

Role-Playing Games in English Language Education: A Systematic Review of Theoretical Foundations, Learning Outcomes, and Pedagogical Implications

Rico Satria Firhansyah*, Francisca Maria Ivone, Nanang Zubaidi

Universitas Negeri Malang, Indonesia

Email: ricosatria1361@gmail.com*, francisca.maria.fs@um.ac.id,
nanang.zubaidi.fs@um.ac.id

ABSTRACT

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Role-playing games (RPGs) have become an increasingly popular form of media that offers extensive exposure to English through narrative, dialogue, and interaction, suggesting potential as tools for English language learning. However, there is a need to explore the trends in research on their pedagogical use. This study employed the PRISMA framework to analyze 42 peer-reviewed studies on RPG-based learning in English language learning environments. The findings indicate that RPGs provide immersive, contextualized environments aligning with experiential and constructivist learning theories. Learners demonstrate improvements in vocabulary, communication skills, motivation, and socio-emotional development. Studies highlight authentic interaction opportunities found in MMORPGs, vocabulary learning strategies used by ESL learners in RPGs, and gains in vocabulary and communicative skills. Furthermore, recent scholarship emphasizes that these digital environments significantly bolster learner motivation and autonomous engagement. Despite limitations such as methodological heterogeneity and reliance on self-reported data, RPGs show strong potential as effective media in English language learning.

INTRODUCTION

Thousands of newly produced games, branding themselves as role-playing games (RPGs), are flooding the market nowadays (Susilo & Listianingrum, 2023). With their increasing popularity, their potential as innovative tools in English language education remains underexplored. This potential is highlighted by comparing RPGs' features with other forms of literary and media-based language input. RPGs provide rich exposure to English through narrative texts, dialogues, quests, and interactive communication, making these features comparable to any language input provided by other literary works (Giménez, 2024; Poole & Clarke-Midura, 2020; Silalahi & Swondo, 2025). Recent research further supports this by demonstrating how RPG elements, such as character-driven narratives and world-building, facilitate deep linguistic engagement across various proficiency levels (Xu et al., 2020). There are bound to be ideas to use it as innovative tools in English language education. However, the systematic integration of RPGs into language learning contexts remains relatively fragmented.

Recent developments in game-based learning research have highlighted the value of immersive and interactive environments for language acquisition (Basthomi et al., 2025). The said environments are abundant in nature for RPGs since narrative-driven and role-based experiences that RPGs provide are a staple, repeatable formulation usually found in RPGs (Silalahi & Swondo, 2025). Azman and Dollsaid (2018) noted that such features provide contextualized and authentic language interaction opportunities in learning English. Such immersive and interactive environments also push the player into learning the vocabulary in a way that Bytheway (2015) conducted a study on a "taxonomy of 15 vocabulary learning strategies" employed by players of *World of Warcraft*, a popular MMORPG (Massively Multiplayer Online Role-Playing Game), during gameplay. This is reinforced by recent findings suggesting that RPGs act as a catalyst for incidental vocabulary learning through high-frequency exposure to specialized terminology (da Rocha, 2019; Sholichah et al., 2022).

Furthermore, experimental and quasi-experimental studies have demonstrated measurable learning outcomes associated with game-based interventions. Gunel and Top (2022) reported significant vocabulary gains in learners exposed to video game-based instruction as compared to traditional methods, and Baken et al. (2022) and Khair (2023) found improvements in speaking and writing through interaction with other players. Current studies have expanded on these findings, illustrating that the combination of RPG mechanics and structured pedagogy leads to superior retention of complex grammatical structures (Nuriyah et al., 2024; Slamet et al., 2024b). In addition to cognitive and linguistic benefits, studies such as Alshabeb (2024) and Li et al. (2024) emphasize the role of digital games in enhancing learner motivation and engagement, which are critical factors in successful language acquisition.

Despite these promising findings, they are fragmented, as characterized by their methodological diversity and varying research focus, ranging from vocabulary acquisition to motivation and socio-emotional development. This fragmentation necessitates a systematic synthesis of existing research to provide a clearer understanding of the role of RPGs in English language learning. Therefore, this study employs the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines to review related studies examining RPG-based educational contexts in English language learning. This review aims to synthesize evidence, identify theoretical underpinnings, and highlight both the benefits and limitations of RPG-based learning. In doing so, it also traces the development of RPG use in education from early role-playing activities in the 1970s to contemporary digital implementations in the 2020s.

This study offers both theoretical and practical benefits. Theoretically, it contributes to the body of knowledge on game-based language learning by providing a comprehensive synthesis of how RPGs facilitate English language acquisition across cognitive, linguistic, and socio-emotional domains, while also identifying the predominant theoretical frameworks sociocultural theory, constructivism, and experiential learning that underpin RPG-based pedagogy. Practically, this review provides educators and curriculum designers with evidence-based insights into the effective integration of RPGs into English language classrooms, including practical strategies for game selection, task design, scaffolding, and assessment. The identification of research gaps and methodological limitations also offers guidance for future empirical studies, particularly the need for standardized pedagogical frameworks and rigorous experimental designs to better quantify the educational outcomes of RPG-based interventions.

METHOD

Search Strategy

PRISMA guidelines for a systematic literature search in English were followed to conduct the search. Databases were explored between January and March 2026, which included Google Scholar, Scopus, IEEE Xplore, ERIC, and subject-specific journals using keywords such as "role-playing game" OR "RPG" OR "game-based" OR "digital game" AND "English" OR "EFL" OR "ESL" AND "learning" OR "education." Searches were unrestricted by date. Inclusion criteria were:

- a. Peer-reviewed journal articles or high-quality proceedings in English.
- b. Empirical studies of digital role-playing games (broadly defined to include MMORPGs, action RPGs, or serious RPGs). Used for teaching English (including vocabulary, speaking, grammar, etc.)
- c. Reporting learning outcomes (e.g., proficiency, vocabulary gain and retention, skills, motivation)

Study Selection and Data Extraction

The study selection and data extraction process followed a structured, multi-stage procedure to ensure methodological rigor. All identified records were imported into Rayyan, which facilitated efficient screening and management of duplicate checking and abstract reading. The screening process was done by manual cross-checking conducted in two phases: (1) title and abstract screening, followed by (2) full-text assessment. The review prioritized studies that explicitly reported or demonstrated the impact of RPGs on English language learning outcomes, including but not limited to vocabulary acquisition, communicative competence, learner engagement, and motivation.

These inclusion and exclusion criteria ensured that only studies directly relevant to RPG video games in English language learning contexts were assessed. After this stage, 85 full-text articles were assessed for eligibility. In total, 42 studies met the criteria. Data included author, year, intervention, study type, population, contexts, and outcome or findings (see Appendix 1).

RESULT AND DISCUSSION

Chronological Development of RPGs in Education (Timeline)

Role-playing games (RPGs) have gone through evolution from tabletop entertainments in the 1970s to complex digital learning environments. In the 1970s, tabletop creativity was established as a foundation that was used for learning. It evolved in 1980s into early computer-based adventure games, digitalizing it, thus pioneering gamified instruction in schools. The 1990s marked a shift toward multimedia simulations and specialized language labs, setting the stage for the widespread 2000s adoption of MMORPGs such as World of Warcraft as the experimental tools for EFL/ESL learners. Recent uprisings demonstrate a gradual shift in the function of recreational media to tools that provide and encourage interaction, rich with narrative engagement and contextualized learning, particularly in language education contexts (Giménez, 2024; Nuriyah et al., 2024). This evolution has been researched by Peterson (2016), noting that meaningful communication is essential in language education.

By the 2010s, the trend moved toward serious games and immersive VR/AR narrative environments, where formal studies began to quantify gains in vocabulary and communicative skills. This progression is not incidental; it reflects changes in both educational and technology

theory (Subakti et al., 2024). This timeline shows how education and technology improve along with each other. In the 2020s, high-fidelity commercial RPGs, such as Genshin Impact and Wuthering Waves, have emerged as powerful informal learning resources, with recent university-level research focusing on dedicated RPG modules for ESL. Earlier studies show more emphasis on motivation and engagement, while more recent studies investigate communicative competence, interaction quality, and immersive learning environments (Bakan et al., 2022; da Rocha, 2019). Indicating that advancements in RPG design have directly influenced pedagogical applications in English language learning (Reinhardt, 2019). Modern RPG interventions now utilize sophisticated mechanics to balance narrative depth with linguistic rigor, a trend increasingly observed in the latest decade of research (Li et al., 2024; Sholichah et al., 2022). Slamet et al. (2024b) noted that gamification leverages a diverse array of game mechanics to enhance learners' engagement and a profound sense of achievement. Further details on the timeline of the development of RPGs can be found in Figure 2.

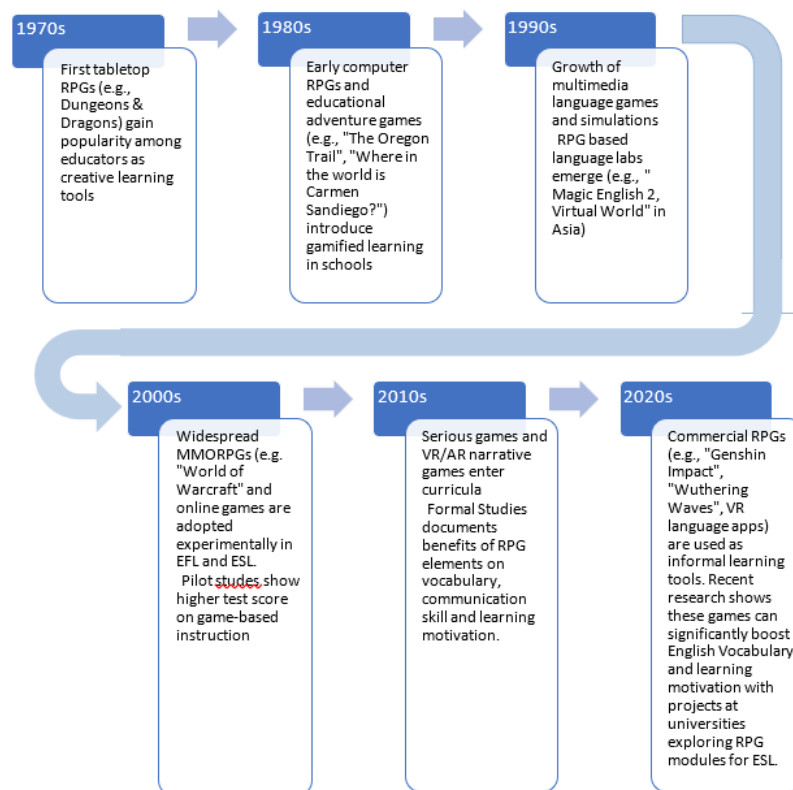


Figure 1. Chronological Development of RPGs in Education (Timeline)

Source: Authors' compilation based on historical development of RPGs in educational contexts as synthesized from the reviewed literature

Theoretical Frameworks of RPG in English Language Learning

The rapid augmentation of digital technologies shifts the world of education toward online realm, accelerated by the COVID-19 pandemic, have created external pressures to rethink traditional pedagogies in favor of immersive virtual environments (Azman & Dollsaid, 2018; Gunel & Top, 2022). An analysis of the 42 selected studies reveals a theoretical landscape dominated by sociocultural theory (38%) and constructivism/experiential learning (33%), with the remaining research grounded in motivational frameworks (19%) and cognitive-

linguistic theories (10%) as illustrated in Figure 3. This section moves beyond the “why” of RPG integration to examine the “how” of facilitating learning, providing a conceptual basis for interpreting how internal mechanisms like immersion and interaction strengthen English language acquisition (Bakan et al., 2022; Nuriyah et al., 2024).

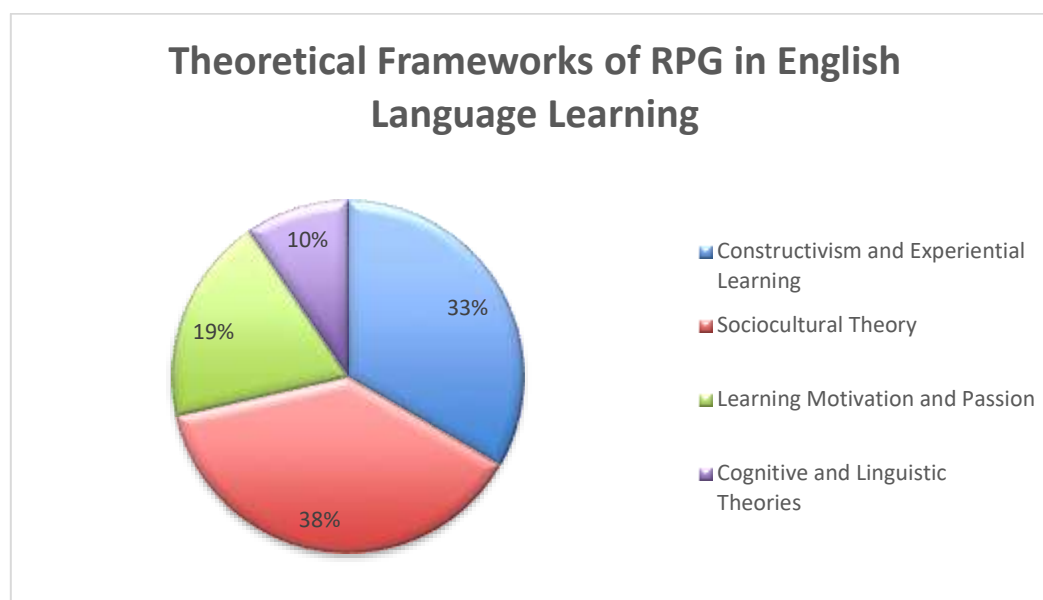


Figure 2. Percentage of theoretical frameworks of RPG in English language learning

Source: Authors' analysis of theoretical frameworks identified in the 42 reviewed studies

Constructivism and Experiential Learning

Representing 33% of the reviewed literature, this framework posits that RPGs provide learners with rich, immersive, problem-solving tasks, fitting Kolb’s experiential cycle (concrete experience–reflection–conceptualization–active experimentation) mentioned in Li et al. (2024). Poole and Clarke-Midura (2020) support that digital RPG environments simulate real-life scenarios and provide captivating and interactive experiences, encouraging learners to actively construct knowledge. This approach emphasizes the role of students as active participants, allowing them to set objectives, choose resources, and self-regulate their progress. This trend is particularly evident in studies where learners utilize RPGs as innovative educational tools to navigate custom-built RPG worlds to solve linguistic puzzles, thereby internalizing vocabulary through direct experience (Nuriyah et al., 2024; Subakti et al., 2024). Giménez (2024) notes that RPGs allow educators to create immersive and dynamic environments that inspire engagement and authentic language use. These features align with Dewey’s and Kolb’s view that learning is rooted in experience.

Learning Motivation and Passion

Accounting for 19% of the primary theoretical focus, this area examines how RPG’s elements such as quest rewards, progression, narrative, badges, and achievements that engage learners intrinsically. With over three billion people playing digital games worldwide, educators are increasingly leveraging these gaming habits to address low motivation in traditional ESL settings (Nuriyah et al., 2024; Presentación-Muñoz et al., 2025). Zhang et al. (2023) call serious educational RPGs “game-like adaptations with explicit teaching presence” that lead to “greater learning motivation and more effective learning” than traditional teaching

methods. Studies conducted during the past 5 years consistently report high engagement of students and strongly agree that games increase their motivation for English. Furthermore, the integration of RPG mechanics into autonomous learning platforms has been shown to foster a profound sense of achievement and persistence in even the most challenging tasks (Sholichah et al., 2022; Slamet et al., 2024a). Li et al. (2024) note that digital games positively influence student motivation for learning; the engagement and narratives mediate this effectively. Furthermore, gamified learning allows students to act as active participants who self-regulate their progress, creating a low-anxiety environment conducive to authentic linguistic performance (Callison-Burch et al., 2022; Sholichah et al., 2022; Slamet et al., 2024; Zhou et al., 2023). Enjoyment and flow are important factors to draw persistence in game-based tasks.

Cognitive and Linguistic Theories

While representing a more specialized niche (10%) of the reviewed studies, cognitive and linguistic theories explain how RPGs provide contextualized input (progressive narratives, dialogues, and in-game texts) that supports situated learning. This focus is vital as research transitions from exploring general motivation to measuring specific linguistic outcomes within highly specialized RPG subgenres (da Rocha, 2019). Poole and Clarke-Midura (2020) show that digital games create highly contextualized and interactive environments that aid in vocabulary retention and skill transfer, a finding reinforced by evidence that players must actively use new vocabulary to advance complex narratives (Subakti et al., 2024; Wibowo et al., 2022). Bytheway (2015) identified 15 specific strategies players use to learn new words in RPGs (reading in-game information, equating image/action to words, guessing from context, etc.). These findings show that meaningful game contexts prompt cognitive engagement with language. RPG embeds language tasks and narrative quests, supporting the communicative and cognitive learning processes.

Benefits of RPGs in English Language Learning.

The implementation of RPGs in English language education offers a multifaceted spectrum of benefits, as evidenced by the 42 reviewed studies which highlight consistent impacts on linguistic, psychological, and social domains. Based on the categorical synthesis of these articles, the primary reported benefits are focused on the benefit for the students themselves, distributed across cognitive-linguistic outcomes (45%), learning motivation and passion (33%), and socioemotional or 21st century skills (22%), as illustrated in Figure 4. These advantages manifest as a multidimensional impact on the learner's journey, addressing core competencies, psychological drivers, and social skills (Giménez, 2024; Nuriyah et al., 2024; Peterson, 2016). BY immersing digital natives in interactive, narrative-rich environments, RPGs shift the learning paradigm from passive reception to active exploration. Such environments provide authentic language practice and leverage widespread gaming habits to fulfill contemporary educational demands (Azman & Dollsaid, 2018; Presentación-Muñoz et al., 2025; Vnucko et al., 2024). This section synthesizes empirical evidence to delineate these benefits across cognitive-linguistic gains, increased motivation, and the development of essential socioemotional skills (Gunel & Top, 2022; Renandya et al., 2023; Susilo & Listaningrum, 2023).

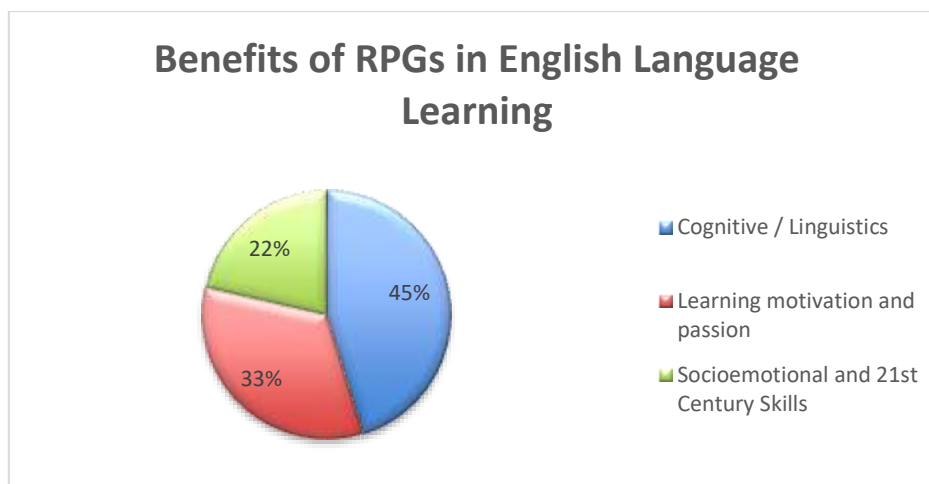


Figure 3. Benefits of RPGs in English language learning

Source: Authors' categorization and synthesis of benefits reported in the 42 reviewed studies

Cognitive / Linguistics:

Representing the 45% of the primary benefits identified in the literature, multiple studies report measurable learning gains when utilizing RPGs in English learning. Gunel and Top (2022) and Lu and Chang (2016) found that students using a purpose-built English vocabulary game show significant results in post-tests for vocabulary learning and retention. Susilo & Listaningrum's (2023) study shows that Indonesian students identified rich target-language vocabulary (e.g., historical and scientific terms) and boosted their vocabulary mastery by playing Genshin Impact. Bakan et al. (2022) note that learners had a positive experience practicing daily used vocabulary and phrases while chatting with peers who play the same games. In short, RPGs provide environments where exposure to English in a contextual situation improves listening, reading, forming sentences, and especially vocabulary gain and retention (da Rocha, 2019; Kurniawan & Rahmawati, 2025; Sholichah et al., 2022).

Research by Azzam et al. (2025) further mentioned that RPG game players can acquire English vocabulary through repeated exposure to meaningful, context-rich input embedded in the gameplay. This is particularly effective in RPGs where vocabulary is linked to specific game mechanics, ensuring that linguistic input is directly tied to functional use and long-term memory (Fakhruddin et al., 2023; Subakti et al., 2024). Sholeh et al. (2019) suggest that learners dislike reading books while finding some reading materials interesting; therefore, there's a need for some other ways to present reading materials that students will be interested in reading aside from books. Video games present an alternative solution while increasing the difficulty as they progress implementing scaffolded voluntary reading through differentiated and level-separated narrative sequences (Silalahi & Swondo, 2025).

Learning motivation and passion.

RPG in English learning has been shown to increase motivation, engagement, and reduce learning anxiety through contextual environments and hands-on feedback. Features such as interactions, rewards, and quest systems make students more active and interested in learning, even outside of the classroom. In addition, the use of RPGs encourages independent learning, improves communication skills, and expands language exposure through immersive and continuous learning experiences.

Socioemotional and 21st Century Skills

RPGs make a significant contribution to the development of social-emotional skills through role-playing, collaboration, and problem-solving activities. This approach increases students' confidence, empathy, involvement, and cooperative and critical thinking skills. The immersive learning environment also allows students to practice social roles safely, strengthening communication competencies and 21st-century skills such as creativity and collaboration. In addition, the integration of technology in RPGs helps students apply language skills in real-world contexts, in line with social learning theories and modern educational approaches.

Limitations and Research Gaps

Although RPGs show strong pedagogical potential in ESL learning, several limitations remain. Many studies rely on unstructured gameplay or lack adequate instructional scaffolding, making their effectiveness unclear. There is also a lack of standardized pedagogical frameworks for integrating RPGs into formal education. Additionally, most research overlooks individual differences such as proficiency level, gaming experience, and gender, which significantly influence learning outcomes. Existing studies tend to use either short-term exposure with limited impact or long-term immersion that is difficult to implement. Therefore, further research is needed to develop structured instructional designs, consider diverse learner characteristics, and create balanced, goal-oriented RPG interventions for specific language skills.

Practical Implications for Educators

Effective use of RPGs in classroom practice requires a systematic approach to game selection and task design. Key strategies include aligning game content with the curriculum, providing guidance and reflection, encouraging collaboration, utilizing open-world games for learning, fostering motivation, and ensuring technical support. Success depends on matching game mechanics with learning objectives and language targets, while also ensuring that technical aspects do not hinder the intended educational outcomes.

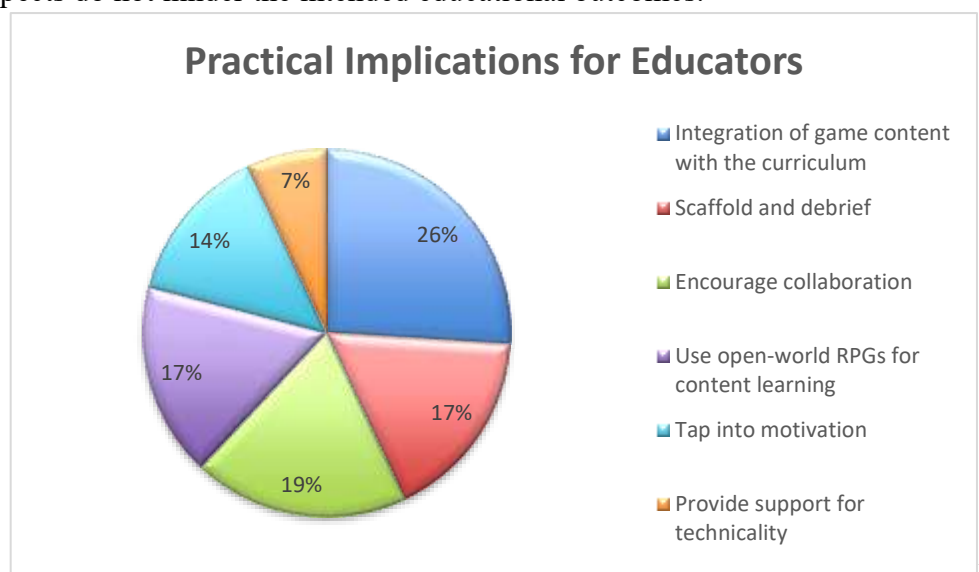


Figure 4. Practical implications for educators

Source: Authors' synthesis of practical recommendations extracted from the 42 reviewed studies

Integration of game content with the curriculum

Representing 26% of the practical recommendations in the literature, RPG elements, such as in-game dialogue, quests, and tasks, are integrated with prompts for classroom activities. For example, after playing for 30 minutes, students need to list new words encountered and use them in writing or discussion. Furthermore, the development and utilization of purpose-built RPG instruments allow for a more direct alignment with specific syllabus requirements and targeted lexical items (Nuriyah et al., 2024; Subakti et al., 2024).

Scaffold and debrief

Accounting for 17% of the identified strategies, teachers should teach relevant vocabulary or grammar, then use the game as practice. Bakan et al. (2022) suggest guiding students to notice target phrases during gameplay and reflect on them afterward. This structured reflection is vital for transforming incidental gameplay exposure into intentional learning outcomes (da Rocha, 2019; Nilsson, 2023).

Encourage collaboration

Comprising 19% of the observed trends, educators should assign group quests or team play to provide students with an environment to practice their English communication skills. Raghbir et al. (2025) found that MMORPGs naturally prompted peer interaction, which improved lexical knowledge. Such collaborative tasks not only improve linguistic output but also build the essential 21st-century skills of teamwork and creative problem-solving (Giménez, 2024).

Use open-world RPGs for content learning

Accounting for 17% of practical focus, RPGs set in a historical or cultural context (e.g., Assassin's Creed) can teach subject content alongside language. Teachers can devise tasks (e.g., writing game journal entries) or do a related worksheet that requires English output. Utilizing popular open-world titles allows students to engage with complex narratives while performing task-based activities that require active language production (Nuriyah et al., 2024).

Tap into motivation

Representing 14% of the reviewed literature, RPGs' reward systems (points, leveling) can be used to motivate reluctant learners. Teachers should celebrate in-game achievements and relate them to classroom rewards. By incorporating these rewards, teachers can transition students from external motivation toward an autonomous interest in language mastery (Sholichah et al., 2022; Slamet et al., 2024b).

Provide support for technicality

While representing the smallest segment of the literature (7%), technical preparation is foundational to success. Educators must ensure students have the necessary hardware and know how to play basic controls. Otherwise, students will struggle to operate the games, and this may hinder language learning. Educators must also account for varying levels of digital literacy among students to ensure that technical barriers do not overshadow the educational benefits of the game (Vnucko et al., 2024). By thoughtfully choosing games and designing tasks around them, educators can harness RPGs to increase exposure, practice, and motivation in language learning.

CONCLUSION

RPG video games offer a rich English-speaking environment and motivational context for learning English. This statement is supported by multiple learning theories, predominantly by sociocultural theory and theory of constructivism and experiential learning. The empirical evidence, comprising 42 studies from varied countries and participant backgrounds, shows consistent benefits, with 45% of results highlighting improved vocabulary acquisition and retention, enhanced communication practice, and greater learner motivation. Furthermore, recent findings underscore that these gains are most pronounced when RPG mechanics are directly mapped to specific linguistic functions, ensuring that gameplay translates into measurable proficiency. The bond built between players fosters interaction and confidence, and single-player RPGs engage learners in narrative-driven tasks. Most studies conducted previously call for a more rigorous research design, such as controlled experiments with pre- and post-tests, to better quantify these educational outcomes. Reflecting the focus on curriculum integration identified in practical recommendations, steps teachers should take are to integrate RPG elements like story, role-play, collaboration with pedagogy, aligning quests with lesson objectives, and encouraging reflection post-learning. By adopting these strategies, educators can bridge the gap between recreational play and formal instruction, creating a sustainable model for digital game-based language learning. Therefore, it is recommended that educators integrate RPG elements with pedagogy, aligning quests with lesson objectives and encouraging reflection post-learning. For researchers, future studies should employ more rigorous research designs, including controlled experiments with standardized pedagogical frameworks and longitudinal assessments, while also investigating individual differences such as proficiency level, gaming experience, and gender that influence learning outcomes. Policymakers and curriculum developers should consider incorporating game-based learning approaches into formal language education curricula, providing institutional support and technical infrastructure for effective implementation. In conclusion, RPGs represent a powerful pedagogical resource. When aligned with active learning and social scaffolding, teachers can transform language education to be enjoyable, contextual, and student-centered.

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