10-17-2025

Secondary World Language Teachers' Perspectives on Gamification-Based Assessments

Taryn Thompson
Walden University

Walden University

College of Education and Human Sciences

This is to certify that the doctoral dissertation by

Taryn Thompson

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Heng-Yu Ku, Committee Chairperson, Education Faculty
Dr. Darci Harland, Committee Member, Education Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2025

Abstract

Secondary World Language Teachers' Perspectives on Gamification-Based Assessments

by

Taryn Thompson

M.Ed., National University, 2007

BA, Pepperdine University, 2001

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Educational Technology and Design

Walden University

November 2025

Abstract

The problem that was addressed through this study was that there was a gap in the literature about secondary world language teachers using gamification-based assessments and the influence on student learning. The purpose of this basic qualitative study was to explore teachers’ perspectives on the benefits and challenges of gamification-based assessments. The study was grounded in the unified theory of acceptance and use of technology, digital game-based language learning, and Krashen’s second language acquisition theory. To secure a sample of 12 participants for this study, purposeful and snowball sampling were employed, wherein potential secondary world language teachers were solicited through a recruitment flyer and email invitation distributed across the researcher's professional learning networks, academic associations, and targeted social media groups, with final eligibility confirmed via a participant verification survey. Data from semistructured interviews were analyzed thematically, using open coding, revealing key benefits: increased student motivation and engagement, improved vocabulary acquisition, personalized learning, and enhanced classroom dynamics. Identified challenges included significant time and training requirements for teachers, technological and logistical barriers, concerns about assessment accuracy, and the risk of over-reliance on game mechanics. A key recommendation is for educational leaders to provide targeted professional development and robust infrastructure support, which has positive social change implications for creating more equitable, engaging, and student-centered learning environments in world language education.

Secondary World Language Teachers’ Perspectives on Gamification-Based Assessments

by

Taryn Thompson

M.Ed., National University, 2007

BA, Pepperdine University, 2001

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Educational Technology and Design

Walden University

November 2025

Dedication

I dedicate this dissertation to the extraordinary people who have inspired, supported, and believed in me throughout this journey.

To my beloved godmother, Dr. Rhonda Johnson: your unwavering presence has been the cornerstone of my success. You were there with me every step of the way, encouraging me when I felt defeated, reminding me of my strength and capability when doubt crept in. You did not hesitate to push me when I needed it, sometimes even yelling to get me back on task. Your dedication went beyond moral support; you read my drafts carefully, provided invaluable input on every portion of the dissertation, and consistently guided me with your wisdom. Through every challenge, you were my anchor, constantly reminding me, “You can do this.” I am forever grateful for your patience, belief, and relentless commitment to my growth.

To my aunts, Melda English and Zenora Thompson, Alita Larkin and Beatrice Geter, and uncles, Ron English and Keith Thompson: your unconditional love and steadfast encouragement have been my guiding light. Your generosity of spirit and commitment to my well-being have been pillars of strength during my academic journey.

To my cherished family and friends: your companionship and camaraderie have sustained me through challenges and celebrated my triumphs. Your collective support has been the driving force behind the completion of this dissertation.

Acknowledgments

This dissertation was made possible by my dearest parents, Kathlyn Roberts and Thaeon Thompson, whose academic excellence and unwavering dedication have profoundly inspired me to pursue this journey. Your advanced degrees and accomplishments set a shining example of the heights that can be achieved through hard work, perseverance, and a commitment to learning. Growing up, I witnessed the diligence, passion, and resilience you brought to your academic pursuits, and that legacy fueled my determination to embark on this path.

Your endless love, trust in my abilities, and constant support have shaped every step of my life and served as the foundation for my success. I am especially grateful for your patience in putting up with me during this challenging process and your understanding and encouragement, which carried me through moments of doubt and struggle. This dissertation reflects my effort and your unwavering faith in me.

I am humbled and proud to dedicate this achievement to you, with heartfelt gratitude for the sacrifices you have made, the wisdom you have imparted, and the enduring love you have shown. Your belief in the power of education has forever changed my life, and I am honored to continue the tradition of excellence you so beautifully exemplify.

Table of Contents

List of Tables vi

List of Figures vii

Chapter 1: Introduction to the Study 1

Background 4

Problem Statement 8

Purpose of the Study 11

Research Questions 11

Conceptual Framework for the Study 12

Nature of the Study 12

Definitions 13

Assumptions 16

Scope and Delimitations 17

Limitations 18

Significance of Study 21

Summary 23

Chapter 2: Literature Review 25

Literature Search Strategy 26

Literature Review Related to Key Concepts 28

Conceptual Frameworks 28

Gamification Concepts and Theories 39

Benefits of Gamification-Based Assessments 43

Gamification and Second Language Assessment 51

Challenges of Gamification-Based Assessments.. 55

Summary and Conclusions 59

Chapter 3: Research Method...61

Research Design and Rationale 61

Research Design.. 62

Rationale 62

Role of the Researcher 64

Methodology 65

Sampling 66

Participant Selection Logic 67

Permission.. 69

Instrumentation 69

Semistructured Interview Protocol 70

Procedures for Pilot Study 73

Procedures for Recruitment, Participation, and Data Collection.......................... 75

Data Collection 76

Data Analysis Plan.. 77

Issues of Trustworthiness...80

Credibility 80

Transferability.. 82

Dependability.. 83

Confirmability 85
Ethical Procedures 85
Summary 87
Chapter 4: Results 88
Pilot Study 88
Settings 89
Demographics 91
Data Collection 92
Interviews 93
Interview Guide 93
Data Analysis 94
Discrepant Cases and Nonconfirming Data 101
Evidence of Trustworthiness 103
Credibility 103
Transferability 105
Dependability 106
Confirmability 108
Member Checking 109
Results 110
Perceived Benefits of Using Gamification-Based Assessments (RQ1)............. 111
Perceived Challenges of Using Gamification-Based Assessments (RQ2) 125
Summary 139

Chapter 5: Discussion, Conclusions, and Recommendations 141
Interpretation of Findings 142
Research Question 1: Benefits of Gamification-Based Assessments 143
Research Question 2: Challenges of Gamification-Based Assessments............ 151
Limitations of the Study..162
Recommendations..165
Expand Participant Diversity and Geographic Scope 166
Investigate Longitudinal Outcomes of Gamification-Based Assessment........... 166
Include Student Perspectives in Future Studies 166
Examine Institutional Support Structures and Leadership Influences 167
Design and Evaluate Professional Development Models 167
Implications..168
Implications for Educational Practice 168
Implications for Policy.. 169
Theoretical Implications 171
Implications for Diverse Contexts 171
Implications for Positive Social Change.. 174
Conclusion 178
References..180
Appendix A: Research Study Flyer 226
Appendix B: Participant Recruitment Email 227
Appendix C: Interview Guide..228

Appendix D: Interview Questions 231

Appendix E: Participant Verification Survey 233

Appendix F: Audit Trail..234

Appendix G: Copyright Permission..238

Appendix H: AI and Technology Usage Declaration 239

List of Tables

Table 1. Interview Questions 72

Table 2. Participant Demographics of Experience, Ethnicity, and Subject(s) Taught 92

Table 3. Interview Dates and Times 93

Table 4. Atlas.ti Codes 96

Table 5. Atlas.ti Collapsed Codes 98

List of Figures

Figure 1. UTAUT Model 30

Figure 2. DGBLL Model 34

Figure 3. Krashen’s Second Language Acquisition Theory 36

Figure 4. Data Analysis in Qualitative Research. The 6-Step Strategy for Qualitative Data Analysis by Creswell and Creswell (2023).. 78

Figure 5. Perceived Benefits of Using Gamification-Based Assessments (RQ1) 112

Figure 6. Perceived Challenges of Using Gamification-Based Assessments (RQ2)...... 125

Chapter 1: Introduction to the Study

Considerable evidence underscores the growing recognition of gamification as a potent pedagogical strategy for fostering engaging learning experiences. Empirical findings from recent research not only confirm the efficacy of digital games in the educational sphere but also attest to gamification's capacity to bolster motivation, engagement, and social influence, all while facilitating students' deep immersion in experiential learning (Goening & Binnewies, 2019; Lopez & Tucker, 2019). As such, gamification is an emerging educational technology requiring further research into its usage in secondary education.

Acknowledging how gamification revolutionizes instruction by positively influencing learners' performance, it is not widely used in secondary world language courses (Baah et al., 2024). The current literature shows the benefits of gamification on student motivation and engagement by leveraging game elements, gamification, and game-based learning; these predominant trends in mobile and technological domains emphasize the imperative of experiential learning through environmental and peer-based social interactions (Boudadi & Gutiérrez-Colón, 2020; Cortés-Pérez et al., 2023; Demirbilek et al., 2022; York & deHaan, 2018).

Gamification is a practice that employs gaming mechanics to foster motivation, engagement, and improved educational experiences in language learning (Wu, 2018). Studies have shown that educational games are useful as an assessment tool because their repetition influences contextual memories during discriminative learning (Bakhoda & Shabani, 2019; Cheung & Ng, 2021; Degirmenci, 2021; Gómez-Carrasco et al., 2019).

Despite the studies addressing the benefits of gamification (Chowdhury et al., 2024; Lopez & Tucker, 2019; Pitoyo & Asib, 2020; Zainuddin et al., 2022), there is a gap in the research focusing on using gamification-based assessments in secondary world language classes (Dehghanzadeh et al., 2024; Grubjesic & Ivanjko, 2025; Zhang & Crawford, 2023). This subject demands further inquiry as an emerging educational technology with proven academic benefits.

In our digital age, traditional teaching methods are evolving, necessitating educators to adopt pedagogies like gamification, blended learning, and augmented reality to create an engaging, motivational, and holistic learning environment for students. Ekici (2021) found in a systematic literature review that adding game elements to a flipped classroom produces higher motivation, participation, and improved learning performance. However, there is insufficient evidence to generalize the results. Chen et al. (2024) highlighted the need for more longitudinal studies and comparative research on gamification and game-based learning.

The surge in using digital games for learning is becoming prominent in second language acquisition (Acquah & Katz, 2020; Bećirović et al., 2021; Dixon et al., 2022). Educational games are used as tools to transform rote linguistic exercises into engaging experiences and as platforms for contextualized vocabulary introduction and avenues for genuine linguistic interaction with fellow players, among other educational justifications (Gee & Gao, 2022). The benefits of gamification in second language acquisition can readily be transferred to world language assessments while improving overall language assessment practices.

While language is a form of knowledge, true mastery necessitates the development of specific skills that cannot occur through exam-oriented instruction (Amoah & Yeboah, 2021; Namaziandost et al., 2019). Gamification elicits fundamental human emotions like accomplishment and excitement, enhancing learners' joy and happiness (Cigdem et al., 2024; Nuri et al., 2022; Shah et al., 2025) and serves as a pivotal tool in skill acquisition and content retention (Kiyançiçek & Levent, 2022; Li et al., 2022). The positive attributes of gamification can improve second language learning outcomes. Integrating digital games in education revolutionizes ineffective rote-learning processes in second language acquisition (Al-Awawdeh & Kalsoom, 2022). Gamification-based assessments offer context-rich vocabulary and authentic interaction platforms, emphasizing that true language mastery extends beyond traditional, exam-centric pedagogies and leverages gamification's emotive and pedagogical strengths (Buffington et al., 2021).

Given the oversight of secondary teachers' perspectives in gamification studies, exploring and disseminating teaching theories and practices is crucial (Goegan et al., 2020). At the heart of teaching is the concept of pedagogy, encompassing both overt and covert knowledge of educational frameworks, understanding students' backgrounds, curriculum content, subject matter expertise, a nurturing and supportive attitude, demonstrating a critical viewpoint, and grounding in theoretical, ideological, and epistemological knowledge (York & deHaan, 2021). Teachers play a pivotal role in enhancing game-based learning by making informed decisions about lesson preparation, material adaptation, and interactions before, during, and after lessons (York & deHaan, 2021). This research study focused on secondary teachers' perspectives of gamification-based assessment in world language classrooms. This topic is essential to educational technology and design because there is a gap in the literature quantifying secondary teachers' perspectives on using gamification-based assessments.

Background

Ishaq et al. (2021) conducted a systematic literature review to synthesize and analyze published research on the use of mobile-assisted and gamification-based applications for language learning. The research entailed a detailed analysis of over 60 primary studies to identify publication trends, theoretical frameworks, application domains, and evaluation methodologies used in the field. Key findings indicated a significant trend towards using mobile applications, revealing that while both simple and gamified apps are effective, those apps incorporating gamification led to greater student motivation, engagement, and superior learning performance. This review explicitly relates to gamification-based assessments by analyzing how such applications are evaluated and concluding that their game-like features not only enhance learning but also serve as effective, motivating methods for assessing vocabulary and grammar, while highlighting a need for more advanced personalized assessment capabilities, which is the gap in the knowledge that the current research study addressed by investigating the impact that gamification-based assessments have on world language learners' performance, in teachers' perspectives.

Furthermore, F. Su et al. (2021) conducted a literature review from January 2000 to August 2020 investigating mobile game-based language learning (MGBLL) and non-mobile game-based language learning (NMGBLL). The researchers found that learning outcomes and language acquisition relate to the psychological/affective state of the learners. This qualitative study reviewed articles on digital game-assisted language learning, finding that positive outcomes were predominant in mobile and non-mobile game studies focusing on vocabulary acquisition. Comparatively, Cheng et al. (2025) investigated the effects of gamification on the reading proficiency and foreign language learning enjoyment (FLLE) of 220 Chinese undergraduate English as a Foreign Language (EFL) learners. The findings indicated that the gamified classroom significantly enhanced students' reading scores and their overall FLLE, particularly the private dimension related to personal enjoyment, suggesting that gamification is a valuable strategy for boosting both academic outcomes and positive emotional engagement in language learning. These studies emphasized the positive impact of digital games on language learning across various skills and aspects.

Furthermore, digital game-based language learning (DGBLL), using advances in educational technologies, has gained momentum among learners, educators, and researchers (Vnucko & Klimova, 2023). In an investigation into the effects of gamification on English as a Foreign Language (EFL) learners, Tsai (2024) compared an experimental group using a Moodle course with points and badges to a control group. The findings revealed that the gamified instruction significantly increased students' learning motivation and engagement, suggesting that these elements can effectively promote student participation and satisfaction in a foreign language context. Correspondingly, Zou et al. (2021) critically reviewed twenty-one academic journal publications on gamification and found that 10 digital game types show promise in enhancing both immediate and sustained vocabulary retention, bolstering comprehension skills, heightening motivation, reducing learner anxiety, and promoting peer interactions, offering valuable insights about the pedagogical and academic benefits of gamification. Research attests to how digital games facilitate vocabulary learning, enhance reading and listening comprehension, improve pronunciation, and increase motivation, engagement, and interactions.

Despite the limited number of studies on digital games for vocabulary learning (DGVL), valuable insights have been reported. Research studies show that digital games promote effective vocabulary learning, interactions in-game environments aid vocabulary learning, multimedia integrated into games assists vocabulary learning, and providing detailed vocabulary information is more effective (Handayani et al., 2021; York et al., 2021; Zhyhadlo, 2022). To develop digital games for vocabulary learning, prioritize cognitive engagement, establish clear learning objectives, employ learning strategies that consider cognitive load, incorporate scaffolding, and design intuitive games (Tsai, 2024; B. Yu, 2023; D. Zou et al., 2021). This study exemplifies how gamification-based assessments can transfer the multiple benefits from gamification to assessment in world language classes.

Likewise, Luo (2023) found that academic achievement is the predominant metric to gauge the efficacy of gamified tools in language learning settings. Similarly, Roohani and Heidari Vincheh (2023) found the effectiveness of gaming applications as an instructional method for learning phrasal verbs, a challenging language acquisition concept. Moreover, Z. Yu (2023) found that the potential of mobile game-based instruction was a powerful method for learning second-language phrasal verbs and facilitating lexical learning. Studies by Luo (2023) and Roohani and Heidari Vincheh (2023) established how integrating educational gaming applications into world language classes can produce positive results. These positive results suggest that gamification-based assessments can improve academic achievement in secondary language learning classes.

The growing emphasis on word knowledge in second language acquisition has led to a surge in digital game-based vocabulary learning driven by technological advancements (Khalid et al., 2024). Reviews of related literature have identified specific game types as effective in improving vocabulary retention, comprehension, motivation, and peer interactions (Ai et al., 2021; Boudadi & Gutiérrez-Colón, 2020; Csizér & Illés, 2020). At the same time, recent studies have emphasized academic achievement as a primary measure for assessment of these tools, further advocating for educators to incorporate these gaming applications alongside traditional teaching resources (Vnucko & Kilmova, 2023; Yu, 2023; Zhang & Yu, 2022). Research on the pragmatic instructional value of gamification in second language acquisition acknowledges the proven benefits of gamification. It illustrates the need to incorporate gamification-based assessments into world language classes.(Li, 2020; Öden et al., 2021; Teravainen-Goff, 2022).

An overview of research studies examining interactional feedback by Nassaji (2016) focused on the effectiveness of feedback by assessing the various measures used in descriptive and experimental research, discussing its theoretical underpinnings from interactionist and sociocultural perspectives. Nassaji concluded that explicit knowledge tests measure learners' conscious awareness of grammatical forms; however, there is still a need to learn what consciousness is and how and when learners access and use their conscious knowledge (Nassaji, 2016). Furthermore, he found that interactional feedback facilitates second language acquisition, but its effectiveness is complex and moderated by numerous variables, including the type of feedback, instructional context, learner differences, and mode of delivery (Nassaji, 2016). This research on interactional feedback demonstrates that the goal of feedback and instruction should be to develop implicit knowledge, a critical factor in game-based language learning and gamification-based assessments. Using gamification-based assessments in world language classes is a vital educational technology that may improve overall student motivation and academic achievement if teachers universally accept it.

Problem Statement

The socio-educational issue that prompted this study is that while gamification has been proven effective in motivating and encouraging second language learners, there is a lack of gamification-based assessment used in secondary world language classes. The research study addressed a critical gap in the current landscape of education technology and design, specifically concerning the perspectives of secondary world language teachers on the innovative integration of gamification-based assessments. Despite the empirical evidence showing the benefits of gamification in second language acquisition, there is a pronounced lack of research exploring secondary world language teachers' perspectives (Ahmed, 2023; España-Delgado, 2023; Jiao et al., 2022). Due to the sizeable gap in the literature about secondary world language teachers' perspectives on gamification-based assessments, researching perceived challenges and benefits of implementing the emerging educational technology is essential.

This study is timely, given the increasingly pivotal role of educational technology, particularly gamification, which gained prominence during the transformative period of the 2020 COVID-19 pandemic (York & deHaan, 2021). The identified research gap underscores the urgency to explore how world language teachers perceive and navigate the challenges and benefits of incorporating gamification-based assessments within the context of secondary language courses. The research study contributes to the existing body of knowledge by addressing this gap. It propels the field forward by offering actionable insights for educators, researchers, and policymakers seeking to optimize the role of gamification-based assessments in language education.

Building on the established positive impacts of gamification on intrinsic motivation and learning behaviors (España-Delgado, 2023; Jiao et al., 2022; Liu & Moon, 2023), the purpose of this research was to investigate the perspectives of secondary teachers regarding gamification-based assessments. The research study contributes to the ongoing discourse on how educational technology can benefit second language acquisition. Educational technology research emphasizes the vital role of teachers in implementing technology into the learning process and highlights the importance of their support for the successful diffusion of innovative educational technology (Alshehri, 2025; Bakhoda & Shabani, 2019; Bećirović et al., 2021). The usefulness of AI tools such as Grammarly, Duolingo, and ELSA Speak for language assessment was assessed in a mixed-methods study by Alshehri (2025) by examining quantitative data and qualitative user experiences from 50 participants. The results show that although users value AI's ability to provide quick, superficial feedback on grammar and pronunciation, they are dubious of its capacity to evaluate coherence and creativity. This suggests that a hybrid AI-human model is necessary to strike a balance between efficiency and thorough, nuanced evaluation. Consequently, this study counters the current underrepresentation of secondary world language teachers' perspectives in the literature regarding integrating the educational technology of gamification. The research emphasized the need for a holistic understanding of the challenges and benefits associated with gamification-based assessments in world language courses, thereby fostering the advancement of effective and learner-centric language acquisition practices.

Gamification-based assessments can potentially benefit language acquisition skills for secondary world language students (Z. Luo, 2023; Pitoyo & Asib, 2020). However, the successful integration of new educational technology relies on teachers' perspectives on its benefits and challenges (Kopcha et al., 2016; Venkatesh et al., 2016; Wen et al., 2024). Therefore, this study aimed to provide new insights that can inform the design and implementation of innovative educational technologies, promoting a deeper understanding of gamification-based assessments in world language classes. By addressing this gap, the study not only built upon existing research but also countered the limited exploration of teachers' viewpoints in the dynamic field of educational technology and design, thereby advancing our understanding and application of these technologies in language education (Cheung & Ng, 2021; Gómez-Carrasco et al., 2019; Manzano-León et al., 2021). Specifically, this study explored how secondary world language teachers perceive and navigate the challenges and benefits of gamification-based assessments. By emphasizing teachers' perspectives, this research highlighted the importance of studying innovative educational technology in second-language education, a rapidly advancing field.

Purpose of the Study

This qualitative study aimed to explore the perspectives of secondary world language teachers on the implementation and impact of gamification-based assessments within their classes. Specifically, the study aimed to understand the perceived benefits and challenges associated with gamification-based assessments, considering the inherent importance of secondary world language teachers' perspectives in the diffusion of new educational technology. An interpretive-constructivist paradigm served as the guiding framework, acknowledging the multifaceted nature of gamification in language education and recognizing its profound influence on individual experiences and perspectives. Through in-depth analysis of semistructured interviews, the study illuminated the various dimensions of teachers' viewpoints, contributing to a deeper understanding of how gamification-based assessments might shape language learning, classroom dynamics, and overall educational experiences.

Research Questions

RQ1: What are secondary world language teachers' perspectives on the benefits of using gamification-based assessments?

RQ2: What are secondary world language teachers’ perspectives on the challenges of using gamification-based assessments?

Conceptual Framework for the Study

There is a growing trend of integrating educational technology to enhance language teaching and learning in world language education. As part of this trend, gamification-based assessments have gained attention and are widely used. This study was grounded in several theories: the unified theory of acceptance and use of technology (UTAUT) by Venkatesh et al. (2016), DGBLL by Dixon et al. (2022), and Stephen Krashen’s theory of second language acquisition (SLA) (1982). The UTAUT framework details the factors influencing secondary world language teachers’ perspectives on integrating gamification-based assessments (Lai, 2017). DGBLL is the application and use of digital games for developing a second language that has shown promise in recent years (Dixon et al., 2022). Moreover, Stephen Krashen’s theory emphasized using technology’s data-driven insights to make gamified lessons more impactful. This approach allowed teachers to personalize their interventions and ensure inclusive participation for all students. By combining sociocultural language learning theories and gamification-based concepts, this study aimed to develop a conceptual framework to guide research on teachers’ perspectives of using gamification-based assessments in world language classes.

Nature of the Study

The study employed a basic interpretive qualitative research design, using semistructured interviews to analyze participant data using inductive content analysis. A basic qualitative research design based on a social constructivist perspective was appropriate for this study, as it was used to construct meaning by incorporating the social role of the participants. This research sought to understand how teachers interpret their experiences with gamification-based assessments and what meaning they attribute to their experiences (Tisdell et al., 2025). In alignment with constructivist and interpretivist paradigms, basic qualitative research seeks to understand people and their lives, to co-construct and understand the phenomena being studied (Denzin & Lincoln, 2018).

The semistructured interviews, including a combination of pre-determined open questions, further illuminated basic qualitative research design, as the interviews allowed for open-ended questions, flexibility, and the option to probe secondary teachers' perspectives in-depth. I created interview questions for my planned research design to elicit teachers' views on gamification-based assessments within world language classrooms. The research participants' data were obtained via online semistructured interviews, which were audio recorded and transcribed for accuracy. Data analysis included inductive content analysis and grounded coding to categorize information into themes and describe the findings (Vears & Gillam, 2022). The data points from the semistructured interviews included teachers' responses to the questions regarding their perspectives on using gamification-based assessments in their classrooms.

Definitions

Acquisition versus Learning: Acquisition refers to learning a non-native language in a naturalistic environment (e.g., when a Russian speaker learns French in France). In contrast, learning a non-native language in an environment where that language is not natively spoken (e.g., when a Russian speaker learns English in Russia). This distinction correlates with the distinction between “second” versus “foreign language;” hence, the terms’ second language acquisition and foreign language learning are used with distinctions on a similar dimension.” (Kootstra et al., 2015).

Affective Filter: A psychological obstacle that prevents language learners from completely absorbing available comprehensible input (Krashen, 1982).

Digital Game-Based Language Learning: The application and use of digital games to develop a second language. DGBLL is a pedagogical approach to second language teaching aimed at helping learners with the four major language skills: cognitive, behavioral, affective, and motivational outcomes (Vnucko & Klimova, 2023).

Gamification in Education: Educational gamification is using game elements and design techniques in an educational context to enhance learning (Manzano-León et al., 2021).

Gamification-Based Assessments: A new type of standardized assessment that can evaluate more complex skills than traditional assessments. Gamification-based assessments provide data that traditional tests often miss, such as search behaviors, time-on-task behaviors, and patterns of choices, while mirroring the feedback loops, structural complexity, and dynamic interaction of real-world situations (Buckley et al., 2021).

Gamified Learning Theory: It suggests that gamification does not directly impact learning but rather stimulates a behavior related to learning through a mediating or moderating process (Zaric et al., 2021).

Interactive Learning: Also referred to as active learning, it involves directly engaging students in the learning process and fostering their participation, collaboration, and critical thinking skills. With the advancement of technology and our increasing knowledge of effective teaching methods, this approach has become a valuable tool in contemporary education. (Çelik & Baturay, 2024).

Second Language Acquisition: The subfield of linguistics that focuses on the learning and teaching of second languages. It also encompasses the process by which people learn languages in addition to their native tongue(s). Second language acquisition, in a broad sense, refers to learning a non-native language after the first language (L1) (i.e., the native language) has been discovered, either in a naturalistic or formal classroom setting. The language to be learned is often called the "target language" or "second language." The term "language acquisition" became commonly used after Stephen Krashen contrasted it with formal and non-constructive "learning" (Krashen, 1982; Wang & Wu, 2020).

Teachers' Acceptance: The adoption and effectiveness of game-based learning depend on teachers' positive acceptance of change. Teachers' acceptance is their willingness and openness to embrace and implement new ideas, practices, or technologies in their classrooms or schools (Rüth et al., 2022).

The Unified Theory of Acceptance and Use of Technology (UTAUT): This theory examines technology acceptance, determined by the effects of performance expectancy, effort expectancy, social influence, and facilitating conditions (Venkatesh et al., 2003).

Assumptions

Assumptions are research design or methodology characteristics outside the researcher's control (Ravitch & Carl, 2019). The primary assumption in this study was that participants would answer the interview questions honestly and factually. The following assumption was that the participants relayed their experiences of a course that included the instructional strategy of gamification. Researching whether gamification of education is a strategy for increasing engagement by incorporating game elements into an educational environment depends upon the responses from the participants (Arifin & Setiawan, 2022; Chen et al., 2024; Shen et al., 2024).

Additionally, the assumption was that the participants would provide detailed descriptions of their course experiences with gamification. The belief that participants would be honest and relay detailed experiences with gamification was critical to the credibility and validity of this study. The final assumption was that the conceptual framework, UTAUT, would provide data on secondary world language teachers' perspectives of gamification-based assessment usage to improve learning outcomes. The survey and semistructured interview questions were created to ascertain and predict teachers' perspectives on using gamification-based assessments. UTAUT has been used as a theoretical model to assess teachers' attitudes toward using social media for educational purposes (Gruzd et al., 2012), suggesting that the UTAUT components can be adapted to investigate teachers' perspectives of gamification-based assessments.

Scope and Delimitations

The scope of this study involved secondary world language teachers who have used gamification-based assessments in their world language classes. Participants were limited to secondary world language teachers who have used a gamification application in their class at least once. This population provided insight into gamification-based assessments' real-world utilization, benefits, and challenges in second-language courses. To maintain focus on gamification-based assessments and second-language acquisition, the study only included participants with prior experience to answer the research questions.

To ensure that the interpretation or conclusions of the proposed research study were transferable to other similar contexts, I provided a thorough and rich description of the research activities and assumptions. In alignment with Lincoln et al. (1985), I provided sufficient details to transfer the research findings to other researchers.

This study did not cover gamification-based assessments in elementary school due to the abundance of literature on the benefits of gamification in primary school settings (Huang et al., 2020; Lampropoulos et al., 2022). This study was limited to secondary world language teachers to optimize similarities with language courses with similar content standards. Research questions, objectives, and variables focused on secondary courses, limiting the target populations to sixth through 12th-grade students. Finally, data analysis techniques were limited to deductive coding and provided thick descriptions so that other researchers can transfer the findings to their sites (Lincoln et al., 1985).

This study aimed to establish the benefits and challenges of using gamification-based assessments as an assessment tool in world language classes. Delimitations refer to the boundaries of the research study based on the decision of what to include and exclude. This study did not cover game-based learning (GBL), which refers to borrowing and applying gaming principles to educational settings. Game-based learning is a teaching method that uses the power of games to define and support learning outcomes. A GBL environment achieves this through educational games with engagement, immediate rewards, and healthy competition to increase students' learning motivation (Dixon et al., 2022). This study was limited to the population of secondary world language teachers within the demographic that responded to the questionnaire. The research was also delimited by gathering data from interviews. Interview limitations (Creswell & Creswell, 2023) include information separation, researcher bias, and participant response quality. This delimitation is inherent to the qualitative research study methodology. I minimized these delimitations by member-checking, peer debriefing, and maintaining awareness of my reflexivity to increase the trustworthiness of the results (Ravitch & Carl, 2019).

Limitations

One limitation of the research study was the small sample size. The sample came from volunteers within my professional learning network (PLN). This purposeful sampling could have resulted in discrepancies in classroom sizes, school demographics, and staffing allocations. This limited sample size may have adversely affected the generalization and transferability of the research findings. In addressing the limitation of a small sample size for this qualitative research study, I recognized the need for careful consideration and strategic approaches to mitigate this constraint. To compensate for the limited sample, I planned to provide comprehensive, rich descriptions of the study context, encompassing variations in classroom sizes, school demographics, and staffing allocations. This detailed contextualization contributed to a nuanced understanding of the specific conditions under investigation. Additionally, I deliberately selected participants to ensure representation across diverse demographic characteristics and teaching experiences within the sample population. Using the in-depth data collection method of semistructured interviews further enriched the exploration of participants' perspectives, compensating for the inherent limitations of a small sample size.

To enhance the validity and credibility of the findings, I applied the principle of data saturation, continuing data collection until no new information or themes emerged. This saturation analysis ensured a thorough exploration of the depth and diversity of participants' experiences. In presenting the results, I employed in-depth descriptions, providing readers with a comprehensive understanding of participants' responses and the intricate contextual factors at play. Furthermore, I conducted a comparative analysis, considering variations in classroom sizes, demographics, and staffing to identify patterns and differences across different contexts. By adopting a transparent approach and explicitly acknowledging the limitations associated with a small sample size, I aimed to uphold the standards of rigor and contribute valuable insights to the field of language education.

Instead of traditional generalization, I focused on qualitative generalization, emphasizing the transferability of findings to similar educational settings. This approach aligns with the interpretivist paradigm, emphasizing understanding over statistical inference. Additionally, semistructured interviews risk bias due to the open-ended nature of the interviews. This structure can lead to the temptation to ask leading questions, biasing the responses. Social desirability could also impede open and honest feedback from the respondents. The selected participants may have desired to give answers to questions that they believed would make them look good to others, concealing their accurate opinions or experiences. To mitigate social desirability concerns, the semistructured interview included indirect questioning that focuses responses on the topic rather than individuals. By implementing these strategies, I am confident that the research study yielded robust and insightful qualitative findings despite the inherent challenges posed by the constrained sample size and variations in school contexts.

This study was limited by its small sample size (n=12), drawn primarily from my professional learning network. While purposeful sampling allowed for selecting participants with specific experience in gamification-based assessments, it introduced potential limitations to the study’s generalizability. For instance, in terms of PLN affiliation, the sample's homogeneity may have underrepresented the diversity of perspectives and experiences found in broader populations of secondary world language teachers. Teachers outside these networks may have significantly different access to resources, professional development opportunities, or administrative support, which could have substantially influenced their views on gamification. Furthermore, the small sample size limited the statistical power of any potential quantitative analysis that could have supplemented the qualitative findings, restricting the depth of comparative insights. While efforts were made to capture variations in teaching experience, the predominance of veteran teachers in the sample (as noted in Chapter 4) means the study's findings may not fully reflect the perspectives of early-career teachers, who might have different levels of comfort and familiarity with technology integration. Finally, the study's reliance on self-reported data through interviews introduced the potential for social desirability bias, where participants might present their practices or perceptions in a more favorable light.

Significance of Study

This study is significant because the results may encourage others to consider how gamification-based assessments are an alternative to standard tests in secondary world language classes. The results of this study have the potential to contribute to the field by helping to fill the gap in the literature on secondary world language teachers' perspectives on using gamification-based assessments. To illustrate the importance of this new educational technology, Sun and Hsieh (2018) found that gamification effectively stimulated interest, intrinsic motivation, attention, and emotional engagement for second language learners. Focusing on secondary world language teachers' perspectives, I aimed to provide insight into how gamification-based assessments can benefit second language acquisition and learning outcomes.

Gamification in second language teaching enhances motivation and engagement by breaking down learning elements such as motivation theory, offering a differentiated and individualized approach, and addressing learners' varied academic achievements, with its efficacy rooted in game-like features applied to real-world situations and its alignment with individualized progress (Szabó & Kopinska, 2023). Gamification-based formative assessments have been found to significantly increase student engagement, critical and creative thinking, and information literacy during the learning process (Zainuddin et al., 2022). Additionally, Zainuddin (2023) found that gamification-based formative assessments using easy-to-use media significantly enhance student engagement, critical thinking, and information literacy throughout the learning process. Although few research studies have concluded a positive correlation between teachers' perspectives and using gamification tools, there have been no empirical studies of secondary world language teachers' perspectives on using gamification-based assessments (Alabbasi, 2018; Lester et al., 2023; Liu & Moon, 2023). My study explored secondary world language teachers' perspectives on gamification-based benefits and challenges, addressing a literature gap that may prompt a more widespread adoption to enhance motivation, engagement, and practical assessment in second language teaching.

The results of this research study aimed to illuminate the perspective of world language teachers with a focus on secondary language acquisition and gamification-based assessments consistent with broader inclusion goals. Regarding educational importance, the research study directly aligns with education policy, particularly in the context of the Every Student Succeeds Act (ESSA). The teacher perspectives revealed in the study can provide nuanced insights into effective college and career readiness practices to address the unique challenges of second language learning.

In educational technology and design, this research is important in increasing technological integration in language education. This study may provide valuable insights into the ongoing development of educational technology tools by investigating how teachers perceive and use game-based assessment. This may inspire innovations in language teaching and develop engaging and effective language learning strategies. Specifically, this research has a potentially transformative impact, influencing educational practices, policies, and technological developments in language education. It is a means of bridging equality gaps, formulating effective teaching strategies, and contributing to developing technological tools for language learning.

Summary

Chapter 1 introduced gamification as an emerging instructional technology and highlights existing research gaps, particularly the lack of exploration into secondary teachers' perspectives on gamification-based assessments in world language classes. The chapter positioned gamification as a tool that positively influences learners' performance and emphasizes its potential to enhance motivation, engagement, and experiential learning. Despite the proven benefits of gamification in education, the focus on world language classes, especially in the secondary education context, is identified as a significant research gap. Chapter 1 sets the stage for qualitatively exploring secondary world language teachers' perspectives on the benefits and challenges of gamification-based assessments in the US and introduces the conceptual framework.

Chapter 2 builds on this foundation by conducting a thorough literature review. The research includes established literature reviews by Ishaq et al. (2021), F. Su et al.

(2021), and Nassaji (2016), which emphasized the critical role of mobile-assisted language learning, game-based strategies, and the necessity for feedback in language instruction. Despite these advancements, the research underscored the gap in understanding teachers' perspectives on using gamification as an assessment tool in world language courses, particularly in the post-COVID-19 era. Chapter 2 bridges the literature gap and lays the groundwork for understanding the significance of secondary teachers' perspectives on gamification-based assessments in world language classes, contributing to the potentially transformative impact on language education.

Chapter 2: Literature Review

The socio-educational issue that prompted this study is that although gamification has increased as an instructional and assessment tool, there is a lack of research on secondary world language teachers' perspectives about the benefits and challenges of gamification-based assessments (Alabbasi, 2018; Jääskä & Aaltonen, 2022; Sánchez-Mena et al., 2017). Lester et al. (2023) conducted a systematic literature review of the drivers and barriers of gamification in universities. They found that professors' beliefs on gamification include encouraging student interactions and collaborative learning, providing fun, and improving engagement in a fun manner. The report also found that university educators' significant barriers to implementing gamification included a lack of time, a lack of proven benefits, and classroom setting issues. Congruently, Lester et al. (2023) concluded that further research into understanding teachers' perspectives is necessary to address this problem.

There is a lack of understanding of information about how teachers perceive and leverage the challenges and benefits of gamification-based assessments in secondary world language courses to assess students. This qualitative study explored the perspectives of secondary world language teachers on the implementation and impact of gamification-based assessments. The research aimed to understand the benefits and challenges of gamification-based assessments and the importance of secondary world language teachers' perspectives in adopting new educational technology. Utilizing an interpretive-constructivist paradigm to analyze semistructured interview responses may provide insight into how gamification-based assessments can affect language learning and classroom dynamics and improve secondary world language educational experiences.

Chapter 2 restated the research problem and purpose to identify the importance of gamification-based assessments in instructional technology and design. Throughout Chapter 2, I synthesized literature relevant to the proposed study's key concepts, including conceptual theories on gamification, second language acquisition, and assessment. The literature review included a synthesis of peer-reviewed journal articles about the benefits and challenges of using gamification-based assessments to give background information on this emerging technology. A synthesis of relevant research about secondary world language teachers' perspectives on implementing technology highlighted the significance of the proposed research study. The literature review concluded with a summary of key themes emerging from current research to illuminate a profound gap in the literature on secondary world language teachers' perspectives of gamification-based assessments.

Literature Search Strategy

I used the Walden Library online database and Google Scholar to locate peer-reviewed academic journal articles for the proposed research study. During this literature review, the databases I accessed included EBSCO, ERIC, SAGE Journals, Computer-Science Database, *LearnTechLib*-The Learning and Technology Library, Google Scholar, and ProQuest. I created an outline from the research articles used within my previous courses in educational technology and design to focus on the proposed research questions for this literature review. I used Zotero reference management software throughout the literature review process to store and organize references, create citations, and maintain my keyword reference list. I exported the most relevant articles from Zotero into an Excel workbook to utilize as a literature review matrix. The matrix, keywords, and outline helped analyze and streamline my research findings' focus.

The peer-reviewed articles cited in this literature review initially came from the Walden University database system and Google Scholar. The initial search was limited to peer-reviewed scholarly journals from the Walden Library online database within the timeframe of 2019 to 2024 using the search terms: *gamification in education* (2,004 results); *digital game-based learning* (1,326 results); *technology-enhanced language learning* (302 results); *second-language acquisition theory* (430 results); and *UTAUT* (6,430 results). I then added subject and classification filters to the search term groups to ensure that all research articles relate to teachers' perspectives on gamification-based assessments in secondary world language classes. This secondary search was narrowed to articles published after 2020 and included the following keyword combinations: *gamification, benefits,* and *challenges,* using the same search terms across the same databases. The results found for benefits were *benefits* and *gamification in education* (1,156 results); *benefits* and *digital game-based learning* (164 results); *benefits, gamification,* and *digital language learning* (3 results); *benefits, gamification,* and *second-language acquisition* (8 results); *benefits, gamification*, and *UTAUT* (3 results); *challenges* and *gamification in education* (302 results). The results found for challenges were *challenges* and *digital game-based learning* (164 results); *challenges* and *technology-enhanced language learning* (36 results); *second-language acquisition,* *challenges*, and *gamification* (17 results); *gamification*, *challenges*, and *UTAUT* (4 results). Correspondingly, I applied these key search term combinations to EBSCO, ERIC, SAGE Journals, Computer-Science Database, *LearnTechLib*: The Learning and Technology Library, Google Scholar, and ProQuest Dissertations and Theses to provide a multidisciplinary approach to academic scholarship.

In addition, I created Google Scholar alerts for new articles and related research that match the research parameters of new articles with the keywords second language acquisition, assessment, and gamification to ensure a thorough and iterative literature review. Similarly, I saved the hyperlinks from Walden Library online searches specific to the benefits and challenges of gamification-based assessments within my literature review matrix Excel workbook. The literature review outline and matrix provided a substantive roadmap to apply germane scholarship of the current literature toward answering the research questions:

RQ1: What are secondary world language teachers' perspectives on the benefits of using gamification-based assessments?

RQ2: What are secondary world language teachers' perspectives on the challenges of using gamification-based assessments?

Literature Review Related to Key Concepts

Conceptual Frameworks

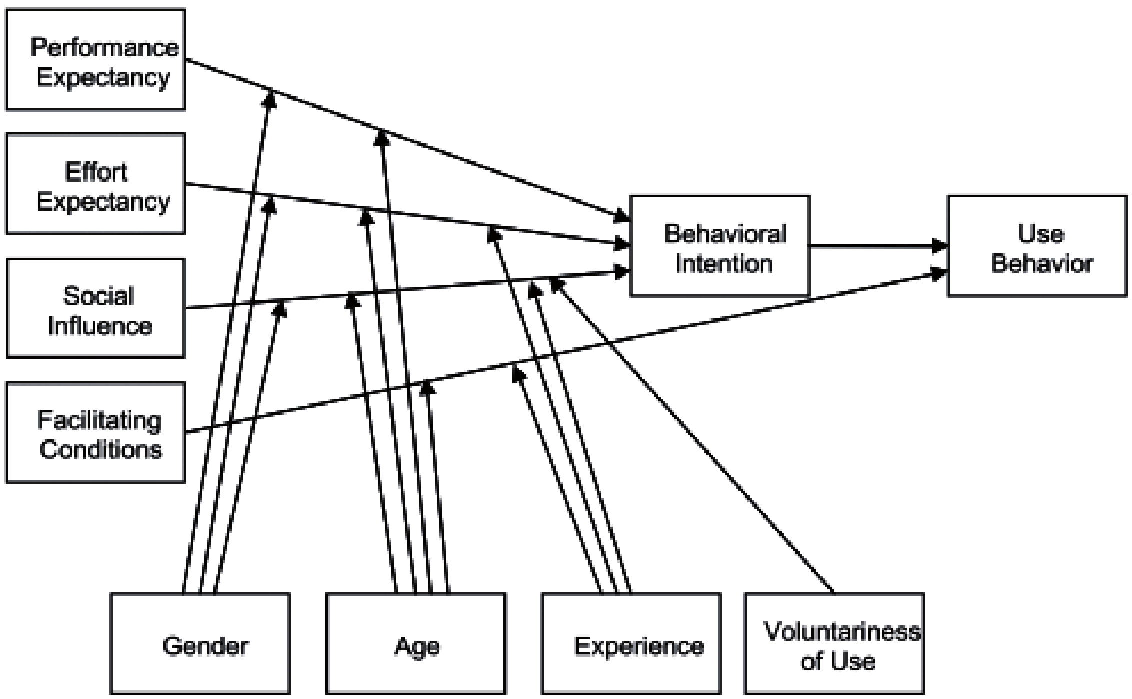
In world language education, the adoption of gamification-based assessments aligns with the broader trend of integrating technology into language teaching and learning. The theories that ground this study include UTAUT by Venkatesh et al. (2016), DGBLL by Dixon et al. (2022), and Stephen Krashen's theory of SLA (1982). UTAUT provided a framework for exploring the factors influencing secondary world language teachers' perspectives on integrating gamification-based assessments (Lai, 2017). DGBLL is a technology-based language teaching approach that has gained significant attention in recent years as a promising approach to language education (Dixon et al., 2022). Stephen Krashen's theory of second language acquisition reinforces how gamified lessons become more impactful by using technology's data-driven insights, allowing teachers to personalize interventions and ensure inclusive participation for all students. These sociocultural language learning theories and gamification-based concepts work together to form the conceptual framework to guide research on teachers' perspectives of using gamification-based assessments in world language classes.

Unified Theory of Acceptance and Use of Technology

UTAUT, developed by Venkatesh et al. (2016), designates the key factors influencing individuals' acceptance and use of technology, including performance expectancy, effort expectancy, social influence, and facilitating conditions. Accordingly, Venkatesh et al. (2016) found that the key constructs and predicting factors in UTAUT emerged as key acceptance factors that determine the behavioral intention and actual use of technology (Marikyan & Papagiannidis, 2023). Aligning the research study interview questions to UTAUT key constructs and predictors provided a framework to assess the participants' responses about secondary world language teachers' perspectives on integrating gamification applications. UTAUT is a leading model widely employed in understanding technology adoption in educational technology (Xue et al., 2024) (see Figure 1).

Figure 1

UTAUT Model



Note. Adapted from "User Acceptance of Information Technology: Toward a Unified View," V. Venkatesh, M. G. Morris, G. B. Davis, and F. D. Davis, 2003.

Applicability to Gamification-Based Assessments

UTAUT was useful for this study due to its proven effectiveness in gauging technology usage and implementation. In considering the specific elements that enhance users' motivation, engagement, and overall experience, UTAUT provided a framework for understanding secondary world language teachers' perspectives on implementing gamification-based assessments. The application of UTAUT to the adoption of gamification-based assessments in secondary language acquisition provided valuable insights into the factors that may influence teachers' willingness to incorporate gamified assessment techniques into their language classrooms (Alrashed et al., 2023; Behl et al., 2022; Granić, 2022). By considering the perspectives of secondary world language teachers within the framework of UTAUT, the research study aimed to contribute to our understanding of the facilitators and barriers to implementing gamification-based assessments in language teaching.

Previous Studies Applying UTAUT in Educational Technology Adoption

Previous studies applying UTAUT in the context of educational technology adoption have demonstrated its relevance and applicability in understanding teachers' and students' attitudes and behaviors toward technology integration in education. According to Marikyan and Papagiannidis (2023), the perceived likelihood of adopting the technology depends on the direct effect of four fundamental constructs: performance expectancy, effort expectancy, social influence, and facilitating conditions. Similarly, Zhang and Yu (2022) found that applying UTAUT in the context of educational technology adoption has demonstrated its relevance and applicability in understanding teachers' and students' attitudes and behaviors toward technology integration in education.

Digital Game-Based Language Learning

According to Govender and Arnedo-Moreno (2021), DGBLL includes providing feedback, having a theme, telling a story, progressing through stages of increasing difficulty, and giving points. The sociocultural interpretation of Vygotsky's (1986) zone of proximal development argues that interaction through collaboration, socialization, and co-construction of meaning occurs through DGBLL for meaningful second-language learners. A meta-analysis of DGBLL research studies corroborates the conclusion that employing DGBLL can effectively support language learning, particularly vocabulary acquisition (Dixon et al., 2022). Similarly, Vnucko and Klimova (2023) attest that game-based learning encourages students to explore education familiarly while developing their language skills simultaneously.

DGBLL and Second Language Learning

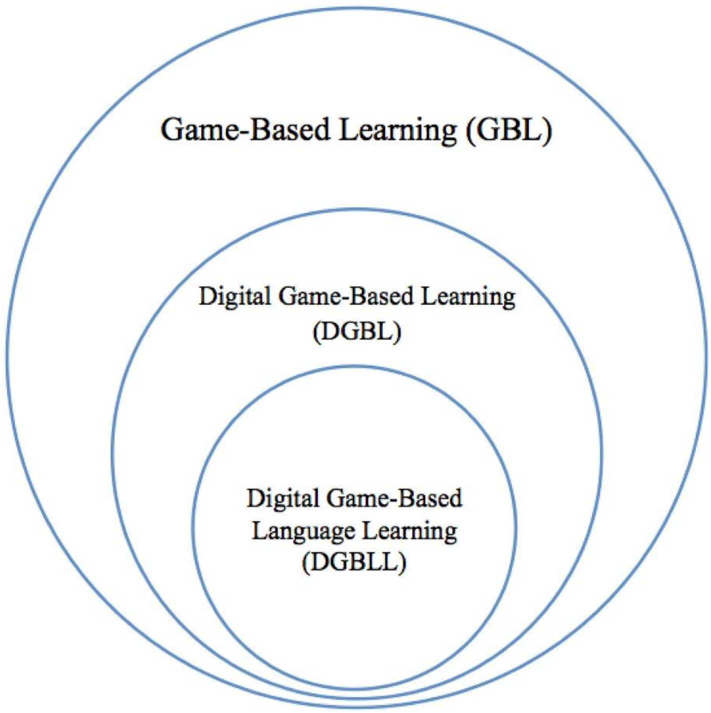
Existing research in the realm of DGBLL has delved into a range of learning outcomes, spanning cognitive facets, behavioral achievements, and affective outcomes, which encompass motivational gains and, sometimes, a combination of both (Ekici, 2021; Li & Lan, 2022; Vnucko & Klimova, 2023). Notably, motivational outcomes are essential to affective outcomes (Vlachopoulos & Makri, 2017). The critical elements of DGBLL include providing feedback, having a theme, telling a story, progression through stages of increasing difficulty, and giving points as valuable in language education (Dixon et al., 2022; Govender & Arnedo-Moreno, 2021; Pitoyo & Asib, 2020). Most research on using DGBLL as a tool to learn a second language focuses on the impact of games on learning attitudes (Li et al., 2024).

DGBLL Connection to Gamification-Based Assessments

Figure 2 visually represents the proposed research study’s position within the broader landscape of DGBLL and game-based learning (GBL). This model contextualizes the current dissertation within these existing reviews, contributing to understanding gamification-based assessments in the wider landscape of DGBLL and GBL research. The existing literature on the educational value of digital games is fragmented, with diverse research focusing on various aspects of learning through gaming in different contexts (Hung et al., 2018). The research study aimed to provide a domain-specific and current overview of secondary world language teachers' perspectives on the use and impacts of digital games used as assessments in language education.

Figure 2

DGBLL Model



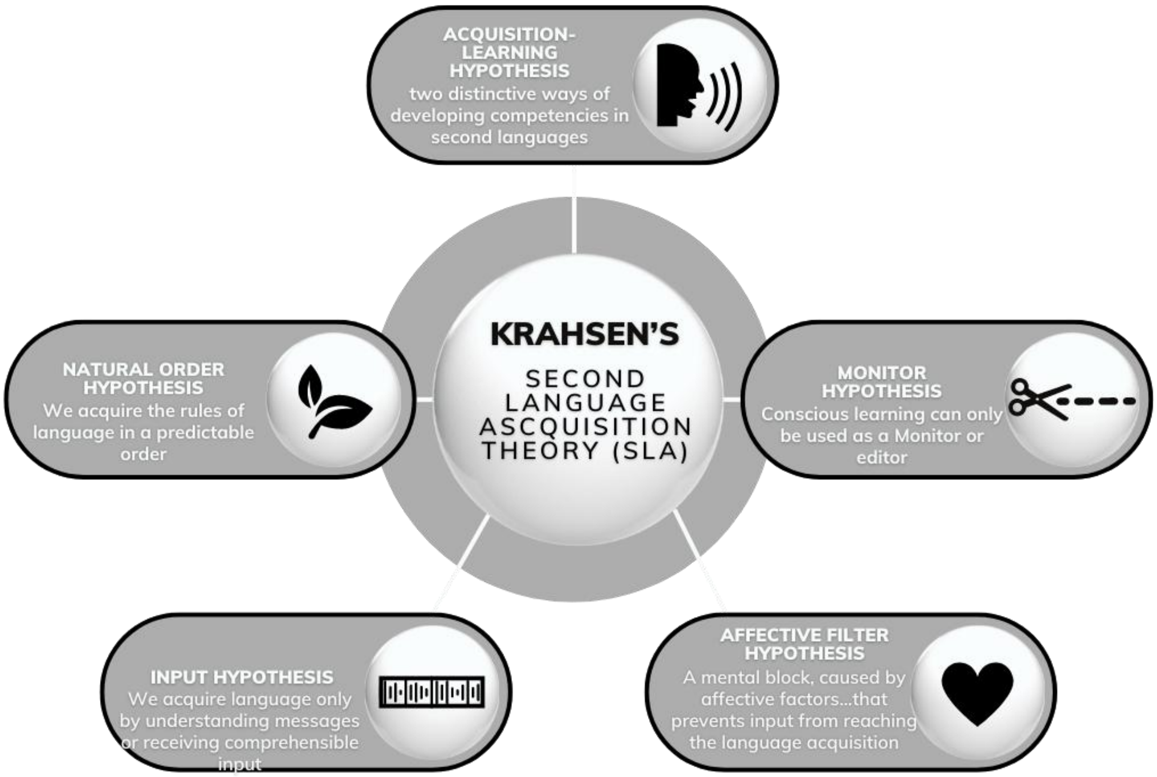
Note. Hung et al., depicting the relationship of current research of Digital Game-Based Language Learning (DGBLL) and Game-Based Learning (GBL) contexts, produced this model in 2018. From "A scoping review of research on digital game-based language learning," H. T. Hung et al., 2018, *Computers & Education, 126*, p. 92. Copyright 2018, with permission from Elsevier.

Stephen Krashen's Theory of Second Language Acquisition

Stephen Krashen's theory of second language acquisition, shown in Figure 3, is widely recognized and influential in language education. The theory emphasizes the importance of comprehensible input and natural communication in language learning. According to Krashen's theory (1981), language acquisition occurs when learners are exposed to language slightly beyond their current level but still understandable. This concept, known as the "i+1" hypothesis, suggests that learners progress in language proficiency by encountering input just above their current ability, thereby leading to gradual linguistic development.

Figure 3

Krashen's Second Language Acquisition Theory



Note. Figure adapted from Luis Javier Pentón Herrera's model, depicting the hypotheses within Krashen's second language acquisition theory from "Learning, Language, and Literacy as Entities for Empowerment and Equality: A Case Study of Three Adolescent Indigenous Ixil ELs," by L. J. Pentón Herrera, 2019.

Krashen also emphasized the importance of the affective filter, which refers to the emotional and motivational factors that facilitate or hinder language acquisition (Krashen, 1981). A supportive and low anxiety learning environment lowers the affective filter, allowing learners to absorb better and internalize the language input they encounter. Krashen’s SLA theory posits that language acquisition is involuntary and can happen through natural interaction with the language instead of meaningful communication. At the same time, learning is intentional and happens through implicit language instruction (Krashen & Scarcella, 1978).

Second Language Acquisition Theory’s Relevance to Language Teaching and Assessment

In the context of second language acquisition, Krashen’s theory posits that language acquisition is a subconscious process, with language acquirers being unaware of the process but conscious of using the language for communication. The outcome of acquired competence is also subconscious (Krashen, 1981). Krashen extends this theory by suggesting that adults, like children, can develop a second language but may not attain a native-like proficiency. The monitor hypothesis, a component of Krashen’s theory, asserts that acquisition and learning serve distinct roles wherein acquisition initiates fluent language use, and learning acts as a monitor or editor for making post-production changes to linguistic forms (Krashen, 1982). Building upon this, a systematic review analyzes 18 studies from 2014 to 2021 on using gamification for English learning in higher education, examining its effects on student experiences and learning outcomes (Laura-De La Cruz et al., 2023). The findings indicate that incorporating gamification elements like feedback, challenges, and points enhances student motivation, enjoyment, and engagement, leading to positive results in vocabulary acquisition, grammar, and overall language skills.

Incorporation of Second Language Acquisition in Gamification-Based Language Assessments

In the context of gamification-based assessment in world language classes, Krashen's theory aligns with the idea that language learning is most effective when learners are engaged in enjoyable activities and provided opportunities for natural language use (Krashen, 1981). Gamification involves integrating game elements, such as competition, rewards, and interactive challenges, into non-game contexts to enhance motivation and engagement. When applied to language learning, gamification can create a dynamic and immersive environment that promotes meaningful interaction in the target language. This approach supports Krashen's emphasis on authentic communication and language acquisition through exposure to messages rather than explicit instruction.

In gamification-based language assessment, students participate in language-related games or activities that require them to use the target language for communication and problem-solving. This mirrors Krashen's belief that language acquisition occurs when learners focus on conveying and understanding messages rather than rigid adherence to grammatical rules (Krashen, 1981). By its nature, gamification encourages learners to engage in contextualized, real-life language use within the game scenarios. Krashen's monitor hypothesis also suggests that the learned system monitors post-production language changes and can be integrated into gamified assessments (Krashen, 1982). Learners may apply explicit language knowledge gained through gamification to refine and edit their language output, aligning with the monitor function in Krashen's theory. Gamification-based assessment in world language classes aligns with Krashen's theory by creating an environment that emphasizes meaningful interaction, engagement, and the subconscious acquisition of language skills through enjoyable and immersive experiences.

Gamification Concepts and Theories

Gamification fosters active student participation, aligning with their interests and personality type, which can bolster digital literacy and quality education. (Duncan, 2020; Handayani et al., 2021; Smiderle et al., 2020). As educational paradigms evolve, educators innovate to meet learner needs by leveraging smartphones, tablets, and laptops to integrate knowledge seamlessly with enjoyment in daily lessons through technology (Kotob & Ibrahim, 2019). DGBLL asserts that technology fuels gamified learning by unlocking interactive elements like simulations and real-time feedback, boosting engagement, and enabling students to tailor their learning approach. Krashen's second language acquisition theory includes elements of interactionism, constructivism, and Vygotsky's Zone of Proximal Development. According to Krashen's SLA theory, these theories reinforce how gamified lessons can be more impactful using technology's data-driven insights, allowing teachers to personalize interventions and ensure inclusive student participation (Phakiti & Plonsky, 2018). Therefore, the sociocultural language learning theories and gamification-based concepts work together to form a conceptual framework to guide research on teachers' perspectives on using gamification-based assessments in world language classes. Krashen's theory of SLA (1981) intersects with interactionism, constructivism, and Vygotsky's ZPD by emphasizing the importance of meaningful input, the active role of learners in language acquisition, and the influence of social interaction and supportive environments in the language learning process.

Sociocultural Theory and the Zone of Proximal Development

The sociocultural interpretation of Vygotsky's (1986) zone of proximal development (ZPD) refers to second-language learners' ability to complete tasks with peer interaction through collaboration, socialization, and constructing meaning. According to Vygotsky, the ZPD is "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance, or in collaboration with more capable peers" (Vygotsky, 1986, p. 86). Vygotsky's research underscores that learners reaching optimal success by completing a task within their zone of proximal development is vital (Krath et al., 2021; Machmud et al., 2023; Vygotsky, 1986). Utilizing digital games for language learning offers a versatile approach that can effectively enhance all four primary language skills while expanding vocabulary and bolstering grammatical proficiency (Klimova & Kacet, 2017). Vygotsky's ZPD refers to the range of tasks that a learner can perform with the assistance of a more knowledgeable other.

Krashen's theory (1981) can be related to Vygotsky's ZPD in that exposure to comprehensible input provides learners with linguistic input within their ZPD. Learners are exposed to language slightly beyond their current level of proficiency but still within their potential development zone. As learners interact with this input, they gradually move towards greater proficiency, with the assistance of teachers, peers, or supportive environments, like the scaffolding process described by Vygotsky.

Sociocultural research on gamification and language learning has delved into a range of learning outcomes, spanning cognitive facets, behavioral achievements, and affective outcomes (Li & Lan, 2022), which encompasses motivational gains and, sometimes, a combination of both (Ekici, 2021; Vlachopoulos & Makri, 2017). Sociocultural theory and the ZPD demonstrate how gamification utilizes social contexts and interactions to aid language development (Miller De Rutté & Lopez, 2022). Learning within the Zone of Proximal Development (ZPD) is intrinsically motivating due to the shift of responsibility from the teacher to the learner, recognizing mastery and fostering efficacy. Given these points, gamification-based interaction within the ZPD cultivates interest and appreciation for the subject matter as learners value knowledge endorsed by a respected mentor or peer.

Constructivism

The theory of constructivism states that individuals construct knowledge by interacting with the world around them (Cao et al., 2009). Constructivism posits that learners actively construct their understanding of the world through experiences and interactions (Szabó & Csépes, 2023). Krashen’s theory (1981) aligns with constructivist principles of the learner’s active role in processing and making sense of input. Learners actively engage with language input, internalize linguistic structures, and construct their linguistic knowledge over time. Constructivism supports Krashen’s emphasis on meaningful input and the learner’s role in language acquisition. The constructivist perspective suggests that learners increase knowledge while trying to address externally provided goals (Vygotsky, 1986). Vygotsky argued that there are critical internal processes in which students engage while interacting with their peers. This viewpoint emphasizes the importance of learners' active participation in and interaction with their environment in creating their understanding of reality rather than simply receiving correct information. Constructivist principles guide the development of learner-centered, collaborative environments in distance education, which support reflective and experiential learning processes. The theory of constructivism is an underlying phenomenon in many aspects of world language teaching, wherein gamification-based assessments are an interactive assessment tool that utilizes emerging educational technology.

Interactionism

It has been suggested that learning is more effective when students interact more with the learning environment, including peers, teachers, and learning materials (Jonassen et al., 1995). Interactionism emphasizes the importance of social interaction in language acquisition. Krashen's theory (1981) acknowledges the role of interaction to some extent, particularly in providing opportunities for comprehensible input through conversations, interactions, and exposure to the language in authentic contexts. Interactionism complements Krashen's theory by highlighting the significance of communicative interactions in language learning. Xu (2019) attests to the mechanisms involved in learning, development, and conceptual change in human infants and children. Xu proposes that infants possess proto-conceptual primitives, basic building blocks of cognition. By middle childhood, these primitives develop into domain-specific intuitive theories, conceptual representations expressed through language. These representations are an essential factor in language learning from the constructivist viewpoint.

In online learning, students and instructors interact through computer-mediated communication, which is critical in student learning experiences. Hernández-Sellés et al. (2020) found that students identify three types of interaction necessary to reach knowledge convergence: cognitive, social, and organizational. Similarly, España-Delgado (2023) found that implementing game-based platforms in language lessons makes the classes and the learning process more appealing, meets students' needs, and generates interest and engagement while addressing the social component necessary for meaningful interaction. Lesson plans incorporating these critical elements of language learning affect the development of autonomous learning and the process of differentiation and organize language learning to improve learning outcomes (Degirmenci, 2021; Szabó & Csépes, 2023). In conclusion, integrating interactive technologies, including game-based platforms and cognitive, social, and organizational interaction, enhances instructor presence and student engagement, fosters autonomous learning, and improves learning outcomes in online language lessons.

Benefits of Gamification-Based Assessments

Gündüz and Akkoyunlu (2020) analyzed how gamification affected student interaction, participation, and achievement and found gamification to have an overall positive influence in each area. Engagement and motivation encourage students to participate, which leads to a better understanding of the course material. Gamification can reinforce and facilitate learning by re-engaging students in learning. Correspondingly, incorporating gamification as an assessment tool increases motivation and improves their engagement or motivation toward the activity (Malahito & Quimbo, 2020). Gamification-based assessments can provide valuable benefits for language learning.

Positive Impact on Student Participation

Sevim-Cirak and Islim (2023) conducted a study that revealed using Kahoot! Significantly boosted participants' midterm exam scores compared to paper-based quizzes, aligning with prior research showing the positive impact of gamified learning on academic performance. This can be attributed to Kahoot!'s combination of game mechanics, immediate feedback, and engaging features, as highlighted by studies on educational games and the interactive elements used in Kahoot! (Sevim-Cirak & Islim, 2023). These qualities likely improved focus, knowledge retention, and motivation, leading to enhanced performance on the midterm exam. Gamification in world language learning boasts numerous benefits: it enhances skills through safe practice, sparks motivation through engaging challenges, and supports the development of language and communication skills (Dehganzadeh & Dehganzadeh, 2020; Gil-Acirón, 2022; Rahmani, 2020). While increasing the motivation for language learning, gamification-based assessments can also improve learning outcomes for formative and summative assessments through feedback and aligned objectives.

Benefits of Gamification in Education

Gamification in education uses gamified elements such as leaderboards, badges, challenges, and rewards to motivate and engage students toward a learning objective. In education, gamification techniques transfer the mechanics of games to educational environments to improve motivation and, consequently, the teaching-learning process in non-recreational contexts to encourage participation and favor the teaching-learning process and problem-solving through actions that increase motivation (Cortés-Pérez et al., 2023; De-Marcos et al., 2014). Another benefit of gamification is that it encourages interaction between teachers and students to increase motivation and improve the capacity to assimilate knowledge and acquire skills (Fuster-Guilló et al., 2019). By incorporating elements such as competition, rewards, and feedback into educational activities, gamification intends to increase student engagement, motivation, and achievement.

Benefits of Game-Based Learning

Game-based learning (GBL) is skill development wherein game characteristics and principles are used in learning activities. The benefits of game-based learning have been widely acknowledged due to their ability to increase student engagement and motivation (Greipl et al., 2020; Malamed, 2012). Traditional GBL approaches include using serious games (i.e., games designed with a purpose, such as education, besides entertainment), repurposing commercial off-the-shelf (COTS) games in educational contexts, and having students create their own games (Van Eck, 2006). Boudadi and Gutiérrez-Colón (2020) found gamification predominantly positive in motivation and engagement, but only a few studies confirmed apparent interconnections with learning outcomes. Similarly, in a case study involving 41 university students, Aldalur and Perez (2023) investigated the novel, combining gamification and discovery learning to enhance student motivation and involvement in a software engineering course. The results confirmed that the joint implementation of these methodologies led to a significant improvement in academic marks and a 15.55% reduction in failures compared to a control group, while also increasing student motivation, creativity, and the ability to put learned concepts into practice.

A comprehensive systematic literature review affirms the multifaceted benefits of digital game-based learning (DGBL) in K-12 mathematics education. Synthesizing 43 studies published between 2008 and 2019, Hussein et al. (2022) found a consistent pattern of positive outcomes associated with DGBL, including gains in knowledge acquisition and enhancements in cognitive skills and student motivation. Despite these promising results, the review also underscored a significant gap in the existing research, noting a need for more rigorous investigation into how specific game mechanics foster learning and support twenty-first-century skills. Accordingly, while the evidence strongly supports the general efficacy of DGBL, it simultaneously calls for a more granular analysis of the specific design elements that drive these positive learning outcomes.

As a result, gamification-based assessments have steadily gained notoriety as an innovative approach to assessing students' performance in world language classes. This method engages and motivates students to participate more actively and fosters a dynamic learning environment that enhances their language skills. Educators can effectively measure students' progress in mastering linguistic concepts by implementing game-like elements, such as points, levels, and rewards. Accordingly, Oliveira et al.

(2022) found that gamification promotes a more personalized and interactive learning experience, fostering a positive relationship between the students and the subject matter.

Beneficial Elements of Educational Games

Elements of educational games, including badges, leaderboards, and challenges, are known tenants of gamification. Appropriately, Jääskä and Aaltonen (2022) found that teachers and students perceived the details of games in educational games as beneficial. Gamification elements are intrinsic motivators for second-language learners that inspire and engage them in learning (Boudadi & Gutiérrez-Colón, 2020). Similarly, Alenazi (2025) found that gamification in an English as a Foreign Language (EFL) classroom significantly improved student motivation and learning outcomes. The research identified the beneficial game-based elements of competitive tasks, points, leaderboards, and instant feedback from digital tools as key drivers for enhancing engagement, vocabulary retention, and grammar accuracy (Alenazi, 2025). Correspondingly, a recent study found that different gamification components impact online learner engagement in distinct ways, identifying points as a beneficial element for tracking progress and reinforcing behavior across all types of engagement. In contrast, badges were beneficial for fostering a sense of community and increasing participation (Meng et al, 2024). Comparably, according to a study by Enayat et al. (2025), the integration of specific game-based elements provided significant benefits for second language acquisition, particularly for receptive vocabulary knowledge, finding that leaderboards and rewards were beneficial for increasing learner motivation, engagement, and time spent on tasks by creating a competitive and encouraging environment. Furthermore, according to a recent report on the future of work in competitive domains, this category commonly fosters collaboration and incentives within a team setting, a practice frequently employed in the business sphere (Jaworski et al., 2022). Given these points, gamification elements such as badges, leaderboards, and challenges have been shown through research to be beneficial for both teachers and students, serving as motivators for second-language learners, visually representing progress, and fostering commitment and engagement while also finding application in promoting collaboration and incentives within teams in the business world.

Another beneficial gamification element is a reward system, which grants prizes or accolades. This type of incentive manifests in gaming scenarios, wherein players unlock additional tasks or stages by completing preceding ones. According to Kalleny (2020), providing prizes or awards intensifies player commitment and engagement, an aspect perpetuated in second language learning. Govender and Arnedo-Moreno (2021) analyzed 114 peer-reviewed articles on language learning and gamification in a related study. They found feedback, theme, points, narrative, and levels essential to gamification-based language learning applications. In gamification-based learning applications, achievements are visually exhibited as badges on an individual’s online profile, signifying a fusion of previously discussed reward modalities.

To display the advantages of a reward system, the use and popularity of badges, each with its unique meaning, have been facilitated by the development of game consoles and online gameplay (Rodrigues et al., 2019). Second-language learners’ motivation to complete an activity comes from the desire for acceptance or integration, which can be achieved through recognition (Khan & Takkac, 2021). A gamification-based assessment motivates students to progress to the following levels or earn additional rewards (Andrés, 2022). Correspondingly, gamification also incorporates the fundamental element of progression, wherein the primary aim is to consistently apprise players regarding their progress within a given level while offering requisite information about completed objectives and remaining tasks essential for level completion (Handayani et al., 2021). Progression symbolizes a player's journey through an embedded series of incremental challenges within a broader overarching job or learning objective. Within world language classrooms, educators enforce progression by strategically promoting healthy competition while concurrently demonstrating students' progress (Govender & Arnedo-Moreno, 2021). Consequently, second language learners can observe their advancements and adopt risk-taking behaviors while maintaining the motivation to persevere or escalate their efforts in DGBLL.

Benefits of Gamification Instructional Practices

The goal of education is to enhance students' computational thinking. Digital game-based learning (DGBL) experiences can be beneficial because children need personalized learning support and will likely experience cognitive challenges in computational thinking development and learning transfer (Liu & Moon, 2023). Using gaming elements to deliver learning experiences to participants is a redesign of the classroom structure to make it a more engaging learning experience, borrowing elements from game design (Cafarella & Vasconcelos, 2025; Landers, 2018). Gamification instructional practices have earned interest from educational professionals as student motivation and engagement continue to be challenging aspects in the field (Martí-Parreño et al., 2016; Sánchez-Mena et al., 2017; Toda et al., 2018). Consequently, researchers agree that gamification employs game-like features to inspire motivation and engagement, encourage persuasion, and bolster student performance (Malamed, 2012; Seaborn & Fels, 2014; Yu, 2023).

Benefits of the Integration of Games into the Second Language Course

Gamification in second language learning must be proficiency-based, include creative play with a purpose, and involve multisensory language modalities inherent in content-based language instruction to be effective (Liontas, 2022). Gamification could epitomize learning through meaningful experiences, ensure prolonged student engagement, focus attention, increase knowledge recall, and significantly revitalize the learning environment. According to Liontas (2022), the pedagogical benefits of integrating games into world language courses include cognitive development, social competition, and self-directed achievement. Liontas further concluded that when used correctly, gamification enables students to develop critical language learning skills, including information processing and problem-solving, while supporting the cognitive processes necessary for language acquisition.

Research demonstrates the effectiveness of DGBLL in promoting language development (Gündüz & Akkoyunlu, 2020; Seyyedrezaei et al., 2022; Yu, 2023). The interactive nature of DGBLL facilitates establishing a constructivist learning environment wherein students can engage without experiencing high levels of stress or anxiety (Raffone, 2022). Gamification is effective at motivating students with competitive activities based on language learning. In response to the prevalence of traditional teaching methodologies for digital natives, Harvey Arce and Cuadros Valdivia (2020) developed a digital platform for foreign language learning incorporating competitiveness and gamification. The study found that most students preferred using gamified digital tools and felt more motivated to learn a second language through this methodology, indicating the positive effects of these elements in a virtual learning environment. Consequently, integrating games in second language courses increases students' intrinsic motivation and improves learning outcomes.

Gamification and Second Language Assessment

Analyzing students' knowledge is essential to improving their learning quality. Formative assessments occur throughout a lesson to identify what students are learning, and summative assessments measure what students have learned at the end of a concept or course. Assessments in secondary education aim to determine students' grades and matriculation, making them critical for student success (Andujar, 2020; De Neve et al., 2022; Kamaruzaman et al., 2023; Hung & Nguyen, 2022; Seyyedrezaei et al., 2022). In Andujar's study (2020), the pedagogical mobile-mediated dynamic assessment was examined and identified as an integral component of the student's learning process, extending their learning beyond the confines of the classroom, and serving as a continuous provider of second language input and feedback. Findings from Andujar's study revealed that immediate assessment feedback was crucial in fostering students' self-reflection regarding their language performance.

Practical assessment in second-language acquisition considers multiple factors, such as the validity and reliability of assessment tools, cultural and linguistic diversity among learners, and the alignment of assessments with language learning objectives (Li et al., 2022; Nortvedt et al., 2020; Trumbull & Nelson-Barber, 2019; Winke & Brunfaut, 2020). Assessment aims to provide meaningful feedback to learners and educators, enabling them to make informed decisions about instructional strategies, materials, and interventions. Al-Awawdeh and Kalsoom (2022) also investigated the efficiency and effectiveness of e-learning assessment and content access in university education during the COVID-19 pandemic. Using a questionnaire, they collected data from 154 randomly selected college students from various Jordanian universities and analyzed the results using SPSS. The findings indicated that students perceive electronic assessments used in universities as highly efficient across all disciplines. Al-Awawdeh and Kalsoom's study highlights the importance of the assessment methods and distribution channels for foreign language e-learning content and suggests conducting further research in this area.

Assessment in second-language acquisition also considers the diversity of learners, including factors such as age, background, previous language learning experiences, and individual learning styles (Lin, 2024). It recognizes that learners may progress at different rates and have unique strengths and challenges. Therefore, assessments should accommodate these differences and provide equitable opportunities for learners to demonstrate their language abilities. Second-language acquisition involves acquiring proficiency in various language skills, while assessment plays a crucial role in measuring learners' progress, informing instruction, and supporting their language development. By employing effective and inclusive gamification-based assessment practices, educators could better support learners in their second-language acquisition journey and facilitate their overall language proficiency.

Benefits of Gamification on Assessment Feedback

The primary goal of assessment is to provide feedback to learners on their progress toward a learning outcome. Immediate feedback on reviews is critical in the learning process. Song et al. (2022) conducted a research study of middle school students to evaluate the effectiveness of accommodation provided in a language activity. They found that students benefited from receiving immediate feedback on the task. This finding demonstrates the necessity of immediate feedback to improve learning outcome attainment. Consequently, student motivation to reach a learning outcome plays a pivotal role in language development. Chalupa (2021) argued that giving students a choice in their assessment modality motivates students to focus and improves their desire to learn. Incorporating choice into assessments can positively influence the intrinsic motivation necessary to be successful in second language acquisition (Oliveira et al., 2021). Gamification offers constant feedback, shows student progression, and immediately recognizes student effort in language learning.

Gamification-Based Assessment Benefits on Motivation

Second-language assessment and motivation play crucial roles in language learning among individuals (Ai et al., 2021; Lou & Noels, 2019; Zhang, 2023). Second-language assessment involves language skills such as speaking, listening, reading, writing, grammar, vocabulary, and pronunciation (Wang & Wu, 2020). Practical second-language assessment provides valuable feedback to learners and educators, enabling them to identify strengths, weaknesses, and areas for improvement. It helps learners set realistic goals, track their progress, and adapt their learning strategies accordingly. Focusing on intrinsic motivation is linked to learner autonomy and maximizes motivation for second language acquisition (Chalupa, 2021). Individualized assessments can improve student motivation and engage learners on their terms by involving their reality and creativity in language learning (Csizér & Illés, 2020). A study of 1036 Chinese middle school students learning English as a foreign language found that intrinsic interest and personal development motivation significantly positively impacted language learning achievement (Jiao et al., 2022). As a result, gamification-based assessments may increase student motivation and, therefore, improve second language acquisition.

Centrally, research confirms how motivation plays a crucial role in second-language assessment (Ai et al., 2021; Heydarnejad et al., 2022; Zhyhadlo, 2022). Consequently, highly motivated learners tend to be more engaged, dedicated, and willing to put in the effort required for successful language learning (Heydarnejad et al., 2022). Motivation can positively influence learners' assessment performance, fostering an eagerness to learn, practice, and improve (Ojong, 2023). In contrast, low motivation can lead to decreased effort and disengagement, resulting in suboptimal assessment performance (Pham, 2021). Thus, second-language assessment and motivation are interconnected aspects of language learning (Vyas & Sharma, 2022). Consequently, motivation plays a pivotal role in driving learners' engagement, effort, and overall performance in language assessments (Lee & Bong, 2019). Educators and learners can work together to create a supportive and motivating language learning environment by understanding the relationship between assessment and motivation.

Challenges of Gamification-Based Assessments

Despite the potential of gamification in education, research suggests that many educators cling to traditional methods, hindering the exploration of this innovative approach (Md Yunus & Azmanuddin bin Azman, 2019; Iyawa et al., 2019). Additionally, technical barriers, such as teachers' knowledge and understanding of integrating gamification-based assessments, may delay their learners' learning process (Md Yunus & Azmanuddin bin Azman, 2019). There is also a need for adaptive and personalized gamification-based assessments to consider the personalities, needs, and motivations of all learners (Khaldi et al., 2023). Due to the gap in current educational technology research on gamification-based assessments, there is scarce information on the challenges it may impose.

Challenges With Gamification Elements

Badges have become a fundamental gamification element in educational and corporate arenas. Despite the findings from several studies that suggest the effectiveness of badges (Helmefalk, 2019; Xu et al., 2021), a significant percentage of students are not motivated by badges. Gironella (2023) conducted a study exploring gamification and post-secondary course design and found that students (38.9%) rated badges as either poor or not helpful, as they did not have any extrinsic reward or recognition system. Likewise, Kyewski and Krämer (2018) also discovered that badges did not effectively motivate student activity, and Facey-Shaw et al. (2020) determined that, as external motivators, badges decreased intrinsic motivation. Consequently, gamification-based assessments that rely upon badges as a reward may not be helpful in second language acquisition.

Technical Barriers to Gamification-Based Assessment

Integrating a new technology comes with the inherent challenges of technical skills and abilities. However, Al Breiki and Wan Yahaya (2025) found that regardless of technical difficulties and minor challenges, learners remained motivated to interact with gamification-based assessments using Activity Theory as a conceptual framework and identified that gamified formative electronic assessment has a large, statistically significant positive effect on student academic performance. Contrastingly, teachers had trouble using gamification technologies based on their digital readiness to incorporate the technology (Dixon et al., 2022). As evidenced by these studies, while learners demonstrate sustained motivation when engaging with gamification-based assessments despite technical challenges, teachers may encounter hurdles related to their digital readiness to adopt such technologies. Addressing these challenges through targeted training and support may facilitate smoother integration and maximize the benefits of gamification in education.

Challenges With Gamification and Student Autonomy

Autonomous personalized learning is a system that helps students identify their strengths and weaknesses in learning by allowing them to choose their learning tools and paths independently. The effectiveness of gamification for language learners depends significantly on self-regulated learning, as highlighted by studies conducted by Alshehri (2025) and Cho and Jonassen (2009). Cho et al. (2020) examined the relationship between students' beliefs about assessment and using self-regulated learning strategies in second language learning. It showed that students' adaptive ideas about high-stakes assessment were significantly associated with self-regulated learning strategies and knowledge transferability. However, it is essential to understand that technology facilitates personalized language learning but does not automatically teach the language. Similarly, Leshchenko et al. (2023) found that students need guidance on using digital resources effectively and evaluating the suitability of content, topics, and resources based on their cognitive abilities to improve their world language communication skills. In effect, gamification-based assessments can offer freedom but require solid organizational and self-regulation skills.

Challenges With Gamification-Based Assessments and Collaboration

Second-language acquisition research has shown that learners need as much exposure as possible to the target language for acquisition to occur and encourage peer collaboration (Arndt et al., 2023; Khalid et al., 2024; Montrul, 2019). As a result, educators maximize language exposure by providing a language-rich environment that prepares learners for success in the real world, and gamification facilitates a real-world interpretation of classroom content (Li et al., 2022). Researchers have conducted many studies comparing language learning through technology with language learning in face-to-face classrooms (Hung & Nguyen, 2022; Kamaruzaman et al., 2023; Seyyedrezaei et al., 2022). Meta-analyses of these studies have indicated that students using technology for language learning achieve superior learning outcomes than those studying in a face-to-face classroom (Chapelle, 2007). However, students' reluctance to collaborate and difficulties using new technology are challenges in integrating gamification-based assessments (Zhang & Hasim, 2023). Further research on the effects of collaboration using gamification on second language acquisition is needed.

Problems With Engagement and Gamification-Based Assessments

Another challenge of gamification-based assessments in world language classes is the potential for students to become disengaged or distracted. Although gamification aims to enhance learning, some students may perceive these activities as mere games and not take them seriously. This could influence the validity and reliability of the assessment results (Dehghanzadeh et al., 2021; Phuong, 2020). Additionally, there may be concerns about the inclusivity of gamified assessments, as some students may not have equal access to the necessary technology or resources to participate fully. These challenges emphasize the importance of carefully designing and implementing gamification in language classes to ensure its effectiveness and fairness for all students (Zhang & Hasim, 2023).

Technology Dependence

Additionally, gamification-based assessments in world language classes may be challenging due to reliance on technology (Astafeva et al., 2020). This dependence can create difficulties if technological malfunctions or technical issues are experienced. Additionally, the limited availability of student feedback and perspectives poses another challenge. Understanding students' experiences and opinions is crucial for improving and refining gamification-based assessments (Phuong, 2020). Educators face difficulties making informed adjustments and enhancements to gamified learning activities without comprehensive feedback.

Ethical Considerations

Alongside the technical and technological challenges, it is imperative to address ethical considerations when implementing gamification-based assessments in world language classes. It is essential to consider the moral implications of gamification as an assessment tool, particularly regarding student privacy and data security. Integrating digital platforms and tools requires protecting student data and adequately addressing privacy concerns (Klock et al., 2023). Moreover, it is essential to consider the ethical implications of incentivizing student participation through gamification. While gamification can motivate many students, it is crucial to guarantee that it does not create unfair advantages or disadvantages for specific individuals. This necessitates a careful balance in designing and implementing gamified assessments to uphold ethical standards and fairness in the evaluation process.

Summary and Conclusions

Chapter 2 explored the current literature on gamification-based assessments in world language acquisition. An extensive review of existing literature identified critical themes, including the significance of teachers' experiences in the diffusion of any new educational technology, the application of gamification concepts and elements in second language acquisition, and the advantages and challenges associated with gamification-based assessments. It underscored the necessity for the proposed research study by highlighting gaps in the literature concerning the perspectives of secondary world language teachers. Primarily, research shows that gamification-based assessments can improve student engagement, motivation, and learning outcomes in language classes. Equally important, researchers agree that integrating educational technologies, providing immediate feedback, and implementing motivational strategies have been critical in world language assessment. However, there is a marked gap in the literature on secondary world language teachers' perspectives, the benefits, and the challenges of integrating gamification-based assessments.

Contrastingly, concerns about engagement, inclusivity, dependence on technology, and ethical considerations regarding privacy and fairness arose as issues needing further research before implementing gamification-based assessments in language learning contexts. Consequently, educators and stakeholders may benefit from the proposed research study, which explores teachers' perspectives on gamification-based assessments in secondary world language classes, particularly considering their power to predict the intentions and behaviors regarding adopting and using new technologies. By understanding the relationship between assessment and motivation, the research study aimed to establish a supportive and motivating language-learning environment, enhancing students' overall language-acquisition experience.

Chapter 3 will discuss the research methodology of this qualitative research study. The next chapter will also illustrate how the study addressed the posed research questions.. An in-depth explanation of the study design, sample population, instrumentation, data analysis plan, data, and issues of trustworthiness and ethical procedures are addressed.

Chapter 3: Research Method

This chapter describes the basic qualitative inquiry employed to examine secondary world language teachers’ perspectives on the benefits of using gamification-based assessments. The purpose of this qualitative study was to explore the perspectives of secondary world language teachers on the implementation and impact of gamification-based assessments and to understand the perceived benefits and challenges associated with gamification-based assessments, considering the inherent importance of secondary world language teachers’ perspectives in the diffusion of new educational technology. An interpretive-constructivist paradigm served as the guiding framework of the research. An in-depth analysis of semistructured interviews illuminated the various dimensions of teachers’ viewpoints, contributing to a deeper understanding of how gamification-based assessments might shape language learning, classroom dynamics, and overall educational experiences. This chapter encompasses the study’s design, research queries, setting, participant details, the researcher’s role, data collection, and analysis techniques. It concludes with a discussion of the study’s trustworthiness and ethical considerations.

Research Design and Rationale

RQ1: What are secondary world language teachers’ perspectives on the benefits of using gamification-based assessments?

RQ2: What are secondary world language teachers’ perspectives on the challenges of using gamification-based assessments?

The central phenomenon of the study is secondary world language teachers’ perspectives on gamification-based assessments. A basic qualitative study, including semistructured interviews of 10–12 participants, is proposed to expound upon the limited research in this area. The study utilized a basic interpretive qualitative research design employing semistructured interviews and inductive content analysis. It aimed to understand teachers' interpretations of gamification-based assessments, aligning with social constructivism and interpretivist paradigms. Through open-ended questions and grounded coding, data from online semistructured interviews were analyzed to elucidate teachers' perspectives on gamification-based assessments in world language classrooms.

Research Design

All data were obtained via semistructured interviews, including pre-determined open-ended questions (questions that prompt discussion) with the opportunity for me to explore themes or responses further. This allowed for questions, flexibility, and the option to ask additional questions to gather the teachers' perspectives. I created interview questions for my planned research design to elicit teachers' views on gamification-based assessments within world language classrooms. The respondents' data obtained via online semistructured interviews were audio-recorded and transcribed for accuracy. Data were analyzed inductively, and I used grounded coding to categorize information into themes and describe the findings (Vears & Gillam, 2022). All data points from the semistructured interviews included teachers' responses to the questions regarding their perspectives on using gamification-based assessments in their classrooms.

Rationale

Qualitative methods, emphasizing in-depth exploration and understanding, allow researchers to capture the richness and complexity of individual perspectives. According to Durdella (2019), qualitative methodology is an approach to investigating the social world. I chose a basic qualitative research design for the proposed research because the central phenomenon to be researched is teachers' perspectives, which are best illuminated using a qualitative approach. Alternatively, quantitative methods, prioritizing numerical data and statistical analysis, might oversimplify the nuanced experiences and meanings associated with gamification in language teaching. The contextual relevance of a basic qualitative design was chosen to provide a deeper understanding of secondary teachers' perspectives within the specific domain of world language education. While valuable for generalizability, quantitative methods might sacrifice the depth of contextual insight needed to grasp the intricacies of how gamification is perceived and implemented in language classrooms (Durdella, 2019). Qualitative research is holistic and focuses on the process and context rather than outcomes, differences, and comparisons, as in quantitative and experimental research (Toma, 2006).

Qualitative research is interpretive and focused on gaining meaning and understanding, utilizing methods such as interviews and observations while acknowledging the inherent subjectivity of the researcher-as-instrument, inviting readers to form their interpretations (Ravitch & Carl, 2019). A basic qualitative research design with an interpretative constructivist approach was justified by the need to delve deeply into world language teachers' subjective experiences and interpretations regarding gamification-based assessments to understand the participants' perspectives. Other research methods may not have provided the level of detail, context-specific understanding, and flexibility necessary to explore the complexities of this phenomenon within the unique context of language education.

Role of the Researcher

In this basic qualitative research study employing semistructured interviews with secondary world language teachers, the role of the researcher was multifaceted. Firstly, the researcher was a facilitator, guiding the interview process while allowing flexibility to explore participants' perspectives deeply. Secondly, the researcher was an active listener, attentively engaging with participants' responses to understand their experiences and viewpoints regarding gamification-based assessments. Lastly, the researcher played the role of an interpreter, analyzing interview data using inductive content analysis to identify themes and insights, ultimately contributing to a comprehensive understanding of teachers' perspectives on gamification-based assessments in secondary world language classes.

While teaching, I used and promoted gamification in world language classes for the benefits of second language learning, including frequent and personalized feedback, the development of social learning, and increased motivation (Gil-Acirón, 2022). Although I have seen teachers use gamification to improve learning outcomes by examining the quality of the learning experience itself, I am aware of the benefits and challenges of using gamification-based assessments (Liontas, 2022). As a Learning Strategist, training teachers on the use and benefits of gamification as an instructional strategy, I continually observed my reactions to ensure that I was unbiased. My personal feelings, past training, or present research did not bias the respondents' data.

I was not personally affiliated with the prospective study participants. I did not influence educators because, as a Learning Strategist, I am considered a teacher on a special assignment and do not have administrative authority over them. I did not influence the study results by employing member-checking and peer debriefing. Furthermore, inductive coding of the transcript interviews ensured no conflicts of interest or ethical issues in the proposed research. Following the Institutional Review Board (IRB) specifications, there were no prior supervisory or personal relationships between me as the researcher, my role as a Learning Strategist, and the selected participants.

As a former French teacher, I understand that world language teachers face unique challenges distinct from other educators. Specifically, they instruct in a language students have yet to comprehend, necessitating specific interaction patterns like group work. Unlike other subjects where knowledge is transmitted through textbooks, world language teachers must constantly communicate real-life language to grow proficiency, and they often feel isolated due to fewer colleagues teaching the same subject and needing extracurricular activities to simulate naturalistic learning environments, which is not as crucial in other disciplines (Borg, 2006). As such, my role as the researcher aligned well with this study.

Methodology

The methodology for this study was a basic qualitative approach. I first recruited participants through an online survey. Then, semistructured interviews with the selected participants were conducted, recorded, and transcribed for accuracy. The interview questions were designed to elicit answers to the study's research questions. The data was collected to understand secondary world language teachers' perspectives on the benefits and challenges of gamification-based assessments in their classes. This approach aligns with constructivist epistemology, which asserts that reality is subjective and socially constructed, emphasizing the importance of interpreting and understanding the diverse perspectives of individuals (Mustofa, 2024).

Sampling

Initially, I used purposeful sampling to ensure that the selected participants would provide insightful, in-depth responses that add to the data richness and are a representative sample of world language teachers. Hennink and Kaiser (2022) reviewed empirical studies of saturation in qualitative research data from in-depth interviews, finding that saturation was reached by having at least nine interviews. Guest et al. (2020) developed a method to assess and report thematic saturation in qualitative research. They found that six to seven interviews typically capture many themes in a homogeneous sample. Therefore, the ideal interview sample size was 10–12 secondary world language teachers to achieve data saturation about teachers' perspectives on using gamification-based assessments in secondary world language classes. During interviews, saturation was reached when the same themes repeatedly appeared.

Purposeful sampling was used to select the participants based on their responses to a recruitment email and flyer. Purposeful sampling is often used in qualitative research studies to choose a specific group of individuals to gather in-depth data on topics (Thomas, 2022). The participants were deliberately chosen based on characteristics or attributes relevant to the study. Patton (2015) described purposeful sampling as selecting participants who meet predetermined criteria by selecting individuals who align with the research study and possess the characteristics and experiences necessary to answer the research questions. To employ this method, I defined the study's purpose and obtained consent from 10–12 participants before analyzing the findings.

Purposeful sampling was the most appropriate plan for the research study because it allowed me to choose participants who fit the parameters of the research questions, goals, and purpose (Tracy, 2024). Although random sampling creates an equal opportunity for all the members of a specific population to be chosen, due to the specificity of this study, random sampling would not fit within the necessary parameters of being a secondary world language teacher with gamification-based assessment experience. The purposive sample included a measure of convenience or opportunistic sampling because all participants were recruited from my professional learning network. However, to ensure maximum variation of the possible data, recruitment via social media ensured the inclusion of usually marginalized data. Although purposeful sampling may also have been employed, snowball sampling expanded the sample population by asking participants to recommend other participants (Saldaña, 2021).

Participant Selection Logic

I recruited participants using my professional learning network, forums, and associations. I am a member of the academic instructional design organizations Association for Talent Development (ATD), the Association for the Advancement of Computing in Education (AACE), the International Society for Technology in Education (ISTE), and the Association for Educational Communications and Technology (AECT).

These reputable organizations specifically focus on using technology to improve teaching and learning. I am also a member of the American Council on the Teaching of Foreign Languages (ACTFL) and the Center for Applied Linguistics (CAL), membership organizations of thousands of language educators and administrators from elementary through graduate education, government, and industry (Abbott, 2018). Each organization within my professional learning network has a forum where I posted my research flyer (Buckley et al., 2021). The proposed population came from these professional organizations to minimize the chance of selecting participants who are not secondary world language teachers.

I am also a member of several online communities and forums where language teachers discuss teaching methods and strategies. I frequently participate in social media groups dedicated to educators. I posted my flyer (see Appendix A) to the Facebook and Twitter groups associated with Second Language Teaching and Educational Technology. I incorporated relevant hashtags to increase the visibility of my posts and used hashtags related to language education, gamification, and teaching methodologies. I also tagged language education groups, associations, or influential individuals who could help share my post within the community, using snowball sampling.

In the same vein, snowball sampling is a non-probability sampling technique that I used to identify and recruit participants through referrals from existing participants (Hennink & Kaiser, 2022; Patton, 2015). For the proposed study, I emailed prospective participants a standardized recruitment letter (see Appendix B). In this method, I started with a small group of individuals who met the study’s criteria. Then, these initial participants referred other potential participants (Rubin & Rubin, 2005) to increase the spectrum of my participants. As a result, the sample population for this study encompassed a multifaceted selection of secondary world language teachers to answer the research questions effectively.

Permission

To obtain permission to recruit participants on social media, I thoroughly reviewed the terms of service and community guidelines for each platform I intended to use. To ensure that my recruitment methods complied with the platform's rules, I obtained permission from administrators or moderators before recruiting for research. I researched whether there are any specific channels or procedures for obtaining approval on the platform (Braun et al., 2021). I checked the latest guidelines for both Twitter and Facebook before posting. In addition, I contacted the support or community management teams on each platform for specific guidance related to research recruitment. To maximize recruitment, I focused on dedicated groups and forums wherein I am a member. I used these channels to share study information. I also adhered to all published platform guidelines.

Instrumentation

The Interview Guide (see Appendix C), which structured the semistructured interviews, was created with the input of my professors and colleagues. The interview guide contains an introduction, background questions, ten open-ended questions about gamification-based assessment benefits and challenges, a concluding question, and closing remarks. Each interview question was designed to elicit answers to the research questions and was categorized into the UTAUT factors to determine what influences secondary world language teachers' perspectives on integrating gamification-based assessments. Castillo-Montoya (2016) presented the Interview Protocol Refinement (IPR) framework, a four-phase process for systematically developing and enhancing interview protocols for qualitative inquiry. This framework is intended to strengthen the reliability of interview methods and thereby improve the quality of data obtained by ensuring interview questions align with research questions, constructing an inquiry-based conversation, receiving feedback, and piloting the protocol. To develop the interview guide, I followed the four phases of the Interview Protocol Refinement Framework: (1) ensuring interview questions aligned with research questions, (2) constructing an inquiry-based conversation, (3) receiving feedback on the interview protocol, and (4) piloting the interview protocol in prior courses (Castillo-Montoya, 2016). Before beginning each recorded interview, the participants verbally consented to participating in the study (see Appendix D). Consequently, the interview guide and protocol refinement framework ensured that the researcher-developed instrument would produce accurate data for the proposed study.

Semistructured Interview Protocol

According to Karatsareas (2022), in semistructured interviews, researchers do not necessarily follow a pre-set order of questions but ensure that key topics are covered. To ensure that the study participants were free to answer questions in their own way and to any extent, I used a pre-prepared interview protocol to monitor the interview and refocus it if needed. Semistructured interviews offer flexibility, allowing participants to express their in-depth views while researchers monitor the interview using a pre-prepared protocol (Rubin & Rubin, 2005). The method aims to uncover themes and patterns in participants' responses, providing rich and in-depth data relatively quickly. To ensure the trustworthiness of the findings, researchers must consider cultural contexts and power dynamics to ensure participants feel comfortable sharing their experiences (Roberts, 2020). As a result, the Interview Guide for the proposed study encompassed ten questions to elicit responses and provide a detailed description of secondary world language teachers' perspectives on gamification-based assessments.

I created the Interview Guide because there was no established protocol for obtaining secondary world language teachers' perspectives on gamification-based assessments published. In addition, I developed ten semistructured interview questions that aligned with the research questions to ensure the validity of the study's findings. To validate the research questions for the proposed study, I consulted with qualitative methodologists at Walden University, my peers, and colleagues. Table 1 depicts the alignment of each interview question to the research questions and conceptual framework.

Table 1

Interview Questions

Research question	Interview question	Conceptual framework UTAUT
RQ1: What are secondary world language teachers' perspectives on the benefits of using gamification-based assessments? Questions 1-5	1. In your experience, how might gamification-based assessments benefit students' vocabulary acquisition? *Prompt:* Please provide specific examples.	Effort expectancy
	2. In what ways do you believe using gamification-based assessments may enhance students' engagement in language learning?	Performance expectancy
	3. Please provide examples of improvements in student performance that you could attribute to using gamification-based assessments. *Prompt:* How have gamification elements like points, scoring, leaderboards, progress bars, ranks, and rewards benefited students' language acquisition?	Performance expectancy
	4. In your view, how might gamification-based assessments reshape the learning landscape compared to traditional assessment methods?	Effort expectancy
	5. What are some advantages of gamification-based assessments in world language classes?	Social influence
RQ2: What are secondary world language teachers' perspectives on the challenges of using gamification-based assessments? Questions 6-10	6. Describe any challenges you have encountered with gamification-based assessments in your world language classes. *Follow-up Question*: Please elaborate on how you have handled these challenges.	Performance expectancy
	7. What aspects of gamification-based assessments are burdensome or difficult to implement in your teaching practices?	Effort expectancy
	8. What organizational barriers could hinder the effective use of gamification-based assessments in your teaching? *Prompt*: For example, organizational barriers could include time constraints, administrative policies, etc.	Social influence
	9. How do you perceive the effectiveness of gamification-based assessments in enhancing students' performance compared to traditional assessment methods? *Prompt:* Please describe your experience.	Facilitating conditions
	10. Can you discuss any logistical challenges when implementing gamification-based assessments, such as access to technology or classroom setup?	Facilitating conditions

Interview questions one through five focused on teachers' perspectives on the benefits of gamification-based assessments. Interview questions six through ten focused on their perceived challenges. The prompts were included in the Interview Guide to allow participants to express their thoughts and experiences in depth (Rubin & Rubin, 2005). The data obtained from the interview questions (see Appendix E) aimed to explore teachers' perspectives on the benefits and challenges revealed in the literature review for the study.

For data collection, I transcribed the interview sessions using the Otter.ai program to ensure accurate data capture. Subsequently, the semistructured interviews elicited in-depth data from each participant. In addition to the ten pre-established questions, I adapted the prompts and added follow-up questions depending on the participant's responses. Furthermore, I documented any non-verbal cues made by the participants in the Interview Guide to assist in interpreting the data. After the interviews, member checking included asking the participants to verify the accuracy of their comments (Toma, 2006). This process was undertaken for data validation purposes.

Procedures for Pilot Study

A pilot study was conducted with three veteran teachers using gamification-based assessment in their secondary courses. The pilot study mimicked the research study in all aspects of recruitment and data collection to provide an overview of the research and the feasibility of a more extensive study (Tracy, 2024). The preliminary results from the pilot study informed and indicated the research's validity and value (Creswell & Creswell, 2023). The interview guide and questions were refined based on the pilot study. I used the online transcription program Otter.ai to assist in identifying keywords and theme identification. The software allows users to record and review transcripts, provides an automated live summary, and generates a list of keywords for the coding process (Rubin & Rubin, 2005). In addition, while reviewing the transcript, Otter.ai allowed me to edit the transcripts for errors and annotate to add emerging themes. I also used hand coding and the qualitative data analysis program, Atlas.ti, to analyze the data further.

In the pilot study, I employed the core principles of inductive analysis in applied qualitative research by continuously comparing data to discern distinct categories (Patton, 2015). Following the framework proposed by Thomas (2006), I first organized my data, subsequently generating categories, themes, and patterns from the transcripts. Subsequently, I hand-coded the data, identifying emerging insights and exploring alternative interpretations. Lastly, I drafted a summary of the results. Heeding Leavy's (2014) advice, I analyzed the data systematically throughout the interview process, allowing me to understand emerging categories better, refine my questions, focus on critical areas, manage the data volume, and efficiently address any information gaps.

In the pilot study, the coding process highlighted the positive benefits of engagement and motivation in personalization and gamification of learning. The results indicated several challenges in monitoring progress and providing individualized feedback in gamification-based assessments. Immediate feedback, individualization, and engagement arose predominantly as benefits of second-language education. Gamification-based assessments being used for formative purposes were shown to provide improved student engagement and feedback. The beneficial elements prevalent in the data included improved multidisciplinary skills, self-directed learning, and individualized language proficiency assessment. Educational technology integration as an alternative testing method for the benefit of language learning also appeared to be a predominantly positive theme. Personalized learning, self-confidence, motivation, and effort were important for students. However, noticeably, gamification-based assessments were described as time-consuming for teachers. The results from the pilot study were not used in the research study. In summary, the overall notion is that students' familiarity with gaming arose as a critical factor in successfully integrating gamification-based assessments in the pilot study for most participants.

Procedures for Recruitment, Participation, and Data Collection

Recruitment

I used purposeful sampling to recruit participants via email and social media groups within my professional learning network (see Appendices A and B). The initial recruitment email and flyer included the link to a preliminary participant verification survey, verifying that all participants meet the study criteria (see Appendix F). The verification survey was a Google Form that asked each prospective participant about their world language teaching experience and their past usage of gamification applications within those classes. Participants who met the criteria were selected and given an informed consent form defining the participants' research study parameters, expectations, and rights. Lastly, I described the study's purpose and obtained consent from the selected participants before interviewing.

Participation

Upon receipt of their response and consent to participate in the interview, I scheduled 45–60-minute semistructured interviews with the participants. Following the Interview Guide (see Appendix C), which served as the protocol for the semistructured interviews, verbal consent (see Appendix D) was audio-recorded at the beginning of each interview. I employed a standardized interview protocol, ensuring the alignment of semistructured interview questions with the research questions and the critical elements of the UTAUT framework. The Interview Protocol Refinement Framework, created by Castillo-Montoya (2016), guided each interview.

Data Collection

The research study collected data through semistructured interviews. Each 45-60-minute interview was transcribed accurately using the online transcription service Otter.ai. This tool facilitated in-depth exploration and theme identification by providing automated live summaries, recording, reviewing transcripts, and generating a list of keywords for the coding process (Rubin & Rubin, 2005). Interviews were scheduled and conducted during the summer and winter of 2024. If initial recruitment results had insufficient participants, additional participants would be recruited from my colleagues who met the study's criteria.

Participants received their transcribed interview responses within one week, enabling them to confirm the accuracy and intent of their statements. This member-checking process served as an external validation method to ensure the credibility of the raw data (Birt et al., 2016). As a follow-up, each participant was invited to meet with the researcher to address any potential misconceptions from their interview transcripts. Additionally, participants were invited to a debriefing conversation after the interview to further confirm the raw data's confirmability (Lincoln et al., 1985).

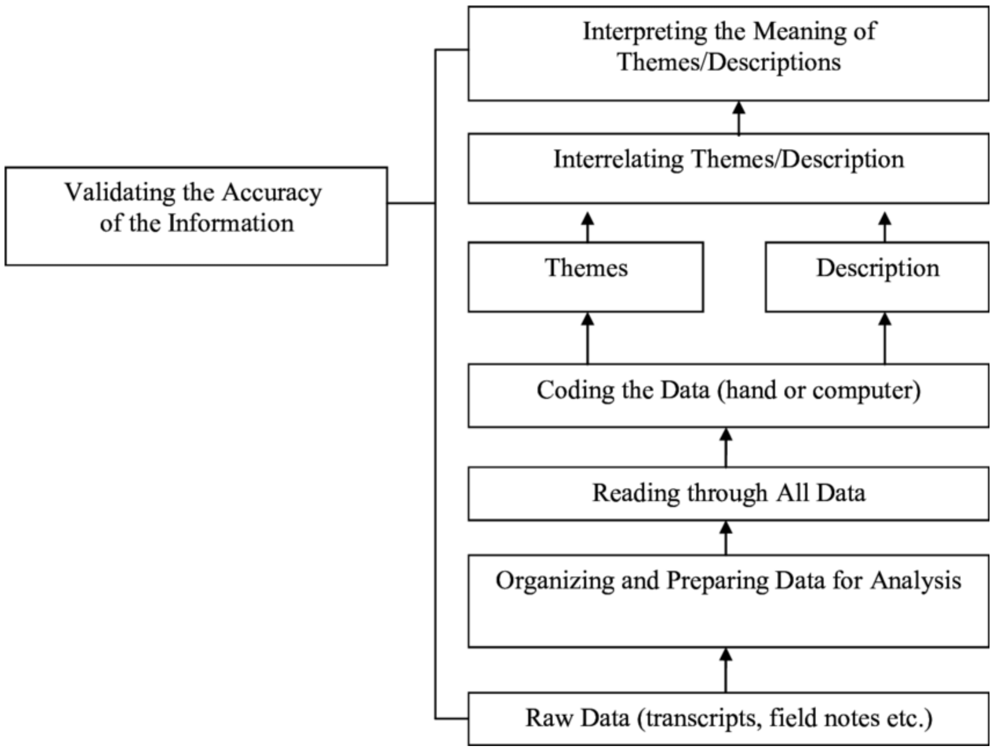
Data Analysis Plan

I employed the core principles of inductive analysis in applied qualitative research by continuously comparing data to discern distinct categories (Patton, 2015). Following the framework proposed by Creswell and Creswell (2023), I first organized my data, subsequently generating categories, themes, and patterns from the transcripts. I then coded the data, assessed the arising insights, explored alternative interpretations, and drafted the results (see Figure 4). I concurrently analyzed the data as I gathered it, allowing me to understand emerging categories better, focus on critical areas, manage the data volume, and efficiently address any information gaps.

I used inductive content analysis (ICA) to examine textual data, like transcripts or written documents. The main goal of ICA is to summarize individual texts in a dataset without predetermined content items (Vears & Gillam, 2022). Unlike quantitative content analysis, which focuses on tallying instances or establishing statistical correlations, ICA prioritizes understanding the underlying meanings in the dataset. It shares similarities with thematic analysis, such as coding text segments and identifying similarities across documents (Kyngäs, 2020). Ultimately, the analysis was refined through iterative coding by comparing documents and repeating coding procedures, uncovering new codes, and ensuring a comprehensive analysis.

Figure 4

Data Analysis in Qualitative Research. The 6-Step Strategy for Qualitative Data Analysis by Creswell and Creswell (2023)



Note. This figure outlines the data collection process, Creswell and Creswell (2023) proposed for qualitative interview data analysis, which I followed for the study. Figure 4 is used with permission via license: Creative Commons Attribution-NonCommercial-No Derivatives 4.0 International.

Discrepant Cases

Dobakhti (2013) analyzes the discussion sections of qualitative and quantitative research articles in applied linguistics to identify differences in how findings are presented and commented on. The study reveals that quantitative articles tend to feature more elaborate and distinct steps for commenting on findings, a difference attributed to the distinct epistemological foundations of each research paradigm. By actively seeking out and incorporating such contradictory evidence, I intended to minimize bias, enhance the understanding of the phenomenon under study, and present a more realistic and credible account. Discussing supportive and contradictory data strengthens the validity and credibility of the research findings, allowing for a more comprehensive and nuanced understanding of the complex social and political world being studied (Broesch et al., 2020). Employing diverse participants and settings in the research design contributed to the study’s credibility.

Identifying disconfirming evidence and alternatives can be a powerful verification procedure during data collection and analysis (Booth et al., 2013). It involves a systematic search and critical data analysis to challenge the emerging categorization or explanation (Assarroudi et al., 2018). Researchers must consider alternative possibilities, examining data confirming challenges and disconfirming emerging findings. This was achieved through purposeful or theoretical sampling methods. Lincoln et al. (1985) referred to this as negative case analysis, intending to continuously refine the emerging categorization, hypothesis, and theory until it fits all cases. If any discrepant cases arose during data collection and analysis, detailed information would be addressed in Chapter 4.

Issues of Trustworthiness

In this research study, I prioritized establishing trustworthiness to ensure the credibility of my qualitative research. Drawing from established frameworks, I ensured that my findings were credible, transferable, dependable, and confirmable, paralleling quantitative research's notions of validity and reliability (Saldaña, 2021). I used thick descriptions of the semistructured interviews to represent the secondary world language teachers' perspectives comprehensively and authentically. Recognizing the evolving standards of rigor in qualitative research, I meticulously detailed my methodological approach and logic, ensuring clarity and transparency for the readers and stakeholders of my study.

Credibility

I gathered information from multiple sources to promote the credibility of my research study on secondary world language teachers' perspectives on gamification-based assessments. An internal validation check was to code the interview data to identify recurring themes preliminarily. Subsequently, the UTAUT and Krashen's SLA theory were employed to categorize and derive themes from the findings (Venkatesh et al., 2016; Krashen, 1982). Prolonged engagement, member checks, saturation, reflexivity, and peer review validated the evidence and presented a comprehensive understanding of the phenomenon (Creswell & Creswell, 2023). Member checking involved sharing transcribed interview responses with participants to confirm the accuracy and intent of their statements, serving as an additional external validation method (Birt et al., 2016).

Detailed descriptions within the interview guide provided contextual accounts of the settings to establish credibility (Chana, 2022; DeJonckheere & Vaughn, 2019). The data analysis process was transparent and well-documented, allowing for reproducibility and validation by other researchers (Belotto, 2018; Rodgers et al., 2008). Systematically describing the research design, data collection methods, and data analysis procedures enhanced the study’s credibility and trustworthiness (Lincoln et al., 1985). Incorporating discrepant cases in the research strengthened the validity and credibility of the findings, ensuring a more comprehensive understanding of the phenomenon under study and preventing bias or context-specific limitations (Maxwell, 2022). Utilizing a qualitative approach allowed for thorough exploration and understanding of gamification in language learning. I aimed to ensure the qualitative validity of the study by integrating information from multiple sources, conducting internal validation checks, and using established theories to categorize and derive themes (Ravitch & Carl, 2019). This approach enhanced the research's credibility and provided a comprehensive understanding of the impact and limitations of gamification-based assessments in language learning.

I gathered information from multiple interviews to promote the credibility of the research. An initial validation check of the interview data and repeated findings of the same themes were discussed with an external auditor. Using an external auditor to review the entire project, unfamiliar with the researcher or the project, can provide an objective assessment of the project throughout the research process or after the study (Creswell & Creswell, 2023). Similarly, I shared the transcribed interview responses with participants, allowing them to confirm the accuracy and intention of their statements. Correspondingly, I frequently sought input from colleagues or mentors to review and challenge my findings, interpretations, and potential biases. Throughout my research journey, I kept a reflexive journal documenting my reflections, decisions, and biases to ensure transparency. The resulting audit trail is an internal validation of the trustworthiness of the research findings to ensure credibility.

Transferability

This research study explored the perspectives of secondary world language teachers regarding integrating gamification-based assessments into their instructional practices. A fundamental aspect of this investigation lay in the concept of transferability, which emphasized the extent to which the findings can be applied across diverse educational contexts and demographic groups. In their 2024 article, Stalmeijer et al. explored the idea of transferability in qualitative research and how findings from one study can be meaningful in another setting. They suggested a more nuanced approach by breaking the concept down into three distinct dimensions: applicability, resonance, and theoretical engagement, which gives researchers a richer framework for discussing the potential impact and relevance of their work. Although the research focus may appear specific, the chosen qualitative methodology provided a robust framework for delving into the underlying concepts and phenomena, enabling insights of broader relevance within language education (Biggs et al., 2021).

Ensuring the transferability of findings necessitated a meticulous approach to participant selection. By leveraging national and local networks within my professional learning community, the study aimed to assemble a diverse cohort of secondary world language educators. Each participant represented a unique perspective, contributing to the richness of perspectives and experiences essential for capturing the multifaceted nature of the phenomenon under investigation (Drisko, 2024).

Additionally, the study employed a narrative approach characterized by rich, thick descriptions to enhance the transferability of findings. These descriptions served as a conduit for elucidating the intricacies of the research context, participant demographics, and the nuances of data analysis procedures. By meticulously documenting each facet of the research process, the study endeavored to transcend the confines of its immediate context, resonating with educators and scholars across diverse settings and demographics.

Central to this endeavor was an unwavering commitment to comprehensive documentation, which underscored the transparency and rigor of the research process. The research study aimed to foster a collaborative scholarly discourse marked by inclusivity and universality by disseminating detailed findings and methodological insights. By bridging disciplinary boundaries and cultivating a community united by a shared commitment to advancing language education, the study aspired to make a meaningful contribution to the broader educational landscape.

Dependability

I used qualitative data analysis software to demonstrate how the keywords and themes emerged from the interview data and improve the findings’ dependability.

O'Kane et al. (2019) suggest that computer-aided qualitative data analysis software (CAQDAS) techniques can support transparency, enhancing trustworthiness by their inability to be biased. I used Atlas.ti and Microsoft Excel to facilitate keyword searches within the semistructured interview data, aligning with the research questions. O'Kane et al. (2019) argued that computer-aided qualitative data analysis software (CAQDAS) can resolve the lack of transparency often found in inductive research, thereby increasing the trustworthiness of a study's findings. The authors propose and illustrate a series of specific CAQDAS techniques and checks that give researchers a practical language to clearly report their analytical process and demonstrate rigor. Similarly, I used CAQDAS to determine code frequencies, aiding in the inductive analysis of the data. By combining word and code frequencies, Atlas.ti was an additional method for ensuring reliability by checking the initial coding for consistency (O'Kane et al., 2019). Utilizing CAQDAS techniques to explore the data by interpreting the text, coding, and clarifying the codebook, checking coding, and studying patterns within the textual and coded data was an additional corroboration of the data.

Dependability in qualitative research refers to the extent to which the study may be replicated in similar conditions (Stenfors et al., 2020). I intended to provide sufficient information so that another researcher can follow the same procedural steps to address dependability issues. Additionally, I audio-recorded and took notes during the interviews. During the member-checking stage, I confirmed that the transcribed interviews and my interpretations are consistent with the participants' responses.

Confirmability

In qualitative research, researchers must self-reflect and acknowledge the biases and perspectives they bring to the study (Gil-Acirón, 2022). This reflexivity fosters an open and transparent narrative that resonates with readers. In the study, I explicitly discussed how my gender, cultural background, personal history, and socioeconomic status may have influenced my interpretation of the findings (Palaganas et al., 2017). Such self-awareness and transparency enhanced the confirmability and credibility of the research findings by helping readers better understand the contextual factors that shape the researcher's understanding of the phenomenon under investigation (Perera, 2019). Ultimately, this approach contributed to a more nuanced and reliable exploration of secondary world language teachers' perspectives on gamification-based assessments.

Ethical Procedures

Based on Walden University's ethical standards and APA guidelines on human subjects' research, the study meticulously addresses various aspects of participant treatment, data management, and ethical considerations. Institutional permissions and approval from the IRB were sought and documented; approval #is 06-27-24-1042609, ensuring compliance with ethical standards and regulatory requirements. This entailed obtaining approval for the research proposal and providing relevant IRB approval numbers for the completed dissertation, aligning with Walden University's protocols and APA guidelines (American Psychological Association, 2020). The recruitment documents (see Appendices A & B) were thoroughly vetted with Walden professors and classmates.

Ethical concerns associated with participant recruitment were diligently addressed to uphold principles of transparency and voluntary participation, consistent with all guidelines on informed consent. Initial approval to conduct a research study within a local school district was requested and approved by Walden's IRB. All recruitment materials provided clear and comprehensive information about the study's objectives, procedures, risks, and benefits, while measures were implemented to prevent coercion or undue influence during the recruitment process.

Participants were provided with informed consent before beginning the study. Consent was facilitated by an audio recording of the detailed Walden University IRB consent form outlining the study's purpose, procedures, confidentiality measures, and participants' rights (see Appendix B). This process adhered to IRB ethical guidelines, ensuring participants are fully informed and empowered to make voluntary decisions regarding their participation (American Psychological Association, 2020). Similarly, ethical considerations about data collection prioritize participant privacy and risk minimization, with all data securely stored on password-protected computers and pseudonyms used to maintain confidentiality. Consistent with IRB guidelines, data will be securely deleted after five years post-data collection to uphold confidentiality and participant rights. Furthermore, the study did not include other ethical issues, such as potential conflicts of interest or conducting research within one's work environment. The incentive for participation was ethically justified and administered, aligning with IRB ethical principles. Any emerging ethical concerns during the research process were promptly addressed in consultation with the dissertation committee, reflecting a commitment to transparent communication and adherence to ethical standards. Through these measures, the study upheld the integrity and validity of research outcomes while safeguarding participant welfare and rights.

Summary

Chapter 3 outlined the basic qualitative approach adopted to address the research problem of minimal use of gamification-based assessments in secondary world language courses. The research questions focused on understanding teachers' perspectives on the benefits and challenges of gamification-based assessments in secondary world language courses. Using semistructured interviews, the chosen basic qualitative research methodology emphasizes teachers' construct of meaning, enabling in-depth exploration of their interactions with gamification, deeply rooted in their values, beliefs, and identities. Chapter 3 covered the research design, questions, setting, participant selection, and my role as the researcher. It also detailed the interview data collection and analysis methods, concluding with insights into the study's trustworthiness and pertinent ethical considerations. Leveraging semistructured interviews, I aimed to obtain comprehensive accounts of the teachers' experiences, capturing the nuances and intricacies of their perspectives.

Chapter 4: Results

This qualitative research study sought to explore secondary world language teachers' perspectives on the benefits and challenges of using gamification-based assessments. The following research questions guided this study:

RQ1: What are secondary world language teachers' perspectives on the benefits of using gamification-based assessments?

RQ2: What are secondary world language teachers' perspectives on the challenges of using gamification-based assessments?

A basic qualitative methodology was chosen for this study to explore teachers' perspectives of gamification-based assessments in secondary world language classes using semistructured interview questions. This chapter presented a thematic analysis of the semistructured interviews, coding strategies, and member-checking for this study. The study results will also be presented, including demographics, data collection and analysis processes, and evidence of trustworthiness.. Finally, a detailed analysis of the results and alignment with the study's theoretical framework will be included.

Pilot Study

A pilot study was conducted with three veteran teachers to examine the feasibility of using gamification-based assessment in secondary education. The study mirrored the recruitment and data collection research to assess methodological validity (Creswell & Creswell, 2023). The findings from the pilot study informed refinements to the interview guide, allowing for more precise questioning and data analysis. Data transcription and preliminary theme identification were facilitated by Otter.ai, which provided live summaries, keyword generation, and transcript annotation. Additionally, qualitative analysis was conducted using both hand coding and the software Atlas.ti to ensure a thorough examination of emerging patterns.

Using an inductive analysis approach (Patton, 2015), data were systematically reviewed, categorized, and coded to identify key themes (Thomas, 2006). This iterative process enabled refining interview questions, identifying critical themes, and managing data volume (Leavy, 2014). The analysis highlighted several benefits of gamification-based assessment, including increased student engagement, motivation, and personalized learning. The approach was particularly beneficial for second-language acquisition, providing immediate feedback and individualized skill assessment. However, the pilot study also revealed significant challenges, such as the time-intensive nature of implementation, difficulties monitoring student progress, and the need for additional teacher training.

Although the pilot study results were not included in the final research, they provided valuable insights into the effectiveness and limitations of gamification-based assessment in secondary education. Notably, students' familiarity with gaming emerged as a critical factor in successful implementation. The pilot study reinforced the potential of educational technology as an alternative assessment method while highlighting the necessity of professional development and structural support for teachers.

Settings

Participants in this study were recruited through my professional learning network, which included reputable academic organizations focused on instructional design and language education. As a member of the Association for Talent Development (ATD), the Association for the Advancement of Computing in Education (AACE), the International Society for Technology in Education (ISTE), and the Association for Educational Communications and Technology (AECT), I leveraged these organizations' forums to distribute my research flyer (Buckley et al., 2021). Additionally, my affiliations with the American Council on the Teaching of Foreign Languages (ACTFL) and the Center for Applied Linguistics (CAL) provided access to a broad network of language educators across various educational levels (Abbott, 2018). Posting the recruitment flyer within these professional organizations ensured that participants were secondary world language teachers, reducing the likelihood of selecting individuals outside the target demographic.

Beyond academic associations, I utilized online communities and social media platforms to expand participant recruitment. As an active member of various forums where language educators discussed teaching methodologies and instructional strategies, I posted recruitment materials on Facebook and Twitter groups dedicated to second-language teaching and educational technology. To enhance visibility, I incorporated relevant hashtags related to language education, gamification, and teaching methodologies while tagging influential organizations and individuals who could assist in sharing the post. Additionally, I employed snowball sampling, a non-probability technique in which initial participants referred other eligible individuals to the study (Hennink & Kaiser, 2022; Patton, 2015). Recruitment began with a standardized email invitation (see Appendix B) sent to prospective participants, who were encouraged to share the study with colleagues (Rubin & Rubin, 2005). This strategy facilitated a diverse and well-rounded selection of secondary world language teachers, ensuring the study effectively addressed its research questions.

Demographics

A total of 12 secondary world language teachers participated in the study through semistructured interviews. The participants had varied levels of teaching experience; seven had over 10 years of experience in the classroom, while five were relatively new to the profession. This range of expertise provided a diverse perspective on implementing gamification-based assessment in language instruction. The participants were taught in various educational settings, including public and charter schools, reflecting a broad spectrum of institutional contexts. Their familiarity with gamification tools also varied.

Nine participants reported extensive prior experience using gamified tools in their classrooms and integrating them into their instructional strategies. In contrast, three participants were exploring these tools for the first time, offering insights into both the adoption process and the challenges faced by educators new to gamification. This variation in experience contributed to a comprehensive understanding of how gamification-based assessment influences language teaching across different levels of expertise and institutional settings. Table 2 shows that most participants included veteran teachers who have taught for over 11 years. Veteran teachers’ perspectives may be vastly different than those of new teachers. A potential limitation of the study is that no new teachers were included in the sample size. For example, one teacher with over 11 years of experience mentioned being on task forces, which allowed them to use gamification in the classroom. Another teacher, relatively new to gamification, said, “I love that I was able to just open my mind and see the benefits of gamification.”

Table 2

Participant Demographics of Experience, Ethnicity, and Subject(s) Taught

Participant pseudonym	Teaching experience	Ethnicity	Language taught
001	Over 11 years	White	Spanish
002	Over 11 years	White	Spanish, French
003	Over 11 years	White	Spanish
004	Over 11 years	White	Spanish
005	Over 11 years	White	Spanish, French, Other
006	Over 11 years	White	French
007	2–5 years	Mixed or biracial	Spanish
008	6–10 years	Asian	Spanish, Chinese
009	Over 11 years	Hispanic or Latino	Spanish, Other
010	6–10 years	Hispanic or Latino	Spanish
011	Over 11 years	Mixed or biracial	Spanish
012	6–10 years	White	Spanish, French

Data Collection

There were 12 participants from whom the semistructured interview data were collected. Data was collected through semistructured interviews, each lasting approximately 20–60 minutes. The interviews were conducted online via Google Meet and audio-recorded. Participants were informed of the study’s purpose and their rights, and verbal consent was obtained before recording. All participants were allowed to answer in their target language or English and were offered the opportunity to review the transcripts for accuracy. Participant 008 chose to interview in their target language, Spanish, and the transcripts were translated into English. The participant member verified that the English translation was accurate. There were no variations in the data collection from the plan presented in Chapter 3. No unusual circumstances were encountered during data collection.

Interviews

The interviews were recorded between July 2024 and January 2025 (see Table 3). All interviews were conducted within the specified timeframe of 20–60 minutes. Participants 001 and 002 were interviewed on July 24, 2024, at 12:37 PM and 3:06 PM, respectively. Interviews 003-008 occurred at regular intervals, monthly. During the 2024 winter school break, no interviews were conducted to respect the participants' time. The final interviews of participants 009-012 were conducted January 12-15, 2025.

Table 3

Interview Dates and Times

Interview	Date	Time (start)	Duration
001	July 24, 2024	12:37 PM	40:07
002	July 24, 2024	3:06 PM	50:52
003	August 14, 2024	1:26 PM	30:07
004	August 18, 2024	7:26 PM	32:41
005	August 29, 2024	5:18 PM	29:24
006	September 2, 2024	12:40 PM	29:37
007	October 14, 2024	8:32 AM	33:02
008	October 16, 2024	1:35 PM	22:26
009	January 12, 2025	3:00 PM	19:08
010	January 12, 2025	7:18 PM	21:15
011	January 13, 2025	1:28 PM	19:39
012	January 15, 2025	9:04 AM	24:19

Interview Guide

The interview guide (Appendix C) was the basis for the semistructured interviews. An interview guide comprising 10 questions was designed to elicit teachers' perspectives on gamification-based assessments. Questions 1-5 focused on benefits

(RQ1), while 6-10 addressed challenges (RQ2). Prompts were included to encourage in-depth responses, and follow-up questions were incorporated to clarify participants' experiences (Rubin & Rubin, 2005). Non-verbal cues were documented to assist in data interpretation. Following contemporary approaches to qualitative data collection, member checking was employed, with participants verifying the accuracy of their transcribed comments (Vnucko & Klimova, 2023). This process served as a secondary data source for validation purposes.

Data Analysis

Thematic analysis involved inductive coding to identify recurring themes and patterns in the raw data. The codes and categories were not predetermined but identified during the analysis phase of the coding process (Bingham, 2023). The data analysis followed rigorous qualitative methods, beginning with the transcription of the audio recordings. Inductive coding was then applied to identify recurring themes and patterns directly from the text. As Zhang and Hasim (2023) recommended, this approach allowed themes to emerge organically rather than imposing predetermined categories for gamification studies.

The data analysis for this study used thematic inductive analysis to examine the interview data. The process began with transcribing the audio recordings of the interviews using Otter.ai. Then, inductive coding was applied to the transcribed data. This method allows me to directly identify recurring themes and patterns from the text. The analysis aimed to understand the perspectives of secondary world language teachers on gamification-based assessments through a careful review of their interview responses.

The first coding round involved closely reading the transcripts to identify initial codes. This process was inductive, meaning codes were derived from the data rather than pre-determined (Charmaz, 2017). These initial codes were then grouped into categories and themes that emerged from the data. The first coding round also utilized the Atlas.ti codes provided by the QDAS. The Atlas.ti codes were used to create major themes. Throughout the analysis, attention was paid to confirming and disconfirming evidence to ensure a comprehensive understanding of teachers' perspectives.

Table 4

Atlas.ti Codes

Collapsed theme	Frequency	Note
Student engagement	63	Increased Engagement, Active Engagement, Fun Learning Engagement, Excitement, and Participation.
Student motivation	57	Includes Motivation, Increased Motivation, Desire to Learn, Self-Motivation, and Motivation Boost.
Interactive learning	41	Includes Interactive Activities, Interactive Practice, Interactive Learning Environment, and Interactive Games.
Language acquisition	31	Language Acquisition, Quick Language Acquisition, Language Learning, Vocabulary Acquisition, and Pronunciation Improvement.
Immediate feedback	22	Includes Immediate Feedback, Personalized Feedback, Quick Feedback, and Real-Time Feedback.
Community building and collaboration	18	Includes Community Building, Peer Learning, Teamwork, Group Work, and Connecting Students.
Learning outcomes	17	Includes Improved Performance, Student Learning Impact, and Improved Skills.
Fun and enjoyable learning	15	Includes Fun Learning, Fun Review, and Enjoyable Experience.
Gamification elements	14	Includes Gamification Elements, Points, Rewards, Bragging Rights, and Competition.
Implementation barriers (challenge)	22	Includes Material Durability, Material Accessibility, Cost Concerns, and Technology Issues.
Cultural and parental barriers (challenge)	14	Includes Parental Misconceptions, Parental Understanding, and Cultural Differences.
Assessment challenges (challenge)	18	Includes Assessment Diversity, Fairness, Norming, and Alignment Challenges.
Resistance to change (challenge)	11	Includes Resistance to Change, Traditional Methods, and Administrative Pushback.
Technology challenges (challenge)	10	Includes Technology-Averse, Data Analysis Burden, and Game Selection Difficulties.
Instructional planning challenges (challenge)	9	Includes Planning Burden, Time Constraints, and Familiarity Issues.

Coding of the qualitative data was conducted using Atlas.ti Qualitative Data Analysis Software (QDAS). Open coding was initially used to label all participant responses regarding the benefits and challenges of gamification-based assessments. Due to the high volume of codes and considerable overlap in wording, a secondary coding cycle was conducted wherein similar or synonymous codes were collapsed into broader parent categories to improve clarity and interpretability. For instance, all codes related to “Increased Engagement,” “Active Engagement,” and “Engagement Through Fun” were collapsed under the parent category “Student Engagement.” Similarly, all codes referring to “Language Acquisition,” “Vocabulary Acquisition,” and “Pronunciation Improvement” were grouped into the broader theme “Language Acquisition.” Challenges such as “Material Durability,” “Cost,” and “Technology Issues” were merged into an overarching category labeled “Implementation Barriers.” This process of thematic collapsing ensured the results were comprehensive and conceptually organized, providing a clearer foundation for analysis and discussion of key findings aligned with the study’s research questions.

Table 5

Atlas.ti Collapsed Codes

Collapsed theme	Frequency
Student engagement	63
Student motivation	57
Interactive learning	41
Language acquisition	31
Immediate feedback	22
Implementation barriers	22
Assessment challenges	18
Community building and collaboration	18
Learning outcomes	17
Fun and enjoyable learning	15
Cultural and parental barriers	14
Gamification elements	14
Resistance to change	11
Technology challenges	10
Instructional planning challenges	9

Note. Collapsed Themes from Gamification-Based Assessments Coding. The table presents the frequency distribution of the main themes identified from open coding, grouped and collapsed for conceptual clarity.

The analysis process was iterative, with ongoing refinement of codes and themes as patterns emerged. This approach aligns with current methodological recommendations for qualitative research in educational technology for reaching saturation (Daher, 2023). Member-checking was also a critical part of the analysis, where the participants were asked to verify the accuracy of the transcripts and interpretations. This was done to ensure the credibility and validity of the study's findings.

Data analysis involved a systematic coding and categorization process, employing the CAQDAS Atlas.ti 14 to facilitate data organization into thematic clusters. This process was grounded in participants' verbatim accounts, with initial descriptive codes as the foundation for subsequent interpretive analysis. Each code represented a distinct data segment, capturing specific ideas or concepts articulated by the participants, thereby clarifying the content and context of the interviews (Saldaña, 2021). Descriptive coding enabled the grouping and organization of data to reflect the teachers' lived experiences more closely, revealing emergent patterns in their responses.

To manage the substantial volume of data, Atlas.ti was utilized to support electronic data organization and coding. This software facilitated the creation of nodes corresponding to each descriptive code, thereby streamlining the sorting and retrieval of specific passages across multiple interviews. Simultaneously, I manually coded printed transcripts, employing highlighters to mark relevant excerpts visually. This dual approach, combining digital and manual methods, aimed to maintain a close connection with the data while leveraging the analytical capabilities of Atlas.ti to enhance coding efficiency.

The descriptive coding process entailed highlighting and tagging key phrases or statements that captured prominent ideas or key points, such as desensitization to anxiety, motivation, implementation challenges, technology proficiency, learning environment, improved language acquisition, active engagement, vocabulary acquisition, misconceptions, continuous practice, curriculum enhancement, learning outcomes, lack of resource autonomy, individualization, classroom community, competition, or student engagement. The following codes referred to RQ1: desensitization to anxiety, motivation, learning environment, improved language acquisition, active engagement, vocabulary acquisition, continuous practice, curriculum enhancement, learning outcomes, individualization, classroom community, competition, or student engagement. The following codes refer to RQ2: implementation challenges, technology proficiency, misconceptions, and lack of resource autonomy.

The CAQDAS Atlas.ti was instrumental in organizing the data into thematic clusters, with initial descriptive codes providing a foundation for subsequent in-depth analysis. This approach facilitated the identification of patterns within participants' responses. Throughout the analytical process, I maintained an audit trail through reflexive journaling, documenting each analytical decision and its rationale to ensure transparency and rigor (Nowell et al., 2017). This audit trail allowed me to document my biases and critically examine their potential influence on the coding process to promote objectivity and transparency in making thematic coding decisions. The audit trail also tracked the evolution of my analytical thinking throughout the research process.

This multi-faceted approach facilitated the construction of a wide-ranging framework of data categories that reflected the twelve teachers' perspectives while avoiding premature imposition of interpretations. Analyzing the data included descriptive coding, which was critical in preparing the data for subsequent interpretive coding and thematic development. This systematic approach to data management allowed the emerging insights and concepts to evolve authentically from the data (Saldaña, 2021). A rigorous, multi-component approach using descriptive and interpretive coding created a rich structure for analyzing the data, which reflected teachers' perspectives and enabled insights to arise organically from the data.

Discrepant Cases and Nonconfirming Data

While most participants viewed gamification-based assessments positively, there were instances of divergent perspectives that merit discussion. The following participants expressed concerns about technological dependence and potential student distractions. In reference to Research Question 2 (Challenges), including “Technological Barriers” and “Potential for Student Distraction/Misuse,” the following quotes from the interviews express perspectives related to these concerns:

Concerns Related to Potential for Student Distraction/Misuse

- “It is sometimes hard to keep them focused on the actual lesson when the game elements are so exciting.” (Interview 001)
- “I’ve seen students prioritizing earning points over understanding the language.” (Interview 001)
- “Some of the games are not secure. So sometimes you have extra people jumping in, or you have kids that are manipulating them.” (Interview 001)
- “I’ve noticed that some of my students get so caught up in the points, badges, and leaderboards that they lose focus on the actual language content.” (Interview 3)
- “And the kids that do not have the staying power with a game, they will quit and give up, and so I have to play certain games or set my parameters for other games at a lower rate so that they can accomplish those kinds of things.” (Interview 012)

Concerns Related to Technological Dependence/Barriers

- "We have constant issues with our school's Wi-Fi and a limited number of devices. It can be really frustrating trying to implement gamified assessments when the technology isn't reliable." (Interview 009)
- "If you don't have the technology, it's a 30-minute process." (Interview 001)
- "You definitely would need, like, a site-based technician to make sure everything is moving smoothly, and it was secure for the students answering and things of that nature." (Interview 002)
- "Yeah, those are all actually challenges. Sometimes the Wi Fi goes down, you have this amazing quiz set up for your kids, and you go to turn it on, and it doesn't turn on, and the Wi Fi is down, and you have to adjust and shift quickly." (Interview 010)
- "Again, depending on your school, I've had to make minor adjustments, no matter what it was, whether it be using a large monitor screen like I currently have, which is new to me this year. So, I had to learn how to do gamification using that platform." (Interview 012)

These perspectives provide important counterpoints to the predominantly positive view of gamification and align with cautionary findings in recent literature about the potential negative effects of gamification on learning focus (Zhang & Hasim, 2023). The application of discrepant cases also helped to increase confirmability further by illustrating that the results were not selectively reported or subject to researcher bias. The audit trail maintained during the research allowed other researchers to trace the research process and check the accuracy and consistency of the findings. By integrating reflexivity, theoretical underpinning, external inspection, and illustrative documentation, the researcher made sure that conclusions derived from the study were credible, transferable, reliable, and verifiable, thereby enhancing the total trustworthiness of the research.

Evidence of Trustworthiness

Several strategies were employed to enhance the trustworthiness of the coding process, including an audit trail, checks for credibility, transferability, dependability, confirmability, and member-checking. The audit trail facilitated tracking my thought processes and coding decisions, documenting emerging insights. Furthermore, member checking was conducted by sharing a summary of the recordings with participants to validate the accuracy of interpretations (Birt et al., 2016). This step ensured that the codes and categories of the study correctly reflected the participants' experiences and perspectives.

Credibility

Credibility in the study was established through a combination of systematic data collection, thorough analysis, and multiple validation strategies. Data were collected from 12 secondary world language teachers through semistructured online Google Meet interviews between July 2024 and January 2025. Each interview lasted approximately 20–60 minutes and was audio-recorded with participants' informed consent. Participants were briefed on the study's purpose and their rights before the interview, and they were given the option to respond in their target language or English. Participant 008 was interviewed in Spanish, and the transcript was subsequently translated into English. The participant verified the accuracy of the translation through member checking, which served as an important external validation method (Birt et al., 2016).

The data analysis process was conducted systematically to enhance credibility. After transcription, initial coding was performed to identify recurring themes. UTAUT and Krashen's SLA theories were applied to categorize and derive themes from the data (Krashen, 1982; Venkatesh et al., 2016). Prolonged engagement with the data allowed the researcher to gain a greater awareness of the participants' perspectives, strengthening the credibility of the findings (Creswell & Creswell, 2023). Peer debriefing was utilized to validate the analysis process by consulting with colleagues and mentors who provided feedback on coding consistency and thematic development. To provide inter-coder reliability, I reviewed the data and findings to objectively assess the study's methodological rigor and findings numerous times (Creswell & Creswell, 2023).

To further enhance credibility, I maintained an audit trail that included a reflexive journal throughout the study. According to Rodgers et al. (2008), an audit trail in qualitative research is a thorough collection of documentation, such as fieldnotes and reflexive journals, that provides a mechanism to retroactively assess the research process, justify changes in the emergent design, and address issues of rigor and trustworthiness in the findings. This journal documented the researcher's reflections, decisions, and potential biases, ensuring transparency and minimizing the influence of subjectivity. Thick, rich descriptions were provided within the interview guide and data analysis to offer contextual insights into the research setting and participant responses (Chana, 2022;

DeJonckheere & Vaughn, 2019). Discrepant cases were also included in the analysis to provide a balanced representation of the data and to strengthen the validity of the conclusions by addressing any inconsistencies (Maxwell, 2022). The audit trail was established to document each stage of the research process, ensuring that the study was reproducible and transparent, further reinforcing credibility (Rodgers et al., 2008).

Transferability

Transferability was addressed by providing comprehensive, contextual descriptions of the research setting, participant demographics, and data collection procedures. The study explored the perspectives of 12 secondary world language teachers regarding the use of gamification-based assessments in instructional practices. While the study focused on a specific educational context, the qualitative methodology allowed for extracting broader insights that could be applied to similar educational settings.

Participant selection was designed to maximize diversity and representation. The sample included 12 secondary world language teachers recruited through professional networks at both the national and local levels. This ensured a wide range of perspectives, contributing to the richness of the data and increasing the likelihood that the findings would apply to other educational contexts (Drisko, 2024).

The sample included participants from varied backgrounds and professional experiences, which enhanced the depth and breadth of the study's findings. The study employed a narrative approach involving detailed, thick descriptions of participant experiences, settings, and data analysis procedures. These rich descriptions allowed other researchers and educators to evaluate the relevance of the findings to their specific contexts (Biggs et al., 2021). Additionally, comprehensive documentation of the research design, data collection methods, and analysis process ensured that other researchers could assess the applicability of the findings to different educational settings. This commitment to transparency and detail increased the transferability of the study's conclusions.

The study's findings were intended to contribute to a broader understanding of gamification-based assessments in secondary world language education. The study aimed to foster a broader scholarly discourse and encourage the replication of similar research in diverse educational contexts by disseminating the results and methodological insights through scholarly publications and professional forums.

Dependability

Reliability was attained by utilizing stable and replicable research procedures—computer-aided qualitative data analysis software (CAQDAS) such as Atlas.ti. I utilized Atlas.ti and Microsoft Excel to facilitate systematic data analysis. This involved keyword searching, coding, and pattern searching within semistructured interview data. Computer-aided qualitative data analysis software (CAQDAS) ensured that coding remained objective, systematic, and transparent (O'Kane et al., 2019). Comparing frequencies of words and codes helped the researcher confirm consistency in the coding process, which assisted in the reliability of the findings.

Dependability was also enhanced through detailed documentation of the research conducted and the design. I created an audit trail that entailed keeping records of interview transcripts, coding processes, and analytical decisions. An audit trail is crucial for establishing trustworthiness in basic qualitative research. It provides a transparent and systematic record of the research process, enhancing dependability and confirmability. Dependability, analogous to reliability in quantitative research, is strengthened by meticulous documentation of data collection, coding, and analysis procedures, allowing for external review of the analytical pathway (Nowell et al., 2017). Scholars agree that an audit trail promotes rigor and accountability, enabling critical evaluation of the research process and bolstering confidence in the findings (Birt et al., 2016; Saldaña, 2021). This process helps establish a logical connection between the data and the conclusions, ensuring the findings are not influenced by researcher bias or inconsistencies. Furthermore, an audit trail enables other researchers to replicate the study or apply similar methods in different contexts, thereby improving the transferability of the research. It also reinforces confirmability by allowing independent reviewers to verify that the findings are rooted in the data rather than the researcher’s interpretations (Lincoln et al., 1985). This allowed the study to be replicated using the same conditions, increasing the findings’ validity (Belotto, 2018). According to Ahmed (2024), establishing trustworthiness in qualitative research is necessary to offer methodological solidity. It can be achieved through the four pillars of credibility, transferability, dependability, and confirmability, and supported through techniques such as triangulation, thick description, audit trails, and reflexive journaling. Additionally, interviews were recorded on audio, and notes were taken in the field during the interview to capture non-verbal data and contextual information.

Member checking was carried out at the time of data verification. After transcription, the participants had to read their responses and confirm the correctness and meaning of their answers. This ensured that the data accurately reflected the participants' opinions and eliminated misinterpretation (Birt et al., 2016). Peer debriefing was also employed to check the validity and consistency of the coding and interpretation process. Supervisors and peers were consulted to challenge and critique the thematic analysis to make the findings dependable.

Confirmability

Confirmability, paralleling objectivity, is bolstered by demonstrating that interpretations are derived from the data rather than researcher bias, evidenced by detailed records of data excerpts, coding decisions, and the evolution of themes (Appendix H). Confirmability was attained through a reflexive approach and openness to data analysis and interpretation. Reflexive journaling occurred throughout the study; personal remarks, decisions, and potential biases were noted. I maintained this account in the audit trail so that study findings were evidence-based, independent of the researcher's viewpoint (Gil-Acirón, 2022).

To enhance confirmability, I openly acknowledged how the participants' experience, cultural background, and working life may have affected their interpretation of the findings in each interview. Such openness and self-awareness allow readers to observe the contextual conditions influencing the research process (Palaganas et al., 2017). Established theoretical models, including UTAUT and Krashen's theory of second language acquisition, provided a systematic basis for understanding the data so that the findings were rationally deduced from the data (Venkatesh et al., 2016; Krashen, 1982).

Member Checking

The member-checking process, a vital step in ensuring the credibility and trustworthiness of qualitative research, was implemented in this study, involving 12 interviews transcribed using Otter.ai. The dissertation draft explicitly details the plan to ensure the participants' true voices are accurately represented in the research. Following the 20–60-minute semistructured interviews, the intention was to use Otter.ai for accurate transcription, a tool noted for its live summaries, transcript recording and review, and keyword generation to aid in the coding process. The software's capability to edit transcripts and annotate emerging themes was also highlighted. A crucial step involved sending the transcribed interview responses to each participant within one week, allowing them to verify the accuracy and intent of their statements. This procedure is corroborated by mentions in several interview excerpts where participants were informed that they would receive a copy of the transcript to make any necessary changes, additions, or edits. This member-checking process was designed to serve as an external validation method to bolster the credibility of raw data.

Allowing participants to act as co-interpreters of their own data ensured that the researcher's understanding aligned with their intended meaning (Ravitch & Carl, 2019). This aligns with the fundamental goal of qualitative research, which is to capture nuanced and complex individual perspectives. Accordingly, Lincoln et al. (1985) provide detailed accounts for transferability and confirmability through debriefing, highlighting credibility through techniques like member checking. Additionally, Ravitch and Carl (2019) speak to the importance of qualitative methodology and the benefits of member checking for validation, underscoring it as a key strategy for data accuracy.

Furthermore, Birt et al. (2016) refer to member checking as an external validation method for raw data credibility. According to Toma (2006), the context of verifying the accuracy of participants' comments emphasizes direct participant verification of transcribed content. Similarly, Soysal and Türkmen (2024) proposed that applying a hermeneutic lens to qualitative inquiry can reveal significant potential for reassessing and refining common validation methods, particularly the member-checking strategy. This review argues that a hermeneutic perspective offers greater explanatory power and a more holistic understanding, serving as a tool for thinking that can improve the robustness of how researchers validate qualitative data. This member-checking process was directly applied as planned in the dissertation proposal by sharing the Otter.ai transcripts with all 12 interview participants and allowing them to review, amend, and clarify their statements. This was done to ensure that the final analysis accurately represented each participant's experiences and perspectives concerning gamification-based assessments in their world language classrooms, thereby significantly enhancing the credibility and confirmability of the qualitative research findings.

Results

This chapter presents the findings of a qualitative research study exploring secondary world language teachers' perspectives on the benefits and challenges of using gamification-based assessments. The study employed a basic qualitative methodology and gathered data through semistructured interviews with twelve participating teachers.

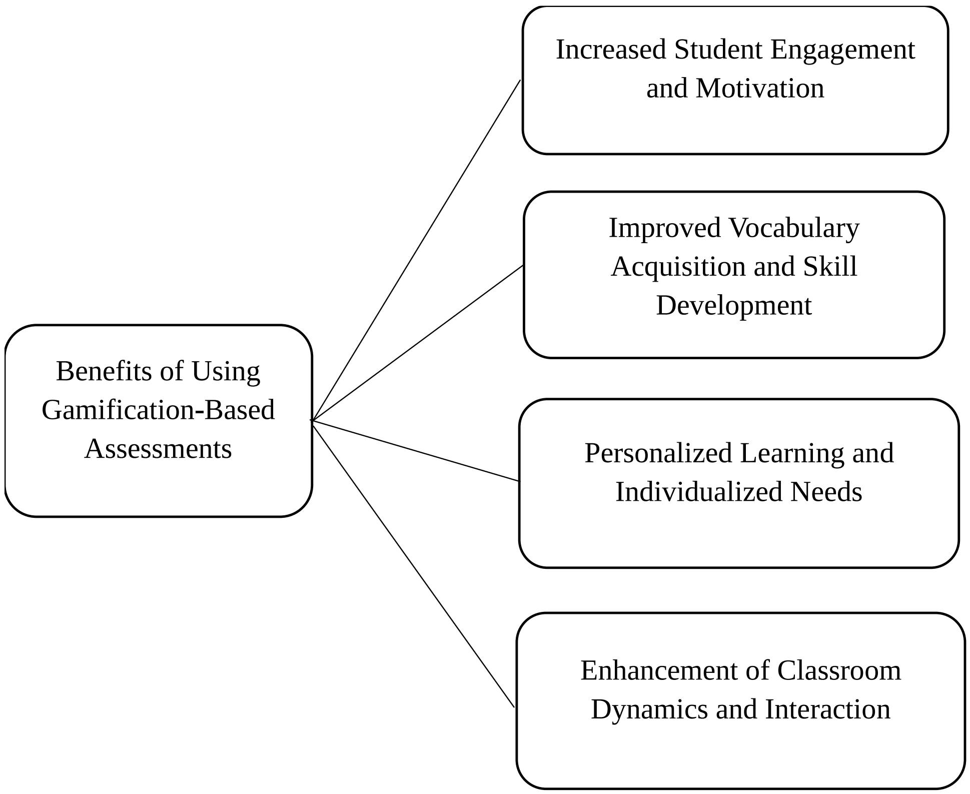
The analysis focused on identifying recurring themes related to the perceived benefits (RQ1) and challenges (RQ2) of integrating gamification into language assessments. The results are detailed in the following sections based on thematic analysis of the interview data.

Perceived Benefits of Using Gamification-Based Assessments (RQ1)

The interview data from the twelve secondary world language teachers revealed the following benefits associated with the use of gamification-based assessments: (1) increased student motivation and engagement, (2) improved vocabulary acquisition and development, (3) personalized learning, (4) individualized needs, and enhancement of classroom dynamics and interaction. These findings highlight the potential of gamification to impact student learning experiences and outcomes positively.

Figure 5

Perceived Benefits of Using Gamification-Based Assessments (RQ1)



Theme 1: Increased Student Engagement and Motivation

All 12 participants (100%) identified this as a prominent benefit. Teachers reported that gamification significantly enhanced student engagement and motivation in language learning. The interactive and visually appealing nature of gamified tools was noted for captivating students and making learning more enjoyable. It was perceived to foster a positive interaction with the content and contribute to a positive classroom culture and community. Competitive aspects, such as leaderboards and points, were reported to energize students, increasing their excitement and motivation compared to traditional assessment methods. This approach could potentially reduce student tension and boost their confidence due to the familiarity of the format. Participants felt that gamification made learning feel less like traditional testing. Gamified activities were described as fostering active student participation and activating the learning desire of introverted students, making them more comfortable expressing themselves. Improved student outcomes and more positive attitudes towards language learning were also observed. Participant 004 stated that gamification allowed students to synthesize their learning and provided them with more tools, resulting in summative assessments that were “much more interesting”. Participant 005 noted that the students were “excited and proud,” requesting gamified activities again and reviewing their notes in preparation.

Participant 001 described how gamification made repetition easier and more fun, allowing students to practice without realizing how often they did it. She noted that it fostered excitement and enthusiasm for engaging with the material. Gamification also gave students a voice and a way to feel connected, making the often-tough task of learning a world language more manageable, especially for non-heritage speakers who might otherwise feel discouraged. She also mentioned that the inherent competitiveness, particularly when playing against the teacher, made them “all in,” leading them to forget they were learning or practicing and become absorbed in the game. Immediate feedback was also identified as a key motivator. Furthermore, she stated that gamification “just makes it more fun,” which is crucial for students today who may not engage if something is not enjoyable. Being engaged leads to wanting to be involved.

Participant 002 stated that gamification “excites most students”. She shared experiences across different student populations, noting that even the hardest students respond positively to games. The desire to achieve something is universal, and engagement does not solely depend on language proficiency.

Participant 003 emphatically stated that engagement would “skyrocket” with gamification. He also mentioned that including “learning to love the language” is important, suggesting that gamification helps foster this affection.

Participant 004 observed that gamification “increased participation” and “increased again, engagement” again. She saw students “more engaged, enthusiastic about learning”. A key insight was that “we’re learning without even having the feeling that we’re learning,” as students think they are just having fun while still taking in important information. Gamification helps them “memorize in a fun and engaging way” and makes them “excited about the vocabulary, the grammar”. She linked motivation and self-motivation to a “will to be more successful”, noting that motivated kids are less likely to have behavioral issues because they are engaged. Immediate scores within games also provide quick feedback, helping students see areas for improvement and setting goals, thereby enhancing motivation.

Participant 005 noted that kids “get really excited about their name being the first one up” or being the fastest to answer. Specific game features like those in Kahoot or Blooket generate excitement, such as being the fastest or getting a streak of correct answers. She found that “points are really effective,” not necessarily for prizes but because students like tracking their improvement. The game format itself motivated students to participate, even in activities they might otherwise resist.

Participant 006 found that “students’ motivation was much higher”. The competitive element of games “sent motivation through the roof,” as students could see what others were doing and were motivated to “work even harder and faster”. Based on past observations, she believed gamification is “going to promote engagement” and that “students are very, very engaged”.

Participant 007 observed that gamification “Attracts just everybody,” and students get “very worried” if they might miss the chance to participate due to technical issues. He saw that students are “much more energetic”. When students are put in groups for games, they “actually interact,” unlike in more traditional settings. The students are highly active and energized when using gamification.

Participant 008 stated, "Gamification makes learning more enjoyable, engaging, and fun for both students and teachers”. It “adds color, enthusiasm, and an interactive element to the learning process”. Ultimately, it “can help students stay motivated and engaged in language learning”.

Participant 009 noted that it “Encourages more positive student interaction and engagement with the content” and “Provides students with a choice and makes learning more enjoyable”. It also “Increases peer-to-peer collaboration and engagement outside the classroom”, with some students being “really interested in the outside of the classroom” activities facilitated by gamification.

Participant 010 believes that “gamification makes learning more engaging and less boring and keeps children’s attention”. She felt students would be “more engaged in the assessments than in a typical paper-and-pencil”. Observing its success in another teacher's class, she noted that students were "excited and they are up and learning and talking," and this positive engagement transferred to her own classroom. The simple fact that "gamification, the kids like it" is a significant factor. Gamification provides opportunities for repeated practice, which students can do independently, making it a dynamic tool.

Participant 011 highlighted that students "are having fun" and "are interacting with their peers," even those who might not otherwise interact. They are "shouting," "exciting, excited," and simultaneously interacting. Through the engaging nature of games, students do not focus on the time or the device itself but on the fun, which can lead to an "addiction to learning".

Participant 012 observed that students "performed better as they were exposed to those words in the Kahoot setting". Competition through leaderboards in whole-class reviews "motivated" students. Gamification offered a way for students who might not excel with traditional methods "to excel", and "their own monitoring of their progress" through game elements like progress bars was "really motivating". It gives students a "buy-in" to their own education by allowing them input on which games work best.

Theme 2: Improved Vocabulary Acquisition and Skill Development

Most participants, 10 of the 12 (83.3%), identified improved vocabulary acquisition as a key benefit of gamification. Participants indicated that gamification aids in memorization and contextualization of vocabulary. For example, Participant 004 noted that gamification helps students memorize and put vocabulary into context. Participant

011 described gamification as “beneficial to vocabulary acquisition because it provides repetition and memorization of words.”

The interactive nature of gamification was frequently cited as a factor in enhancing vocabulary and grammar reinforcement, leading to improved acquisition and retention. As Participant 006 explained, gamification helps students focus on specific skills, such as verb conjugation, enabling them to use language more readily. Participant 001 highlighted that gamification makes the necessary repetition for vocabulary practice easier and more enjoyable, allowing students to practice frequently without consciously realizing the extent of the repetition. Repeated exposure to words, immediate feedback, and the ability to make connections significantly improve vocabulary retention and recall for both speaking and writing. Additionally, gamification helps students accept and engage with vocabulary review activities.

Participants also described specific ways that gamification supports vocabulary acquisition. Participant 003 reported using tools like Quizlet and Blooket, and described integrating new vocabulary sets into gamified sessions to facilitate the building and reviewing of learned words. He also noted that these programs provide data on student performance. Participant 004 observed that gamification, through tools like WordWall or Gimkit, supports memorization and contextualization by presenting words visually and audibly. The repetition and multisensory approach allow students to practice pronunciation and memorize vocabulary, making vocabulary quizzes more interesting and increasing their vocabulary.

Furthermore, participants believe that gamification leads to quicker vocabulary acquisition due to its immediate feedback (Participant 006) and may positively influence long-term retention (Participant 007). Participant 009 considered vocabulary acquisition particularly suitable for gamification, noting that its effectiveness depends on game design. Participant 010 suggested that gamification aids vocabulary acquisition by presenting it in a game format, offering repeated practice, and incorporating visual and auditory elements. Participant 011 described tools like Kahoot, Lexia, and Speakable and how they facilitate repetition and memorization and help students understand and retain vocabulary. Participant 012 observed improved student performance in vocabulary acquisition with Kahoot, attributing this to the inherent repetition in gamified methods.

In summary, the findings indicate that secondary world language teachers perceive gamification as a valuable tool for enhancing vocabulary acquisition and skill development. The teachers believe that the repetition, contextualization, and engaging nature of gamified activities contribute to improved memorization, retention, and application of vocabulary.

Theme 3: Personalized Learning and Individualized Needs

All twelve participants (100%) perceived gamification as beneficial for personalized learning and addressing individualized needs. Participants emphasized the value of the efficient and immediate feedback provided by gamified tools for enhancing student learning. As Participant 001 stated, “Gamification provides immediate feedback, which encourages students. Feedback and leaderboards are key elements in language development.” Participant 004 noted, “Games allow students to assess themselves.” This immediate feedback was seen as crucial for fostering student self-reflection on their language performance.

Participants reported that gamification could facilitate differentiated instruction, allowing teachers to tailor assessments to individual student needs and skill levels, catering to diverse learners and learning styles, and addressing test or assessment anxiety by offering alternative, less stressful environments. They also suggested that data-driven insights from gamified lessons could potentially inform more personalized interventions. Participant 001, for example, described gamification as offering a differentiated and individualized approach and felt it could be a powerful tool for differentiation and individualization in the classroom. Participant 002 described how gamification could be tailored to a particular student's needs, such as addressing test anxiety or accommodating physical or mental abilities, enabling students with ailments or learning impairments to succeed in ways often not possible with traditional assessments. Participant 003 felt that gamification could reach diverse learners and learning styles. He discussed how tools could be set up with mastery paths, directing students who missed specific words or areas to reinforcing activities, allowing them to focus only on what they needed to relearn. He added that gamification provides opportunities for students who need more practice and mentioned that AI can tailor content.

The ability of gamification to provide students with a clear understanding of their progress and needs was also highlighted. Participant 004 observed that the immediate score provided by games helps students assess themselves, see how they are doing, understand their strengths and weaknesses, and set goals. She also noted that teachers can group students based on their performance data from gamified assessments to facilitate differentiated instruction and tailored assessments. Participant 005 stated that gamified activities can be assigned to students individually, allowing them to work at their own pace, and shared an example of assigning games individually to students with test anxiety who would shut down in a whole-class competition. Participant 006 appreciated that gamification provides immediate feedback and allows students to try again and believed that some games include algorithms that can adjust difficulty based on student performance. Participant 007 suggested that gamification could activate the learning desire of introverted students, offering a personalized opportunity.

Additional participants identified the potential of gamification to address individualized needs. Participant 008 identified addressing individualized needs as a benefit of gamification-based assessments. Participant 009 noted that gamification provides individualized services and considered individualized learning a benefit. Participant 010 highlighted that gamification allows teachers to easily assign different tests or games to different students, manipulating the content to suit different reading levels or needs, using pictures or just words, fill-in-the-blank or multiple-choice formats, and tailoring questions or answers while focusing on the same topic or unit. Participant 011 stated that gamification tools allow introverted or shy students to feel freer to express themselves more privately. Participant 012 observed that students can work independently at their own pace and revisit activities multiple times. He found that allowing students to choose from different game formats or versions within the same platform improved their buy-in compared to being forced into a single method. He also noted that gamification offered a way for students who might not excel with traditional methods to succeed, and that the self-monitoring of progress using game elements like progress bars was very motivating.

In conclusion, the findings indicate that secondary world language teachers believe gamification offers significant benefits for personalized learning and addressing individualized needs. The key advantages of this approach are immediate feedback, opportunities for differentiation, and support for diverse learners.

Theme 4: Enhancement of Classroom Dynamics and Interaction

All 12 participants (100%) viewed gamification as fostering a more positive classroom culture and community. A core finding across interviews was that gamification boosts student engagement and motivation, fundamentally reshaping classroom dynamics. Participant 001 noted that gamification “amps up their enthusiasm” and helps students “be okay with the kind of review necessary.” Participant 002 similarly stated that it “excites most students and helps them feel engaged,” while Participant 010 added that it “makes learning more engaging and less boring and keeps children’s attention.” Participant 006 agreed that it “is going to promote engagement” and that students are typically “very, very engaged.” Participant 008 described gamification as a “different fun activity” full of “enthusiasm.” This increased engagement creates a more positive atmosphere and dynamic interaction with the content. The competitive aspects, such as leaderboards and points, energized students and fostered a sense of competition that motivated them. Participant 006 noted that students seeing what others were doing motivated them to work harder and faster. Participant 005 observed that students “get really excited about their name being the first one up" or being the fastest, making competition a motivating aspect.

Beyond just engagement, gamification was perceived to promote peer interaction and collaboration. Several sources emphasize that learning is more effective when students interact more with their environment, including peers, and that social interaction is important in language acquisition. Gamification, through interactive elements, supports experiential learning through peer-based social interactions. Gamification-based assessments are interactive assessment tools that foster active student participation, collaboration, and critical thinking. Participant 004 noted that tools like Gimkit have options for students to collaborate with a partner, practicing interpersonal skills, and that she makes students quiz each other on platforms like Kahoot or Quizizz to encourage speaking and interaction in the target language. Participant 011 found that gamified activities encouraged students to interact with their peers, sometimes even those who usually do not interact despite sitting beside each other. Participant 012 observed that whole-class review games motivated students when they competed with one another and found it fun to see students' different points of view on language through the games. Participant 007 specifically mentioned that games and quizzes made students interact, especially when put in groups, and described working together in groups on sections of a test as "very beneficial and positive." Participant 009 also noted that gamification can increase "peer-to-peer collaborating." Some gamified activities also "commonly foster collaboration and incentive within a team setting."

Gamification can also foster a sense of classroom community and shared experience. Participant 001 felt that some games allowed the class to set rules or limits together and allowed students to write questions, adding to their buy-in and a sense of community. Participant 002 stated that gamification “unifies” the class and “evens the playing field,” allowing students to learn together and even find learning partners. Gamification can reach beyond classroom walls to draw families into the life of the school community. Its interactive design supports sociocultural approaches to language learning, recognizing social interaction, collaboration, and shared meaning-making as essential to acquisition. By making learning more engaging, gamified activities simultaneously address the social context that meaningful communication requires.

Furthermore, gamification can provide a voice for students and make the learning environment more inclusive. Participant 001 felt gamification “has also given them a voice, like by them being an active participant, being able to play in it.” Allowing students to choose games or write questions adds to their sense of autonomy and choice. For students who are introverted or shy, gamification tools can allow them to feel “freer to express themselves more confidentially” compared to traditional methods, where they might be called out in front of peers. This helps create more inclusive learning experiences that can meet the needs of diverse students.

Gamification reshapes the learning landscape by making it more fun and dynamic. Participant 001 stated that gamification “makes it more fun,” which is crucial for engaging students today. The game-like format leads to more positive interactions with the content. Some administrators even see the value, with one calling it “edutainment” because it adds “funness to learning something,” leading to more engaged students. This dynamic environment enhances students’ language skills and can potentially lower the affective filter, reducing anxiety and promoting a low-stress learning environment conducive to acquisition.

However, some participants expressed concern that students could get too caught up in game elements like points and leaderboards and lose focus on the language content itself, suggesting a potential for negative classroom instructional dynamics if not managed. While competition is a benefit, Participant 005 observed that the pressure of whole-class competition could cause some students to “shut down.” These observations suggest that balancing gamified approaches with traditional methods is important to ensure gamification does not overshadow essential language skills.

Other Reported Benefits

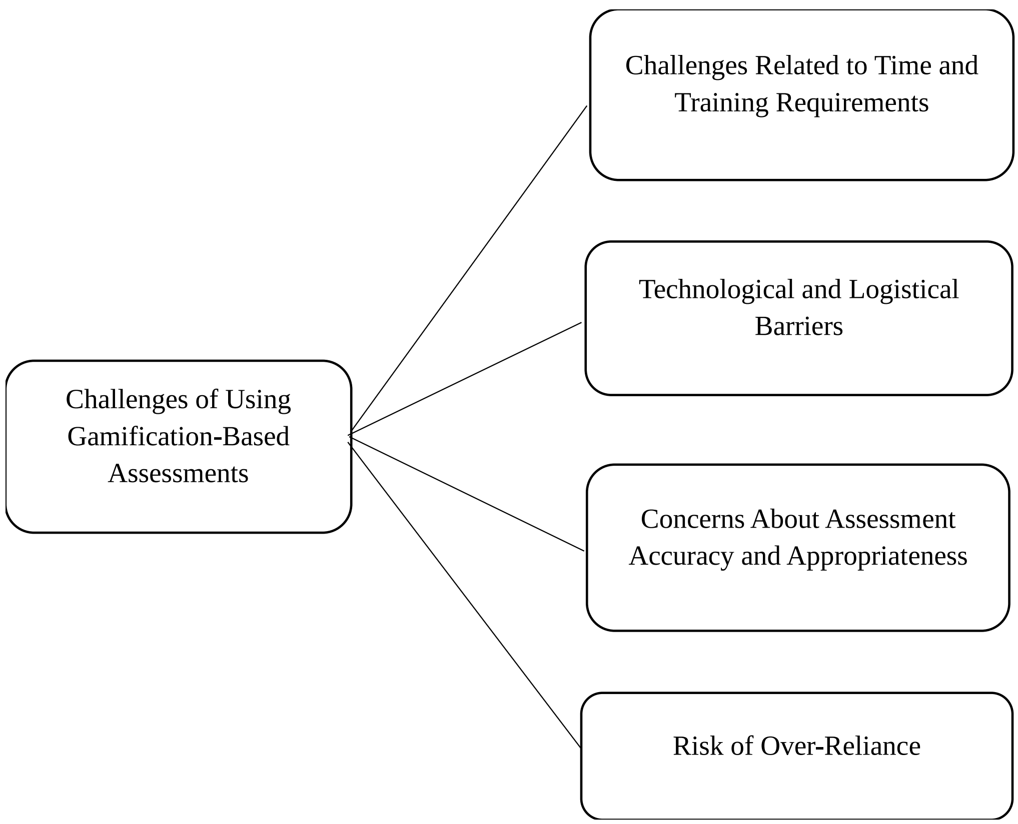
Beyond the core themes, the study's findings indicated that gamification could yield time savings for teachers following the initial development of assessments. Participants perceived gamification as transforming the pedagogical environment by adding color, enthusiasm, and interactive elements to the learning experience in ways that traditional methods do not provide. Gamification was considered capable of fitting into all parts of lesson planning according to Participant 004 and aligning with language curriculum standards (Participant 007). When used in conjunction with traditional assessments, it could enhance evaluation.

Perceived Challenges of Using Gamification-Based Assessments (RQ2)

Alongside the reported benefits, teachers identified the following significant challenges related to the implementation of gamification-based assessments: (1) challenges related to time and training requirements, (2) technological and logistical barriers, (3) concerns about assessment accuracy and appropriateness, and (4) the risk of over-reliance.

Figure 6

Perceived Challenges of Using Gamification-Based Assessments (RQ2)



Theme 1: Challenges Related to Time and Training Requirements

Nine of 12 participants (75%) highlighted challenges related to time and training. The initial creation of gamified assessments required significant time investment, work, and input. Individually inputting questions was perceived as burdensome. Many teachers need professional development and training to use gamification tools effectively. Participant 001 specifically mentioned a “lack of training” as a reason some teachers had not used gamification. Effective use was thought to require specific pedagogical approaches.

A recurring theme identified by participants was that creating and implementing gamified assessments proved time-consuming and labor-intensive. Preparing these assessments frequently required more time than traditional assessment methods. Participants expressed concerns about the effort required to research, select, and integrate appropriate gamification tools into their instructional practices. Participant 001 explained, "It takes a lot of time and energy to find quality gamified resources that align with my curriculum and learning." According to Participant 003, creating the specific materials needed can be "a lot of work" on the "front end," with the initial setup being described as difficult (Participant 010). Tailoring assessments from year to year or from class to class adds additional workload. However, once created, these resources can become time-savers because they remain available for future use (Participant 001). Careful design requires considerable time investment, such as ensuring questions are readable and error-free. One teacher suggested that implementing gamification might require additional planning time, potentially necessitating "a second prep" period (Participant 010). These challenges align with the Effort Expectancy construct in the UTAUT framework, which addresses the perceived ease of using a technological system.

The need for professional development and training emerged as a significant theme centered on teacher preparedness. Effective implementation of gamification-based assessments requires specific pedagogical knowledge and technological skills. Some teachers acknowledged they had not implemented gamification due to insufficient training. The findings suggest a need for targeted professional development in gamification and indicate that schools should invest in resources to equip educators with the necessary competencies. Participant 006 explicitly stated they "would have to learn how to do them" and would need "some good teacher staff, professional development." This participant also noted a preference for one-on-one or small group training while acknowledging that this approach might be "burdensome" for colleagues who provide the instruction. Participant 007 expressed that teachers need both time and support to learn about the various available games, noting that new platforms continually emerge and identifying those best suited for language learning requires ongoing professional learning. Participant 001 indicated that district-level professional development could alleviate some barriers, stating "without a doubt" that knowledge becomes power in this context. Collaborative sharing of resources and expertise among teachers was also identified as beneficial, potentially reducing creation time significantly.

Beyond training, teachers also noted implementation-related logistical challenges (Participants 001 and 009). Access to technology and classroom setup were discussed as potential difficulties by participant 002. Implementing these tools might require site-based technical support to ensure smooth operation and security. Financial support for subscriptions to useful gamified platforms was also mentioned as a needed resource.

Logistical challenges, including access to technology and classroom setup, relate to the Facilitating Conditions factor in UTAUT. While less explicitly tied to time and training in the provided text, the effort and time needed to navigate these logistical hurdles are implicitly linked to the overall implementation burden.

Some teachers perceived these aspects as burdensome or complex. However, participant 004 offered a contrasting view, suggesting that the workload is manageable for those willing to get started and stay organized. Administrative policies or time constraints can also function as organizational barriers, highlighting the need for administrative support for effective implementation, according to participant 007.

Theme 2: Technological and Logistical Barriers

Nine of the twelve participants identified technological and logistical issues. Drawing on participant interviews and existing research, secondary world language teachers consistently identified technological and logistical barriers as significant impediments to implementing gamification-based assessments. This theme was identified by nine participants (75%), and commonly referenced issues included inconsistent access to reliable internet, device availability, system outages, and classroom management challenges. These concerns align with the Facilitating Conditions construct from the UTAUT, emphasizing that educators are more likely to adopt innovative technologies when institutional support and resources are in place (Venkatesh et al., 2016).

Participant 001 expressed persistent frustration due to unreliable Wi-Fi and difficulty getting students online. They also noted that district-level safety protocols and system outages, such as Canvas crashing, often rendered gamification tools unusable.

Additional concerns included forming teams and preventing external users from infiltrating the games, highlighting security as a management concern. Participant 002 underscored the need for an on-site technician to manage infrastructure and support. They explained that high system demand can overload servers and suggested that gamification platforms be hosted on a localized intranet for better stability and cybersecurity. This aligns with recent studies indicating that school-based technology ecosystems reduce dependency on external networks (Bhati et al., 2025).

Teachers frequently encounter significant logistical and implementation challenges with gamified assessments, even in technologically advanced settings. While some participants in this study, like Participant 003, noted that the transition to one-to-one device initiatives has eased specific access issues, and Participant 004 described a well-equipped school with tools like screen sharing for monitoring, these resources do not eliminate all hurdles. Participant 004 still emphasized the need for teacher proficiency and appropriate classroom configuration for successful gamification. Other teachers, such as Participant 005, pointed to persistent concerns with peripheral tools like speakers, device charging, and classroom setup, even in districts that have invested in modern technology like Smart Boards and student devices. These findings suggest that while foundational technology is crucial, its optimal integration requires addressing a broader range of practical considerations (Al-Rahmi et al., 2022).

Beyond hardware and Internet access, teachers identified more nuanced and persistent obstacles. Participant 006 reported strong Wi-Fi, yet highlighted student forgetfulness (e.g., leaving laptops at home) as a frequent disruption. Participant 007 noted recurring issues with slow login processes and internet lag, emphasizing that these seemingly minor technical glitches can significantly impede the flow of gamified assessments. Furthermore, a critical financial constraint emerged, with many teachers, like Participant 007, resorting to personally funding subscriptions to gamified learning platforms. This individual financial burden, often overlooked in institutional planning, is a substantial barrier to broader and more equitable implementation. Sambo et al. (2025) conducted a systematic review of 43 studies, aiming to discover the challenges contributing to the integration of gamification into educational systems. The review findings indicated that the obstacles included cultural misunderstandings of gamification's role and value, technological barriers such as costs and low digital literacy, and institutional issues, including inadequate teacher training and supportive policies. These challenges underscore that effective technology integration extends beyond availability, requiring robust support systems and comprehensive planning to overcome technical and human-centric impediments with a comprehensive human-centered model intended to address the lack of theoretical grounding and contextual consideration in gamified digital education research.

Participant 009 described similar frustrations. Despite having one-to-one access, persistent Wi-Fi issues and unreliable student devices undermined implementation. Their statement that “the Wi-Fi does nobody” was interpreted to mean that internet access was frequently dysfunctional or unavailable. Participant 010 echoed these concerns, describing how Wi-Fi outages during gamified lessons disrupted instruction. Additional issues included uncharged or malfunctioning Chromebooks, which required students to share devices and compromised the learning experience.

Participant 011, in contrast, reported no significant technological or logistical issues, suggesting a variance in infrastructure or support between school sites. Participant 012 shared that minor adjustments were needed based on the hardware available, such as using monitors instead of projectors. They noted an initial learning curve in operating gamified tools and mentioned that while Chromebooks were generally sufficient, some students preferred using smartphones. A specific challenge involved managing student-created Kahoot games, which required instructional time to teach students how to share their games effectively and resolve minor technical issues.

These findings reinforce the critical role of institutional infrastructure and teacher readiness in effectively integrating gamification. While some teachers operated in well-supported environments, others faced persistent technological disruptions that compromised their ability to implement gamified strategies. Even in settings with one-to-one devices, the lack of stable internet, peripheral tool reliability, and student device preparedness posed daily hurdles. This disparity highlights systemic inequities in educational technology deployment and underscores the need for district-level planning, ongoing teacher training, and dedicated technical support to ensure equitable implementation (Gomez et al., 2022; Venkatesh et al., 2016). Furthermore, aligning gamified platforms with school-based intranets and subsidizing platform subscriptions could alleviate financial and cybersecurity concerns, which are steps that directly support the Facilitating Conditions aspect of the UTAUT model.

Theme 3: Concerns About Assessment Accuracy and Appropriateness

Assessment accuracy and appropriateness emerged as a significant concern among secondary world language teachers when implementing gamification-based assessments. This theme was identified by 11 participants (91.7%) and focused on the limitations of gamified formats in effectively evaluating the full spectrum of language proficiency. Participants highlighted that while gamification can be engaging and beneficial for certain tasks, it is not always well-suited to assess deeper or more complex communicative competencies. These limitations align with research cautioning against overreliance on game-based metrics for summative evaluation (Su & Cheng, 2015; Su & Zou, 2024).

Multiple participants emphasized that language skills, especially those tied to productive communication, are difficult to assess accurately through gamification. Participant 006 explicitly noted the “difficulty in assessing writing skills” through game-based methods, implying that open-ended written expression is not easily captured by the typically binary or multiple-choice structures common in gamified tools. This view is consistent with existing literature, which underscores that automated or gamified scoring mechanisms often fail to account for the complexity of written syntax, organization, and voice in second language learning (Kessler, 2018).

Participant 006 also discussed the “difficulty in assessing... interpersonal, and presentational modes of communication through gamification.” These communication modes, which involve real-time dialogue or formal oral presentations, require a nuanced evaluation of pronunciation, fluency, and content coherence, which gamified platforms typically do not accommodate. This concern points to a critical gap in many gamification tools, which may prioritize speed or accuracy in vocabulary recall but lack the sophistication needed for robust communicative assessment.

Furthermore, participants questioned the validity of using gamification as a standalone tool for summative evaluation. Participant 006 stated that it was difficult to “accurately assess a full summative task solely through gamification,” reinforcing the belief that gamification may be more appropriate for formative assessments or reinforcement activities. Similarly, concerns were raised about students being able to “game” the system, achieving high scores in a gamified environment without demonstrating substantive language proficiency. Though not all participants expressed this sentiment with direct quotes, Participant 007 highlighted that assessments relying on simplistic formats such as yes/no questions often fail to reveal the depth of understanding. They stated that students “can’t just have a yes or no question,” advocating for more rigorous item design even within gamified assessments.

Participants overwhelmingly supported a balanced approach to assessment: one that integrates gamified tools with traditional language evaluation methods. Participant 006 stressed “the necessity of balancing gamified approaches with traditional teaching methods,” acknowledging that each has distinct strengths. Similarly, Participant 011 referenced traditional methods in their teaching practice, suggesting that gamification is best used to supplement rather than replace established pedagogical tools. Participant 006 further noted that “gamification-based assessments can enhance the evaluation of students’ language proficiency when used in conjunction with traditional assessments to meet standards.”

The findings suggest that while gamification can enhance engagement and formative assessment, it must be thoughtfully integrated with traditional strategies to ensure that essential language learning skills, particularly in writing and oral communication, are accurately and comprehensively assessed. This insight supports broader research advocating for hybrid assessment models in language education, where gamified tools serve as valuable, but limited, components of a holistic approach.

Theme 4: Risk of Overreliance

The risk of over-reliance on gamification-based assessments emerged as a significant challenge and concern among the participants. Ten participants (83.3%) explicitly cautioned against excessive dependence on gamified approaches, emphasizing the importance of integrating traditional assessment methods to ensure comprehensive evaluation of students’ language proficiency.

Participants perceived the potential for overuse and emphasized that relying too heavily on gamification could detract from core language skills and diminish the overall effectiveness of instruction. The concern centered on the notion that gamification, while engaging, should function as a supplementary tool rather than the primary mode of assessment.

Participant 006 explicitly discussed the importance of balance, stating, “Teachers just need to understand that they must do more than just gamification assessment.” They further cautioned that overuse of gamification could lead it to “lose their luster,” indicating a diminished impact over time. Participant 006 also warned that using gamification as the primary or sole assessment method could displace more appropriate formats for evaluating writing skills, such as assessments requiring students to write complete paragraphs. They concluded that gamification-based assessments should be part of a diverse teaching strategy and not relied upon exclusively.

This need for balance was echoed across participant reflections and thematic analysis. Several teachers expressed reservations about the accuracy and completeness of gamification-based assessments and highlighted the importance of integrating them with more traditional approaches. These concerns were rooted in ensuring that essential language skills, especially writing, speaking, and reading comprehension, were not overshadowed.

Participant 011, although supportive of the motivational benefits of gamified tools, identified strongly with traditional instructional methods. They stated, “I am very old school when talking about learning language,” and emphasized that students “need to write on paper, read, and talk” to develop true language fluency. This perspective reinforced the need for blended instructional approaches that respect and preserve fundamental pedagogical practices. Participant 004 also acknowledged the necessity of combining assessment modalities, noting the importance of balancing gamification with traditional assessments to support the diverse needs of all learners.

Additional Challenges Related to Gamification-Based Assessments

In addition to the major themes previously discussed, participants identified a range of supplementary challenges associated with the implementation and effectiveness of gamification-based assessments. These challenges encompassed issues such as limited support from colleagues and administrators, concerns about maintaining student engagement, risks of inappropriate content, classroom management difficulties, financial constraints, the necessity of student self-regulation, and constraints in assessing specific communicative competencies.

Lack of Institutional Support

Several participants emphasized a perceived lack of support from colleagues and administrators. Participant 004 noted that some teachers face difficulties using educational games due to limited technological proficiency or discomfort with innovative teaching strategies. Furthermore, colleagues and administrators were often described as favoring traditional pedagogical approaches, creating resistance to the adoption of gamification. Participant 008 similarly indicated that administrative and peer support are not always forthcoming, which can hinder the implementation of gamified instruction.

Participant 006 expressed concern that school leadership might discourage the overuse of gamification, particularly when it replaces diverse instructional methods. They stressed the importance of incorporating gamification as a varied teaching strategy component. Participant 007 reinforced this point by emphasizing the need for supervisory support to ensure successful implementation. Additionally, Participant 004 described reluctance among teachers rooted in a fear of the unknown and apprehension that gamified activities might lead to classroom disorder or a lack of academic rigor.

Challenges in Student Engagement and Appropriate Use

Maintaining student focus during gamified learning activities emerged as another significant concern. Participants reported that students sometimes view gamification as entertainment, failing to engage with the underlying language learning objectives. Participant 009 shared that students often become preoccupied with earning points, badges, and achieving leaderboard status, distracting them from the instructional content. Participant 006 echoed these sentiments, warning that students may interpret gamified activities as simply “fun and games,” potentially diminishing their educational value. They also noted that excessive use of gamification could result in diminishing returns, as novelty wears off.

Participant 007 highlighted structural flaws in game design, whereby students can learn to “win” without demonstrating genuine language proficiency. This concern was further supported by Participant 001, who noted in their summary the importance of preventing the misuse of game mechanics in ways that compromise learning outcomes.

Concerns About Inappropriate Content

Issues related to inappropriate student behavior during gamified activities were also mentioned. For example, Participant 007 observed that students may select offensive or inappropriate team names, posing challenges to maintaining a respectful and inclusive classroom environment.

Difficulties in Classroom Management

Classroom management during gamified instruction was another theme raised by participants. Participant 001 discussed challenges in guiding students to participate constructively in games and organizing them into teams. The need for proactive classroom management strategies was also highlighted in the summary for this participant.

Financial Constraints and Resource Limitations

Financial barriers to accessing gamification tools were cited as a practical challenge. Participant 007 noted that teachers are often required to pay for subscriptions to online game-based platforms, and institutional support for these costs is inconsistent. Participant 002 echoed this concern, identifying cost as a significant impediment, though they could adapt older materials to mitigate expenses. The summary for Participant 007 emphasized that access to gamification tools frequently depends on the availability of school resources.

Need for Student Self-Regulation

The success of gamification-based assessments was also linked to students' self-regulatory skills. While gamified platforms offer flexibility and learner autonomy, they require students to be organized and self-directed. Although no direct participant quote was available, this theme was acknowledged in the literature review and represents a relevant consideration for implementation.

Limitations in Assessing Specific Communicative Competencies

Participants also noted that gamification may not effectively support assessing specific language skills. Participant 006 mentioned challenges in evaluating writing proficiency and communicative competencies, such as interpersonal and presentational speaking. These modes of communication are essential in language acquisition and were perceived as insufficiently addressed by current gamified tools. The literature review further underscored the need for additional research on collaborative activities within gamified contexts, indicating that these platforms may not fully accommodate all forms of language interaction.

These findings highlight a complex array of logistical, pedagogical, and institutional factors that can hinder the successful integration of gamification-based assessments in language instruction. These challenges underscore the importance of strategic planning, professional development, and balanced instructional design in maximizing the effectiveness of gamified approaches.

Summary

This chapter presents the findings of the qualitative study investigating the benefits and challenges of gamification-based assessments in secondary world language classrooms. Data was analyzed using Atlas.ti Qualitative Data Analysis Software (QDAS). Open coding was applied to all responses, collapsing similar codes into parent themes. This coding process was accompanied by thematic analysis.

Coding of participant responses was conducted through an iterative process. Open coding was used to identify preliminary ideas and recurring topics. Due to the volume of overlapping codes, a secondary coding cycle was performed to collapse synonymous terms into broader parent categories. For example, codes such as increased engagement, active engagement, and engagement through fun were collapsed under the parent category Student Engagement. Similar consolidation occurred for Language Acquisition, vocabulary acquisition, and pronunciation improvement codes. Materials, technology, and cost challenges were merged under the implementation barriers. This approach improved clarity and conceptual organization, allowing for a focused analysis aligned with the study's research questions.

Chapter 4 presented the benefits and challenges that teachers experience when implementing gamification-based assessments in secondary world language classrooms. Drawing from what teachers encounter in their classrooms, these insights show how complicated it can be to weave gamified approaches into everyday teaching. Chapter 5 furthers this analysis by discussing the findings with wider theoretical and practical considerations. The chapter explains why this study matters for educational technology and second language acquisition.. The discussion subsequently connects the results to established theoretical models, including Krashen's Affective Filter Hypothesis and the unified theory of acceptance and use of technology (UTAUT), thereby deepening our understanding of the factors that influence the effectiveness of gamification.

Beyond interpreting the findings, Chapter 5 addresses the study's limitations, offers recommendations for future research, and examines the practical implications for promoting positive social change among teachers, school leaders, and policymakers. Ultimately, the chapter underscores the considerable potential of gamification as an instructional tool in language learning when implemented with intentionality and appropriate institutional support.

Chapter 5: Discussion, Conclusions, and Recommendations

This basic qualitative study aimed to explore secondary world language teachers' perspectives on using gamification-based assessments in their classrooms. This study addressed a gap in the literature regarding how gamified assessment practices are perceived and implemented by classroom educators in world language contexts. Data were collected through semistructured interviews with 12 secondary teachers and analyzed using thematic content analysis.

Key findings indicated that teachers viewed gamification-based assessments as highly engaging and beneficial for increasing student motivation, enhancing vocabulary retention, and supporting differentiated instruction. However, they also reported limitations such as time constraints, technological challenges, and concerns over the perceived validity of gamified assessments.

This chapter interprets the findings about the theoretical and conceptual frameworks, discusses the study's limitations, and provides recommendations for future research and practice. Finally, this chapter discusses how the findings can promote positive social change by promoting better, student-focused assessments in world language classes. Two guiding research questions shaped the inquiry:

RQ1: What are secondary world language teachers' perspectives on the benefits of using gamification-based assessments?

RQ2: How do secondary world language teachers perceive challenges in implementing gamification-based assessments?

The findings indicate that teachers view gamification as an engaging and effective tool that fosters increased student motivation and participation. Through qualitative analysis, I identified eight central themes: RQ1(1) increased student engagement and motivation, (2) improved vocabulary skills and acquisition, (3) personalized learning and individualized needs, (4) enhancement of classroom dynamics and interaction, and RQ2(1) challenges related to time and training for teachers, (2) technological and logistical barriers, (3) concerns about assessment accuracy and appropriateness, and (4) risk over resilience. These themes provide meaningful insight into the practical advantages and constraints educators experience when integrating gamification into their assessment methodologies.

As schools look for new ways to boost student engagement, understanding how and why gamification works in second language acquisition is more important than ever. Accordingly, this chapter is structured into several major sections. It begins by interpreting the findings about the two research questions, drawing from theoretical frameworks such as Krashen's affective filter hypothesis and the UTAUT. The chapter then includes the implications for educational practice, policy, and theory, and examines the study's limitations. It concludes with recommendations for future research and a reflective summary of the broader contributions of this investigation.

Interpretation of Findings

The findings of this study support existing literature on the motivational and instructional value of gamification in education. Participants' descriptions of increased student motivation align with prior research indicating that gamification has the potential to foster engagement and promote learning outcomes in language education (Laksanasut, 2024). The emphasis on vocabulary acquisition confirms findings by Batlle and González (2023), who noted that gamified tools improve retention and learner autonomy.

Moreover, teachers' concerns about time and training echo the organizational barriers Klock et al. (2023) discussed, showing that school support and specific professional development are crucial for success. The conceptual frameworks used in this study, UTAUT, DGBLL, and Krashen's input hypothesis, further supported the thematic results. Specifically, the alignment of gamification with perceived ease of use (UTAUT) and authentic input (Krashen) validated its classroom potential.

Research Question 1: Benefits of Gamification-Based Assessments

Theme 1: Increased Student Engagement and Motivation

All 12 participants (100%) identified enhanced student engagement and motivation as a primary benefit of gamification-based assessments. This perception strongly aligns with existing research by Dixon et al. (2022), which found that gamification significantly increases student participation in language learning activities. Teachers consistently reported that gamification made their classrooms more enthusiastic and exciting. It turned what would have been boring drills into activities that students actually enjoyed.

This unanimous perspective among participants reinforces a growing body of literature highlighting gamification's motivational power in second language acquisition contexts (Zou et al., 2021; Zhang & Crawford, 2023). Specifically, the competitive components of gamified platforms, such as point systems, leaderboards, and digital rewards, were frequently mentioned as key components of student motivation (Marín-Suárez et al., 2025). These features effectively engaged reluctant learners by fostering a sense of achievement and encouraging social participation (Chan & Lo, 2024; Qiao et al., 2024). In doing so, they supported the development of classroom communities grounded in shared goals and peer support.

The findings reflect those of earlier studies highlighting the role of competition and rewards in sustaining student motivation (Al-Khresheh, 2025; Gil-Quintana & Jurado, 2024). Moreover, recent evidence suggests that digital gamification enhances classroom energy and reduces behavioral disruptions, a significant benefit for educators working with adolescent learners (Murillo-Zamorano et al., 2021). Additionally, a systematic review by Gkintoni et al. (2024) synthesized recent empirical evidence on the efficacy of gamification for promoting physical and mental health among adolescents. These observations resonate with Krashen’s affective filter hypothesis, which posits that students acquire language more effectively in low-anxiety environments. By creating a playful and low-stress setting, gamification appears to lower affective barriers and foster conditions conducive to language learning (Baah et al., 2023; Krashen, 1982; Wang & Wu, 2020).

Theme 2: Improved Vocabulary Skills and Acquisition

Ten participants (83.3%) identified improved vocabulary acquisition as a key advantage of implementing gamification-based assessments in secondary world language classrooms. This observation is consistent with research by Vnucko and Klimova (2023), who found that digital game-based vocabulary instruction significantly enhances immediate and sustained retention of new lexical items. Participants in the present study shared practical examples illustrating how gamified tools promote vocabulary development through contextualized, repetitive, and interactive exposure.

Educators reported that platforms like Quizlet, WordWall, Gimkit, and Blooket effectively reinforced vocabulary acquisition by presenting terms in dynamic, game-like formats that maintain student interest while encouraging repeated practice (Lai, 2017). These tools were particularly noted for integrating enjoyable multimodal content, such as images, audio, and matching games, which aligns with best practices in second language vocabulary learning, as outlined by Muñoz et al. (2021) and supported by Zou et al. (2021). Integrating visual and auditory cues within these platforms creates stronger cognitive associations to facilitate deeper learning (Baah et al., 2024; Smiderle et al., 2020).

Additionally, spaced repetition in platforms like Quizlet and Blooket enhances long-term retention. This aligns with research by Alzahrani and Nor (2022) and Han (2025), who emphasize that structured review intervals and visually engaging formats improve memory consolidation in second-language learners. Han (2025) investigated the impact of single-player, multi-player, and a combination of both role-playing game types on the incidental vocabulary acquisition of 98 Chinese EFL learners. The study found that while all game-based learning groups outperformed the comparison group, the group that used both single- and multi-player games achieved the most significant vocabulary gains, suggesting that combining self-regulated and collaborative activities is most effective. Summarily, spaced learning, when delivered in a gamified context, also aligns with cognitive load theory, as it minimizes overload while maximizing recall through gradual and repeated exposure (Al-Khresheh, 2025).

Beyond simple retention, several teachers reported observable improvements in vocabulary usage during both spoken and written language tasks, suggesting that gamified tools may contribute to memorization and the meaningful application of new language (Cancino & Castillo, 2021). Jaramillo-Mediavilla et al. (2024) found that gamification supports language and vocabulary acquisition by enhancing key cognitive processes, such as knowledge retention, through repetition and contextualized practice in meaningful game scenarios. Gamification significantly boosts student motivation and engagement, which promotes the active learning necessary for skill development and is validated by a consensus in the literature on gamification's positive impact in the specific domains of language and communication (Jaramillo-Mediavilla et al., 2024). Furthermore, Alenazi (2025) investigated the impact of gamification on motivation and learning in an English as a Foreign Language (EFL) classroom and found it to be an effective pedagogical strategy evoking students' interest and learning efficacy. This experimental research ascertained vocabulary retention and grammatical accuracy to be significantly higher, and motivation levels to be greater in the students taught using gamified tasks aided by digital tools like Kahoot and Quizlet, compared to a control group (Alenzazi, 2025). These findings reflect the potential of game-based learning to scaffold vocabulary instruction and support more effective language acquisition in educational settings (Zhyhadlo, 2022).

Theme 3: Personalized Learning and Individualized Needs

All 12 participants (100%) emphasized that gamification-based assessments provide meaningful support for personalized learning by addressing students' individual needs through adaptive pathways. This finding is consistent with Seyyedrezaei et al. (2022), who demonstrated that digital environments enabling personalized learning significantly to improve second language acquisition outcomes. Teachers in the current study observed that gamified platforms allow students to proceed at their own pace, receive immediate feedback, and engage with content in ways aligned with their learning preferences.

These observations align closely with the principles of self-regulated learning, where learners monitor and adjust their performance based on ongoing feedback (Arifin & Setiawan, 2022; Chen et al., 2024). Participants identified platforms like Quizizz, Classcraft, and Edmodo as valuable tools for offering adaptive feedback and differentiated instruction. Game-based feedback mechanisms, such as dynamic difficulty adjustment, goal-setting elements, and mastery tracking, encouraged students to take ownership of their learning and develop metacognitive strategies, supporting findings by Checa-Romero and Gimenez-Lozano (2025) and Khaldi et al. (2023).

Furthermore, gamified learning environments can create more inclusive and equitable educational experiences. Adaptive gamification systems that automatically adjust difficulty levels based on student performance were especially beneficial in linguistically and academically diverse classrooms. Arifin and Setiawan (2022) used a phenomenological approach to investigate how Indonesian secondary school teachers perceived and experienced using Quizizz as a gamified platform for online assessment in their classrooms during the COVID-19 pandemic. The authors concluded that teachers believed Quizizz was beneficial and effective, and helped make online assessments more convenient and less stressful for students. However, they noted many challenges, such as a lack of internet connectivity for students and a lack of institutional support. They suggested there should be an ongoing formalized training for teachers.

Emerging studies further support these claims. Likewise, using a mixed-methods approach, Huang (2025) investigates how integrating information technologies, including multimedia and digital storytelling, into foreign literature courses can reduce foreign language anxiety (FLA) among university students. The study found that technology integration significantly lowers students' FLA by improving skills and fostering collaborative learning, and it provides practical guidelines for educators to design technology-driven curricula that create a more supportive and engaging learning environment. Similarly, Chung et al. (2025) investigated the beliefs of 556 secondary school students in Hong Kong regarding vocabulary teaching, analyzing how these perceptions were moderated by English proficiency and grade level. The findings indicated that while students valued diverse pedagogical approaches, they simultaneously relied on teacher-led instruction, with specific preferences differing significantly across proficiency levels and between junior and senior students. This research demonstrates that personalizing the learning experience is not just a nice-to-have feature. It is a core teaching strategy essential for improving student engagement, grades, and fairness in the classroom.

Theme 4: Enhancement of Classroom Dynamics and Interaction

Twelve participants (100%) highlighted how gamification-based assessments contributed positively to classroom dynamics and peer interaction, mainly through their integrated feedback and assessment mechanisms. This observation is consistent with findings by Zhang and Hasim (2023), who demonstrated that gamified digital tools offer faster and more effective feedback than traditional assessment formats. Participants emphasized the role of real-time feedback in enhancing student learning, noting that automated scoring in platforms like Kahoot!, Quizizz, and Socrative provided immediate formative responses that supported continuous learning.

The efficiency of automated feedback was viewed as a critical advantage, allowing educators to make data-informed instructional decisions while reducing the time spent on manual grading. This feedback made assessments more efficient and allowed teachers to create more specific and responsive lesson plans (Baah et al., 2024). According to a systematic review by Johnson et al. (2022), real-time assessment, like that provided in gamification-based assessment, is a critical component of effective K-12 online instruction that supports student learning and allows educators to adjust their teaching, thereby improving student outcomes. Demszky (2022) also highlighted the efficiency of automated feedback in delivering actionable data that informs practice.

Participants also noted that gamified assessments reduced student test anxiety and encouraged a more growth-mindset. This aligns with Vygotsky's (1978) sociocultural theory, which emphasizes the role of social interaction and supportive scaffolding in learning. Al-Khresheh (2025) concluded that gamification significantly enhances English language learning by improving cognitive functions and boosting learner motivation. These findings align with Vygotsky's sociocultural theory by demonstrating how gamified tools and collaborative challenges mediate learning, encourage peer interaction, and create a supportive learning environment, leading to enhanced cognitive development. The playful and low-stakes nature of gamified assessments also contributed to a more relaxed classroom atmosphere, enabling students to participate more confidently in language tasks. Mercer et al. (2019) described that these environments encourage collaborative learning where students build meaning together.

Furthermore, empirical evidence suggests that feedback-rich gamified assessments may surpass traditional testing methods in supporting learner confidence and content mastery. In a qualitative exploratory study of 19 undergraduate students, Aguilos and Fuchs (2022) investigated the perceived usefulness of a gamified massive open online course in higher education. The findings indicated that students' competitive behavior and the instant gratification from immediate feedback were highly motivating, although the effects were most significant for already engaged students and less so for unmotivated ones. Similarly, Nilubol and Sitthitikul (2025) emphasized that gamified feedback encourages metacognitive awareness, enabling learners to understand their progress better and take greater ownership of their learning. In comparison, Wang and Lee (2021) found that gamified elements create a more relaxed and enjoyable environment, which reduces anxiety and can potentially boost language learning confidence.

These findings reinforce the formative value of gamification in educational assessment. Gamified platforms are a powerful tool for improving teaching and engagement because they offer quick feedback, increase classroom interaction, and support students' emotional well-being.

Research Question 2: Challenges of Gamification-Based Assessments

Theme 1: Challenges Related to Time and Training for Teachers

Nine respondents (75%) noted concerns about the time and effort required to prepare and implement gamification-influenced assessments. This aligns with Wang et al.’s (2022) identification of effort expectancy as a critical determinant in teachers’ willingness to adopt new technological solutions. Participants offered a range of perspectives on the time commitment involved, with many also reporting insufficient access to professional training. These concerns reflect the UTAUT factor of effort expectancy (Venkatesh et al., 2016) and support Ertmer and Ottenbreit-Leftwich’s (2010) assertion that teacher beliefs, training, and time limitations significantly impact technology integration in education.

Research by Barreto and Ertzberger (2024) designed and validated an online teacher professional development (PD) module for grades K-12 teachers, finding that one hour of training enhanced teachers' self-efficacy in using gamification methods in the classroom. The researchers also improved teachers' overall attitudes, confirming that the passion to boost student engagement is the strongest motivator for them to acquire and adapt new gamification methods. Participants reported that preparing gamification-based assessments often required more time than traditional formats, predominantly during the initial implementation phase. This additional time demand represents a substantial barrier to adoption, particularly where educators manage intensive workloads. These findings suggest that professional development, simplified implementation strategies, and the availability of pre-made resources could help alleviate the workload burden associated with gamification-based assessment design.

In addition, a systematic review of 35 articles published between 2012 and 2020, Shortt et al. (2023) analyzed the research trends, methods, and findings related to the gamified mobile-assisted language learning (MALL) application, Duolingo. The results indicated that most research was quantitative, utilized non-probability sampling, and strongly focused on the application's design features over the actual processes and outcomes of language acquisition. Consequently, the review highlights significant gaps in the literature, underscoring the need for more methodologically rigorous studies that employ diverse frameworks and control for confounding variables to better understand the effectiveness of gamified MALL (Shortt et al., 2023). Consequently, Shortt et al. conclude that there is currently insufficient evidence to support Duolingo’s overall effectiveness or specific contribution to language learning, much less its applicability to gamified assessment practices.

Theme 2: Technological and Logistical Barriers

Nine participants (75%) identified logistical and implementation challenges associated with gamification-based assessments. This finding reflects Christopoulos and Mystakidis (2023), who reported that infrastructure and technological access are significant barriers to effective gamification implementation. Specific challenges mentioned by participants included issues with technology access and functionality. These factors correspond with UTAUT’s facilitating conditions component and highlight ongoing digital equity concerns with infrastructure and technological access (Bennani et al., 2022; Chun & Yunus, 2023). The literature review (Bennani et al., 2022) critically synthesizes research on adaptive gamification in e-learning. The central argument is that the common one-size-fits-all approach to gamification is often ineffective because it fails to account for individual learners' diverse and dynamic characteristics. Digital divide concerns persist across school districts, with implications for instructional equity.

The interview data underscores the importance of addressing technological and infrastructural barriers to ensure effective gamification integration. The digital divide remains a significant concern, as inconsistent access to technology can create inequities in educational experiences (Miras et al., 2023). This aligns with the UTAUT framework’s emphasis on facilitating conditions as a critical factor in technology adoption (Venkatesh et al., 2016). The “Rising Use of Artificial Intelligence in K-12 Education” report (Pennsylvania Advisory Committee to the U.S. Commission on Civil Rights, 2024) provides strong evidence directly supporting the dissertation’s emphasis on addressing technological and infrastructural barriers to ensure effective technology integration, aligning directly with the UTAUT framework’s emphasis on facilitating conditions. The report details how the digital divide significantly impacts education, particularly with increased reliance on new technologies like AI, corroborating the findings by Miras et al. (2023, p. 938). It explicitly states that AI’s effectiveness is contingent upon “ubiquitous internet access” and other essential resources. This disparity in access, prevalent in economically disadvantaged urban and rural areas, means that “populations that are already disadvantaged either will not have access to the technology and/or will not know how to use it” (Yim & Su, 2025, p. 99).

Consequently, students from lower socioeconomic backgrounds, racial and ethnic minorities, and students with disabilities are disproportionately susceptible to AI’s risks and harms (Salas-Pilco et al., 2022). In contrast, students from more privileged backgrounds are more likely to reap its benefits due to better resources and home access. This directly supports the findings about instructional equity, demonstrating how inconsistent access to technology can perpetuate existing inequalities, such as “trapping low-income and minority students into low-achievement tracks” and disadvantaging students entering the workforce who lack digital technology exposure (Yim & Su, 2025, p. 110). To improve the facilitating conditions factors and ensure equitable AI adoption, the report recommends establishing benchmarks for safety, privacy, data security, and equity, directing that educational technologies are designed and tested specifically in educational settings, implementing third-party audit providers, and developing regional AI purchasing associations to assist smaller districts (Yaseen et al., 2025). Furthermore, it underscores the critical need for teachers to be properly trained to watch for potential issues, inaccuracies, biased information, and to monitor the impact on students, highlighting that digital literacy and professional development are vital facilitating conditions for successful and equitable technology integration (Yim & Su, 2025, p. 117). Therefore, equitable and informed policy and professional development are paramount to prevent AI from exacerbating existing educational disparities and to ensure its transformative potential benefits all students.

Theme 3: Concerns About Assessment Accuracy and Appropriateness

Eleven participants (91.7%) discussed challenges related to aligning gamification with curriculum standards and learning objectives, impacting assessment accuracy. This finding reflects ongoing concerns about integrating game elements meaningfully with pedagogical goals (Sevim-Cirak & Islim, 2023). Participants provided specific examples of alignment challenges and strategies. Participants questioned the ability of gamified tools to measure complex communicative skills such as oral proficiency and written expression. They expressed concern that some tools rely too heavily on multiple-choice formats. Sevim-Cirak & Islim (2023) review the challenges of meaningfully integrating game elements with pedagogical goals, particularly in assessing higher-order language skills. Similarly, recent evidence from Li & Lan (2022) also suggests that while gamified assessments are valid for receptive language skills, they must be supplemented to assess expressive language proficiency adequately.

Correspondingly, several teachers raised concerns about the accuracy of gamification-based assessments in evaluating specific language skills, particularly writing, interpersonal, and presentational modes of communication. There was a perception that gamification might not accurately assess a full summative writing or interpersonal task. In agreement with the participants, Li & Lan (2022) found that students often need supplementation to assess expressive language proficiency adequately. Furthermore, participants cautioned against over-reliance on gamification, emphasizing the need for a balanced approach that integrates traditional assessments. Over the course of 20 weeks, Zhang and Huang (2024) explored the status of motivation and the volume of language concentration of students in grade school using blended learning frameworks, with the help of adaptive tests and games. During this period, 45 students were examined. Distance learning tools were provided, and students continued learning with the help of devices and games. Zhang and Huang (2024) were able to draw various conclusions from the tests across all the grade levels. The adaptive tests combined with the games were able to reduce learner disgruntlement while also greatly improving the accuracy rate. The adaptive tests were able to enhance learning while at the same time boosting intrinsic motivation. The insights from this study highlight the need for intentional curriculum design to ensure that gamification supports learning outcomes rather than becoming an end. The challenge lies in maintaining academic rigor while incorporating engaging game elements, requiring thoughtful consideration of assessment objectives and design.

Theme 4: Risk Over Resilience

Ten teachers (83.3%) cautioned against excessive use of gamification. While acknowledging its motivational value, they emphasized that gamified assessments should complement, not replace, traditional methods. This is consistent with current findings on novelty effects diminishing over time (Baah et al., 2023). Likewise, de Marcos-Ortega et al. (2020) investigated the effects of adding gamification to a massive online course, using social network analysis and principal component analysis to compare a gamified group with a control group. The results indicated that gamification influenced the structure of the course's social network and that a predictive model based on student activity and network position showed the probability of passing the course increases more rapidly in the gamified environment. Correspondingly, while analyzing the effectiveness of gamified instruments for foreign language learning (FLL) tools, Luo (2023) conducted a systematic review of 21 empirical studies and found mixed outcomes of the interventions, with some resulting in positive, negative, and some with no significant changes in learners' outcomes. The author ascribes these discrepancies to methodological, technical, and psychological issues, as well as a lack of proper individual gamification of content, and describes research gaps with recommendations for future work. While acknowledging the motivational potential of gamification, research indicates its effectiveness is often inconsistent and subject to diminishing novelty effects, leading educators to recommend its use as a supplement rather than a replacement for traditional pedagogical methods.

Additionally, Gómez Niño et al. (2024) directly advocated using gamification as a pedagogical strategy in foreign language education, principally at the primary and secondary levels. They emphasized the value of gamified learning environments in developing content mastery and critical 21st-century skills such as collaboration, creativity, and communication. Integrating game-based mechanics within instructional design increases student engagement and enhances the learning experience. Furthermore, the convergence of AI and gamification is a transformative approach to assessment and instruction. According to Gómez Niño et al. (2024) and Kassenkhan et al. (2025), AI-enabled gamification tools offer adaptive learning pathways, real-time analytics, and personalized content delivery. These innovations support more holistic and continuous assessment forms by capturing a range of student behaviors, aptitudes, and attitudes, demonstrating a clearer, more detailed picture of each student's unique learning path. Similarly, Surve and Ghatule (2024) argue that the fusion of AI-powered tools with gamification can transcend the limitations of one-size-fits-all solutions to create genuinely personalized and adaptive learning experiences. The authors considered both a psychological and a technical perspective for this synergy, showing how AI agents can be programmed to administer immersive content and promote intrinsic motivation to keep students highly engaged.

Likewise, Lee (2025) examined how artificial intelligence (AI) reshapes language education by opening new possibilities for personalization, improving student engagement, and addressing common classroom limitations. Lee identifies recurring themes, including the importance of ethical implementation, the value of AI as a support for teachers rather than a replacement, and the potential for developing more inclusive and adaptive approaches to learning. This study demonstrates that AI-powered gamified systems significantly enhance student motivation, engagement, and academic performance. Furthermore, through adaptive feedback loops and personalized learning experiences, students benefit from tailored support that addresses their unique learning needs (Yaseen et al., 2025). These findings are particularly relevant for secondary world language classrooms, where differentiated instruction and sustained engagement are critical for language acquisition. While the reviewed literature may not directly address secondary world language assessments, the themes that emerge, namely, the pedagogical value of gamification, the affordances of AI integration, and the efficacy of personalized learning, offer a compelling rationale for the development and implementation of gamification-based assessments in this educational domain.

Critical Considerations for Gamification in Language Education

Educators have, for the most part, continued to tread at least cautiously into gamification at scale, more often contending for its complementary application in teaching rather than for gamification to become a wholesale replacement for existing methods. In certain cases, gamification may be imprudent or inappropriate and may work to disincentivize genuine learning. The results of this study indicate the significance of placing the teacher in a role to support relevant and real-world engagement in learning activities and gamification in the role of a support or for the learning process (Gómez Niño et al., 2024). In their review, Kassenkhan et al. (2025) explored how the intersection of AI and gamification is changing how we learn. The authors stated that with AI able to offer adaptive feedback, and gamification working to motivate critical thinking, both have the potential to transform student engagement to the point that the processes of deconstructing and solving problems can be internalized. Subsequently, gamification should not replace good teaching; it should support it. Teachers can use it to create authentic engagement, while AI and adaptive feedback can help motivate students and deepen their learning.

Moreover, while gamification has been associated with initial motivational gains, these effects are often attributed to the novelty effect, which tends to diminish over time unless supported by sustained, deliberate, and scaffolded instructional design (Shortt et al., 2023). Systematic reviews caution that once the novelty wears off, gamified elements, especially those that prioritize competition or rote repetition, may fall short of maintaining learner engagement or fostering deep, meaningful language acquisition (Shortt et al., 2023). This underscores the need for adaptive, personalized gamification frameworks, often made possible through the integration of artificial intelligence, to counteract diminishing engagement and avoid the limitations associated with generic, one-size-fits-all implementations (Lee, 2025; Zhumbei et al., 2025).

Despite its promise, the overall effectiveness of gamification within educational contexts, and language instruction specifically, remains an area requiring further empirical investigation. Existing literature reveals substantial methodological limitations, such as small sample sizes and inadequate control for unforeseen variables, leading to inconclusive evidence regarding its consistent impact on learning outcomes. In a systematic literature review of 65 empirical papers, Gomez et al. (2023) analyzed the current trends and challenges in the field of game-based assessment (GBA). The findings indicate that GBAs are predominantly used in K-16 education to assess STEM content and cognitive skills. At the same time, significant challenges remain, including the need for larger data samples, more sophisticated algorithms, and improved research replication. Additionally, ethical considerations, such as data privacy, algorithmic bias in AI-driven systems, and the need for robust teacher training, pose critical challenges that must be addressed to ensure equitable and effective adoption of gamified and AI-enhanced learning technologies (Kassenkhan et al., 2025; Gómez Niño et al., 2024; Surve & Ghatule, 2024).

Integration With Theoretical Frameworks

The study's findings can be interpreted through two primary theoretical lenses: Krashen's SLA theory and the UTAUT. Krashen's affective filter Hypothesis suggests that learners acquire language more effectively in low-anxiety environments where the affective filter is lowered, allowing for greater receptiveness to language input (Krashen, 1982). In a meta-analysis and systematic review of 37 articles, Xiong et al. (2024) investigated interventions targeting foreign language anxiety. They found that foreign language acquisition negatively correlates with overall academic success, achievement outcomes, listening performance, and foreign language self-efficacy. The findings of this study corroborate these findings, as teachers observed that gamification creates a stress-free environment that enhances language acquisition. The playful, non-threatening nature of gamified assessments reduces anxiety and promotes more natural language learning, particularly for students who might otherwise be intimidated by traditional assessment formats.

The UTAUT framework helps explain the challenges educators face in adopting gamification technologies. The reluctance of some teachers to implement gamification aligns with UTAUT's emphasis on effort expectancy as a predictor of technology adoption (Venkatesh et al., 2016). When teachers perceive gamification as requiring significant time and effort to implement, their willingness to adopt these approaches diminishes. Additionally, the logistical and technological challenges identified by participants relate to UTAUT's concept of facilitating conditions, which suggests that adequate infrastructure and support are necessary for successful technology integration.

The study also connects with Vygotsky's constructivist perspective, as participants noted that their students actively engaged with educational games to achieve learning goals. This aligns with the constructivist view that learners gain knowledge by addressing externally provided challenges within social contexts (Vygotsky, 1978). The collaborative and interactive elements of many gamified assessments create opportunities for social learning and scaffolded knowledge construction. Interactive and collaborative gamification promotes social learning and peer scaffolding within the learner's zone of proximal development (Vygotsky, 1978; Mercer et al., 2019).

Limitations of the Study

This study contains six methodological and conceptual limitations that warrant consideration when interpreting its findings and their transferability to other contexts. First, the purposive sample of 12 secondary world language teachers, while sufficient for achieving thematic saturation in a basic qualitative study (Creswell & Creswell, 2023), represents a relatively homogeneous group that limits the generalizability of findings to the broader population of language educators. Although diversity in teaching experience, school settings, and geographical locations was sought during recruitment, the final participant pool may not fully represent the range of perspectives among secondary world language teachers nationally or internationally. Lincoln et al. (1985) suggested that transferability in qualitative research depends on thick description of context; while this study provided contextual information about participants' teaching environments, additional demographic factors such as teachers' technological proficiency and prior experience with gamification might have enhanced contextual understanding.

Second, the exclusive reliance on self-reported data from semistructured interviews presents another significant limitation. While valuable for understanding lived experiences, teacher perceptions are inherently subjective and may be influenced by social desirability bias, particularly regarding innovative pedagogical approaches (Wright, 2025). There is a noted absence of triangulation via direct classroom observations, student feedback, or quantitative performance metrics, which creates a potential disconnect between reported practices and actual implementation. Patton (2015) emphasizes that triangulation strengthens research credibility by cross-verifying findings through multiple data sources; this study's single-method approach constrains its ability to corroborate teacher perceptions with observable classroom outcomes or student experiences. Additionally, member checking was conducted only after initial coding rather than during the more comprehensive interpretive phase, potentially limiting participants' opportunities to validate the researcher's interpretations of their experiences.

Third, the study's timing and cross-sectional design impose temporal limitations on the findings. Data collection occurred during a single academic term, providing only a snapshot of teacher perceptions rather than tracking how their views and implementation strategies might evolve. This constraint is chiefly relevant when studying technological innovations like gamification, as Fullan (2016) notes that educational change processes typically require multiple cycles of implementation and reflection. The absence of longitudinal data leaves questions about the sustainability of gamification benefits and the potential for novelty effects to influence initial teacher enthusiasm. Furthermore, the study did not systematically account for contextual variables such as institutional support, technological infrastructure differences, or school-wide technology policies that might influence teacher experiences with gamification implementation.

Fourth, conceptual limitations also exist in the study's approach to gamification. The research primarily focused on digital gamification tools, potentially neglecting the broader spectrum of non-digital gamification approaches that might be valuable in resource-constrained educational environments (Dehghanzadeh et al., 2021). This digital emphasis may present an incomplete picture of gamification possibilities in language education and inadvertently privilege perspectives from better-resourced educational settings. Moreover, the study did not disaggregate findings based on specific game elements or mechanics, treating gamification as a monolithic concept rather than examining which aspects (e.g., leaderboards, badges, narratives) might be most effective for different language learning objectives or student populations.

Fifth, the study's limited attention to equity considerations represents another important limitation. While participants occasionally mentioned differentiation for diverse learners, the research did not systematically examine how gamification might impact students from different socioeconomic backgrounds, language proficiencies, or cultural contexts. The digital divide remains a significant concern in educational technology implementation (Reich, 2020), and varying levels of technological access and familiarity among students could lead to inequitable educational experiences that were not fully captured in this research. The study did not explore potential gender differences in gamification experiences, despite research suggesting that game preferences and engagement may vary across gender identities (González-González, et al., 2022).

Sixth, the researcher's positionality and potential confirmation bias are further limitations. Being a former language teacher with positive experience in applying gamification, the researcher's perspective may have inadvertently influenced question design, interview questioning options, or translation of ambiguous statements. While reflexivity practices were employed when analyzing data, including bracketing and peer debriefing, researcher bias is still not eliminated. Moreover, while appropriate, theoretical frameworks used in the research may have prioritized attention for certain gamification features over others. Drawing from other theoretical frameworks, such as critical pedagogy or culturally responsive teaching models, might have shed further light on power dynamics and cultural dimensions of gamified assessment measures.

Despite these limitations, the study provides valuable preliminary insights into teacher perspectives on gamification-based assessments in secondary world language education. By acknowledging these constraints transparently, this research establishes a foundation for future investigations that can address these limitations through mixed-methods approaches, larger and more diverse samples, longitudinal designs, and more nuanced examination of specific gamification elements and equity considerations. These factors limit the study’s credibility and dependability, although triangulation through thematic coding helped ensure confirmability.

Recommendations

Based on the strengths and limitations of this qualitative study and informed by the literature reviewed in Chapter 2, several targeted recommendations for future research are proposed. These suggestions remain within the scope of the current study and are designed to deepen the understanding of gamification-based assessments in secondary world language instruction.

Expand Participant Diversity and Geographic Scope

Future research should include a broader and more diverse sample of secondary world language teachers across different geographic regions, school types, and instructional contexts. This would enhance the transferability of findings and provide a more comprehensive view of how gamification-based assessments are perceived and applied across educational settings. Future research should recruit secondary world language teachers from varied regions and school environments to enhance the transferability of findings. This aligns with recent calls to contextualize gamification across educational settings (Batlle & González, 2023; Laksanasut, 2024).

Investigate Longitudinal Outcomes of Gamification-Based Assessment

Given the limitations of single-time-point data collection in this study, longitudinal research is recommended to examine how gamification-based assessments influence student learning outcomes, motivation, and language acquisition over time. Such studies could offer insight into gamified assessment tools' sustained effects and practical value. Because this study relied on single-time-point interviews, longitudinal designs are needed to examine sustained effects on student motivation, language acquisition, and engagement (Gomez et al., 2023).

Include Student Perspectives in Future Studies

To build on teacher-reported data, future research should incorporate student voices to explore how learners experience and perceive gamification-based assessments.

Including student perspectives would provide a balanced view and support the development of student-centered assessment strategies. Incorporating student viewpoints will provide a more balanced understanding of gamified assessments and support student-centered assessment design (Klock et al., 2023)

Examine Institutional Support Structures and Leadership Influences

Building on challenges identified in this study related to training and implementation, future research should investigate the role of school leadership, institutional policies, and professional development in facilitating or hindering gamified assessments. As this study identified training and policy challenges, further research should explore how administrative attitudes and professional development impact gamification adoption (Batlle & González, 2023; Klock et al., 2023).

Design and Evaluate Professional Development Models

Since several participants expressed the need for targeted support, future applied research could focus on designing, implementing, and evaluating professional development models that equip teachers with the knowledge and skills to use gamification-based assessments effectively. Future applied research should develop and test training programs that support teachers in effectively implementing gamified assessment strategies (Batlle & González, 2023; Laksanasut, 2024).

These recommendations aim to advance the scholarly discourse on gamification in world language education and support the development of effective, equitable, and sustainable assessment practices that align with teacher needs and instructional goals.

Implications

Implications for Educational Practice

The findings of this study yield significant implications for classroom practitioners in language education contexts. Educators should consider a strategic implementation approach by incorporating gamification-based assessments incrementally, beginning with modest projects or utilizing existing game templates to mitigate the initial planning burden (Al-Rahmi et al., 2022; Bennani et al., 2022; Venkatesh et al., 2016). A balanced assessment approach remains essential; teachers should maintain equilibrium between gamified and traditional assessment methods to ensure comprehensive evaluation of all language competencies, particularly those challenging to assess through gamification alone (Mohammed & Jesudas, 2025; Sevim-Cirak & Islim, 2023). Given participants' unanimous acknowledgment of motivational benefits, educators should strategically employ game elements to address student engagement challenges in language acquisition contexts, aligning with findings from Gil-Quintana & Jurado (2024). The potential for personalized learning experiences should be maximized through thoughtful platform selection that facilitates individualized learning pathways aligned with diverse student needs (Chen et al., 2024). Li et al. (2023) synthesized the empirical evidence on the efficacy of gamification in educational settings in a meta-analysis of 41 studies. The authors found an overall significantly large effect size, which strongly supports the use of gamification in elevating student learning outcomes. Additionally, the analysis showed that the effectiveness of gamification varies greatly based on user type, educational discipline, length of intervention, design principles, and learning environment, with significant implications for future implementation optimization. Consequently, establishing professional learning communities may substantially benefit educators by creating collaborative spaces for resource sharing and strategy development, potentially reducing the individual workload associated with gamification implementation.

Implications for Policy

These findings suggest critical considerations for educational leadership and governance at the policy level. Educational authorities should prioritize equitable technological infrastructure and digital resource access to support effective implementation of gamification-based assessments across diverse learning environments (Al-Rahmi et al., 2022). Comprehensive professional development programs warrant development to equip educators with the requisite knowledge and pedagogical skills for effective gamification integration. According to Chun and Yunus (2023), in their systematic review analyzing studies from the COVID-19 pandemic, most teachers displayed a high level of acceptance of technology use for emergency remote teaching. Further analysis identified five primary factors that drive acceptance. The foremost factor is the perception of usefulness, followed by perceived ease-of-use, teacher attitude, social influence, and facilitating conditions. Educational governance bodies should establish coherent curriculum guidelines that integrate gamification principles within language curriculum standards, ensuring game elements enhance rather than detract from core learning objectives (Mohammed & Jesudas, 2025; Sevim-Cirak & Islim, 2023).

The significant time investment required for developing quality gamified assessments necessitates appropriate recognition in teacher workload allocations and planning provisions. A noteworthy finding in the 2023 gamification study by Flores et al. identified that substantial time investment and increased workload for the teacher implementing a gamified curriculum in the development and preparation phase negatively affected implementation. Therefore, policymakers should not simply mandate gamification but create frameworks that guide its pedagogically sound integration. This involves encouraging the use of game elements that are cognitively aligned with specific language learning objectives and ensuring that assessment methods effectively capture all desired competencies, thereby preventing the gamification for gamification's sake; pitfall and truly leveraging its potential (Batlle Rodríguez & Vicenta González Argüello, 2023). In a controlled study involving 151 educators, Machado et al. (2025) examined how participants perceived cognitive workload in manual, automated, and semi-automated scenarios for educational resource recommendation. The authors discovered that participants thought the fully automated scenario had a substantially lower workload than the manual one. The study also showed that teachers' perceptions of workload were significantly impacted by their gender, level of ICT proficiency, and the educational level at which they teach. These findings are important for developing AI-supported tools that enhance pedagogical decision-making and lessen cognitive load. Additionally, formal assessment policies require review to accommodate innovative approaches while maintaining academic rigor and accountability standards essential to educational integrity.

Theoretical Implications

This research contributes substantively to theoretical understanding across multiple domains. The findings support Krashen's Affective Filter Hypothesis by demonstrating gamification's capacity to create low-anxiety environments conducive to language acquisition processes (Krashen, 1982). This study adds to the UTAUT model by showing that for gamification, the major barriers for teachers are the perceived effort required and the lack of school resources (Venkatesh et al., 2016). Furthermore, the research reinforces constructivist learning theory by illustrating gamification's potential to create meaningful contexts for active language engagement and knowledge construction (Vygotsky, 1978; Piaget, 1972). The findings also contribute to motivation theory by elucidating how game elements can simultaneously foster intrinsic and extrinsic motivational orientations in language learning environments (Ryan & Deci, 2020), consistent with van Roy and Zaman's (2018) findings.

Implications for Diverse Contexts

The findings of this study, while generated from a specific sample, offer three implications for implementing gamification-based assessments in diverse secondary world language classrooms.

Varying Class Sizes

In larger classes (e.g., 30+ students), the emphasis on gamification's potential to increase student engagement and provide immediate feedback can be particularly valuable for managing student attention and monitoring learning in real-time. Teachers might leverage group-based gamified activities to foster collaboration and peer teaching, reducing the burden of individual feedback. Conversely, in smaller classes (e.g., <20 students), gamification can be tailored to provide more individualized learning experiences and targeted feedback, focusing on personalized learning pathways as highlighted by participants.

Diverse School Demographics

In schools with high populations of English Language Learners (ELLs), gamification can be adapted to provide visual aids, simplified instructions, and repeated exposure to key vocabulary, addressing the diverse linguistic needs of students. The findings suggest that gamification’s ability to contextualize vocabulary and provide a low-anxiety learning environment can particularly benefit ELLs. In contrast, in schools with a high proportion of advanced learners, gamification can introduce more challenging tasks, competitive elements, and opportunities for creative language use, fostering deeper engagement and higher-order thinking skills.

Differing Technological Resources

Teachers can utilize low-tech gamification strategies in classrooms with limited technological resources (e.g., only one computer or limited student devices), such as adapting board games, role-playing, or creating in-class challenges with simple rewards. The focus shifts from digital tools to the underlying game mechanics of points, badges, and leaderboards, which can be implemented without technology. The findings related to increased student engagement and motivation remain relevant, even in low-tech settings. Conversely, in technology-rich environments (e.g., 1:1 devices, interactive whiteboards), teachers can leverage a wide range of digital gamification platforms and tools, focusing on personalized learning paths, data-driven instruction, and the integration of multimedia elements. However, as highlighted in the study, teachers in these settings must be mindful of potential technological barriers, such as Wi-Fi reliability and device management.

Based on the study's findings and limitations, several directions for future inquiry emerge as particularly salient. Longitudinal investigations are warranted to examine the sustained impact of gamification-based assessments on student motivation, engagement, and academic achievement over extended periods, determining the durability of observed benefits (Gkintoni et al, 2024). Future research should systematically examine gamification's influence across diverse demographic and socioeconomic contexts to address potential equity concerns related to technology access and digital literacy. Comparative effectiveness studies would prove valuable in evaluating various gamification approaches, including digital and non-digital implementations, to identify optimal strategies for specific learning objectives and educational contexts (Al-Khresheh, 2025; Rüth et al., 2022; Zeng et al., 2024).

Student perspectives merit comprehensive exploration to complement teacher insights and provide a more holistic understanding of the impact of gamification. Moreover, developing and empirically testing implementation models suitable for resource-constrained educational environments would address this study's logistical and temporal challenges. Assessment validity warrants rigorous investigation to establish the psychometric properties of gamification-based assessments compared to traditional methods, particularly for complex language skills such as extended writing and interpersonal communication. Finally, systematically evaluating professional development approaches would identify effective practices for supporting educators in gamification implementation.

Implications for Positive Social Change

The findings suggest that this approach could create positive social change for students, their families, and the school community. Concerning individualism, the participants made it clear that gamification is a powerful way to motivate and engage them in learning a new language (Al-Khresheh, 2025; Baah et al., 2023). The fact that gamified assessments give immediate feedback allows students to track their progress more accurately. This helps them become more aware of how they learn and better regulate it (Chen et al., 2024). This feedback-rich environment may contribute to developing learner autonomy and self-efficacy, critical factors in sustained language learning success and persistence through challenging linguistic concepts (Baah et al., 2024). Gamification's use of different formats and activities helps it appeal to various learning styles. This makes the classroom more inclusive and better suited to the diverse needs of today's students (Baah et al., 2024; Smiderle et al., 2020). The customizable nature of gamified learning platforms facilitates differentiated instruction, allowing educators to tailor content delivery and assessment to individual student requirements, potentially mitigating achievement gaps among diverse learner populations (Chen et al., 2024).

The positive implications extend beyond individual students to influence family systems and home learning environments. This research documented instances where gamification catalyzed increased family engagement with school community activities and educational processes. Such enhanced family involvement in technology-enhanced learning initiatives is consistent with recent findings on strengthened school-family partnerships. Hsu and Chen (2023) investigated the influence of digital platforms on family-school partnerships in early childhood education. They found that digital platforms positively enhance parental involvement, teacher-child interactions, and online communication, collectively and significantly contributing to stronger collaborations between families and preschools. By transforming traditionally isolating academic exercises into interactive, engaging experiences, gamification can redefine perceptions of homework and independent practice, potentially elevating family participation in language learning activities beyond traditional classroom boundaries (Gil-Quintana & Jurado, 2024). Game-based mechanics may resonate with parents who otherwise experience barriers to educational involvement due to their own negative academic experiences or limited language proficiency, as the accessible interface and supportive structure create welcoming entry points for family participation. Families might be more willing to get involved at home when learning is more like a game. This sustained support is consistently linked to better student results (Baah et al., 2024).

At the organizational level, educational institutions can leverage gamification to cultivate more inclusive, effective learning communities that respond dynamically to evolving student needs and expectations. Schools implementing gamified assessment approaches may experience enhanced student engagement metrics, improved learning outcomes, and development of more positive institutional cultures characterized by collaborative problem-solving and achievement orientation (Al-Khresheh, 2025; Gil-

Quintana & Jurado, 2024). The findings from this research study emphasize the necessity for educational organizations to prioritize equitable technology access across demographic groups, as technology disparities could potentially exacerbate rather than ameliorate existing achievement gaps, aligning with current research by Tang et al. (2024). Additionally, substantial investment in comprehensive professional development initiatives is essential to equip educators with the requisite pedagogical knowledge and technical competencies for effective gamification implementation (Smiderle et al., 2020). Institutional support structures must accommodate the significant time investment required for developing quality gamified assessments, potentially through collaborative teaching arrangements, dedicated planning periods, or specialized instructional design support personnel (Bennani et al., 2022). Furthermore, organizational assessment policies may require recalibration to accommodate innovative approaches while maintaining academic rigor and accountability expectations essential to educational integrity (Mohammed & Jesudas, 2025; Sevim-Cirak & Islim, 2023).

The implications of this research go beyond a single school; they have the possibility to shape educational policy and guide how future learning technologies are designed. The study findings can inform educational policy formulation by highlighting the benefits of innovative assessment methodologies, potentially catalyzing more widespread adoption of gamified approaches within language education frameworks. In a controlled experiment with 40 undergraduate students, Smiderle et al. (2020) investigated how a gamified programming environment affected learning, engagement, and behavior. They found that the impact of gamification with introverted students showed significantly more engagement and greater improvements. Thus, policymakers may leverage these insights to develop more nuanced guidelines for technology integration that balance innovation with established pedagogical principles (Sevim-Cirak & Islim, 2023). The research outcomes provide empirical support for investments in educational technology infrastructure that facilitate equitable access to high-quality digital learning resources across diverse socioeconomic contexts (Al-Rahmi et al., 2022; Zou et al., 2025). In a comprehensive review, Zou et al. (2025) synthesized the current trends, challenges, and innovations in digital learning, highlighting the transformative impact of technologies like AI and VR on student achievement and engagement. Aligning with the research study's implications, the authors provided strategic recommendations for educators and policymakers, emphasizing the need for infrastructure investment, continuous professional development, and collaborative approaches to create an inclusive and effective digital learning environment (Zou et al., 2025).

Furthermore, by documenting gamification's capacity to enhance language learning experiences, this investigation may stimulate the development of more sophisticated educational technology tools specifically designed to address linguistic competency development (Al-Khresheh, 2025). Commercial educational technology providers may incorporate these research-derived principles into product development workflows, potentially creating more effective and accessible learning resources that benefit diverse learner populations across varied educational settings (Baah et al., 2024). This study shows that a tangible collaboration between researchers, developers, and teachers is the best way to create educational technology that educators can use to solve classroom problems, instead of just being new.

Conclusion

This study explored the perspectives of secondary world language teachers on the use of gamification-based assessments, revealing valuable insights into both their potential benefits and the challenges associated with implementation. The research indicates that gamification is a highly engaging and effective tool for enhancing student motivation, participation, and learning outcomes. Teachers noted significant improvements in vocabulary retention and complex sentence construction through repeated, contextualized exposure to language. Gamified assessments were also seen to provide immediate feedback, allowing teachers to focus more on differentiated instruction.

These findings align with Krashen's theory of second language acquisition, which emphasizes the importance of low stress learning environments, suggesting that gamification can reduce anxiety and promote more effective learning. However, the study also identified significant challenges, notably the time-consuming nature of creating and implementing gamified assessments and concerns about technological infrastructure. These challenges align with the UTAUT framework, highlighting how effort expectancy and facilitating conditions influence technology adoption among educators.

Despite these challenges, the study underscores the transformative potential of gamification in secondary language classrooms. In a comprehensive review, Laksanasut (2024) examines the theoretical foundations and empirical evidence supporting the use of gamification in ESL/EFL education to enhance learner engagement and motivation. The author concluded that strategically implementing game mechanics fosters significant improvement in language acquisition and proficiency, while identifying and proposing solutions for challenges such as cognitive overload and over-reliance on extrinsic motivation. Similarly, educators can harness gamification by strategically addressing implementation barriers through professional development, resource allocation, and balanced assessment approaches to foster more engaging, effective, and inclusive language learning experiences. These recommendations offer practical guidance for educators, schools, and policymakers seeking to integrate gamification into their language education programs.

Future research should continue to explore the long-term impact of gamification and examine its influence in diverse contexts to build upon the foundation established by this study. As educational technology evolves, understanding how to integrate game elements into language assessment effectively will remain an important area of inquiry with significant implications for teaching practice and student success.

References

Abbott, E. D. M. (2018). *World-Readiness standards for learning languages.* American Council on the Teaching of Foreign Languages. https://www.actfl.org/uploads/files/general/World-ReadinessStandardsforLearningLanguages.pdf

Acquah, E. O., & Katz, H. T. (2020). Digital game-based second language learning outcomes for primary through high-school students: A systematic literature review. *Computers & Education, 143*, Article 103667. https://doi.org/10.1016/j.compedu.2019.103667

Aguilos, V., & Fuchs, K. (2022). The perceived usefulness of gamified E-learning: A study of undergraduate students with implications for higher education. *Frontiers in Education, 7*. https://doi.org/10.3389/feduc.2022.945536

Ahmed, A. A. (2023). The use of gamification in language teaching and education: A content analysis study. *Journal of Philology and Educational Sciences, 2*(2), 33–45. https://doi.org/10.53898/jpes2023223

Ahmed, S. K. (2024). The pillars of trustworthiness in qualitative research. *Journal of Medicine, Surgery, and Public Health, 2*, 100051. https://doi.org/10.1016/j.glmedi.2024.100051

Ai, J., Pan, Y., & Zhong, W. (2021, November). The role of motivation in second language acquisition: A review. In *2021, the 3rd International Conference on*

Literature, Art, and Human Development (ICLAHD 2021) (pp. 623–627). Atlantis Press. https://doi.org/10.2991/assehr.k.211120.115

Alabbasi, D. (2018). Exploring graduate students' perspectives towards using gamification techniques in online learning. *Turkish Online Journal of Educational Technology-TOJET*, *17*(2), 34–45. https://doi.org/10.17718/tojde.328951

Al-Awawdeh, N., & Kalsoom, T. (2022). Foreign languages e-learning assessment efficiency and content access effectiveness during coronavirus pandemic in the university context. *Theory and Practice in Language Studies*, *12*(10), 2124–2132. https://doi.org/10.17507/tpls.1210.20

Al Breiki, M., & Wan Yahaya, W. A. J. (2025). The impact of a gamified formative electronic assessment on students' academic performance: A meta-analysis. *International Journal of Human-Computer Interaction*. Advance online publication. https://doi.org/10.1080/10447318.2025.2531270

Aldalur, I., & Perez, A. (2023). Gamification and discovery learning: Motivating and involving students in the learning process. *Heliyon*, *9*(1). https://doi.org/10.1016/j.heliyon.2023.e13135

Alenazi, M. H. (2025). Gamification in ELT: Investigating its impact on motivation and language learning outcomes. *Theory & Practice in Language Studies (TPLS)*, *15*(8), 2584–2591. https://doi.org/10.17507/tpls.1508.15

Al-Khresheh, M. H. (2025). The cognitive and motivational benefits of gamification in English language learning: A systematic review. *The Open Psychology Journal,* *18*(1). https://doi.org/10.2174/0118743501359379250305083002

Al-Rahmi, A. M., Al-Rahmi, W. M., Alturki, U., Aldraiweesh, A., Almutairy, S., & Al-Adwan, A. S. (2022). Acceptance of mobile technologies and M-learning by university students: An empirical investigation in higher education. *Education and Information Technologies*, *27*(6), 7805–7826. https://doi.org/10.1007/s10639-022-10934-8

Alrashed, Y., Rasheed, A., Gohari, M., Eltanahi, N., Ramzy, S., Saleh, W., Abduljawad, R., & Wahab, H. (2023). Factors affecting students' willingness to use gamification in university settings. *International Journal of Information and Education Technology*, *13*(8), 1222–1229. https://doi.org/10.18178/ijiet.2023.13.8.1924

Alshehri, A. (2025). AI's effectiveness in language testing and feedback provision. *Social Sciences & Humanities Open*, *12*, 101892. https://doi.org/10.1016/j.ssaho.2025.101892

Alzahrani, M. A., & Nor, F. M. (2022). Professional development and EFL teachers' practices in activating learners' acquisition of 21st-century skills. *Problems of Education in the 21st Century*, *80*(5), 652. https://doi.org/10.33225/pec/22.80.652

Amoah, S., & Yeboah, J. (2021). The speaking difficulties of Chinese EFL learners and their motivation towards speaking the English language. *Journal of Language and Linguistic Studies*, *17*(1), 56–69. https://doi.org/10.52462/jlls.4

Andrés, G. Á. (2022). Gamification project in Japanese higher education for Spanish as a foreign language. *Journal of Higher Education Theory and Practice*, *22*(2), 255-273. https://doi.org/10.33423/jhetp.v22i2.5063

Andujar, A. (2020). Mobile-mediated dynamic assessment: A new perspective for second language development. *ReCALL: The Journal of EUROCALL, 32*(2), 178–194. https://doi.org/10.1017/S0958344019000247

Arifin, Z., & Setiawan, B. (2022). Utilising gamification for online evaluation through Quizizz: Teachers' perspectives and experiences. *World Journal on Educational Technology: Current Issues, 14*(3), 781–796. https://doi.org/10.18844/wjet.v14i3.7278

Arndt, H. L., Granfeldt, J., & Gullberg, M. (2023). The lang-track-app: Open-source tools for implementing the experience sampling method in second language acquisition research. *Language Learning, 73(3),* 869–903. https://doi.org/10.1111/lang.12555

Assarroudi, A., Heshmati Nabavi, F., Armat, M. R., Ebadi, A., & Vaismoradi, M. (2018). Directed qualitative content analysis: the description and elaboration of its underpinning methods and data analysis process. *Journal of Research in Nursing: JRN, 23*(1), 42–55. https://doi.org/10.1177/1744987117741667

Astafeva, A. E., Dulalaeva, L. P., & Semushina, E. Y. (2020, January). Elements of gamification in the practice of language training for students in technical and managerial areas. In *First International Volga Region Conference on Economics, Humanities and Sports (FICEHS 2019)* (pp. 531–535). Atlantis Press. https://doi.org/10.2991/aebmr.k.200114.124

Baah, C., Govender, I., & Rontala Subramaniam, P. (2023). Exploring the role of gamification in motivating students to learn. *Cogent Education, 10*(1), Article 2210045. https://doi.org/10.1080/2331186X.2023.2210045

Baah, C., Govender, I., & Subramaniam, P. R. (2024). Enhancing learning engagement: A study on gamification's influence on motivation and cognitive load. *Education Sciences, 14*(10), 1115. https://doi.org/10.3390/educsci14101115

Bakhoda, I., & Shabani, K. (2019). Bringing L2 learners' learning preferences in the mediating process through computerized dynamic assessment. *Computer Assisted Language Learning, 32*(3), 210–236. https://doi.org/10.1080/09588221.2018.1483950

Barreto, D., & Erztberger, J. (2024, March). Teachers' perceptions of an online gamification professional development. In *Society for Information Technology & Teacher Education International Conference* (pp. 2343–2345). Association for the Advancement of Computing in Education (AACE). Retrieved October 5, 2024, from https://www.learntechlib.org/primary/p/224306/

Batlle Rodríguez, J., & Vicenta González Argüello, M. (2023). Gamification and learning Spanish as a modern language: Student perceptions in the university context. *Language Learning in Higher Education, 13*(1), 89–103. https://doi.org/10.1515/cercles-2023-2016

Bećirović, S., Brdarević-Čeljo, A., & Delić, H. (2021). The use of digital technology in foreign language learning. *SN Social Sciences, 1*(10), 246. https://doi.org/10.1007/s43545-021-00254-y

Behl, A., Jayawardena, N., Pereira, V., Islam, N., Del Giudice, M., & Choudrie, J. (2022). Gamification and e-learning for young learners: A systematic literature review, bibliometric analysis, and future research agenda. *Technological*

Forecasting and Social Change, *176*, 121445. http://dx.doi.org/10.1016/j.techfore.2021.121445

Belotto, M. J. (2018). Data analysis methods for qualitative research: Managing the challenges of coding, interrater reliability, and thematic analysis. *The Qualitative Report*, *23*(11), 2622–2633. https://doi.org/10.46743/2160-3715/2018.3492

Bennani, S., Maalel, A., & Ben Ghezala, H. (2022). Adaptive gamification in E-learning: A literature review and future challenges. *Computer Applications in Engineering Education*, *30*(2), 628–642. Portico. https://doi.org/10.1002/cae.22477

Bhati, R., Dandona, I., Chaudhary, D., Agarwal, N., Agarwal, E., & Kumar, P. (2025, May). Sustainable Computing for Future-Ready Engagement: Integrating Green Technologies and Gamification in Digital Ecosystems. In *2025 International Conference on Engineering, Technology & Management* (ICETM) (pp. 1–6). IEEE. https://doi.org/10.1109/ICETM63734.2025.11051700

Biggs, R., De Vos, A., Preiser, R., Clements, H., Maciejewski, K., & Schlüter, M. (2021). *The Routledge handbook of research methods for social-ecological systems* (1st ed.). Taylor & Francis. https://doi.org/10.4324/9781003021339

Bingham, A. J. (2023). From data management to actionable findings: A five-phase process of qualitative data analysis. *International Journal of Qualitative Methods, 22*, 1–11. https://doi.org/10.1177/16094069231183620

Birt, L., Scott, S., Cavers, D., Campbell, C., Walter, F., & Pillay, J. (2016). Member checking: A tool to enhance trustworthiness or merely a nod to validation? *Qualitative Health Research, 26*(13), 1802-1811.

https://doi.org/10.1177/1049732316654870

Booth, A., Carroll, C., Ilott, I., Low, L. L., & Cooper, K. (2013). Desperately seeking dissonance: Identifying the disconfirming case in qualitative evidence synthesis. *Qualitative Health Research, 23*(1), 126–141. https://doi.org/10.1177/1049732312466295

Borg, S. (2006). The distinctive characteristics of foreign language teachers. *Language Teaching Research, 10*(1), 3–31. https://doi.org/10.1191/1362168806lr182oa

Boudadi, N., & Gutiérrez-Colón, M. (2020). Effect of gamification on students' motivation and learning achievement in second language acquisition within higher education: A literature review 2011-2019. *The EuroCALL Review*, *28*(1), 57–69. https://doi.org/10.4995/eurocall.2020.12974

Braun, V., Clarke, V., Boulton, E., Davey, L., & McEvoy, C. (2021). The online survey is a qualitative research tool. *International Journal of Social Research Methodology*, *24*(6), 641–654. https://doi.org/10.1080/13645579.2020.1805550

Broesch, T., Crittenden, A. N., Beheim, B. A., Blackwell, A. D., Bunce, J. A., Colleran, H., Hagel, K., Kline, M., McElreath, R., Nelson, R. G., Pisor, A. C., Prall, S., Pretelli, I., Purzycki, B., Quinn, E. A., Ross, C., Scelza, B., Starkweather, K., Stieglitz, J., & Mulder, M. B. (2020). Navigating cross-cultural research: methodological and ethical considerations. Proceedings. *Biological sciences, 287*(1935), 20201245. https://doi.org/10.1098/rspb.2020.1245

Buckley, J., Colosimo, L., Kantar, R., McCall, M., & Snow, E. (2021). Game-based assessment for education. *OECD Digital Education Outlook 2021*, *Pushing the*

Frontiers with Artificial Intelligence, Blockchain and Robots. p. 195. https://doi.org/10.1787/589b283f-en

Buffington, J., Demos, A. P., & Morgan-Short, K. (2021). The reliability and validity of procedural memory assessments used in second language acquisition research. *Studies in Second Language Acquisition, 43*(3), 635–662. https://psycnet.apa.org/doi/10.1017/S0272263121000127

Cafarella, L., & Vasconcelos, L. (2025). Computational thinking with game design: An action research study with middle school students. *Education and Information Technologies, 30*, 5589–5633. https://doi.org/10.1007/s10639-024-13010-5

Cancino, M., & Castillo, G. (2021). Gamification: How does it impact L2 vocabulary learning and engagement? *Electronic Journal of Foreign Language Teaching [e-FLT], 18*(2), 156–170. https://doi.org/10.56040/ghcc1824

Cao, Q., Griffin, T. E., & Bai, X. (2009). The importance of synchronous interaction for student satisfaction with course websites. *Journal of Information Systems Education, 20*(3), 331–338. http://jise.org/volume20/n3/JISEv20n3p331.pdf

Castillo-Montoya, M. (2016). Preparing for interview research: The interview protocol refinement framework. *Qualitative Report, 21*(5), 811–831. https://doi.org/10.46743/2160-3715/2016.2337

Çelik, F., & Baturay, M. H. (2024). Technology and innovation in shaping the future of education. *Smart Learning Environments, 11*(1), 54 (2024). https://doi.org/10.1186/s40561-024-00339-0

Chalupa, C. (2021). Increasing motivation among language learners through individualized assessment. *Central European Journal of Educational Research, 3*(2), 1–13. https://doi.org/10.37441/cejer/2021/3/2/9564

Chan, S., & Lo, N. (2024, August). Enhancing EFL/ESL instruction through gamification: A comprehensive review of empirical evidence. *In Frontiers in Education* (Vol. 9, p. 1395155). Frontiers Media SA. https://doi.org/10.3389/feduc.2024.1395155

Chana, N. (2022). Conducting credible qualitative research: The role of contextual descriptions. *Journal of Qualitative Research Methods, 24*(1), 1–12. https://doi.org/10.1016/j.qrm.2022.101012

Chapelle, C. (2007). Second language learning and online communication. In R. Andrews, C. Haythornthwaite (Eds.) *Second language learning and online communication* (pp. 371–393). SAGE Publications, Ltd, https://doi.org/10.4135/9781848607859.n17

Charmaz, K. (2017). Constructivist grounded theory. *The journal of positive psychology, 12*(3), 299–300. https://doi.org/10.1080/17439760.2016.1262612

Checa-Romero, M., & Gimenez-Lozano, J. M. (2025, January). Video games and metacognition in the classroom for the development of 21st century skills: A systematic review. In *Frontiers in Education* (Vol. 9, p. 1485098). Frontiers Media SA. https://doi.org/10.3389/feduc.2024.1485098

Chen, C., Jamiat, N., Abdul Rabu, S. N., & Mao, Y. (2024). Effects of a self-regulated-based gamified interactive e-books on primary students' learning performance and affection in a flipped mathematics classroom. *Education and Information*

Technologies, *29*(18), 24143–24180. https://doi.org/10.1007/s10639-024-12789-7

Cheng, J., Lu, C., & Xiao, Q. (2025). Effects of gamification on EFL learning: A quasi-experimental study of reading proficiency and language enjoyment among Chinese undergraduates. *Frontiers in Psychology*, *16*, 1448916. https://doi.org/10.3389/fpsyg.2025.1448916

Cheung, S. Y., & Ng, K. Y. (2021, March). Application of the educational game to enhance student learning. In *Frontiers in Education* (Vol. 6, p. 623793). Frontiers Media SA. https://doi.org/10.3389/feduc.2021.623793

Cho, H. J., Yough, M., & Levesque-Bristol, C. (2020). Relationships between beliefs about assessment and self-regulated learning in second language learning. *International Journal of Educational Research*, *99*, 101505. https://doi.org/10.1016/j.ijer.2019.101505

Cho, M., & Jonassen, D. (2009). Correction: “Development of the human interaction dimension of Self-Regulated Learning Questionnaire in asynchronous online learning environments.” *Educational Psychology*, *29*(2), 267. https://doi.org/10.1080/01443410902786056

Chowdhury, M., Dixon, L. Q., Kuo, L. J., Donaldson, J. P., Eslami, Z., Viruru, R., & Luo, W. (2024). Digital game-based language learning for vocabulary development. *Computers and Education Open*, *6*, 100160. https://doi.org/10.1016/j.caeo.2024.100160

Christopoulos, A., & Mystakidis, S. (2023). Gamification in education. *Encyclopedia*, *3*(4), 1223–1243. https://doi.org/10.3390/encyclopedia3040089

Chun, T. W., & Yunus, M. M. (2023). Exploring teachers' technology acceptance during COVID-19 pandemic: A systematic review (2020-2022). *Int J Eval & Res Educ ISSN, 2252*(8822), 8822. http://doi.org/10.11591/ijere.v12i2.25398

Chung, E., Fung, D., & Wan, A. (2025). Learner beliefs about vocabulary teaching in secondary ESL classrooms: a proficiency and grade-level analysis. *International Review of Applied Linguistics in Language Teaching*. https://doi.org/10.1515/iral-2024-0186

Cigdem, H., Ozturk, M., Karabacak, Y., Atik, N., Gürkan, S., & Aldemir, M. H. (2024). Unlocking student engagement and achievement: The impact of leaderboard gamification in online formative assessment for engineering education. *Education and Information Technologies, 29*(18), 24835–24860. https://doi.org/10.1007/s10639-024-12845-2

Cortés-Pérez, I., Zagalaz-Anula, N., López-Ruiz, M., Díaz-Fernández, Á., Obrero-Gaitán, E., & Osuna-Pérez, M. C. (2023). Study based on the gamification of tests through Kahoot! TM and reward game cards as an innovative tool in physiotherapy students: A preliminary study. *Healthcare, 11*(4), 578. https://doi.org/10.3390/healthcare11040578

Creswell, J. W., & Creswell, J. D. (2023). *Research design: Qualitative, quantitative, and mixed methods approaches* (6th ed.). Sage Publications. http://dx.doi.org/10.1007/s11135-023-01798-2

Csizér, K., & Illés, É. (2020). Helping to Maximize Learners' Motivation for Second Language Learning. *Language Teaching Research* Quarterly, *19*, 19–31.

https://doi.org/10.32038/ltrq.2020.19.02

Daher, W. (2023). Saturation in qualitative educational technology research. *Education Sciences, 13*(2), 98. https://doi.org/10.3390/educsci13020098

de Marcos-Ortega, L., Garcia-Cabot, A., Garcia-Lopez, E., Ramirez-Velarde, R., Teixeira, A. M., & Martínez-Herráiz, J.-J. (2020). Gamifying massive online courses: Effects on the social networks and course completion rates. *Applied Sciences, 10*(20), 7065. https://doi.org/10.3390/app10207065

Degirmenci, R. (2021). The use of Quizizz in language learning and teaching from the teachers' and students' perspectives: A literature review. *Language Education and Technology, 1*(1),1-11. https://www.langedutech.com/letjournal/index.php/let/article/view/12

Dehganzadeh, H., & Dehganzadeh, H. (2020). Investigating effects of digital gamification-based language learning: A systematic review. *Journal of English Language Teaching and Learning, 12*(25), 53–93. https://doi.org/10.22034/elt.2020.10676

Dehghanzadeh, H., Fardanesh, H., Hatami, J., Talaee, E., & Noroozi, O. (2021). Using gamification to support learning English as a second language: A systematic review. *Computer Assisted Language Learning 34*(7), 934–957. https://doi.org/10.1080/09588221.2019.1648298

Dehghanzadeh, H., Farrokhnia, M., Dehghanzadeh, H., Taghipour, K., & Noroozi, O. (2024). Using gamification to support learning in K-12 education: A systematic literature review. *British Journal of Educational Technology, 55*(1), 34–70.

https://doi.org/10.1111/bjet.13335

DeJonckheere, M., & Vaughn, L. M. (2019). Semistructured interviewing in primary care research: A balance of relationship and rigor. *Family Medicine and Community Health*, *7*(2), e000057. https://doi.org/10.1136/fmch-2018-000057

De-Marcos, L., Domínguez, A., Saenz-de-Navarrete, J., & Pagés, C. (2014). An empirical study comparing gamification and social networking on e-learning. *Computers & Education*, *75*, 82–91. https://doi.org/10.1016/j.compedu.2014.01.012

Demirbilek, M., Talan, T., & Alzouebi, K. (2022). An examination of the factors and challenges to adopting gamification in English foreign language teaching. *International Journal of Technology in Education (IJTE)*, *5*(4), 654-668. https://doi.org/10.46328/ijte.358

Demszky, D. (2022). *Using Natural Language Processing to Support Student-Centered Education* (Order No. 30208256). Available from ProQuest Dissertations & Theses Global Closed Collection; ProQuest One Academic. (2778643704). https://www.proquest.com/dissertations-theses/using-natural-language-processing-support-student/docview/2778643704/se-2

De Neve, D., Leroy, A., Struyven, K., & Smits, T. (2022). Supporting formative assessment in the second language classroom: An action research study in secondary education. *Educational Action Research*, *30*(5), 828–849. https://doi.org/10.1080/09650792.2020.1828120

Denzin, N. K., & Lincoln, Y. S. (2018). Introduction: The discipline and practice of qualitative research. In Denzin N., Lincoln Y. (Eds.), *The Sage Handbook of Qualitative Research (4th ed.).* Sage. https://doi.org/10.4135/9781526430212

Dixon, D. H., Dixon, T., & Jordan, E. (2022). Second language gains through digital game-based language learning (DGBLL): A meta-analysis. *Language Learning & Technology*, *26*(1), 1–25. https://doi.org/10.64152/10125/73464

Dobakhti, L. (2013). Commenting on findings in qualitative and quantitative research articles' discussion sections in applied linguistics. *International Journal of Applied Linguistics & English Literature*, *2*(5), 145–154. https://doi.org/10.7575/aiac.ijalel.v.2n.5p.145

Drisko, J. W. (2024). Transferability and generalization in qualitative research. *Research on Social Work Practice*, *35*(1), 102–110. https://doi.org/10.1177/10497315241256560

Duncan, K. J. (2020). Examining the effects of immersive game-based learning on student engagement and the development of collaboration, communication, creativity, and critical thinking. *TechTrends*, *64*(3), 514–524. https://doi.org/10.1007/s11528-020-00500-9

Durdella, N. (2019). Framing a dissertation study through a research tradition. In *Qualitative dissertation methodology: A guide for research design and methods* (pp. 87–144). SAGE Publications, Inc., https://doi.org/10.4135/9781506345147

Ekici, M. (2021). A systematic review of the use of gamification in flipped learning. *Education and Information Technologies*, *26*(3), 3327–3346. https://doi.org/10.1007/s10639-020-10394-y

Enayat, M. J., Asadi Ghadim, N., & Arabmofrad, A. (2025). Effects of two mobile-assisted language learning apps on L2 receptive and productive vocabulary knowledge: A mixed-methods study. *System, 133*, 103763. https://doi.org/10.1016/j.system.2025.103763

Ertmer, P. A., & Ottenbreit-Leftwich, A. T. (2010). Teacher technology change: How knowledge, confidence, beliefs, and culture intersect. *Journal of Research on Technology in Education, 42*(3), 255–284. https://doi.org/10.1080/15391523.2010.10782551

España-Delgado, J. A. (2023). Kahoot, Quizizz, and Quizalize in the English class and their impact on motivation. *HOW, 30*(1), 65–84. https://doi.org/10.19183/how.30.1.641

Facey-Shaw, L., Specht, M., van Rosmalen, P., & Bartley-Bryan, J. (2020). Do badges affect intrinsic motivation in introductory programming students? *Simulation & Gaming, 51*(1), 33– 54. https://doi.org/10.1177/1046878119884996

Fullan, M. (2016). *The new meaning of educational change* (5th ed.). Teachers College Press. https://doi.org/10.1007/1-4020-4451-8_12

Fuster-Guilló, A., Pertegal-Felices, M. L., Jimeno-Morenilla, A., Azorín-López, J., Rico-Soliveres, M. L., & Restrepo-Calle, F. (2019). Assessment of the impact on motivation and academic performance of a game-based learning experience using Kahoot. *Frontiers in Psychology, 10*, 2843. https://doi.org/10.3389/fpsyg.2019.02843

Gee, E., & Gao, Y. (2022). Digital game-mediated language learning for adults. *Adult*

Literacy Education: The International Journal of Literacy, Language, and Numeracy, 4(1), 67–73. https://doi.org/10.35847/egee.ygao.4.1.67

Gil-Acirón, L. Á. (2022). Benefits of gamification in second language learning. *Epos*, (*38)*, 103–126. https://doi.org/10.5944/epos.38.2022.33785

Gil-Quintana, J., & Jurado, R. (2024). Impact of gamification on school engagement: A systematic review. *Frontiers in Education*. https://doi.org/10.3389/feduc.2024.1466926

Gironella, F. (2023). Gamification pedagogy: A motivational approach to student-centric course design in higher education. *Journal of University Teaching & Learning Practice*, *20*(3), 1–28. https://doi.org/10.53761/1.20.3.04

Gkintoni, E., Vantaraki, F., Skoulidi, C., Anastassopoulos, P., & Vantarakis, A. (2024). Promoting physical and mental health among children and adolescents via gamification—A conceptual systematic review. *Behavioral Sciences*, *14*(2), 102. https://doi.org/10.3390/bs14020102

Goegan, L. D., Radil, A. I., Brooks, A., & Daniels, L. M. (2020). Pre-service and in-service teachers' perspectives on academic success: More than just a grade. *Practical Assessment, Research & Evaluation*, *25*(10). https://doi.org/10.55016/ojs/cpai.v6i1.76505

Goening, C., & Binnewies, C. (2019). 'Achievement unlocked!' – The impact of digital achievements as a gamification element on motivation and performance. *Computers in Human Behavior, 97* 151-166. https://doi.org/10.1016/j.chb.2019.02.026

Gomez, F. C., Jr, Trespalacios, J., Hsu, Y. C., & Yang, D. (2022). Exploring teachers' technology integration self-efficacy through the 2017 ISTE Standards. *TechTrends, 66*(2), 159-171. https://doi.org/10.1007/s11528-021-00639-z

Gómez-Carrasco, C. J., Monteagudo-Fernández, J., Moreno-Vera, J. R., & Sainz-Gómez, M. (2019). Effects of a gamification and flipped-classroom program for teachers in training on motivation and learning perception. *Education Sciences, 9*(4), 299. https://doi.org/10.3390/educsci9040299

Gómez Niño, J. R., Árias Delgado, L. P., Chiappe, A., & Ortega González, E. (2024). Gamifying learning with AI: A pathway to 21st-century skills. *Journal of Research in Childhood Education, 39*(4), 735–750. https://doi.org/10.1080/02568543.2024.2421974

Gomez, M. J., Ruipérez-Valiente, J. A., & Clemente, F. J. G. (2023). A Systematic Literature Review of Game-Based Assessment Studies: *Trends and Challenges. IEEE Transactions on Learning Technologies*, *16*(4), 500–515. https://doi.org/10.1109/tlt.2022.3226661

González-González, C. S., Toledo-Delgado, P. A., Muñoz-Cruz, V., & Arnedo-Moreno, J. (2022). Gender and Age Differences in Preferences on Game Elements and Platforms. *Sensors (Basel, Switzerland)*, *22*(9), 3567. https://doi.org/10.3390/s22093567

Govender, T., & Arnedo-Moreno, J. (2021). An analysis of game design elements used in digital game-based language learning. *Sustainability*, *13*(12), 6679. https://doi.org/10.3390/su13126679

Granić, A. (2022). Educational technology adoption: A systematic review. *Education and Information Technologies*, *27*(7), 9725–9744. https://doi.org/10.1007/s10639-022-11053-0

Greipl, S., Moeller, K., & Ninaus, M. (2020). Potential and limits of game-based learning. *International Journal of Technology Enhanced Learning*, *12*(4), 363–389. http://dx.doi.org/10.1504/IJTEL.2020.10028417

Grubjesic, I., & Ivanjko, T. (2025). Using Gamification to Enhance the Acquisition of English as a Second or Foreign Language in Higher Education: A Scoping Review. *INTED2025 Proceedings*, 1662-1670. https://doi.org/10.21125/inted.2025.0502

Gruzd, A., Staves, K., & Wilk, A. (2012). Connected scholars: Examining the role of social media in faculty research practices using the UTAUT model. *Computers in Human Behavior*, *28*(6), 2340–2350. https://doi.org/10.1016/j.chb.2012.07.004

Guest, G., Namey, E., & Chen, M. (2020). A simple method to assess and report thematic saturation in qualitative research. *PloS one*, *15*(5), e0232076. https://doi.org/10.1371/journal.pone.0232076

Gündüz, A. Y., & Akkoyunlu, B. (2020). Effectiveness of gamification in flipped learning. *SAGE Open*, *10*(4). https://doi.org/10.1177/2158244020979837

Han, L. (2025). Effects of single-player and multi-player role-playing game genres on developing incidental vocabulary acquisition. *Computer-Assisted Language Learning*. 1–39. https://doi.org/10.1080/09588221.2025.2479135

Handayani, P. W., Raharjo, S. R., & Putra, P. H. (2021). Active Student Learning through

Gamification in a Learning Management System. *Electronic Journal of E-Learning, 19*(6), 601-613. https://doi.org/10.34190/ejel.19.6.2089

Harvey Arce, N. P., & Cuadros Valdivia, A. M. (2020). Adapting competitiveness and gamification to a digital platform for foreign language learning. *International Journal of Emerging Technologies in Learning (iJET), 15*(20), pp. 194–209. https://doi.org/10.3991/ijet.v15i20.16135

Helmefalk, M. (2019). An interdisciplinary perspective on gamification: Mechanics, psychological mediators, and outcomes. *International Journal of Serious Games, 6*(6), 3–26. https://doi.org/10.17083/ijsg.v6i1.262

Hennink, M., & Kaiser, B. N. (2022). Sample sizes for saturation in qualitative research: A systematic review of empirical tests. *Social Science & Medicine, (292*), 114523. https://doi.org/10.1016/j.socscimed.2021.114523

Hernández-Sellés, N., Muñoz-Carril, P. C., & González-Sanmamed, M. (2020). Interaction in computer supported collaborative learning: An analysis of the implementation phase. *International Journal of Educational Technology in Higher Education, 17*(1), 1–13. https://doi.org/10.1186/s41239-020-00202-5

Heydarnejad, T., Tagavipour, F., Patra, I., & Farid Khafaga, A. (2022). The impacts of performance-based assessment on reading comprehension achievement, academic motivation, foreign language anxiety, and students' self-efficacy. *Language Testing in Asia, 12*(1), 1–21. https://doi.org/10.1186/s40468-022-00202-4

Hsu, P.-C., & Chen, R.-S. (2023). Analyzing the mechanisms by which digital platforms influence family-school partnerships among parents of young children.

Sustainability, *15*(24), 16708. https://doi.org/10.3390/su152416708

Huang, Q. (2025). Integrating IT to foster engagement and reduce anxiety in foreign language learning. *Information Development*. https://doi.org/10.1177/02666669251325520

Huang, R., Ritzhaupt, A. D., Sommer, M., Zhu, J., Stephen, A., Valle, N., Hampton, J., & Li, J. (2020). The impact of gamification in educational settings on student learning outcomes: A meta-analysis. *Educational Technology Research and Development*, *68*, 1875-1901. https://doi.org/10.1007/s11423-020-09807-z

Hung, B. P., & Nguyen, L.T. (2022). Scaffolding Language Learning in the Online Classroom. In: Sharma, R., Sharma, D. (eds) *New Trends and Applications in Internet of Things (IoT) and Big Data Analytics.* Intelligent Systems Reference Library, vol 221. Springer, Cham. https://doi.org/10.1007/978-3-030-99329-0_8

Hung, H. T., Yang, J. C., Hwang, G. J., Chu, H. C., & Wang, C. C. (2018). A scoping review of research on digital game-based language learning. *Computers & Education*, *126*, 89-104. https://doi.org/10.1016/j.compedu.2018.07.001

Hussein, M. H., Ow, S. H., Elaish, M. M., & Jensen, E. O. (2022). Digital game-based learning in K-12 mathematics education: A systematic literature review. *Education and Information Technologies*, 1–33. https://doi.org/10.1007/s10639-021-10721-x

Ishaq, K., Zin, N. A. M., Rosdi, F., Jehanghir, M., Ishaq, S., & Abid, A. (2021). Mobile-assisted and gamification-based language learning: A systematic literature review. *PeerJ Computer Science, p. 7,* e496. https://doi.org/10.7717/peerj-cs.496

Iyawa, G., &Masikara, W., & Osakwe, J., & Oduor, C. (2019). CS Challenger: Gamifying the Learning of Computer Science Concepts through a Mobile Application Platform. *2019 IST-Africa Week Conference (IST-Africa), Nairobi, Kenya, 2019, pp. 1-12,* https://doi.org/10.23919/ISTAFRICA.2019.8764865

Jääskä, E., & Aaltonen, K. (2022). Teachers' experiences of using game-based learning methods in project management higher education. *Project Leadership and Society, 3,* Article 100041. https://doi.org/10.1016/j.plas.2022.100041

Jaramillo-Mediavilla, L., Basantes-Andrade, A., Cabezas-González, M., & Casillas-Martín, S. (2024). Impact of gamification on motivation and academic performance: A systematic review. *Education Sciences, 14*(6), 639. https://doi.org/10.3390/educsci14060639

Jaworski, B. K., Parasuraman, S., Gowda, J., Spotts, E., Schloesser, D., & Hunter, C. M. (2022). *The Future of work, behavioral and social science-informed considerations for a hybrid work environment.* National Institutes of Health, Office of Behavioral and Social Sciences Research.

Jiao, S., Jin, H., You, Z., & Wang, J. (2022). Motivation and its effect on language achievement: Sustainable development of Chinese middle school students' second language learning. *Sustainability, 14*(16), 9918. https://doi.org/10.3390/su14169918

Johnson, C. C., Walton, J. B., Strickler, L., & Elliott, J. B. (2022). Online teaching in K-12 education in the United States: A systematic review. *Review of Educational Research, 93*(3), 353–411. https://doi.org/10.3102/00346543221105550

Jonassen, D., Davidson, A., Collins, M., Campbell, J., & Haag, B. B. (1995). Constructivism and computer-mediated communication in distance education. *The American Journal of Distance Education, 9*(2), 7–26. https://doi.org/10.1080/08923649509526885

Kalleny, N. K. (2020). Advantages of Kahoot! Game-based formative assessments along with methods of its use and application during the COVID-19 pandemic in various live learning sessions. *Journal of Microscopy and Ultrastructure*, *8*(4), 175–185. https://doi.org/10.4103/jmau.jmau_61_20

Kamaruzaman, S. S. S., Nor Azmi, N., Zulkflee, Z., Prakas, J., & Maniam, M. (2023). Language learning strategy: Comparison of online and Face-to-Face ESL classrooms. *International Journal of Academic Research in Progressive Education and Development, 12*(2), 511–527. http://dx.doi.org/10.6007/IJARPED/v12-i2/16753

Karatsareas, P. (2022). Semistructured interviews. *Research Methods in Language Attitudes*, 99–113. https://doi.org/10.1017/9781108867788.010

Kassenkhan, A. M., Moldagulova, A. N., & Serbin, V. V. (2025). Gamification and artificial intelligence in education: A review of innovative approaches to fostering critical thinking. *IEEE Access*. https://doi.org/10.1109/ACCESS.2025.3578147

Kessler, G. (2018). Technology and the future of language teaching. *Foreign Language Annals, 51*(1), 205-218. https://doi.org/10.1111/flan.12318

Khaldi, A., Bouzidi, R., & Nader, F. (2023). Gamification of e-learning in higher education: a systematic literature review. *Smart Learning Environments*, *10*(1),

10. https://doi.org/10.1186/s40561-023-00227-z

Khalid, P. Z. M., Kussin, H. J., Nasir, N., & Esahak, H. A. (2024). Using Games in the Classroom to Boost Motivation Among ESL Students. Integrating Technology in Problem-Solving Educational Practices, 93–116. https://doi.org/10.4018/979-8-3693-6745-2.ch005

Khan, S. S., & Takkac, M. (2021). Motivational factors for learning English as a second language acquisition in Canada. *Higher Education Studies, 11*(1), 160–170. https://doi.org/10.5539/hes.v11n1p160

Kiyançiçek, E., & Levent, U. Z. U. N. (2022). Gamification in English language classrooms: The case of Kahoot! *Bilim Eğitim Sanat ve Teknoloji Dergisi, 6*(1), 1–13. https://doi.org/10.46328/bestdergi.63

Klimova, B., & Kacet, J. (2017). Efficacy of computer games on language learning. *Turkish Online Journal of Educational Technology-TOJET, 16*(4), 19-26. https://eric.ed.gov/?id=EJ1160637

Klock, A. C. T., Santana, B. S., & Hamari, J. (2023). Ethical Challenges in Gamified Education Research and Development: An Umbrella Review and Potential Directions. *Gamification Design for Educational Contexts*, 37–48. https://doi.org/10.1007/978-3-031-31949-5_3

Kootstra, G. J., Dijkstra, T., & Starren, M. (2015). Second Language Acquisition. *International Encyclopedia of the Social & Behavioral Sciences*, 349–359. https://doi.org/10.1016/b978-0-08-097086-8.53025-6

Kopcha, T. J., Ding, L., Neumann, K. L., & Choi, I. (2016). Teaching technology integration to K-12 educators: A ‘gamified’ approach. *TechTrends*, *60*(1), 62–69. https://doi.org/10.1007/s11528-015-0018-z

Kotob, M., & Ibrahim, A. (2019). Gamification: The effect on students’ motivation and achievement in language learning. *Journal of Applied Linguistics and Language Research, 6*(1), 177–198.

Krashen, S. (1981). Second language acquisition. *Second Language Learning, 3*(7), 19–39.

Krashen, S., & Scarcella, R. (1978). On routines and patterns in second language acquisition and performance. *Language Learning 28*, 283–300. https://doi.org/10.1111/j.1467-1770.1978.tb00135.x

Krashen, S. D. (1982). *Principles and practice in second language acquisition*. Pergamon Press.

Krath, J., Schürmann, L., & von Korflesch, H. F. O. (2021). Revealing the theoretical basis of gamification: A systematic review and analysis of theory in research on gamification, serious games, and game-based learning. *Computers in Human Behavior*, *125*, 106963. https://doi.org/10.1016/j.chb.2021.106963

Kyewski, E., & Krämer, N. C. (2018). To gamify or not to gamify? An experimental field study of the influence of badges on motivation, activity, and performance in an online learning course. *Computers & Education, (118)* 25–37. https://doi.org/10.1016/j.compedu.2017.11.006

Kyngäs, H. (2020). Inductive content analysis. In: Kyngäs, H., Mikkonen, K., Kääriäinen, M. (eds) *The application of content analysis in nursing science research*, 13-21.

Springer, Cham. https://doi.org/10.1007/978-3-030-30199-6_2

Lai, P. C. (2017). The literature review of technology adoption models and theories for the novelty technology. *JISTEM-Journal of Information Systems and Technology Management*, *14*(1), 21–38. https://doi.org/10.4301/s1807-17752017000100002

Laksanasut, S. (2024). Gamification in ESL/EFL education: Transforming language learning and teaching through play. *Journal of Applied Linguistics*, *18*(1), 45–61. https://doi.org/10.48185/tts.v6i1.1562

Lampropoulos, G., Keramopoulos, E., Diamantaras, K., & Evangelidis, G. (2022). Augmented reality and gamification in education: A systematic literature review of research, applications, and empirical studies. *Applied Sciences*, *12*(13), 6809. https://doi.org/10.3390/app12136809

Landers, R. N. (2018). Gamification misunderstood: How badly executed and rhetorical gamification obscures its transformative potential. *Journal of Management Inquiry, 28*(2), 137–140. https://doi.org/10.1177/1056492618790913

Laura-De La Cruz, K. M., Noa-Copaja, S.J., Turpo-Gebera, O., Montesinos-Valencia, C.C., Bazán-Velasquez, S.M., & Pérez-Postigo, G.S. (2023). Use of gamification in English learning in higher education: *A systematic review. Journal of Technology and Science Education, 13*(2), 480–497. https://doi.org/10.3926/jotse.1740

Leavy, P. (Ed.). (2014). *The Oxford handbook of qualitative research.* Oxford University Press, USA. https://doi.org/10.1093/oxfordhb/9780199811755.001.0001

Lee, B. J. (2025). Reimagining language learning: AI-driven innovations for engagement and growth. *Technology in Language Teaching & Learning*, *6*(3), 102773. https://doi.org/10.29140/tltl.v6n3.102773

Lee, M., & Bong, M. (2019). Relevance of goal theories to language learning research. *System*, *86*, 102122. https://doi.org/10.1016/j.system.2019.102122

Leshchenko, M., Lavrysh, Y., Halatsyn, K., Feshchuk, A., & Prykhodko, D. (2023). Technology-Enhanced personalized language learning: Strategies and challenges. *International Journal of Emerging Technologies in Learning*, *18*(13), 120–136. https://doi.org/10.3991/ijet.v18i13.39905

Lester, D., Skulmoski, G. J., Fisher, D. P., Mehrotra, V., Lim, I., Lang, A., & Keogh, J. W. L. (2023). Drivers and barriers to the utilisation of gamification and game-based learning in universities: A systematic review of educators' perspectives. *British Journal of Educational Technology*, *54*(6), 1748–1770. Portico. https://doi.org/10.1111/bjet.13311

Li, J. (2020). Development and validation of second language online reading strategies inventory. *Computers & Education*, 145, 103733. https://doi.org/10.1016/j.compedu.2019.103733

Li, K., Peterson, M., Wang, Q., & Wang, H. (2024). Mapping the research trends of digital game-based language learning (DGBLL): A scientometrics review. *Computer Assisted Language Learning*, 1–30. https://doi.org/10.1080/09588221.2023.2299436

Li, M., Ma, S., & Shi, Y. (2023). Examining the effectiveness of gamification as a tool promoting teaching and learning in educational settings: A meta-analysis.

Frontiers in Psychology, *14*, 1253549. https://doi.org/10.3389/fpsyg.2023.1253549

Li, P., & Lan, Y. J. (2022). Digital language learning (DLL): Insights from behavior, cognition, and the brain. *Bilingualism: Language and Cognition*, *25*(3), 361-378. https://doi.org/10.1017/s1366728921000353

Li, S., Hiver, P., & Papi, M. (2022). Individual differences in second language acquisition: Theory, research, and practice. *In The Routledge Handbook of Second Language Acquisition and Individual Differences* (pp. 3–34). Routledge. https://doi.org/10.4324/9781003270546-2

Lin, X. (2024). Learning styles and second language acquisition: A review of influences, factors, and educational implication. *Journal of Education, Humanities and Social Sciences, 26*, 891–896. https://doi.org/10.54097/artnwd45

Lincoln, Y. S., Guba, E. G., & Pilotta, J. J. (1985). Naturalistic inquiry. *International Journal of Intercultural Relations, 9*(4), 438–439. https://doi.org/10.1016/0147-1767(85)90062-8

Liontas, J. I. (2022). Let the games begin! Harnessing the power of gaming in language education. *Iranian Journal of Language Teaching Research*, *10*(2), 1–16. https://doi.org/10.30466/ijltr.2022.121180

Liu, Z., & Moon, J. (2023). A framework for applying sequential data analytics to design personalized digital game-based learning for computing education. *Journal of Educational Technology & Society, 26*(2), 181–197. https://doi.org/10.30191/ETS.202304_26(2).0013

Lopez, C., & Tucker, C. (2019). The effects of player type on performance: A gamification case study. *Computers in Human Behavior, 91,* 333–345. https://doi.org/10.1016/j.chb.2018.10.005

Lou, N. M., & Noels, K. A. (2019). Promoting growth in foreign and second language education: A research agenda for mindsets in language learning and teaching. *System*, *86,* 102126. https://doi.org/10.1016/j.system.2019.102126

Luo, Z. (2023). The effectiveness of gamified tools for foreign language learning (FLL): A systematic review. *Behavioral Sciences (Basel, Switzerland), 13*(4), 331. https://doi.org/10.3390/bs13040331

Machado, A., Tenório, K., Santos, M. M., Barros, A. P., Rodrigues, L., Mello, R. F., Paiva, R., & Dermeval, D. (2025). Workload perception in educational resource recommendation supported by artificial intelligence: A controlled experiment with teachers. *Smart Learning Environments*, *12*(1), 20. https://doi.org/10.1186/s40561-025-00373-6

Machmud, M. T., Wattanachai, S., & Samat, C. (2023). Constructivist gamification environment model designing a framework to improve ill-structured problem-solving in learning sciences. *Educational Technology Research and Development, 71*(6), 2413–2429. https://doi.org/10.1007/s11423-023-10279-0

Malahito, J. A. I., & Quimbo, M. A. T. (2020). Creating G-Class: A gamified learning environment for freshman students. *E-Learning and Digital Media, 17*(2), 94–110. https://doi.org/10.1177/2042753019899805

Malamed, C. (2012). Book Review: “The Gamification of Learning and Instruction:

Game-Based Methods and Strategies for Training and Education" by Karl Kapp. ELearn, 2012(5). https://doi.org/10.1145/2207270.2211316

Manzano-León, A., Camacho-Lazarraga, P., Guerrero, M. A., Guerrero-Puerta, L., Aguilar-Parra, J. M., Trigueros, R., & Alias, A. (2021). Between level up and game over: A systematic literature review of gamification in education. *Sustainability*, *13*(4), 2247. https://doi.org/10.3390/su13042247

Marikyan, D., & Papagiannidis, S. (2023). *Unified Theory of Acceptance and Use of Technology: A review*. In S. Papagiannidis (Ed), TheoryHub Book. Available at https://open.ncl.ac.uk/ ISBN: 9781739604400

Marín-Suárez, I., Gómez-García, C., & Marín-Suárez, L. (2025). Gamification and motivation in adolescents. Systematic review from Physical Education. *Frontiers in Psychology*. https://doi.org/10.3389/fpsyg.2025.1575104

Martí-Parreño, J., Seguí-Mas, D., & Seguí-Mas, E. (2016). Teachers' attitude towards and actual use of gamification. *Procedia - Social and Behavioral Sciences, 228,* 682–688. https://doi.org/10.1016/j.sbspro.2016.07.104

Maxwell, J. (2022). Interactive approaches to qualitative research design. In U. Flick (Ed.), *Interactive approaches to qualitative research design* (Vol. 2, pp. 41–54). SAGE Publications Ltd, https://doi.org/10.4135/9781529770278.n4

Md Yunus, M., & Azmanuddin bin Azman, M. (2019). Memory stay or stray? Irregular verbs learning using Kahoot!. *Arab World English Journal (AWEJ) Special Issue on CALL*, (5). https://dx.doi.org/10.24093/awej/call5.15

Meng, C., Zhao, M., Pan, Z. et al. Investigating the impact of gamification components on online learners' engagement. *Smart Learning Environments 11*, 47 (2024). https://doi.org/10.1186/s40561-024-00336-3

Mercer, N., Wegerif, R., & Major, L. (2019). *The Routledge International Handbook of Research on Dialogic Education* (N. Mercer, R. Wegerif, & L. Major, Eds.). Routledge. https://doi.org/10.4324/9780429441677

Miller De Rutté, A., & Lopez, M. (2022). Gamification as a course organizing principle in second language curricula. *L2 Journal: An Open Access Refereed Journal for World Language Educators, 14*(3). https://doi.org/10.5070/L214357978

Miras, S., Ruiz-Bañuls, M., Gómez-Trigueros, I., & Mateo-Guillen, C. (2023). Implications of the digital divide: A systematic review of its impact in the educational field. *Journal of Technology and Science Education, 13*(3), 936–950. https://doi.org/10.3926/jotse.2249

Mohammed, Z., & Jesudas, R. (2025, June). Enhancing language acquisition with AI and gamification: A new era of learning innovation. In *AIP Conference Proceedings* (Vol. 3306, No. 1, p. 050004). AIP Publishing LLC. https://doi.org/10.1063/5.0276596

Montrul, S. (2019). How learning context shapes heritage and second language acquisition. *The Handbook of Informal Language Learning*, pp. 57–74. https://doi.org/10.1002/9781119472384.ch4

Muñoz, C., Pujadas, G., & Pattemore, A. (2021). Audio-visual input for learning L2 vocabulary and grammatical constructions. *Second Language Research*, *39*(1), 13–37. https://doi.org/10.1177/02676583211015797

Murillo-Zamorano, L. R., López Sánchez, J. Á., Godoy-Caballero, A. L., & Bueno Muñoz, C. (2021). Gamification and active learning in higher education: Is it possible to match digital society, academia, and students' interests? *International Journal of Educational Technology in Higher Education*, *18*(1). https://doi.org/10.1186/s41239-021-00249-y

Mustofa, M. (2024). Epistemology of paradigms for positivism, interpretivism, and action research in educational research: A literature review. *Journal of Office Administration: Education and Practice, 3*(3), 214–224. https://doi.org/10.26740/joaep.v3n3.p214-224

Namaziandost, E., Neisi, L., Kheryadi, & Nasri, M. (2019). Enhancing oral proficiency through cooperative learning among intermediate EFL learners: English learning motivation in focus. *Cogent Education*, *6*(1), 1683933. https://doi.org/10.1080/2331186X.2019.1683933

Nassaji, H. (2016). Anniversary article: Interactional feedback in second language teaching and learning: A synthesis and analysis of current research. *Language Teaching Research, 20*(4), 535–562. https://doi.org/10.1177/1362168816644940

Nilubol, K., & Sitthitikul, P. (2025). Exploring the transformative effects of gamified learning on writing and metacognition in an EFL university context: An account of blended learning landscape. *LEARN Journal: Language Education and Acquisition Research Network, 18*(1), 513–551. https://doi.org/10.70730/bugm2855

Nortvedt, G. A., Wiese, E., Brown, M. et al. (2020). Aiding culturally responsive assessment in schools in a globalising world. *Educational Assessment, Evaluation, and Accountability (32)*5–27. https://doi.org/10.1007/s11092-020-09316-w

Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Defining and refining. *International Journal of Qualitative Methods, 16*, 1–13. https://doi.org/10.1177/1609406917733847

Nuri, H. S. M., Qadir, S. M., Mohammed, R. R., & Azaldin, A. H. (2022). Perceptions of postgraduate students towards the use of Kahoot as a formative assessment tool in an English language course. *Journal of University of Raparin, 9*(5), 229–251. https://doi.org/10.26750/Vol(9).No(5).Paper11

O'Kane, P., Smith, A., & Lerman, M. P. (2019). Building transparency and trustworthiness in inductive research through computer-aided qualitative data analysis software. *Organizational Research Methods*, *24*(1), 104–139. https://doi.org/10.1177/1094428119865016

Öden, M. S., Bolat, Y. İ., & Goksu, İ. (2021). Kahoot! as a gamification tool in vocational education: More positive attitude, motivation, and less anxiety in EFL. *Journal of Computer and Education Research*, *9*(18), Article 18. https://doi.org/10.18009/jcer.924882

Ojong, A. S. (2023). Unraveling the efficacy of differentiated instruction in enhancing second language acquisition: A comprehensive review and future directions. *International Journal of Linguistics, Literature & Translation, 6*(6). https://doi.org/10.32996/ijllt.2023.6.6.8

Oliveira, R. P., Souza, C. G. D., Reis, A. D. C., & Souza, W. M. D. (2021). Gamification in e-learning and sustainability: A theoretical framework. *Sustainability, 13*(21), 11945. https://doi.org/10.3390/su132111945

Oliveira, W., Hamari, J., Joaquim, S., Toda, A. M., Palomino, P. T., Vassileva, J., & Isotani, S. (2022). The effects of personalized gamification on students' flow experience, motivation, and enjoyment. *Smart Learning Environments*, *9*(1), 16. https://doi.org/10.1186/s40561-022-00194-x

Palaganas, E. C., Sanchez, M. C., Molintas, M. P., & Caricativo, R. D. (2017). Reflexivity in qualitative research: A journey of learning. *The Qualitative Report, 22*(2), 426–438. https://doi.org/10.46743/2160-3715/2017.2552

Patton, M. Q. (2015). *Qualitative research and evaluation methods* (4th ed.). SAGE.

Pennsylvania Advisory Committee to the U.S. Commission on Civil Rights. (2024, December). *The rising use of artificial intelligence in K-12 education*. U.S. Commission on Civil Rights. https://www.usccr.gov/files/2024-12/2024-ai-in-education.pdf

Pentón Herrera, L. J. (2019). Learning, language, and literacy as entities for empowerment and equality: A case study of three adolescent Indigenous Ixil ELs. *Educating for a just society: The 41st association of literacy educators and researchers' yearbook*, 31–49.

Perera, K. (2019). The interview as an opportunity for participant reflexivity. *Qualitative Research, 20*(2), 143–159. https://doi.org/10.1177/1468794119830539

Phakiti, A., & Plonsky, L. (2018). Reconciling Beliefs about L2 Learning with SLA

Theory and Research. *RELC Journal*, *49*(2), 217–237. https://doi.org/10.1177/0033688218781970

Pham, T. (2021). Attitude and motivation in language learning: A review. *Journal of English Language Teaching and Applied Linguistics*, *3*(5), 64–72. https://doi.org/10.32996/jeltal.2021.3.5.7

Phuong, T. (2020). Gamified learning: Are Vietnamese EFL learners ready yet? *International Journal of Emerging Technologies in Learning (iJET), 15*(24), 242-251..https://doi.org/10.3991/ijet.v15i24.16667

Piaget, J. (1972). *The psychology of the child*. Basic Books.

Pitoyo, M. D., & Asib, A. (2020). Gamification-based assessment: The washback effect of Quizizz on students' learning in higher education. *International Journal of Language Education*, *4*(1), 1–10. https://doi.org/10.26858/ijole.v4i2.8188

Publication manual of the American Psychological Association (7th ed.). (2020). *American Psychological Association*. https://doi.org/10.1037/0000165-000

Qiao, S., Yeung, S. S., Shen, X. A., Leung, K. L., Ng, T. K., & Chu, S. K. W. (2024). How competitive, cooperative, and collaborative gamification impacts student learning and engagement. *Language Learning & Technology, 28*(1), 1–19. https://doi.org/10.64152/10125/73546

Raffone, A. (2022). Gamifying English language learning through interactive storytelling and MALL technologies. *Language Teaching Research*, *29*(5), 2204–2224. https://doi.org/10.1177/13621688221110206

Rahmani, E. F. (2020). The benefits of gamification in the English learning context. *IJEE*

(Indonesian Journal of English Education), 7(1), 32–47. https://doi.org/10.15408/ijee.v7i1.17054

Ravitch, S. M., & Carl, N. M. (2019). *Qualitative research: Bridging the conceptual, theoretical, and methodological.* Sage Publications.

Reich, J. (2020). *Failure to disrupt: Why technology alone can't transform education.* Harvard University Press. https://doi.org/10.4159/9780674249684

Roberts, R. E. (2020). Qualitative interview questions: Guidance for novice researchers. *The Qualitative Report, 25*(9), 3185–3203. https://doi.org/10.46743/2160-3715/2020.4640

Rodgers, B., Rodgers, B., & Cowles, K. (2008). Audit trail. *In The SAGE encyclopedia of qualitative research methods*. SAGE Publications, Inc. https://doi.org/10.4135/9781412963909.n25

Rodrigues, L. F., Oliveira, A., & Rodrigues, H. (2019). Main gamification concepts: A systematic mapping study. *Heliyon, 5*(7). https://doi.org/10.1016/j.heliyon.2019.e01993

Roohani, A., & Heidari Vincheh, M. (2023). Effect of game-based, social media, and classroom-based instruction on the learning of phrasal verbs. *Computer Assisted Language Learning, 36*(3), 375–399. https://doi.org/10.1080/09588221.2021.1929325

Rubin, H. J., & Rubin, I. S. (2005). Qualitative interviewing (2nd ed.): *The art of hearing data.* SAGE Publications, Inc., https://doi.org/10.4135/9781452226651

Rüth, M., Birke, A., & Kaspar, K. (2022). Teaching with digital games: How intentions to adopt digital game-based learning are related to personal characteristics of pre-service teachers. *British Journal of Educational Technology, 53*(5), 1412–1429. https://doi.org/10.1111/bjet.13201

Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology, 61*, 101860. https://doi.org/10.1016/j.cedpsych.2020.101860

Salas-Pilco, S. Z., Xiao, K., & Oshima, J. (2022). Artificial intelligence and new technologies in inclusive education for minority students: A systematic review. *Sustainability*, *14*(20), 13572. https://doi.org/10.3390/su142013572

Saldaña, J. (2021). The coding manual for qualitative researchers (4th ed.). Sage Publications.

Sambo, K. U., Shishah, W., & Isiaku, L. (2025). Barriers to gamification adoption in education: A systematic review of cultural, technological, and institutional challenges in developing countries. *Information Development*. https://doi.org/10.1177/02666669251331268

Sánchez-Mena, A., Martí-Parreño, J., & Aldás-Manzano, J. (2017). The Role of Perceived Relevance and Attention in Teachers' Attitude and Intention to Use Educational Video Games. *International Journal of Emerging Technologies in Learning (iJET), 12*(03), pp. 154–168. https://doi.org/10.3991/ijet.v12i03.6505

Seaborn, K., & Fels, D. I. (2014). Gamification in theory and action: A survey. *International Journal of Human-Computer Studies, pp. 74*, 14–31.

https://doi.org/10.1016/j.ijhcs.2014.09.006

Sevim-Cirak, N., & Islim, O. F. (2023). Paper versus online quizzes: Which is more effective? *Active Learning in Higher Education, 24*(3), 389-406. https://doi.org/10.1177/14697874221079737

Seyyedrezaei, M. S., Amiryousefi, M., Gimeno-Sanz, A., & Tavakoli, M. (2022). A meta-analysis of the relative effectiveness of technology-enhanced language learning on ESL/EFL writing performance: Retrospect and prospect. *Computer Assisted Language Learning, 37*(7), 1771–1805. https://doi.org/10.1080/09588221.2022.2118782

Shah, P., Gadekar, N. A., & Taylor, S. S. (2025). Escape from passive learning: Harnessing gamified digital educational escape rooms for immersive marketing education. *Journal of Marketing Education,* 02734753241306093. https://doi.org/10.1177/02734753241306093

Shen, Z., Lai, M., & Wang, F. (2024). Investigating the influence of gamification on motivation and learning outcomes in online language learning. *Frontiers in Psychology, 15*, 1295709. https://doi.org/10.3389/fpsyg.2024.1295709

Shortt, M., Tilak, S., Kuznetcova, I., Martens, B., & Akinkuolie, B. (2023). Gamification in mobile-assisted language learning: A systematic review of Duolingo literature from public release of 2012 to early 2020. *Computer Assisted Language Learning, 36*(3), 517–554. https://doi.org/10.1080/09588221.2021.1933540

Smiderle, R., Rigo, S. J., Marques, L. B., Peçanha de Miranda Coelho, J. A., & Jaques, P. A. (2020). The impact of gamification on students' learning, engagement, and behavior based on their personality traits. *Smart Learning Environments*, *7*(1), 3. https://doi.org/10.1186/s40561-019-0098-x

Song, Y., Sparks, J. R., & Guzman-Orth, D. (2022). Investigating student performance on an assessment tool to support the development of English learners' argumentation skills. *Computer Assisted Language Learning*, *35*(9), 2291-2311. https://doi.org/10.1080/09588221.2021.1879160

Soysal, Y., & Türkmen, S. (2024). Reinterpreting the member checking validation strategy in qualitative research through the hermeneutics lens. *Qualitative Inquiry in Education: Theory & Practice, 2*(1), 42–63. https://doi.org/10.59455/qietp.19

Stalmeijer, R. E., Brown, M. E., & O'Brien, B. C. (2024). How to discuss transferability of qualitative research in health professions education. *The Clinical Teacher, 21*(6), e13762. https://doi.org/10.1111/tct.13762

Stenfors, T., Kajamaa, A., & Bennett, D. (2020). How to… assess the quality of qualitative research. *The Clinical Teacher*, *17*(6), 596–599. https://doi.org/10.1111/tct.13242

Su, C. H., & Cheng, C. H. (2015). A mobile gamification learning system for improving the learning motivation and achievements. *Journal of Computer Assisted Learning*, *31*(3), 268–286. https://doi.org/10.1111/jcal.12088

Su, F., & Zou, D. (2024). A systematic review of game-based assessment in education in the past decade. *Knowledge Management & E-Learning*, *16*(3), 451–476. https://doi.org/10.34105/j.kmel.2024.16.021

Su, F., Zou, D., Xie, H., & Wang, F. L. (2021). A comparative review of mobile and non-mobile games for language learning. *SAGE Open*, *11*(4). https://doi.org/10.1177/21582440211067247

Sun, J. C.-Y., & Hsieh, P.-H. (2018). Application of a Gamified Interactive Response System to Enhance the Intrinsic and Extrinsic Motivation, Student Engagement, and Attention of English Learners. *Journal of Educational Technology & Society, 21*(3), 104–116. http://www.jstor.org/stable/26458511

Surve, B. C., & Ghatule, A. P. (2024). Gamification empowered with AI tools to enhance student learning engagement and involvement for personalized, effective learning experiences. *ITM Web of Conferences, 68*, 01023. https://doi.org/10.1051/itmconf/20246801023

Szabó, F., & Csépes, I. (2023). Constructivism in language pedagogy. *Hungarian Educational Research Journal, 13*(3), 405-417. https://doi.org/10.1556/063.2022.00136

Szabó, F., & Kopinska, M. (2023). Gamification in foreign language teaching: A conceptual introduction. *Hungarian Educational Research Journal*. https://doi.org/10.1556/063.2023.00202

Tang, M., Ren, P., & Zhao, Z. (2024). Bridging the gap: The role of educational technology in promoting educational equity. *The Educational Review, USA, 8*(8). http://dx.doi.org/10.26855/er.2024.08.012

Teravainen-Goff, A. (2022). Why motivated learners might not engage in language learning: An exploratory interview study of language learners and teachers. *Language Teaching Research*, *29*(6), 2500-2520.

https://doi.org/10.1177/13621688221135399

Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation, 27*(2), 237–246. https://doi.org/10.1177/1098214005283748

Thomas, F. B. (2022). The role of purposive sampling technique as a tool for informal choices in social sciences in research methods. *Just Agriculture, 2*(5), 1–8. https://doi.org/10.26832/24566632.2022.020502

Tisdell, E. J., Merriam, S. B., & Stuckey-Peyrot, H. L. (2025). *Qualitative research: A guide to design and implementation.* John Wiley & Sons.

Toda, A. M., do Carmo, R. M. C., da Silva, A. P., Bittencourt, I. I., & Isotani, S. (2018). An approach for planning and deploying gamification concepts with social networks within educational contexts. *International Journal of Information Management.* https://doi.org/10.1016/J.IJINFOMGT.2018.10.001

Toma, J. (2006). *Approaching rigor in applied qualitative research.* SAGE Publications, Inc., https://doi.org/10.4135/9781412976039

Tracy, S. J. (2024). Qualitative research methods: Collecting evidence, crafting analysis, communicating impact. John Wiley & Sons. https://bookshelf.vitalsource.com/books/9781119390800

Trumbull, E., & Nelson-Barber, S. (2019). The ongoing quest for culturally responsive assessment for Indigenous students in the U.S. *Frontiers in Education, 4*(40). https://doi.org/10.3389/feduc.2019.00040

Tsai, Y. R. (2024). Leveraging gamification to enhance motivation and engagement among EFL learners. *English Language Teaching Educational Journal, 7*(3), 177–190. https://doi.org/10.12928/eltej.v7i3.12010

Van Eck, R. (2006, March/April). Digital game-based learning: It's not just the digital natives who are restless. *EDUCAUSE Review, 41*(2), 16–30. Retrieved from https://er.educause.edu/articles/2006/3/digital-gamebased-learning-its-not-just-the-digital-natives-who-are-restless

van Roy, R., & Zaman, B. (2018). Need-supporting gamification in education: An assessment of motivational effects over time. *Computers & Education, 127*, 283-297. https://doi.org/10.1016/j.compedu.2018.08.018

Vears, D. F., & Gillam, L. (2022). Inductive content analysis: A guide for beginning qualitative researchers. *Focus on Health Professional Education*: *A Multi-disciplinary Journal, 23*(1), 111–127. https://doi.org/10.11157/fohpe.v23i1.544

Venkatesh, V., Morris, M, Davis, G., & Davis, F. (2003). User Acceptance of Information Technology: Toward a unified view. *MIS Quarterly, 27*(3), 425. https://doi.org/10.2307/30036540

Venkatesh, V., Thong, J. Y. L., & Xu, X. (2016). Unified theory of acceptance and use of technology: A synthesis and extension. *Communications of the Association for Information Systems, 38,* 596-613. https://doi.org/10.17705/1jais.00428

Vlachopoulos, D., & Makri, A. (2017). The effect of games and simulations on higher education: A systematic literature review. *International Journal of Educational Technology in Higher Education, 14*(1), 1–33. https://doi.org/10.1186/s41239-017-0062-1

Vnucko, G., & Klimova, B. (2023). Exploring the potential of digital game-based vocabulary learning: A systematic review. *Systems, 11*(2), 57. https://doi.org/10.3390/systems11020057

Vyas, P., & Sharma, S. (2022). Socio-demographic and psychological predictors of second language achievement: A systematic review. *TESL-EJ, 26*(1), n1. https://doi.org/10.55593/ej.26101a4

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.

Vygotsky, L. S. (1986). *Thought and Language*. Cambridge, MA: MIT Press.

Wang, J., Li, X., Wang, P., Liu, Q., Deng, Z., & Wang, J. (2022). Research trend of the unified theory of acceptance and use of technology theory: A bibliometric analysis. *Sustainability, 14*(1), 10. https://doi.org/10.3390/su14010010

Wang, L., & Lee, I. (2021). L2 learners' agentic engagement in an assessment as learning-focused writing classroom. *Assessing Writing, 50*, 100571. https://doi.org/10.1016/j.asw.2021.100571

Wang, L., & Wu, X. (2020). Influence of affective factors on learning ability in second language acquisition. *Revista Argentina De Clínica Psicológica, 29*(2), 1232. https://doi.org/10.24205/03276716.2020.365

Wen, B., Hu, P. J. H., & Fang, Y. (2024). Influences of leaderboard direction on learning performance and satisfaction in gamified e-learning. *Journal of Global Information Management (JGIM), 32*(1), 1-33. https://doi.org/10.4018/JGIM.350465

Winke, P., & Brunfaut, T. (2020). *The Routledge Handbook of Second Language Acquisition and Language Testing* (P. Winke & T. Brunfaut, Eds.). Routledge. https://doi.org/10.4324/9781351034784

Wright, N. (2025). Let's hear it from them: An interview-based exploration of male Teachers' perceptions of gender imbalance in the English language teaching profession. *TESOL Quarterly, 59*(3), 1199–1224. https://doi.org/10.1002/tesq.3311

Wu, Y. (2018). Gamification design: A comparison of four m-learning courses. *Innovations in Education and Teaching International 55*(4) 470–478. https://doi.org/10.1080/14703297.2016.1250662

Xiong, Y., Zhang, Q., Zhao, L., Liu, S., Guan, H., Sui, Y., Feng, J., & Lee, K. M. R. (2024). A meta-analysis and systematic review of foreign language anxiety Interventions Among Students. *Journal of Language and Social Psychology, 43*(5-6), 620–650. https://doi.org/10.1177/0261927X241291258

Xu, F. (2019). Towards a rational constructivist theory of cognitive development. *Psychological Review, 126*(6), 841–864. https://doi.org/10.1037/rev0000153

Xu, J., Lio, A., Dhaliwal, H., Andrei, S., Balakrishnan, S., Nagani, U., & Samadder, S. (2021). Psychological interventions of virtual gamification within academic intrinsic motivation: A systematic review. *Journal of Affective Disorders, (293)* 444–465. https://doi.org/10.1016/j.jad.2021.06.070

Xue, L., Rashid, A. M., & Ouyang, S. (2024). The unified theory of acceptance and use of technology (UTAUT) in higher education: A systematic review. *Sage Open,* *14*(1). https://doi.org/10.1177/21582440241229570

Yaseen, H., Ashal, N., Abusaimeh, H., Ahmad, A., & Abdel-Aziz, A. (2025). The impact of adaptive learning technologies, personalized feedback, and interactive AI Tools on student engagement: The moderating role of digital iteracy. *Sustainability, 17*(3), 1133. https://doi.org/10.3390/su17031133

Yim, I. H. Y., & Su, J. (2025). Artificial intelligence (AI) learning tools in K-12 education: A scoping review. *Journal of Computers in Education, 12*(1), 93–131. https://doi.org/10.1007/s40692-023-00304-9

York, J., & deHaan, J.W. (2018). A constructivist approach to game-based language learning: Student perceptions in a beginner-level EFL context. *International Journal of Game-Based Learning, 8*(1), 19–40. https://doi.org/10.4018/IJGBL.2018010102

York, J., & deHaan, J. W. (2021). Ludic language pedagogy is MMM … way more delicious than digital game-based language learning. *Ludic Language Pedagogy, (3*), 21–25. Internet Archive. https://doi.org/10.55853/llp_v3pg1

York, J., Poole, F. J., & deHaan, J. W. (2021). Playing a new game: An argument for a teacher-focused field around games and play in language education. *Foreign Language Annals, 54*(4), 1164–1188. https://doi.org/10.1111/flan.12585

Yu, B. (2023). Self-regulated learning: A key factor in the effectiveness of online learning for second language learners. *Frontiers in Psychology, p. 13*, 1051349. https://doi.org/10.3389/fpsyg.2022.1051349

Yu, Z. (2023). Learning outcomes, motivation, and satisfaction in gamified English vocabulary learning. *SAGE Open*, *13*(2). https://doi.org/10.1177/21582440231158332

Zainuddin, Z. (2023). Integrating ease of use and affordable gamification-based instruction into a remote learning environment. *Asia Pacific Education Review*, 1–12. Advance online publication. https://doi.org/10.1007/s12564-023-09832-6

Zainuddin, Z., Farida, R., Keumala, C. M., Kurniawan, R., & Iskandar, H. (2022). Synchronous online flip learning with formative gamification quiz: Instruction during COVID-19. *Interactive Technology and Smart Education, 19*(2), 236-259. https://doi.org/10.1108/ITSE-01-2021-0002

Zaric, N., Roepke, R., Lukarov, V., & Schroeder, U. (2021). Gamified learning theory: The moderating role of learners' learning tendencies. *International Journal of Serious Games, 8*(3), 71-91. https://doi.org/10.17083/ijsg.v8i3.438

Zeng, J., Sun, D., Looi, C. K., & Fan, A. C. W. (2024). Exploring the impact of gamification on students’ academic performance: A comprehensive meta-analysis of studies from the year 2008 to 2023. *British Journal of Educational Technology, 55*(6), 2478-2502. https://doi.org/10.1111/bjet.13471

Zhang, K., & Yu, Z. (2022). Extending the UTAUT model of gamified English vocabulary applications by adding new personality constructs. *Sustainability, 14*(10), 6259. https://doi.org/10.3390/su14106259

Zhang, S., & Hasim, Z. (2023). Gamification in EFL/ESL instruction: A systematic review of empirical research. *Frontiers in Psychology, 13*. https://doi.org/10.3389/fpsyg.2022.1030790

Zhang, Y. (2023). The contribution of personal investment theory of motivation in second language acquisition. *Heliyon*. *9*(6). https://doi.org/10.1016/j.heliyon.2023.e16681

Zhang, Z., & Crawford, J. (2023). EFL learners' motivation in a gamified formative assessment: The case of Quizizz. *Education and Information Technologies, 29*(5), 6217–6239. https://doi.org/10.1007/s10639-023-12034-7

Zhang, Z., & Huang, X. (2024). Exploring the impact of the adaptive gamified assessment on learners in blended learning. *Education and Information Technologies, 29*(16), 21869–21889. https://doi.org/10.1007/s10639-024-12708-w

Zhumbei, M., Khairulin, O., Buniak, N., Sapohov, M., & Parfilova, S. (2025). Enhancing the educational process through AI and gamified learning. *Metaverse Basic and Applied Research,* (4), 164. https://doi.org/10.56294/mr2025164

Zhyhadlo, O. Y. (2022). Application of digital game-based tools for formative assessment at foreign language lessons. *Information Technologies and Learning Tools, 87*(1), 139–150. https://doi.org/10.33407/itlt.v87i1.4703

Zou, D., Huang, Y., & Xie, H. (2021). Digital game-based vocabulary learning: Where are we and where are we going? *Computer Assisted Language Learning*, *34*(5–6), pp. 751–777. https://doi.org/10.1080/09588221.2019.1640745

Zou, Y., Kuek, F., Feng, W., & Cheng, X. (2025). Digital learning in the 21st century: Trends, challenges, and innovations in technology integration. *Frontiers in Education*, 10. https://doi.org/10.3389/feduc.2025.1562391

Appendix A: Research Study Flyer

Want to Improve Language Assessments?

JOIN NOW

WALDEN UNIVERSITY
EDUCATION FOR GOOD

What is this study about?

This study is about the experiences of world language teachers in using gamification-based assessments to better understand their usefulness. For this study, you are invited to describe your experiences using gamification (Kahoots!, Gimkit, Quizizz, etc.) in your language courses.

Why Participate?

To make your perspective on using Gamification-Based Assessments in Secondary World Language Classes known.

To contribute to valuable information on improving World Language learning.

Who can Participate?

Secondary World Language Teachers who have used gamification apps at least once in your classes.

Details:

- One 35—45-minute online interview will be audio recorded (no video recording).
- You will receive a $20 gift card as a thank you.
- To protect your privacy, the published study will not share any names or details that identify you.

Informed Consent Form

Appendix B: Participant Recruitment Email

A new study about gamification-based assessments could help teachers and education leaders better understand the benefits and challenges of integrating gamification-based assessments into world language courses. For this study, you can describe your experiences using gamification applications (Kahoots!, Gimkit, Quizizz, etc.) as an assessment in your language courses.

About the study:

- One 45-60-minute online interview will be audio recorded (no video recording).
- You will receive a $20 gift card as a thank you.
- To protect your privacy, the published study will not share any names or details identifying you.

Volunteers must meet these requirements:

- Secondary world language teacher.
- Experience using a gamification application at least once in a world language course.

This interview is part of the doctoral study for Ms. Taryn Thompson, a Ph.D. student at Walden University. Interviews will take place during the summer of the 2024 school year.

Participant Verification Survey:

If interested, please complete the participant verification survey using this link. If you meet the inclusion requirements outlined above, you will be contacted to participate in a virtual interview at your convenience.

If you know other secondary world language teachers who might be interested, please forward this email to them.

Please contact Taryn Thompson at [redacted] or [redacted] to inform the researcher of your interest. You are welcome to forward it to others who might be interested.

Sincerely,

Ms. Taryn Thompson, Doctoral Candidate
[redacted]

Appendix C: Interview Guide

<table>
<tr><th colspan="3">Interview Guide</th></tr>
<tr><td colspan="3">Time of Interview:
Date:
Method of the interview:
Interviewee:</td></tr>
<tr><td colspan="3">Introduction:
My name is Taryn Thompson, and I am a doctoral student at Walden University. Thank you for participating in this interview. As a French teacher, I have noticed an increase in the usage of educational technology in second-language acquisition classes. The emergence of gamification prompted me to research secondary world language teachers’ perspectives on using gamification-based assessments in their classes.

Today, I aim to gain insights into your perspectives on using gamification-based assessments in secondary World language classes. Your feedback will be invaluable for understanding this approach’s potential benefits and challenges. To protect your identity, I ask that you please refrain from using your name during this interview. I will be recording this interview to obtain a permanent transcribed record. You are free to answer or not answer any questions. You can decide to exit the interview now or at any time during the interview. Do you have any questions before we start the interview? Is it okay with you if I begin recording now?</td></tr>
<tr><th>RQ</th><th>Interview Questions</th><th>UTAUT Factors</th></tr>
<tr><td colspan="3">General/Background Questions:
How long have you taught world languages at the secondary level?
How long have you used gamification-based assessments in world language classes?
Have you been to any of the PD sessions related to gamification? If so, what are those?</td></tr>
<tr><td>RQ1</td><td>1. In your experience, how might gamification-based assessments benefit students’ vocabulary acquisition?
Prompt: Please provide specific examples.</td><td>EE</td></tr>
<tr><td>RQ1</td><td>2. In what ways do you believe using gamification-based assessments may enhance students’ engagement in language learning?</td><td>PE</td></tr>
<tr><td>RQ1</td><td>3. Please provide examples of improvements in student performance that you could attribute to using gamification-based assessments.
Prompt: How have gamification elements like points, scoring, leaderboards, progress bars, ranks, and rewards benefited students’ language acquisition?</td><td>PE</td></tr>
</table>

RQ1	4. In your view, how might gamification-based assessments reshape the learning landscape compared to traditional assessment methods?	EE
RQ1	5. What are some advantages of gamification-based assessments in world language classes?	SI
RQ2	6. From your perspective, how do your student assessment performance expectations using gamification-based assessments influence your approach to implementing them in your teaching practice? *Follow-up Question*: Please elaborate on your student assessment expectations.	PE
RQ2	7. What aspects of gamification-based assessments could be considered burdensome or difficult to implement in your teaching practices?	EE
RQ2	*8.* How might gamification-based assessments address individualized student needs compared to traditional assessment methods?	PE
RQ2	*9.* To what extent do your colleagues or administration encourage or discourage you from incorporating gamification-based assessments into your teaching methods?	SI
RQ2	10. Can you discuss any logistical challenges when implementing gamification-based assessments, such as access to technology or classroom setup?	FC
Concluding Question: What recommendations would you give educators looking to implement gamification-based assessments in their world language classes?		
Closing: Is there anything else you would like to share or elaborate on from earlier in our discussion? Thank you so much for your time. My university requires me to protect the identities of interviewees and their organizations. I am not permitted to share interviewee names, identifying details, contact info, or recordings with anyone outside of my Walden University supervisors (who are also required to protect your privacy). Any reports, presentations, or publications related to this study will share general patterns from the data without sharing the identities of individual interviewees or their organizations. All research data will be kept secure by password protection. The interview transcripts will be held for at least five years, as my university requires. The collected information will not be used outside of this study. Once the transcription of our interview is done, I will send you a copy so that you can make any changes, additions, or edits that you feel are necessary. Do you have any questions for me now that we are done? If, after reading the transcripts, I have any questions for clarification, can I contact you? Feel free to reach me at [redacted] should you have any questions.		

Note. UTAUT Factors:

- (PE) Performance Expectancy: the degree to which an individual believes that using the system will help attain gains in job performance.
- (EE) Effort Expectancy: the ease of using the system.
- (SI) Social Influence: the degree to which an individual perceives that important others believe he or she should use the new system.
- (FC) Facilitating Conditions: the degree to which an individual believes that an organizational and technical infrastructure exists to support the use of the system.

Appendix D: Interview Questions

1. (EE) In your experience, how might gamification-based assessments benefit students' vocabulary acquisition? Aligned with RQ1: What are secondary world language teachers' perspectives on the benefits of using gamification-based assessments?)

2. (PE) In what ways do you believe using gamification-based assessments may enhance students' engagement in language learning? (Aligned with RQ1: What are secondary world language teachers' perspectives on the benefits of gamification-based assessments?)

3. (PE) Please provide examples of improvements in student performance that you could attribute to using gamification-based assessments. (Aligned with RQ1: What are secondary world language teachers' perspectives on the benefits of gamification-based assessments?)

4. (EE) In your view, how might gamification-based assessments reshape the learning landscape compared to traditional assessment methods? (Aligned with RQ2: What are secondary world language teachers' perspectives on the challenges of using gamification-based assessments?)

5. (SI) What are some advantages of using gamification-based assessments in world language classes? (Aligned with RQ2: What are secondary world language teachers' perspectives on the challenges of using gamification-based assessments?)

6. (PE) From your perspective, how do your student assessment performance expectations using gamification-based assessments influence your approach to implementing them in your teaching practice? *Follow-up Question*: Please elaborate on your student assessment expectations. (Aligned with RQ2: What are secondary world language teachers' perspectives on the challenges of using gamification-based assessments?)

7. (EE) 7. What aspects of gamification-based assessments could be perceived as burdensome or difficult to implement in your teaching practices? (Aligned with RQ2: What are secondary world language teachers' perspectives on the challenges of using gamification-based assessments?)

8. (PE) How might gamification-based assessments address individualized student needs compared to traditional assessment methods? (Aligned with RQ2: What are secondary world language teachers' perspectives on the challenges of using gamification-based assessments?)

9. (SI) To what extent do your colleagues or administration encourage or discourage you from incorporating gamification-based assessments into your teaching methods? (Aligned with RQ2: What are secondary world language teachers' perspectives on the challenges of using gamification-based assessments?)

10. (FC) Can you discuss any logistical challenges when implementing gamification-based assessments, such as access to technology or classroom setup? (Aligned with RQ2: What are secondary world language teachers' perspectives on the challenges of using gamification-based assessments?)

Appendix E: Participant Verification Survey

Gamification-Based Assessments Survey

I am conducting a research study about the experiences of world language teachers in using gamification-based assessments. For this study, you are invited to describe your experiences using gamification (Kahoots!, Gimkit, Quizizz, etc.) in your language courses.

1. What is your email address?
   Your email
2. What is your Best Contact Number?
   Your answer
3. What is your name?
   Your answer
4. What language do you currently teach, or have you taught in the past? (Please select all that apply.).
   - Spanish
   - French
   - Chinese
   - American Sign Language
   - Russian
   - German
   - Other

5. How long have you taught world language classes?
   - less than one year
   - 2-5 years
   - 6-10 years
   - over 11 years
6. Have you ever used a gamification app in a world language course?
   - Yes
   - No
7. Are you available for a 35,45-minute online interview outside your contractual hours?
   - Yes
   - No

Research Study Privacy Statement

I am required to protect your privacy and will not use your personal information outside of this research project. Your identity will be kept anonymous within the limits of the law. Also, I will not use your name or anything else that could identify you in the study reports. All interview data will be kept secure by a password-protected drive for at least five years, as the university requires.

Appendix F: Audit Trail

Audit Trail: Secondary World Language Teachers' Perspectives of Gamification-Based Assessments

The study employed a basic interpretive qualitative research design utilizing semistructured interviews. The purpose was to explore secondary world language teachers' perspectives on the benefits and challenges of using gamification-based assessments. The research was grounded in social constructivism and an interpretivist paradigm, aiming to understand teachers' interpretations and the meaning they attribute to their experiences. The conceptual framework informed UTAUT and Krashen's SLA theory.

Participant Recruitment and Selection:

- The target population was secondary world language teachers (6th-12th grade) with prior experience using gamification applications as assessments.
- Purposeful sampling was the primary method, specifically selecting individuals meeting the predetermined criteria to gather in-depth data.
- The sample was drawn from the researcher's professional learning network (PLN), which included a measure of convenience or opportunistic sampling.
- Recruitment was also conducted via social media groups and forums within the PLN, including Facebook and Twitter groups dedicated to second-language teaching and educational technology. Relevant hashtags and influential individuals/organizations were tagged.
- Snowball sampling was also employed, where initial participants were asked to refer other eligible individuals.
- Recruitment materials, including a recruitment email (Appendix B) and a flyer, were posted or sent.
- Recruitment materials included a link to a preliminary participant verification survey (Appendix F), a Google Form, to verify that prospective participants met the study criteria regarding teaching experience and past usage of gamification applications.
- Participants who met the criteria were selected. To achieve data saturation, the target sample size was 10-12 secondary world language teachers. A total of 12 participants were included in the study.
- Institutional permissions and approval from the Institutional Review Board (IRB) were sought and documented; approval # # is 06-27-24-1042609. Walden University's IRB approval number was obtained. District approval was also secured.
- Permission was sought from social media administrators or moderators before recruiting on those platforms.

- Potential ethical concerns related to recruitment, such as transparency and voluntary participation, were addressed, with measures implemented to prevent coercion.
- Informed consent was audio-recorded by all participants. This form detailed the study's purpose, procedures, confidentiality measures, and participants' rights. Participants were required to provide consent before interviewing. Verbal consent was obtained and audio-recorded at the beginning of each interview.
- A plan was in place to recruit additional participants from colleagues if the initial recruitment resulted in insufficient numbers.

Interview Preparation:

- An Interview Guide (Appendix C) was created with input from professors and colleagues.
- The guide contained an introduction, background questions, ten open-ended questions about gamification-based assessment benefits and challenges, a concluding question, and closing remarks.
- Each interview question was designed to elicit answers to the research questions and was categorized into the UTAUT factors to frame the exploration of teacher perspectives.
- The Interview Protocol Refinement Framework developed the guide, ensuring alignment with research questions and constructing an inquiry-based conversation.
- A Pilot Study was conducted with three veteran teachers using gamification-based assessments. The pilot study mimicked the main study's recruitment and data collection procedures to assess feasibility and validity.
- The interview guide and questions were refined based on the preliminary results and feedback from the pilot study.

Interview Process (Data Collection):

- Interviews were conducted as online semistructured interviews via Google Meet.
- Each interview was scheduled for 45-60 minutes.
- The interviews were audio-recorded. No video recording took place.
- A pre-prepared interview protocol (the Interview Guide) was used to monitor the interview and ensure key topics were covered, allowing for in-depth exploration flexibility. The researcher adapted prompts and added follow-up questions based on participant responses.
- Interview questions were projected on the screen for participants to see.
- The researcher's role included facilitating, active listening, and documenting non-verbal cues.
- Notes were also taken during the interviews.

- Interviews were planned to be scheduled and conducted during the summer and winter of 2024. Based on the provided transcripts, the interviews were conducted on the following dates:
    - **Interview 001:** Wednesday, July 24, 2024, starting at 12:37 PM.
    - **Interview 002:** Date and start time not explicitly stated in the provided excerpt.
    - **Interview 003:** Date and start time not explicitly stated in the provided excerpt.
    - **Interview 006:** Date and start time not explicitly stated in the provided excerpt.
    - **Interview 007:** Monday, October 14, 2024, starting at 8:32 AM.
    - **Interview 008:** Date and start time not explicitly stated in the provided excerpt.
    - **Interview 009:** Sunday, January 12, 2025, starting at 3:00 PM (or 3:01 PM).
    - **Interview 010:** Sunday, January 12, 2025, at 7:18 PM.
    - **Interview 011:** Monday, January 13, 2025, starting at 1:28 PM (or 1:32 PM).
    - **Interview 012:** Wednesday, January 15, 2025, starting at 9:04 AM (or 9:05 AM).
- Participants were informed they could exit the interview at any time. A post-interview debriefing conversation was offered to confirm raw data confirmability.

Data Management:

- Audio recordings were transcribed accurately using the online transcription service Otter.ai.
- All research data was kept secure by password protection on computers.
- Pseudonyms were used to maintain participant confidentiality.
- Participants' names, identifying details, contact info, and recordings were not shared with anyone outside the Walden University supervisors.
- All interview data will be securely deleted after five years post-data collection.
- The collected information was not used outside of the study.

Trustworthiness and Validation Procedures:

- **Member Checking:** Transcribed interview responses were provided to participants within one week to verify accuracy and intent. This process served as an external validation method. Participants were also invited to meet with the researcher to address potential misconceptions.
- **Peer Debriefing:** Input was frequently sought from colleagues or mentors to review and challenge findings, interpretations, and potential biases.
- **Reflexivity:** Awareness of researcher bias was maintained, and a reflexive journal was kept to document reflections and decisions.

- **Data Saturation:** Data collection was planned to continue until no new information or themes emerged from the interviews.
- **Thick Descriptions:** Comprehensive descriptions of the study context, participant demographics, and data analysis procedures were provided to enhance transferability.
- **External Auditor:** Initial validation checks and repeated findings of the same themes were to be discussed with an external auditor.
- **Discrepant Case Analysis:** Identification and analysis of information that contradicts the general perspectives or themes (negative or discrepant cases) were planned as a crucial aspect of validity testing.
- Detailed descriptions of the research design, data collection, and analysis procedures were documented to enhance credibility and trustworthiness.

Appendix G: Copyright Permission

Type of Use	reuse in a thesis/dissertation
Portion	figures/tables/illustrations
Number of figures/tables/illustrations	1
Format	electronic
Are you the author of this Elsevier article?	No
Will you be translating?	No
Title of new work	Secondary World Language Teacher's Perspectives of Gamification-Based Assessments
Institution name	Walden University
Expected presentation date	Nov 2024
Order reference number	001
Portions	Fig. 1. DGBLL and its relations to other research contexts. This will be used on page 19 in the background section of Chapter 1 of my doctoral dissertation.
Requestor Location	Walden University 5900 Sky pointe Dr 1116 LAS VEGAS, NV 89130 United States Attn: Walden University
Publisher Tax ID	98-0397604
Total	0.00 USD

Appendix H: AI and Technology Usage Declaration

This dissertation represents the author's original scholarly work and intellectual contribution. In alignment with Walden University's Artificial Intelligence (AI) Use Policy, no generative AI tools (e.g., ChatGPT, Google Bard, Microsoft Copilot, or Claude) were used to generate substantive content, conduct data analysis, or develop findings for this study.

The following digital tools were used ethically and responsibly as productivity aids, consistent with Walden's guidelines:

Grammarly: Used for grammar checking, sentence clarity, and proofreading during the editing phase.
Google Scholar: Utilized as an academic search engine to locate and access peer-reviewed journal articles and scholarly sources.
Reciteworks: Employed to verify in-text citations and reference formatting according to APA 7th edition guidelines.
CrossRef.org: Used to confirm DOIs and citation metadata for accuracy in the reference list.
Atlas.ti: Utilized as CAQDAS to preliminarily identify emerging themes from raw data (interview transcripts) during the initial coding round.

These tools supported, but did not replace, the author's own critical thinking, writing, and scholarly judgment. The author independently conducted all substantive writing, data coding, thematic analysis, interpretation, and argument development.

This dissertation's structure, content, and scholarly arguments reflect the author's academic expertise, original research, and adherence to Walden University's academic integrity and AI usage standards. The author assumes full responsibility for the accuracy, originality, and intellectual contribution of this work.