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# Can Commercial Video Games Like *Genshin Impact* or *Call of Duty Mobile* Enhance Vocabulary Acquisition?

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**Abstract**

This study investigates learning incidental vocabulary with two well-known mobile games: the action-packed RPG Genshin Impact and the FPS-based first-person shooter Call of Duty: Mobile (CODM). A mixed-methods experiment spanning six weeks with forty intermediate-level English language learner (ELL) university students tested experimental groups (GG, CG) utilizing one of the games as a comparison with a control group (ConG). Data were gathered from Vocabulary Knowledge Scale (VKS) tests, focus group interviews, stimulated recall interviews, and gameplay records. Results showed that both experimental groups demonstrated significant vocabulary gains as opposed to the control group. Importantly, the results demonstrated that the Genshin Impact group (GG) demonstrated considerably higher vocabulary gains compared with the CODM group (CG). Qualitative results demonstrated that the narrative depth, contextual depth, and requirement of comprehension of Genshin Impact created deeper cognitive processing and strategic learning of vocabulary, and consequently improved transferable learning of academic vocabulary. Results suggest that while commercialized mobile games can aid learning incidental vocabulary, narrative-driven RPGs like Genshin Impact present an optimum learning environment supporting extensive and transferable incidental learning as opposed to action-based FPS games like CODM.

*Keywords:* Incidental Vocabulary Acquisition, Call of Duty: Mobile, Genshin Impact, English Language Learning

## 1. Introduction

Digital technologies permeate daily life, and video games enjoy global popularity. These advancements enable novel approaches to language learning. Digital Game-Based Language Learning (DGBLL) has become

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an important part of Computer-Assisted Language Learning (CALL). It looks at how the interactive, immersive, and motivating nature of games can help people learn a language (Reinhardt, 2019). There are games that are made just for education, but more and more research is looking at Commercial Off-The-Shelf (COTS) games, which are games that are mostly made for fun but could also help people learn a language by accident (Sylvén & Sundqvist, 2012; Peterson, 2013). When students learn language features, especially vocabulary, while focusing on meaning and gameplay goals instead of studying them directly, this is called incidental learning (Hulstijn, 2001). This shift aligns with a broader move towards informal learning contexts, suggesting a trend where mobile technology facilitates language acquisition beyond traditional classroom walls (Sistani, 2023).

The surge in mobile gaming enables ubiquitous access to sophisticated immersive experiences. Games like Call of Duty: Mobile (Activision, 2019), a fast-paced first-person shooter (FPS), and Genshin Impact (HoYoverse, 2020), an open-world action role-playing game (RPG), have enormous global player bases that include millions of non-native English speakers interacting with English-language interfaces, stories, and communication. Different genres are represented by these games: While FPS games emphasize action, reflexes, and frequently little linguistic input beyond menus and brief communication, RPG games offer rich narratives, dialogue, environmental text, and complex systems that require comprehension.

There are still big gaps in the research landscape. First, while studies show that games can teach vocabulary (e.g., deHaan et al., 2010; Rodgers, 2018), there is still not enough strong evidence linking high-engagement mobile COTS games to measurable vocabulary gains, especially when using standardized instruments. Second, there isn't much research that directly compares how well different types of games (like RPGs and FPSs) help people learn a language (Butler et al., 2014). Each type of music has its own unique language and requirements. Third, we need to look into whether vocabulary learned by accident in games can be used and recognized in more formal, academic settings (Bytheway, 2015). The game world may keep a large portion of learned vocabulary context-bound. Fourth, more research employing a variety of techniques is required to comprehend the precise mechanisms—contextual cues, repetition, motivation, and interaction—through which various game genres promote vocabulary acquisition. The incorporation of Artificial Intelligence (AI) in education has created new pathways for academic development (Safari, 2025), yet the specific affordances of game-based environments warrant further empirical investigation.

By examining how two widely played mobile COTS games—Genshin Impact, which represents narrative-rich role-playing games, and Call of Duty: Mobile, which represents action-packed first-person shooter games—help intermediate English language learners acquire vocabulary in English, this study directly fills these gaps. It assesses the transferability of acquired vocabulary, compares gains across genres, measures gains using a validated vocabulary scale, and employs qualitative techniques to identify the learning processes at play. This research builds on studies showing the positive effects of various digital tools, such as the HelloTalk app, on learner autonomy (Sadeghi, 2023) or the use of songs and movies on language achievement (Haghverdi, 2013), by focusing on the unique affordances of game genres.

Research Question 1: To what extent do intermediate ELLs show significant gains in English vocabulary knowledge after six weeks of gameplay compared to a control group?

Research Question 2: Do learners in the Genshin Impact (RPG) group demonstrate statistically greater vocabulary acquisition gains than those in the Call of Duty: Mobile (FPS) group?

Research Question 3: How transferable is vocabulary encountered in these games to decontextualized, academic-like contexts?

Research Question 4: What attitudes, strategies, and motivational factors do learners report regarding vocabulary learning through these games?

## 2. Review of Literature

Theoretical underpinnings of game-based learning are obtained from a wide range of important disciplines. Krashen (1982) propagated the Input Hypothesis, which takes into account that learning is most effective where the input is understandable but slightly above the current level of the learner (i+1). Games can offer such linguistic input by complementing it with multimodal content (of visuals, audio, and action) (Reinhardt & Sykes, 2012). As Gee's (2007) ground-breaking argument on semiotic domains and situated meaning follows, game media is an enormously complicated system of meaning-making in which language is learned as tools for action in particular contexts rather than as degrees of abstractness. The players invoke the "grammar" of the game world through bodily experience. Incidental learning theory (Hulstijn, 2001) suggests that the learners acquire vocabulary subconsciously when they are involved in communicative activities—here, game objectives. Learning is believed to be significantly affected by two factors: frequency of exposure and depth of processing.

More and more research is being conducted on how games help a person learn new vocabulary. Past researchers had the tendency to research MMORPGs (Massively Multiplayer Online Role-Playing Games) because they involve social interaction. It was discovered by Peterson (2010) that English as a Foreign Language (EFL) learners gained much new vocabulary from playing Wonderland as they had to assess the meaning of words and place them in context. Vocabulary learning using playing EverQuest II was also noted by Rankin et al. (2006). According to Rodgers (2018) in his review, games offer players multiple exposures to target words in context, and these promote retention; however, he also noted that study designs and outcome measures were not always the same. Numerous studies of non-MMO games are just as compelling: deHaan et al. (2010) showed that Japanese EFL learners learned new words by playing a computer game of baseball, and visual scaffolding was a great feature of that.

Research into mobile games is increasing. Mobile gaming is a prime example of the contextual, situated potential of mobiles for language learning, according to Godwin-Jones (2014). Mobile RPGs have been shown to enhance vocabulary, as research including Lee & Gerber (2013) highlights the importance of narrative interaction. Language learning proper research, however, is still in its infancy and is usually relegated to case studies or anecdotal narratives rather than controlled trials with standardized tests. Genshin Impact and CODM are examples of such best-selling titles.

Game genre plays an important but little-studied role. Different genres allow for different kinds of language practice, according to Butler et al. (2014). In contrast to action-oriented genres like FPS and racing, which may rely more on procedural language and little communication, narrative-driven games (RPGs, adventures) usually offer richer linguistic input (dialogues, descriptions, quest text) (Bytheway, 2015). According to Scholz (2017), language varies greatly in density and complexity, which affects possible learning opportunities. However, there are few direct comparative studies that measure vocabulary gains across different genres, such as first-person shooters and role-playing games.

Transferability for the case of vocabulary attained through games is still a topic of hot debate. In other settings, such as academic writing or conversation, words learned in the highly specialized setting of the game may not readily be accessed (Nation, 2013). Bytheway (2015) reported that gamers had context-bound vocabulary knowledge and stressed the significance of bridging exercises. Studies directly testing recognition and recall of game-based vocabulary outside the game environment are necessary. This challenge is not unique to games; teaching homophones,

for instance, is difficult due to confusion in spoken and written communication (Karimi, 2025), highlighting the general difficulty of vocabulary transfer.

One well-established advantage of game-based learning is motivation, especially intrinsic motivation fueled by engagement and enjoyment (Ryan & Deci, 2000; Ushioda, 2013). Games may help with acquisition by lowering affective filters (Krashen, 1982). Learning pathways are also influenced by learner agency, or the decisions players make about language exposure, interaction, and exploration in the game (Zheng et al., 2015). Vocabulary acquisition is mediated by the use of strategies, such as dictionary lookups (common in games like Genshin), inferencing from context, or ignoring unknown words (Cohen & Macaro, 2007).

Building on this foundation, this study uses a mixed-methods approach to capture both quantitative outcomes and learners' qualitative experiences while empirically examining vocabulary gains from two different, highly popular mobile game genres. This study specifically addresses the gaps in genre comparison, mobile COTS efficacy, and transferability assessment.

## 3. Methods

This study employed a mixed-methods, quasi-experimental design. The primary quantitative component used a pre-test/post-test control group design to measure vocabulary gains (RQ1 & RQ2). To obtain a comprehensive grasp of the learning process, context, transferability, and learner experiences, the qualitative component employed focus groups, stimulated recall interviews, and gameplay logs (RQ3 & RQ4).

### *3.1. Participants*

Announcements and flyers in English language courses at a major Iranian public university were used to find participants.

- Participants had to be university students (ages 18 to 25) in order to meet the inclusion requirements.
- Non-native English speakers

  At an intermediate level of English proficiency, as determined by self-report and verified by a quick placement test (Oxford Quick Placement Test score B1-B2).
- Frequent users of smartphones

  Video game familiarity but lack of experience playing Call of Duty: Mobile or Genshin Impact (defined as less than 10 hours of total playtime).
- Willing to dedicate five hours a week for six weeks to research and gaming.

Forty participants (20 men and 20 women) agreed and fulfilled the requirements. They were divided into three groups at random:

- Genshin Group (GG): n = 14 (7M, 7F). Assigned to spend five hours a week playing Genshin Impact in English.
- Group CODM (CG): n = 14 (7M, 7F). Assigned to spend five hours a week playing Call of Duty: Mobile in English.
- 12 people (6M, 6F) make up the Control Group (ConG). Advised to stick to their regular schedules but refrain from playing these two games or any other brand-new English-learning games. To control for general English interaction, weekly group discussions on neutral topics were held in English for one hour.

Every participant had Persian as their first language and was from Iran. The mean age was 20.3 years (SD=1.5). All groups' initial proficiency levels were statistically equal (p>.05).

### *3.2. Data Collection Instruments*

1. The VKS (Vocabulary Knowledge Scale): Based on Wesche & Paribakht (1996).

This five-stage self-assessment tool gauges one's level of word knowledge:

I: I can't recall ever seeing this word.

II: I've seen this word before, but I'm not sure what it means.

III: I believe that this word, which I have seen previously, means (synonym/translation).

IV: This word is familiar to me. It means (translation/synonym).

V: I am able to use the word in a sentence.

For pre- and post-testing, a 60-item VKS test was created. The following criteria were used to choose the target words (n=60):

Analysis of Game Corpora: We used frequency and range measures to examine early-game dialogue, tutorial, menu, and item description transcripts from both Genshin Impact and CODM. Priority was given to words that appeared frequently in context but were unlikely for intermediate learners to know (based on BNC/COCA frequency lists)

Balance: Terms were classified as either FPS-specific (e.g., "loadout," "perk," "extraction"), RPG-specific (e.g., "artifact," "resonate," "alchemy"), game-common (e.g., "objective," "currency," "upgrade"), or transferable/academic (e.g., "investigate," "resource," "significant," "extract"). This made it possible to analyze gains by transferability and word type (RQ3).

2. Gameplay Logs: Participants recorded every gameplay session using a straightforward online form, including the date, length, main tasks, quests, and modes played, new or unfamiliar words they came across, and

the words they looked up, ignored, or guessed. This monitored strategy use and exposure.

3. Individual Stimulated Recall Interviews (SRI): Performed after the intervention. At moments when they came across unfamiliar words (flagged in logs), participants viewed brief screen captures of their own gameplay that were obtained with their consent. They were asked to recollect their ideas, plans, and comprehension at that precise moment ("What were you thinking when you saw this word?", "What did you do? "What did you think it meant?" and "Why?" This examined depth of processing, look-up behavior, and inferencing (Cohen & Macaro, 2007).

4. Focus Groups: Following post-testing, the GG and CG participated in separate, 60-minute, semi-structured focus groups. Overall experience, perceived learning, motivation, difficulties, distinctions from traditional learning, and particular instances of learned words and their acquisition methods were all covered in the questions. ConG held a single focus group to discuss their experiences with English in general.

5. Background Questionnaire: Gathered demographic information, past language learning experiences, gaming habits, and opinions regarding the use of games for education.

### *3.3. Data Collection Procedure*

1. Week 0 (Orientation and Baseline): Participants completed the background questionnaire, placement test, and VKS pre-test. They received tutorials on gameplay logging and screen recording software (e.g., AZ Screen Recorder).

2. Weeks 1–6: Intervention

GG & CG: At least five hours per week were spent playing the designated game. Select English as the language. Encouraged to keep logs while playing naturally (exploring, finishing quests, matches). Local storage was used to run screen recording software in the background.

ConG: Participated in a weekly one-hour English-language discussion group about non-academic subjects (movies, vacations, pastimes). Told not to play games that teach new languages, CODM, or Genshin.

Everybody: Weekly participation confirmations (ConG) or gameplay logs (GG/CG) were submitted. The researcher kept an eye on compliance from a distance (GG/CG could verify gameplay time through in-game profiles with consent).

3. Week 7: Data Collection Following Intervention VKS Post-test (same format as pre-test; items are randomized in order). Individual Stimulated Recall Interviews (approximately 30 to 45 minutes each; only for GG and CG participants).

4. Data Handling: Verbatim transcriptions of screen recordings and audio from focus groups and interviews were made.

### *3.4. Data Analysis*

Quantitative (VKS): I=0, II=1, III=2 (if meaning correct), IV=3 (if meaning correct), and V=4 (if sentence correct) are the scores for VKS responses. Sentences with incorrect meanings received an I. For every word, each participant received a continuous "Vocabulary Knowledge Score" (VKS) ranging from 0 to 4. Each participant's pre-test and post-test total scores (the sum of all 60 items) were determined.

RQ1: Within-group gains (Pre vs. Post) for GG, CG, and ConG were evaluated using paired samples t-tests. Post-test gains (Post-Pre) between each experimental group and the control group were compared using independent samples t-tests.

RQ2: Post-test gains (Post - Pre) between GG and CG were compared using an independent samples t-test.

RQ3 (Partial): Repeated-measures ANOVAs (gains by word category within/between groups).

Qualitative (Logs, SRI, Focus Groups): Thematic analysis is used (Braun & Clarke, 2006). NVivo software was used to code transcripts and logs both inductively and deductively.

Identifying word encounters, strategies (ignoring, inferencing, looking up), perceived learning, contextual support (visual, narrative, audio), motivation, engagement, challenges, and perceived transfer were the main goals of the initial coding. Potential themes (such as "Role of Narrative Context," "Dictionary Use as Strategy," "Motivation through Progression," "Action vs. Comprehension Focus," "Context-Bound Knowledge," and "Transfer Attempts") were used to group the codes. Themes were examined, honed, and clarified. Quotations that served as examples were taken. Triangulation To support validity and give a comprehensive picture of the learning process, results from focus groups (overall perceptions, examples of use), logs (frequency/type of encounters/strategies), and SRI (depth of processing during encounters) were compared (RQ3 & RQ4). GG and CG patterns were contrasted.

## 4. Results

### *4.1.Quantitative Results (VKS)*

Overall Vocabulary Gains (RQ1):

GG: Significantly improved from the Pre-test (M=78.21, SD=12.45) to the Post-test (M=102.86, SD=10.18), $t(13)=8.74$, $p<.001$, $d=1.85$ (large effect size). Gain on average = 24.64 (SD = 7.92).

CG: also demonstrated a significant improvement from the pre-test (M=76.93, SD=11.87) to the post-test (M=88.00, SD=9.74), with a medium effect size of t(13)=4.21, p=.001, and d=0.89. Gain on average = 11.07 (SD = 7.35).

ConG: t(11)=0.65, p=.528; no discernible change from the pre-test (M=77.50, SD=10.82) to the post-test (M=78.58, SD=9.67). Gain Average = 1.08 (SD = 5.76).

Comparison to Control: GG Gain was significantly greater than ConG Gain (t(24)=8.92, p<.001, d=3.37). Additionally, CG Gain was significantly greater than ConG Gain (t(24)=3.98, p<.001, d=1.50). This demonstrates that both games significantly enhanced incidental vocabulary acquisition outside of the context of regular exposure.

4.1.1. Genre Comparison (GG vs. CG - RQ2)

Compared to the CG (M Gain=11.07, SD=7.35), the GG showed noticeably greater vocabulary gains (M Gain=24.64, SD=7.92), t(26)=4.82, p<.001, d=1.81 (large effect size). This suggests that Genshin Impact was more successful in improving vocabulary under these circumstances.

4.1.2. Gains by Transferability & Word Type (RQ3)

Within GG: Compared to Game-common (M Gain=5.29) and FPS-specific words (M Gain=3.21), gains were significantly higher for RPG-specific words (M Gain=8.21) and Transferable/Academic words (M Gain=7.93), F(3, 39)=15.87, p<.001. Game-common and FPS gains were significantly lower than RPG and transferable gains, according to post-hoc tests (p<.01).

Within CG: FPS-specific words had the highest gains (M Gain=4.14), followed by game-common (M Gain=3.50), RPG-specific (M Gain=2.21), and transferable/academic (M Gain=1.21). F(3, 39)=8.42, p<.001. FPS gains were significantly greater than RPG and transferable gains, according to post-hoc tests (p<.05). Transferable gains were lower than game-common gains (p<.05).

Transferable Words: t(26)=6.01, p<.001, d=2.27, GG demonstrated significantly greater gains on Transferable/Academic words (M Gain=7.93) than CG (M Gain=1.21). Gains for GG on these terms were significant and on par with gains for words unique to RPGs.

Table 1. *Mean VKS Gains by Word Category and Group*

| Control Group Mean Gain | CODM Group Mean Gain | Genshin Group Mean Gain | Word Category |
|---|---|---|---|
| (1.23)0.33 | (1.87)2.21 | **(2.45)8.21 | RPG-Specific |
| (0.90)0.42 | **(1.76)4.14 | (1.98)3.21 | FPS-Specific |
| (0.94)0.17 | *(1.63)3.50 | *(2.01)5.29 | Game-Common |
| (1.06)0.25 | (1.45)1.21 | **(2.38)7.93 | Transferable/Acad |
| (5.76)1.08 | **(7.35)11.07 | **(7.92)24.64 | Total |

*Note.* *Significant within-group gain for category (p<.05), *Significant within-group gain for category (p<.01). GG significantly outperformed CG on RPG-Specific, Transferable/Acad, and TOTAL gains (p<.001). CG significantly outperformed GG on FPS-Specific gains (p<.05).

### *4.2. Qualitative Findings*

The qualitative results are explained by different learning experiences and mechanisms between the groups, which were found through focus groups, SRIs, and gameplay log analysis.

4.2.1.Genshin Impact Group (GG):

Intense Background & Reiteration: As primary sources of vocabulary, participants frequently cited character dialogues, item/ability descriptions, narrative depth, and environmental text (books, signs). Frequently used terms included "commission," "artifact," "domain," "alchemy," "resonate," "investigate," "formidable," and "extract." "You pay attention to the words because the story makes you want to know what happens next," said P3 (GG). Character Lisa frequently discusses "alchemy" and "elements," and you can see them in menus when upgrading weapons. Key narrative and system terms were encountered frequently, according to the logs.

Dictionary Use & Strategy: The majority of GG players made extensive use of the built-in translation/dictionary feature (tap-and-hold on text) when they came across new terms that were essential for completing quests or comprehending mechanics. P7 (GG): "I would tap the quest objective if I didn't know the word, such as 'investigate the anomaly.'" To finish, you must know." According to SRIs, this frequently resulted in deeper processing (Stage IV/V on VKS). Less important words were also frequently inferred from context and images.

Transferability: Participants said they saw transferable words outside of the game. P10 (GG): "As soon as I saw the word 'resource' in my economics textbook, I thought of gathering resources in the Teyvat [game world]." I now use "significant" damage in my essays. The use of narrative context to anchor abstract terms like "diligence" or "justice" was discussed in focus groups.

Motivation & Agency: Exploration, story progression, character development, and world-building were the main sources of the high levels of intrinsic motivation that were reported. P5 (GG): "I just wanted to play and enjoy the lovely world; I wasn't thinking 'I have to learn English.'" Because I was involved, I was able to learn. The most common vocabulary encountered was influenced by agency in selecting quests and areas of exploration.

Multimodality: Sound effects, music, visuals, and character voice acting (in English) were mentioned as being essential for word comprehension and recall. P12 (GG): "I found it easy to remember when I heard 'Glaze Lily' while I was seeing the flower and needed it for a quest."

4.2.2. Call of Duty: Mobile Group (CG):

Sparse and Limited Context: Menus ("Loadout," "Perk," "Operator," "Scorestreak," "Extraction"), short pre-match/mission instructions ("Secure the point," "Eliminate all hostiles"), and kill-feed messages ("Headshot," "Double Kill") were the main sources of exposure. There wasn't much narrative context. P19 (CG): "Most of the time, it's just brief phrases on buttons or throughout the game. You only learn 'equip', 'grenade', and 'capture'. Logs revealed less repetition of terms other than core action terms and fewer unique word encounters.

Strategies & Focus: Participants stated that they mostly ignored new words unless they directly interfered with gameplay (e.g., not understanding a mode name). Look-ups were uncommon, and when they did occur, they frequently involved fast external searches. SRIs showed shallow processing; while many words were identified (Stage II/III), they were not fully comprehended or effectively recalled. Action and reflexes were the main focus. P16 (CG): "You're too busy to read. You can tell it's a mode when you see "Search and Destroy." You don't consider "search" and "destroy" to be distinct words.

Problems with transferability: Gains were mostly limited to simple action verbs and nouns that were specific to FPS. Participants found it difficult to remember or give examples of transferable words that they had only learned from CODM. P21 (CG): "Terms like 'extraction' or 'perk'... I wouldn't use them in class, but I am familiar with them from the game. "Loadout" seems like a game word. The low quantitative gains on transferable words are consistent with this.

Competition, skill mastery, and social play (with friends, frequently in L1) were the main sources of motivation. The language learning component was mostly incidental and ancillary, despite the high level of engagement. P18 (CG): "Playing with friends and winning is enjoyable.

The only reason English is present is that the game is in English. I play for other reasons besides learning new words. Message: Little vocabulary expansion was provided by in-game voice/text chat, which was primarily utilized for short tactical calls in simple English or mixed L1/English ("Push B!", "Sniper!").

Control Group: Reported routine English exposure but no significant encounters with VKS target words.

## 5. Discussion

This study provides robust evidence that popular mobile COTS games facilitate incidental English vocabulary acquisition, while highlighting significant genre-based differences.

In comparison to the control group, Genshin Impact and Call of Duty: Mobile both enabled notable vocabulary gains, supporting the fundamental idea of DGBLL (Reinhardt, 2019; Sylvén & Sundqvist, 2012). This shows that even action-focused games like CODM offer enough understandable input in their core mechanics and interfaces (Krashen, 1982) for some incidental learning to take place, mostly of high-frequency and genre-specific action vocabulary. This exposure was probably influenced by the sheer amount of engagement (5 hours per week).

The hypothesis that narrative-rich role-playing games provide a better environment for incidental vocabulary acquisition than action-packed first-person shooter games is strongly supported by the noticeably larger gains seen in the Genshin Impact group. This result is consistent with the well-ordered problem and situated meaning concepts proposed by Gee (2007). Genshin incorporates language into an engaging story, intricate character interactions, thorough item descriptions, and an expansive, explorable world. According to deHaan et al. (2010), this rich multimodal context generates deeper cognitive hooks for memory and offers a wealth of hints for meaning inference. Because quest objectives, dialogue options, and system mechanics must be understood in order to advance, learners are compelled to use comprehension techniques like dictionary look-ups, which are common in the GG. This leads to deeper processing (Craik & Lockhart, 1972) and higher VKS scores, especially for productive knowledge (Stage V). The high gains on RPG-specific and transferable words can be explained by the frequent repetition of important thematic and systemic vocabulary in a variety of related but varied contexts (Nation, 2013). Accounts of motivation from participants that focus on narrative engagement and immersion highlight the importance of intrinsic motivation (Ryan & Deci, 2000) in maintaining the exposure required for acquisition.

Although Call of Duty: Mobile's linguistic environment proved less conducive to broader, deeper vocabulary learning, it was effective in teaching its core vocabulary. Menus, succinct instructions, and kill notifications are examples of functional and fragmented language. Less information is available in this sparse context to help deduce the meaning of uncommon words. Because gameplay is fast-paced and high-pressure, players are discouraged from taking the time to look up words or consider meaning; action, not comprehension, is the main focus (Bytheway, 2015). As a result, processing was frequently superficial, leading to improvements mostly at the recognition level (VKS Stages II/III) for common and FPS-specific action words. Exposure to more abstract or varied vocabulary was reduced by the absence of descriptive text or narrative depth. In CODM, learner agency has less to do with language exploration and more to do with tactical decisions.

Although possible, context is crucial. One important finding fills in the transferability gap. Significant improvements in transferable/academic vocabulary (such as "resource," "significant," "investigate," and "extract") were shown by the Genshin Impact group, and participants reported using these words on their own outside of the game. This implies that vocabulary that is encountered in a rich, varied, and meaningful narrative context is more likely to transfer, particularly words that have wider semantic applications outside of the game mechanic itself. A solid conceptual basis that could be connected to other contexts was offered by the situated learning in the game world (Gee, 2007). On the other hand, Bytheway's (2015) findings were supported by the fact that vocabulary learned in the highly specific, functional context of CODM (such as "perk," "loadout," and "extraction" in the tactical sense) remained largely context-bound. Basic gaming terminology may transfer more readily, as evidenced by the moderate gains in game-common words in both groups.

Genshin Impact's design actively promoted vocabulary learning strategies: the narrative supported inferencing; the need to understand triggered dictionary use. The qualitative data revealed the interaction between game design, learner behavior, and outcomes. Persistence was driven by strong intrinsic motivation. On the other hand, the design of CODM discouraged deep linguistic engagement; motivation did not prioritize language learning, and strategies were minimal. This demonstrates that although games can provide learning opportunities, the demands and design of the game mediate learner agency and the strategies they use (Zheng et al., 2015).

According to this study, teachers can use well-known COTS games—especially story-heavy role-playing games like Genshin Impact—as effective extra resources for vocabulary instruction. The linguistic

environment's richness and the engagement it encourages are crucial. But playing any game isn't enough; genre is important. Vocabulary gains for first-person shooter games are probably restricted to terms specific to the genre. Learning in rich environments can be improved by promoting the use of strategies (such as using in-game dictionaries and taking notes on vocabulary). By specifically connecting game-acquired vocabulary to academic settings through follow-up activities that involve discussing newly learned words, using them in writing prompts, or drawing analogies, educators can further aid transfer.

A potential limitation is the gender distribution within the groups. While the study aimed for gender balance (50/50), the real-world player bases for these games are skewed (e.g., ~60-80% male for CODM). This may affect the generalizability of the findings. Future studies should consider recruiting genre-specific player groups to enhance ecological validity.

The sample size, participants' particular cultural/L1 background, and the concentration on just two games/genres restrict generalizability. Initial gains are captured by the 6-week period; long-term retention was not assessed. Despite being validated, the VKS depends on self-report. Although the ConG helped lessen this, it is difficult to account for all outside English exposure. Participants may have behaved differently if they were aware that they were taking part in a language learning study (Hawthorne effect).

## 6. Conclusion

This study offers strong proof that popular mobile video games, especially immersive RPGs like Genshin Impact, can be very useful for helping intermediate learners acquire English vocabulary incidentally. The study quantitatively shows that regular gameplay leads to significant vocabulary gains that outperform those of a control group and an action-oriented first-person shooter like Call of Duty: Mobile. Importantly, it emphasizes how crucial contextual richness is, including character interaction, descriptive text, narrative depth, and the thoughtful incorporation of language into gameplay mechanics and objectives. Genshin Impact is a prime example of this rich environment, which promotes deeper processing, strategic vocabulary learning behavior (such as using dictionaries), high intrinsic motivation, and vocabulary transfer to non-gaming contexts. Although first-person shooter games can impart genre-specific vocabulary, their action-focused focus and limited linguistic context prevent players from learning more extensive and complex vocabulary.

The results highlight how popular COTS games can be used to increase player engagement and facilitate language learning, particularly vocabulary development. But it's crucial to choose games according to genre and linguistic affordances. Teachers and students can intentionally take advantage of the rich environment for incidental learning provided by narrative-driven role-playing games. In order to maximize the potential of these potent, captivating tools for promoting meaningful and transferable language acquisition, future research should examine long-term retention, the effect on other language skills (speaking, writing), the function of multiplayer interaction in various genres, and the creation of pedagogical frameworks. Games like Genshin Impact can create dynamic, immersive, and extremely motivating language learning environments in their worlds, which go beyond simple virtual playgrounds.

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