

Exploring AI-Driven RPGs for Managing Foreign Language Writing Anxiety

An extended doctoral thesis abstract

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Abstract

This paper is an extended abstract of an in-progress doctoral thesis. It explores how AI-driven text-based role-playing games (RPGs) can alleviate Foreign Language Writing Anxiety (FLWA) in English and Italian L2 teenage and young-adults learners. AI-powered RPGs offer a neutral, non-judgmental space for learners, potentially reducing writing anxiety while enhancing Foreign Language Enjoyment through immersive role-playing. The research also aims to develop methods for controlling AI language model output, such as enforcing CEFR level constraints, to allow teachers to guide the learning process. In the upcoming research, mixed-methods approach will be used, including pre- and post-tests with experimental and control groups to measure the impact of AI-mediated RPGs on writing anxiety and performance. The findings will provide insights into how AI-mediated tools can address emotional barriers to language learning.

Keywords

Foreign language learning, Foreign Language Anxiety, Foreign Language Enjoyment, Italian as foreign language, English as foreign language, writing anxiety, educational technologies, AI for education, game-based learning, writing skills development, text-based role-playing games, AI-mediated learning

1. Introduction

The process of foreign language acquisition involves both rational cognitive comprehension and affective engagement. Emotions play a crucial role in language learning, influencing its outcomes. Positive emotions, such as self-esteem and enjoyment, can enhance learning, while negative emotions, like anxiety, can hinder it [1]. Foreign language learning can challenge an individual's self-concept and worldview, often inducing anxiety. To address this emotional challenge, Horwitz, Horwitz, and Cope introduced the concept of Foreign Language Anxiety (FLA) in 1986, which they define as a combination of self-perceptions, beliefs, emotions, and behaviors specific to language learning in a classroom setting [2]. FLA often arises from students' fear of communication due to anticipated difficulties in understanding and being understood, as well as a lack of control over the communicative situation.

Cheng, Horwitz, and Schallert further differentiated between anxieties related to specific language skills, identifying Foreign Language Writing Anxiety (FLWA) as a distinct issue [3]. [4] notes that foreign language anxiety often has a greater impact on productive skills. Among the four aspects of language learning, writing and speaking involve greater self-disclosure than reading and listening, making them potentially more threatening to the student's self-concept [5, 3].

With the growing integration of AI-assisted tools, virtual reality, mobile learning and other technological advancements into language learning, the traditional classroom environment is evolving. This shift prompts researchers to investigate how technologies reshape the emotional dynamics of foreign language learners.

Recent studies have explored the potential of AI tools to mitigate foreign language anxiety and enhance language learning experience. AI-powered chatbots and speaking assistants have shown

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promise in reducing FLA and improving willingness to communicate [6, 7]. These tools can provide non-threatening practice environments, adapt to learners' needs, and offer personalized immediate feedback, suitable for self-regulated learning [8, 9]. However, a more immersive and interactive approach could maximize the benefits of AI tools even further, not only adapting to learners' linguistic needs but also engaging them emotionally and creatively.

To bridge this gap, the current research relies on the experience of game-based learning and creative storytelling. Game-based learning has shown positive effects on foreign language anxiety and enjoyment. Studies have found that digital game-based learning can reduce FLA and increase motivation among English as Foreign Language learners [10, 11], with high-anxiety learners particularly benefiting from game-based learning [12]. Collaborative storytelling games with narrative grounding have been found to enhance student engagement and creative language production [13]. Combining these ideas, the current research proposes the concept of AI-Driven Role-Playing Games for language learning. These games leverage AI to create dynamic, interactive storytelling experiences that offer learners a safe, judgment-free space to practice language skills. In terms of Causality Orientation Theory from the Self-Determination Theory framework [14], the final goal is to switch language learners' attention from the impersonal motivation characterized by anxiety concerning one's competence and/or control motivation pressure of mandatory education context to the the autonomy orientation, where individuals act out of interest in and valuing of the activity process. By engaging learners in narrative-driven tasks, this approach aims to reduce anxiety and enhance Foreign Language Enjoyment, providing a more holistic solution to the emotional challenges of language learning. However, while this method can offer students an enjoyable and engaging learning experience, the challenge remains in ensuring that the AI-generated content can be effectively controlled to meet educational requirements. For teachers, the ability to regulate the output, focusing on specific grammar and vocabulary and enforcing CEFR levels, is crucial to guide the learning process, and future work will focus on achieving this level of control.

2. Related Literature

2.1. Digital technologies and learners' emotions in foreign language learning process

To understand the influence of recent advances in digital educational tools on Foreign Language Writing and Speaking Anxieties, a thematic literature review is being conducted as part of this ongoing research. It is focused on publications from 2021 to 2024 to capture the post-pandemic shift toward digital learning, which significantly impacted the use of technology in education. The PRISMA framework was employed to systematically identify 58 relevant articles and conference papers. The analysis revealed that the vast majority of the studies reported positive or neutral effects of digital tools on language anxiety. Only four papers highlighted negative perceptions or outcomes of technology use, while four others reported moderate positive results. Young adults, particularly undergraduate students formed the majority of the participants in these studies ($n = 39$). Fewer studies focused on school-aged learners ($n = 8$), middle-aged learners ($n = 2$), and no studies included elderly learners. Interestingly, only nine articles considered the perspective of teachers.

During the thematic analysis, the types of technologies used to address Foreign Language Anxiety were classified into two broad categories: enhancing technologies and transformative technologies. Enhancing technologies can be defined as those that complement and improve traditional methods (e.g., online materials, learning platforms and videocalls instead of traditional textbooks and offline classrooms), while transformative technologies fundamentally change the learning process, enabling new forms of interaction and practice, such as AI assistants, avatars, and virtual reality.

In terms of psychological impact, although the search query focused on Foreign Language Anxiety, many studies incorporated concepts from positive psychology, particularly Foreign Language Enjoyment. Among the studies focused on enhancing technologies, a relatively balanced split was found between those examining Foreign Language Anxiety alone ($n = 11$) and those also exploring motivation and enjoyment ($n = 17$). In contrast, studies on transformative technologies were more likely to integrate

anxiety reduction with positive emotional outcomes, with 23 studies addressing both anxiety and positive psychology concepts compared to 7 focused solely on anxiety. Technologies such as AI, VR, AR, and avatars provide students with new ways to interact with the language and with each other, which were not possible in traditional classrooms. The "value added" of transformative technologies lies in their novelty and their potential to fundamentally broaden the educational experience. Innovative technologies are seen as a source of emotional uplift, pushing the researchers to consider not only their effect on anxiety reduction, but also on increasing positive emotions.

2.2. Positive psychology in foreign language learning

Positive psychology (PP) has emerged as a significant influence in foreign language acquisition research and teaching practices. This approach emphasizes the cultivation of positive emotions, traits, and supportive institutional environments in language education [15]. Building upon earlier concepts like the humanistic movement and affective filter, PP offers new perspectives on motivation and learner experiences, positioning positive emotional states as crucial drivers of success in language learning [16]. Since its introduction to foreign language acquisition in early 2010s, PP has gained substantial recognition, leading to a growing body of research within applied linguistics [17].

Research has explored various positive factors such as engagement, enjoyment, resilience, and well-being in language learning contexts [15]. A key focus of PP interventions is to foster states like flow, hope, and optimism, which contribute to enhanced linguistic progress and reduce the impact of negative emotions, including FLA [17]. Recent research has begun to integrate PP principles into technology-enhanced learning environments, including game-based learning and AI-driven educational tools, to create more immersive, enjoyable, and emotionally supportive learning experiences.

2.3. Game-based learning

Research indicates that game-based learning can effectively reduce FLA, increase enjoyment and enhance language learning outcomes. Studies have shown that digital games can lower affective barriers, increase willingness to communicate, and improve motivation in language learners [10, 18]. Online simulation games and problem-based gaming approaches have been found to reduce FLA levels across different anxiety level groups and improve vocabulary learning, particularly for moderate and high-anxiety students [19, 20]. Interestingly, high-anxiety learners' gaming performance positively correlated with their learning performance, suggesting that game-based learning may be especially beneficial for these students [12]. In addition to these benefits, gaming technologies have shown promise in preventing and correcting language anxiety among teenage learners, a group particularly prone to affective barriers in language learning [21]. Game-based learning can engage students by blending entertainment and education, offering dynamic learning experiences that capture attention and enhance emotional involvement.

2.4. AI for role-playing and storytelling

While current studies focus on role-playing games conducted in the players' native languages, where the challenges of language acquisition and foreign language anxiety are certainly not a factor, research has already begun to explore the potential of AI in enhancing role-playing games, particularly in well-established frameworks like Dungeons & Dragons (D&D) [22, 23, 24]. Studies have focused on AI dungeon masters, where language models are used to generate story prompts, manage game mechanics, and facilitate gameplay interactions [22, 23]. AI game masters are found capable of producing engaging and believable fantasy narratives, even if they still fall short in terms of consistency, adaptability, and the nuanced decision-making skills of human dungeon masters [22]. Other areas of research focus on the creative applications of AI for storytelling and role-playing. [25] examine how AI-based characters can be used to inspire creative writing, providing dynamic prompts and character arcs that assist players or writers in co-creating narratives. In addition, research into interactive narrative environments

demonstrates how AI can create immersive story worlds, offering players personalized quests and interactive dialogue through a combination of knowledge graphs and language models [26].

3. Research Objectives

This research aims to investigate the effectiveness of AI-mediated text-based role-playing games in reducing Foreign Language Writing Anxiety among English and Italian L2 learners, considering its effect both on learners of global and a locally significant language. The study will focus on teenage and young-adults students. While young adults would normally have coping strategies to deal with possible FLA, teenagers are more likely to experience emotional obstacles [21], being more vulnerable to self-concept threats that can occur during writing and speaking in foreign language. By offering a judgment-free, narrative-driven environment, AI RPGs are expected to not only reduce anxiety but also enhance Foreign Language Enjoyment (FLE) through collaborative creative storytelling. The study will also explore how teachers can interact with AI tools to guide the learning process, particularly by controlling the AI's output to adhere to linguistic constraints such as CEFR levels requirements and more specific grammar and vocabulary themes.

The study addresses two main research questions:

3.1. RQ1: Controlling the output to meet educational requirements

How can the output of AI language models be controlled to meet educational requirements, such as enforcing both CEFR-based and chosen specifically by teacher grammar and vocabulary constraints?

This exploratory research question focuses on understanding how AI language models can be adapted to align with pedagogical goals. It includes following sub-questions:

- What is the current accuracy of AI models in generating grammatically correct Italian text?
- To what extent can AI models follow linguistic constraints provided in prompts, such as grammar and vocabulary?
- How can prompt engineering or fine-tuning techniques improve the enforcement of these constraints?
- What strategies can ensure that AI outputs meet specific educational goals, allowing teachers to effectively guide the learning process?

3.2. RQ2: AI RPG influence on Foreign Language Writing Anxiety

How do AI-mediated text-based RPGs influence foreign language writing anxiety in English and Italian L2 learners compared to traditional writing exercises?

This research question seeks to explore how AI-driven RPGs can create a more supportive environment for reducing writing anxiety, fostering enjoyment, and improving language proficiency. Specific sub-questions include:

- What features of AI-mediated text-based RPGs contribute most to anxiety reduction?
- How do students' engagement and motivation differ between AI-mediated RPGs and traditional exercises?
- How does AI feedback in RPGs compare to teacher feedback in terms of its impact on writing anxiety?

4. Methodology and Future Work

This study adopts a mixed-methods approach and is structured into two lines of development that align with the two research questions.

4.1. Track 1: AI Model Output Control

The first line of development, addressing RQ1, focuses on exploring how the AI-generated content can be controlled to meet specific linguistic constraints relevant to language learning, such as CEFR levels and grammatical accuracy.

4.1.1. Pilot Study: A1-Level Constraints

As part of this track, a pilot study is currently being conducted to evaluate how well various language models can adhere to A1-level constraints in English, Italian, and Russian as formulated by [27], [28] and [29]. The models are tested on their ability to generate content that aligns with specific grammar and syntax requirements, at this point excluding vocabulary constraints. The three languages have been chosen to compare the language models performance on the languages that are, firstly, differently represented in training corpora, and, secondly, have different levels of constraints specificity. The pilot study involves feeding the models prompts designed to elicit A1-level responses in Italian, English, and Russian. These prompts include both specific communicative tasks based on CEFR A1 requirements and instructions constraining grammar and syntax usage to the A1 proficiency level in all three languages. The generated outputs are being evaluated both by language models and by human experts using CEFR-based rubrics to assess how accurately the models maintain A1-level constraints. Preliminary findings suggest that while the models are capable of generating grammatically correct sentences, in Italian and in Russian they struggle with consistently staying within specific A1-level grammar constraints. Moreover, when models are asked to self-evaluate their outputs by assigning true/false labels to determine whether they meet the given constraints, their performance is notably poor. Even advanced models like ChatGPT 4o struggle with this task, particularly when asked to give direct answers without offering a “chain of thought” explanation.

4.1.2. Enhancing Linguistic Control in AI-Generated Text

Building on the results of the pilot study, the language models will be prompted to follow linguistic constraints of different CEFR levels and its performance will be evaluated. At the same time, feedback from teachers’ will be collected to define more necessary constraints and instruments to meet their needs. Based on the teachers’ input, the prompts and models will be adapted to ensure better adherence to the constraints, refining the AI’s performance before proceeding to the second phase.

4.2. Track 2: Experimental Study of AI RPG effect on FLA

This line of research aims to investigate AI-mediated test-based role-playing games in reducing writing anxiety among English and Italian L2 learners, addressing RQ2.

4.2.1. Pilot Study: Comparing Storyteller and Educator Avatars’ Effect on FLA and FLE

Before the main experimental phase, a pilot study will be conducted, leveraging an existing tool for creating AI conversational agents. The within-subject study will involve University of Trento students who study English as foreign language and are currently at a B1 level. Using ConvAI, a tool for creating AI conversational agents, the experiment will compare the effects of two approaches: one avatar will be acting as a traditional language tutor assigning writing tasks, and the other as an impersonal narrator engaging in role-playing based on students’ interests. Pre- and post- tests will be administered to measure the levels of Foreign Language Anxiety and Foreign Language Enjoyment. It is hypothesized that interactions with the narrating agent will provoke less anxiety and more enjoyment than those with the educator. One of the expected challenges is how to urge students to produce more written output in the storytelling mode, as since players can limit themselves to very short phrases with minimal interaction, they may stay in a more passive, reading-focused mode while the AI game master continues advancing the story.

4.2.2. Pre- and Post-test study on English FLWA

The study will involve English L2 learners, focusing on middle and high school students. Experiments is planned for two months, with one 45-minutes session per week. Participants will be divided into experimental group, engaging on a weekly basis in AI-mediated text-based RPGs and control group, completing traditional writing exercises without AI support. Both groups will complete pre- and post-tests to assess changes in writing anxiety and language proficiency. The Foreign Language Writing Anxiety Scale (FLWAS) [30] will be used to measure participants' anxiety levels before and after the interventions. Participants' written output will be assessed using a CEFR-based rubric to measure proficiency gains. Additionally, semi-structured interviews and surveys will explore participants' experiences with AI-mediated RPGs and their perceptions of how the game format affected their anxiety and enjoyment. Teachers will provide qualitative feedback on how well the AI tools support language learning and meet educational goals.

4.2.3. Comparative study of AI RPG effects on English and Italian FLWA

In order to broaden the results and explore potential differences across age groups and language contexts, a follow-up mixed-methods comparative study with university students learning both English and Italian will be conducted. During a 4-weeks intervention with one 45 minutes session per week, an AI game-master will use the same narrative plots both in Italian and in English, with only difference being the language. FLWA questionnaires and CEFR-based writing tasks will be provided as pre- and post-test assessments. As the number of international students studying Italian in the University of Trento is not enough to achieve a sample size sufficient for statistically significant conclusions, the study will supplement the pre- and post-test assessment results with the thematic analysis of in-depth interviews after the intervention. This approach allows for a qualitative exploration of students' experiences and perceptions, aiming to identify potential differences in Foreign Language Writing Anxiety across languages.

5. Conclusion

This research contributes to the emerging field of AI-mediated language learning tools, offering a novel approach to reducing Foreign Language Writing Anxiety through interactive, narrative-driven tasks. By integrating AI and role-playing games, this study aims to create a more supportive and enjoyable language learning environment that fosters Foreign Language Enjoyment and motivation. The use of AI in this context offers unique opportunities for providing students with judgment-free practice environments that can significantly enhance their learning experiences.

The development of methods to control AI-generated content according to specific linguistic constraints, such as CEFR levels will provide educators with tools to tailor instruction to learners' proficiency levels, with this approach not only supporting language development but also enhancing the role of AI as an adaptable teaching assistant.

Finally, applying AI to create combination of emotional and linguistic support has the potential to transform language learning by bridging the gap between personalized instruction and scalable technology.

References

- [1] J. Arnold, *Affect in Language Learning*, Affect in Language Learning, Cambridge University Press, 1999.
- [2] E. K. Horwitz, M. B. Horwitz, J. Cope, Foreign language classroom anxiety, *The Modern Language Journal* 70 (1986) 125–132. doi:10.1111/j.1540-4781.1986.tb05256.x.

- [3] Y. Cheng, E. K. Horwitz, D. L. Schallert, Language anxiety: Differentiating writing and speaking components, *Language Learning* 49 (1999) 417–446. URL: <http://dx.doi.org/10.1111/0023-8333.00095>. doi:10.1111/0023-8333.00095.
- [4] S. Akkus, Research perspectives on foreign language speaking anxiety in turkish efl context: A systematic review, *Language Teaching and Educational Research* 4 (2021) 30–44. doi:10.35207/later.892775.
- [5] C. Gkonou, Anxiety over efl speaking and writing: A view from language classrooms, *Studies in Second Language Learning and Teaching* 1 (2011) 267. URL: <http://dx.doi.org/10.14746/ssllt.2011.1.2.6>. doi:10.14746/ssllt.2011.1.2.6.
- [6] Y. Deng, K. Wen, D. G. Dusza, H.-W. Huang, Ai-supported authentic communication with native speakers: Exploring efl learners' willingness to communicate and emotional changes, in: *2024 the 8th International Conference on Innovation in Artificial Intelligence*, volume 24 of *ICIAI 2024*, ACM, 2024, p. 59–64. doi:10.1145/3655497.3655530.
- [7] I. P. Hapsari, T.-T. Wu, *AI Chatbots Learning Model in English Speaking Skill: Alleviating Speaking Anxiety, Boosting Enjoyment, and Fostering Critical Thinking*, Springer International Publishing, 2022, p. 444–453. doi:10.1007/978-3-031-15273-3_49.
- [8] H. Qiao, A. Zhao, Artificial intelligence-based language learning: illuminating the impact on speaking skills and self-regulation in chinese efl context, *Frontiers in Psychology* 14 (2023). doi:10.3389/fpsyg.2023.1255594.
- [9] C.-C. Liu, S.-J. Liu, G.-J. Hwang, Y.-F. Tu, Y. Wang, N. Wang, Engaging efl students' critical thinking tendency and in-depth reflection in technology-based writing contexts: A peer assessment-incorporated automatic evaluation approach, *Education and Information Technologies* 28 (2023) 13027–13052. doi:10.1007/s10639-023-11697-6.
- [10] A. A. A. Ahmed, E. S. Ampry, A. Komariah, I. Hassan, I. Thahir, M. Hussein Ali, A. Fawzi Faisal, P. Zafarani, Investigating the effect of using game-based learning on efl learners' motivation and anxiety, *Education Research International* 2022 (2022) 1–9. doi:10.1155/2022/6503139.
- [11] Y.-F. Yang, A. P. Goh, Y.-C. Hong, N.-S. Chen, Primary school students' foreign language anxiety in collaborative and individual digital game-based learning, *Computer Assisted Language Learning* 36 (2021) 1587–1607. doi:10.1080/09588221.2021.2008979.
- [12] J. C. Yang, M. Y. D. Lin, S. Y. Chen, Effects of anxiety levels on learning performance and gaming performance in digital game-based learning, *Journal of Computer Assisted Learning* 34 (2018) 324–334. doi:10.1111/jcal.12245.
- [13] E. Zhang, G. Culbertson, S. Shen, M. Jung, Utilizing narrative grounding to design storytelling games for creative foreign language production, in: *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*, CHI '18, ACM, 2018. doi:10.1145/3173574.3173771.
- [14] E. L. Deci, R. M. Ryan, The general causality orientations scale: Self-determination in personality, *Journal of Research in Personality* (1985).
- [15] Y. Wang, A. Derakhshan, L. J. Zhang, Researching and practicing positive psychology in second-/foreign language learning and teaching: The past, current status and future directions, *Frontiers in Psychology* 12 (2021). doi:10.3389/fpsyg.2021.731721.
- [16] S. Mercer, P. D. MacIntyre, Introducing positive psychology to sla, *Studies in Second Language Learning and Teaching* 4 (2014) 153–172. doi:10.14746/ssllt.2014.4.2.2.
- [17] J.-M. Dewaele, X. Chen, A. M. Padilla, J. Lake, The flowering of positive psychology in foreign language teaching and acquisition research, *Frontiers in Psychology* 10 (2019). doi:10.3389/fpsyg.2019.02128.
- [18] H. Reinders, S. Wattana, Affect and willingness to communicate in digital game-based learning, *ReCALL* 27 (2014) 38–57. doi:10.1017/s0958344014000226.
- [19] Y.-F. Yang, W.-M. Hsieh, W.-K. Wong, Y.-C. Hong, S.-C. Lai, Reducing students' foreign language anxiety to improve english vocabulary learning in an online simulation game, *Computer Assisted Language Learning* 37 (2022) 410–432. doi:10.1080/09588221.2022.2039203.
- [20] G.-J. Hwang, T.-C. Hsu, C.-L. Lai, C.-J. Hsueh, Interaction of problem-based gaming and learning anxiety in language students' english listening performance and progressive behavioral patterns,

- Computers & Education 106 (2017) 26–42. doi:10.1016/j.compedu.2016.11.010.
- [21] G. V. Sorokoumova, O. V. Shurygina, T. E. Egorova, I. V. Burova, Y. Y. Pospelova, The use of gaming technologies in foreign language classes as a way to prevent and correct language anxiety, SHS Web of Conferences 117 (2021) 03002. doi:10.1051/shsconf/202111703002.
- [22] C. Ang, L. R. Cortel, C. L. Santos, E. Ong, Fable reborn: Investigating gameplay experience between a human player and a virtual dungeon master, in: Conference on Human Factors in Computing Systems - Proceedings, Association for Computing Machinery, 2023. doi:10.1145/3544549.3585793.
- [23] T. Triyason, Exploring the potential of chatgpt as a dungeon master in dungeons & dragons tabletop game, in: ACM International Conference Proceeding Series, Association for Computing Machinery, 2023. doi:10.1145/3628454.3628457.
- [24] J. M. Santiago, R. L. Parayno, J. A. Deja, B. P. V. Samson, Rolling the dice: Imagining generative ai as a dungeons & dragons storytelling companion, 2023. URL: <https://arxiv.org/abs/2304.01860>. doi:10.48550/ARXIV.2304.01860.
- [25] P. Grigis, A. D. Angeli, Roleplay with large language model-based characters: A creative writers perspective (short paper) paolo grigis, in: SYNERGY@AVI, 2024. URL: <https://api.semanticscholar.org/CorpusID:270554966>.
- [26] T. Ashby, B. K. Webb, G. Knapp, J. Searle, N. Fulda, Personalized quest and dialogue generation in role-playing games: A knowledge graph- and language model-based approach, in: Conference on Human Factors in Computing Systems - Proceedings, Association for Computing Machinery, 2023. doi:10.1145/3544548.3581441.
- [27] J. Trim, Breakthrough specification, 2009.
- [28] M. Barni, A. Bandini, L. Sprugnoli, S. Lucarelli, A. M. Scaglioso, B. Strambi, C. Fusi, A. M. Arruffoli, Linee Guida CILS. Certificazione di Italiano come Lingua Straniera, Guerra Edizioni, 2009.
- [29] T. E. Vladimirova, M. M. Nahabina, N. I. Soboleva, T. Andrushina, Государственный стандарт по русскому языку как иностранному. Элементарный уровень [State Standard for Russian as Foreign Language. Elementary level], Zlatoust, 2001.
- [30] Y.-S. Cheng, A measure of second language writing anxiety: Scale development and preliminary validation, Journal of Second Language Writing 13 (2004) 313–335. doi:10.1016/j.jslw.2004.07.001.