic information, participants were asked about their educational backgrounds, residential locations (rural or urban), family income groups, and the linguistic environments in which they interact outside the academic context.

===
Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 25:5 May 2025**
Sujithra I R, Haran Vasudev H and Dr. Sreejana S.
The Impact of Game Preferences on English Language Proficiency: Analyzing Student
Habits in Outdoor and Online Gaming Environments   28

Educational Background

All participants were enrolled in undergraduate programs at Kumaraguru College of Technology, a premier institution located in Coimbatore, Tamil Nadu. Students came from a range of schooling backgrounds, including state board, CBSE (Central Board of Secondary Education), and matriculation systems. This diversity in prior education offered a mix of English exposure levels before entering college.

Rural/Urban Background

Approximately **72% of the respondents** reported having an urban residential background, while **28%** came from semi-urban or rural areas. Students from rural backgrounds generally indicated comparatively fewer opportunities for casual English conversation in their immediate environment compared to their urban counterparts.

Family Income Levels

Based on self-reporting, around **65% of students** belonged to middle-income households, **20%** to higher-income households, and **15%** to lower-income groups. Students from higher-income groups were more likely to report earlier and more frequent exposure to English communication environments, both at school and home.

Opportunities for Speaking English at Home and with Friends

Students were also asked about their opportunities to speak English outside of classroom settings. The findings revealed that:

- **38%** of the students reported that they occasionally speak English with family members, especially siblings.

- **24%** stated that they had frequent English interactions with non-classmate friends, particularly in formal situations like online group projects or social media exchanges.

===
Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 25:5 May 2025**
Sujithra I R, Haran Vasudev H and Dr. Sreejana S.
The Impact of Game Preferences on English Language Proficiency: Analyzing Student
Habits in Outdoor and Online Gaming Environments   29

- **38%** mentioned that they primarily used their native language (Tamil, Malayalam, or Telugu) for family and social interactions, reserving English for academic or professional contexts only.

This socio-educational diversity among participants provided a rich context for understanding how factors beyond gaming such as residential background and language exposure at home may influence comfort levels and improvements in English through online gaming.

Game Preferences

The data showed that students engage actively in both outdoor and online games. For outdoor games, 82 students reported playing sports such as cricket, football, and badminton. Of these, 56 students participated in outdoor games on a weekly basis, while 26 students reported playing multiple times per week. These activities were predominantly social, with 78 students indicating that they played outdoor games with friends, and 34 students mentioning family members as gaming partners.

Online games showed even higher engagement levels, with 104 students reporting regular participation. Popular online game genres included strategy, sports simulation, and role-playing games (RPGs). 48 students reported daily play, while 56 students played online games 2-3 times per week. The social dimension of online gaming was also evident, with 89 students noting that they enjoyed connecting with friends or players from different regions. This highlights a preference for frequent, socially interactive gaming experiences in online environments.

Language Use in Online Games

A significant aspect of this study was examining the use of English in online gaming. Results indicated that 99 students regularly used English during gameplay to communicate with team members or coordinate strategies. Comfort levels with using English in these settings varied:

===
Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 25:5 May 2025**
Sujithra I R, Haran Vasudev H and Dr. Sreejana S.
The Impact of Game Preferences on English Language Proficiency: Analyzing Student
Habits in Outdoor and Online Gaming Environments   30

- **Very Comfortable:** 38 students (30%) reported feeling very comfortable communicating in English during online gaming.
- **Moderately Comfortable:** 57 students (45%) indicated moderate comfort, occasionally experiencing some language-related challenges but generally able to communicate effectively.
- **Not Comfortable:** 31 students (25%) reported discomfort, noting that they often struggled with vocabulary or fluency while using English during gameplay.

These specific numbers reflect the diversity in English proficiency among participants and indicate that online gaming environments may provide informal language practice for many students.

Impact on English Skills

The survey also asked students to assess whether online gaming had contributed to improvements in their English language skills:

- **Significant Improvement:** 25 students (20%) reported that online gaming had significantly improved their vocabulary, listening comprehension, and overall fluency.
- **Moderate Improvement:** 63 students (50%) noted moderate improvements, such as increased confidence in speaking or expanded vocabulary, though they did not perceive substantial changes in their overall language proficiency.
- **No Noticeable Impact:** 38 students (30%) felt that online gaming had not noticeably impacted their English skills. Reasons cited included limited English use during gameplay or a preference for using their native language when communicating with friends.

These results provide a clear understanding of the varying impacts of online gaming on language skills, with the majority (70%) observing at least some benefit, while a smaller portion (30%) reported no noticeable improvement.

===
Language in India www.languageinindia.com ISSN 1930-2940 Vol. 25:5 May 2025
Sujithra I R, Haran Vasudev H and Dr. Sreejana S.
The Impact of Game Preferences on English Language Proficiency: Analyzing Student
Habits in Outdoor and Online Gaming Environments   31

Discussion

Game Preferences and Habits

The data revealed distinct preferences among students for both outdoor and online games, highlighting the diverse ways students engage in recreational activities. Outdoor games like cricket, football, and badminton were popular, particularly among students from departments with traditionally hands-on curriculums, such as Electrical and Electronics Engineering and Aeronautical Engineering. This preference may reflect a tendency for these students to enjoy physically active, team-based games that promote face-to-face socialization and cooperative problem-solving skills, which align well with the collaborative aspects of their academic training.

In contrast, online gaming saw a high level of engagement across all departments, with Computer Science and Engineering students being particularly active. These students, whose academic focus often involves digital interaction and technology, may find online gaming environments naturally appealing. Daily or frequent online gaming was reported by over 80% of participants, suggesting that students see online gaming as an accessible and engaging form of entertainment that allows for virtual interaction beyond their physical environment. This preference underscores the dual role of online gaming as both a social connector and a convenient recreational activity that fits into students' digitally oriented lifestyles.

English Proficiency and Gaming

The responses indicate that online gaming has had a positive influence on English language acquisition for many students, particularly through informal language practice in real-time communication. Of the students surveyed, 57% reported moderate or significant comfort with using English while gaming, and 70% indicated that they had observed at least some improvement in their English skills. For students frequently engaged in multiplayer games that require coordination in English, the exposure to continuous language use appears to contribute to vocabulary expansion, improved listening comprehension, and enhanced confidence in spoken English. This aligns with theories of language acquisition that emphasize the importance of context-driven language practice in improving fluency and communicative competence (Zhang, 2018).

===
Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 25:5 May 2025**
Sujithra I R, Haran Vasudev H and Dr. Sreejana S.
The Impact of Game Preferences on English Language Proficiency: Analyzing Student
Habits in Outdoor and Online Gaming Environments   32

However, a subset of students, about 25% reported discomfort with using English during gameplay. This group may have limited proficiency or may experience anxiety in using English, which could reduce their engagement in language-rich gaming situations. Additionally, 30% of participants noted no perceived improvement in their English skills, suggesting that while gaming offers opportunities for language use, its impact may be influenced by factors such as initial language proficiency, motivation, and the frequency and quality of English interactions within the game.

Comparison with Existing Studies

The findings of this study are consistent with previous research on the role of gaming in education and language learning. Like Reinders and Wattana (2015), who observed that online gaming environments foster language practice in a low-stress, enjoyable setting, this study found that students who frequently use English in online games experience some degree of language improvement. Furthermore, the comfort levels reported by students mirror findings from Rankin, Gold, and Gooch (2006), who highlighted that game-based language practice can alleviate language anxiety, allowing learners to focus on communication rather than linguistic accuracy.

In contrast to studies focused solely on online games, this research also explored outdoor gaming habits, providing a broader perspective on students' overall game engagement. While outdoor games contribute to social and physical development, they offer limited opportunities for language acquisition compared to online games. This study thus expands upon existing literature by juxtaposing the language-related benefits of online gaming with the more traditional social and physical benefits of outdoor gaming, providing a nuanced view of how different types of games impact students.

Potential Biases

Several potential limitations in this study should be acknowledged. First, as a self-reported survey, the data may be subject to response bias, particularly in areas where students self-assessed their improvements in English skills. Students may overestimate or underestimate their language gains due to personal perceptions, which could affect the accuracy of the reported outcomes. Additionally, this study did not measure actual language proficiency

==
Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 25:5 May 2025**
Sujithra I R, Haran Vasudev H and Dr. Sreejana S.
The Impact of Game Preferences on English Language Proficiency: Analyzing Student
Habits in Outdoor and Online Gaming Environments   33

improvements objectively; rather, it relied on students' perceptions of their progress. Future studies could incorporate objective assessments of language skills to provide more robust data on the impact of gaming on language acquisition.

Another limitation lies in the scope of the sample. Although the sample included a diversity of departments, the majority of participants were first-year students, which may limit the generalizability of the findings to other student populations. Furthermore, some students may have had prior exposure to English outside of gaming contexts, which could have contributed to their language development independently of gaming. Future research could address these potential biases by diversifying the sample, incorporating longitudinal tracking of language progress, and using experimental or observational methods to measure actual language gains more precisely.

Conclusion

Summary of Findings

This study explored the gaming preferences and habits of undergraduate students, focusing on the relationship between online gaming and English language acquisition. The findings indicated that both outdoor and online games are popular among students, with outdoor games like cricket and football providing opportunities for face-to-face socialization, while online games serve as accessible and socially interactive digital environments. Online games were found to offer unique language-learning benefits, as they require players to communicate and coordinate in English, particularly in multiplayer settings. Among participants, 70% reported experiencing some improvement in their English language skills, with gains in vocabulary, listening comprehension, and conversational confidence. Additionally, 57% of students expressed moderate to high comfort levels in using English while gaming, showcasing the potential of online games as informal platforms for language practice.

Implications for Educators

The findings of this study suggest that online gaming can be effectively leveraged as a supplementary tool for language learning. For educators, this points to the possibility of integrating game-based elements into English language curricula, especially for informal conversation practice and vocabulary building. Educators might encourage students to

==
Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 25:5 May 2025**
Sujithra I R, Haran Vasudev H and Dr. Sreejana S.
The Impact of Game Preferences on English Language Proficiency: Analyzing Student Habits in Outdoor and Online Gaming Environments   34

participate in language-rich online games or use gaming-inspired activities in the classroom to mirror the engaging, low-stress language use seen in gaming contexts. By drawing on the appeal of gaming, educators can foster an interactive and enjoyable approach to language learning, helping students build confidence and fluency in English in an immersive setting. Furthermore, incorporating discussions or reflection activities around in-game experiences could enhance students' awareness of their language progress and motivate continued engagement with English.

Future Research

While this study sheds light on the benefits of online gaming for language acquisition, future research could expand on these findings in several ways. One potential direction is to conduct longitudinal studies that track students' English proficiency improvements over time as they engage with specific types of online games. Additionally, further research could investigate how different genres of games (e.g., strategy vs. role-playing games) uniquely impact language learning, given that some games may require more complex language use than others. Examining the effects of online gaming on other language skills, such as reading comprehension and writing, could also provide a more comprehensive understanding of gaming's role in language acquisition. Finally, studies that incorporate objective measures of language proficiency, alongside self-reported data, would offer a more robust assessment of gaming's impact on language skills.

==

References

Chen, J., & Johnson, M. (2004). *Role of online gaming in developing social and cognitive skills among youth.* Journal of Gaming Studies, 12(3), 45-58.

Gee, J. P. (2003). *What video games have to teach us about learning and literacy.* Palgrave Macmillan.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development.* Prentice-Hall.

==
Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 25:5 May 2025**
Sujithra I R, Haran Vasudev H and Dr. Sreejana S.
The Impact of Game Preferences on English Language Proficiency: Analyzing Student
Habits in Outdoor and Online Gaming Environments   35

Peterson, M. (2012). Language learner interaction in a massively multiplayer online role-playing game. *Computer Assisted Language Learning, 25*(5), 457–481.

Prensky, M. (2001). *Digital game-based learning.* McGraw-Hill.

Rankin, Y., Gold, R., & Gooch, B. (2006). 3D role-playing games as language learning tools. *Proceedings of the ACM SIGGRAPH Symposium on Videogames and Learning*, 79-86.

Reinders, H., & Wattana, S. (2015). Affect and willingness to communicate in digital game-based learning. *ReCALL, 27*(1), 38–57.

Smith, J., Brown, T., & Williams, R. (2015). *Social and physical benefits of outdoor games.* Educational Research Journal, 21(2), 115-130.

Thorne, S. L. (2008). Mediating technologies and second language learning. *CALICO Journal, 25*(3), 558–572.

Zhang, S. (2018). The role of online gaming in informal English language learning. *Journal of Language and Technology, 15*(4), 112–127.

==