

Needs Analysis for Gamified Learning Media Development: A Focus on Civilisation Française Course

William Anderson Hutapea¹, Ria Fuji Destiara², and Icha Priliskha Yunisty³

Universitas Negeri Medan

Jl. Willem Iskandar, Medan Estate, Kabupaten Deli Serdang, Sumatera Utara, Indonesia

william@unimed.ac.id

Abstract. The Civilisation Française course presents challenges due to its complex socio-cultural, historical, and geographical content. This study conducted a needs analysis to identify requirements for developing ZepQuiz, a gamification-based learning medium. Using a descriptive quantitative approach, data were collected from 27 undergraduate students through a structured questionnaire. The findings showed that 85.2% experienced moderate-to-high learning difficulties, while 77.8% preferred interactive gamified quizzes and 55.6% preferred short videos. Students also emphasized introductory summaries, instant feedback, interactive activities, and motivational features. These findings provide an empirical basis for developing an accessible, visually supported, and interactive ZepQuiz platform.

Keywords: Needs Analysis; Gamification; ZepQuiz; Civilisation Française.

1. Introduction

In the contemporary landscape of higher education, the integration of digital technology has shifted from an innovative alternative to a fundamental necessity. Foreign language education, particularly French as a Foreign Language (Français Langue Étrangère/ FLE), demands continuous pedagogical adaptation to engage 21st-century learners effectively (Pegrum, 2019). While core linguistic skills such as grammar and vocabulary often dominate language curricula, the study of culture—specifically through courses like Civilisation Française plays a pivotal role in fostering intercultural communicative competence (Byram, 2021). However, teaching cultural and historical contexts presents unique pedagogical challenges, frequently struggling to maintain high levels of student engagement and retention.

The Civilisation Française course traditionally covers complex historical, social, political, and cultural frameworks of France. Despite its strategic importance in contextualizing language learning, conventional instructional methods in this course often rely heavily on dense readings, passive lectures, and rote memorization (Kramsch, 2013). Consequently, students frequently perceive the subject as abstract, overwhelming, and disconnected from interactive language practice. This pedagogical gap highlights an urgent need to re-evaluate instructional strategies and incorporate interactive learning tools capable of transforming complex cultural knowledge into active, engaging learning experiences.

Gamification, the application of game design elements in non-game contexts, has emerged as a transformative pedagogical approach to address student disengagement in higher education (Dichev & Dicheva, 2017). By embedding elements such as points, leaderboards, immediate feedback, and narrative progression, gamified learning media leverage intrinsic and extrinsic motivation to enhance cognitive retention and active participation (Deterding et al., 2011; Ryan & Deci, 2020). In language and cultural education, gamified platforms foster an immersive environment where learners can explore complex concepts with lower affective filters and higher self-efficacy (Krashen, 1982; Deterding, 2015).

Among various digital tools, ZepQuiz offers distinct features tailored for interactive assessment and collaborative learning. However, implementing digital media without prior systematic analysis often leads to pedagogical misalignment, where technology distracts from rather than enhances the learning objectives (Branch, 2009). Following the classic Educational Technology development models (such as ADDIE or Borg & Gall), a rigorous needs analysis serves as the essential foundational phase. This phase systematically identifies learner characteristics, existing instructional gaps, technological readiness, and specific pedagogical requirements before media development begins (McKillip, 1987; Richey & Klein, 2007).

Despite the growing literature on gamification in foreign language acquisition, empirical studies specifically investigating gamified media development for upper-level cultural courses remain sparse. Most existing research focuses predominantly on vocabulary acquisition or basic grammar drillings, leaving a critical gap in how gamified media can be structured to support historical and cultural comprehension in French studies.

To bridge this gap, this study conducts a comprehensive needs analysis to evaluate the necessity, feasibility, and specific requirements for developing a gamification-based ZepQuiz learning media for the *Civilisation Française* course. By examining both student perceptions and instructional challenges, this paper establishes a data-driven baseline designed to inform the initial design and structural framework of the proposed media.

2. Method

This study utilized a descriptive quantitative design framed within the preliminary diagnostic phase of Educational Design and Development Research (DDR) (Richey & Klein, 2007). Specifically, this research addresses the needs analysis stage – a pivotal foundational step embedded in classic instructional design systems such as the ADDIE model (Branch, 2020) and Borg and Gall's (2020) educational research and development framework. The primary objective of a needs analysis in instructional technology is to examine and measure the discrepancy between existing classroom practices systematically and desired learning outcomes (McKillip, 1987). By conducting a thorough baseline evaluation, instructional designers can prevent pedagogical misalignment and ensure that technological interventions directly resolve empirical learning barriers rather than serving as mere novelties.

In alignment with the goal of developing interactive gamified media, this study focuses on evaluating the need for ZepQuiz – an emerging digital game-based learning platform designed to integrate gamification mechanics into educational contexts (ZEP, 2024). Within the framework of foreign language education, recent empirical studies have demonstrated that quiz-based platforms like ZepQuiz significantly enhance student motivation, cognitive engagement, and subject matter retention by offering interactive visual spaces and real-time feedback mechanisms (Feriansyah & Titaley, 2024). Within this research, ZepQuiz is conceptualized as an adaptive instructional tool capable of delivering concise cultural content, providing automated formative assessment, and facilitating gamified review sessions. Conducting a needs analysis specifically tailored to ZepQuiz allows researchers to establish user requirements, media preferences, and functional feature priorities before proceeding to the actual media prototyping and development phases.

To provide a robust conceptual foundation for designing the proposed media, this investigation integrates Self-Determination Theory (SDT) (Ryan & Deci, 2020) alongside modern Gamification Theory in educational contexts (Deterding et al., 2011). SDT posits that optimal cognitive engagement, intrinsic motivation, and knowledge retention occur when an instructional environment satisfies three fundamental psychological needs: autonomy, competence, and relatedness. In foreign language and cultural education, learning media can fulfill these psychological drivers by offering self-paced exploration (autonomy), providing immediate feedback

and mastery challenges (competence), and incorporating collaborative or competitive dynamics (relatedness). Gamification operationalizes these principles by embedding specific game design mechanics—such as point systems, visual badges, real-time leaderboards, and timed quizzes—into non-game academic environments (Dichev & Dicheva, 2017). When applied to complex socio-cultural studies through platforms like ZepQuiz, gamified media lower students' affective filters, reduce cognitive overload, and transform passive reading tasks into active, engaging learning experiences.

The target population for this research comprised undergraduate students in the French Language Education Study Program (Program Studi Pendidikan Bahasa Prancis) at Universitas Negeri Medan (UNIMED), Indonesia. A purposive sampling strategy was employed to select a sample size of $n = 27$ students who were actively enrolled in or had recently completed the *Civilisation Française* course (Etikan et al., 2016). Selecting this specific cohort ensured that all participating respondents possessed direct, firsthand exposure to the course curriculum, traditional lecture slides, dense historical readings, and existing evaluation methods. The sample size of $n = 27$ represents a targeted, highly contextualized cohort, providing rich and representative quantitative insights necessary for establishing initial functional design parameters in software and media development.

Data collection was executed using a comprehensive, web-based structured questionnaire designed and distributed via Google Forms. The survey instrument was systematically structured into five operational dimensions to capture a holistic overview of instructional needs and platform requirements:

1. **Current Course Difficulty and Instructional Media Effectiveness:** Evaluated using a 5-point Likert scale ranging from 1 (Very Difficult / Ineffective) to 5 (Very Easy / Effective), alongside frequency-based items examining how often instructors utilize digital media beyond standard presentation slides.
2. **Media Format Preferences:** Multiple-selection items allowing students to identify up to three preferred learning modalities (e.g., documentary videos, interactive gamified quizzes, e-books, educational podcasts, and infographics).
3. **Perceptions of Gamification and Learning Motivation:** Measured through a 5-point Likert scale matrix (Strongly Disagree to Agree Strongly) to gauge student demand for visually appealing content, concise summaries, interactive competition, and reward-driven mechanics.
4. **Targeted Cultural Content Analysis:** A diagnostic checklist mapping specific core topics in the *Civilisation Française* syllabus (e.g., French geography, educational structure, culinary heritage, national holidays, family structures, social partnerships, and immigration phenomena) to pinpoint areas of highest learning friction.
5. **Functional Features and Technical Specifications for ZepQuiz:** A prioritized 3-point rating scale (Very Important, Important, Not Important) determining essential platform features such as leaderboards, badge/point systems, instant correct/incorrect feedback, multiplayer competition modes, and pre-quiz introductory overviews alongside preferences for optimal session duration and qualitative feedback.

The data collection procedure was conducted digitally during the ongoing academic term to maximize response accessibility and operational efficiency. Prior to completing the survey, all $n = 27$ participants received an explicit informed consent statement detailing the research purpose, ensuring voluntary participation, and guaranteeing strict data confidentiality. The administration yielded a 100% response completion rate with no missing values. The retrieved raw quantitative data were exported into tabular spreadsheets and subjected to descriptive statistical analysis. Frequencies, percentage distributions (Query%), mean scores ($\bar{X}$), and standard deviations (SD) were calculated to synthesize baseline data patterns (Field, 2018). Mean scores derived from the Likert

scales were interpreted using quantitative numerical intervals to determine the urgency and priority of student needs, directly establishing the user requirements, functional specifications, and initial prototype architecture for the ZepQuiz learning media.

3. Result

This study involved 27 undergraduate students enrolled in the Civilisation Française course at Universitas Negeri Medan (UNIMED). The study examined students' learning needs as the empirical basis for developing ZepQuiz, a gamification-based learning medium for the course. The results cover students' perceptions of course difficulty, the use and effectiveness of existing learning media, media preferences, difficult course content, perceptions of gamification, and the functional requirements expected from the proposed platform.

To facilitate interpretation and enable readers to identify the main findings without having to sift through individual figures across a lengthy narrative, Table 1 summarizes the results of the needs analysis and their implications for the design of ZepQuiz. All frequencies and percentages reported in this section are based on the total number of respondents.

Table 1. Summary of Students' Needs Analysis Findings and Design Requirements for ZepQuiz

Dimension	Main Finding	Design Requirement
Course difficulty	Most students perceived Civilisation Française as moderately to highly difficult.	Learning content should be structured and segmented.
Existing media	Digital media were frequently used and generally perceived as effective	More interactive learning support is required
Media preference	Students preferred visual, dynamic, and interactive media	Integrate visual and interactive learning elements
Difficult content	Geography, immigration, family life, education, relationships, culinary heritage, and national holidays were identified as challenging.	Prioritize difficult topics in the learning modules.
Visual presentation	Most students preferred visually attractive learning media	Use images, maps, illustrations, and visual representations
Interaction and competition	Most students perceived interactive and competitive activities positively	Include interactive and optional competitive activities
Concise content	Most students preferred concise and point-focused learning materials	Segment learning content into manageable units
Reward systems	Points, badges, and leaderboards were positively perceived	Integrate appropriate gamification mechanics
Instant feedback	Considered important or very important by most students	Provide immediate explanatory feedback
Introductory summaries	Considered important or very important by most students	Include concise pre-quiz summaries
Question variety	Students requested diverse and visually supported questions	Provide varied interactive question formats
Accessibility	Students emphasized ease of access, including offline functionality	Consider accessibility across different connectivity conditions
User onboarding	Students required simple guidance	Provide intuitive navigation and introductory instructions
Learning duration	Students generally preferred relatively short learning sessions	Design learning activities for approximately 30–45 minutes

Current Course Difficulty and Existing Media Baseline

The results indicate that *Civilisation Française* presents a substantial level of difficulty for a considerable proportion of the 27 respondents. When students evaluated the difficulty of the course using a 5-point scale ranging from 1 (Very Easy) to 5 (Very Difficult), 59.3% rated the course at level 3 (Moderate), 22.2% rated it at level 4 (Difficult), and 3.7% rated it at level 5 (Very Difficult). In contrast, 14.8% rated the course at level 2 (Easy), while 0% rated it at level 1 (Very Easy).

Overall, the results show that most of the 27 participating students experienced the course as moderately to highly challenging. Regarding the use of digital learning media, 37% of the respondents reported frequent use, 33.9% reported occasional use, 22.2% reported constant use, and 7.4% reported rare use. Students also evaluated the effectiveness of existing digital learning media. 48.1% rated the media as Very Effective, 33.3% rated them as Effective, and 18.5% considered them Moderately Effective. These findings indicate that digital learning media were already integrated into the instructional process and were generally perceived positively by the participating students.

Media Preferences and Target Content Difficulty

All 27 students were asked to identify their preferred media for learning *Civilisation Française*, with each respondent allowed to select up to three options. The results showed preferences for documentary or short videos (*Video dokumenter/pendek*), interactive games or quizzes (*Permainan/Kuis Interaktif Gamifikasi*), educational social media, reading texts or e-books, educational podcasts or audio, and interactive infographics.

Because respondents were permitted to select more than one option, the frequencies reported for this item do not necessarily total 27, and the percentages do not necessarily total 100%. Among these media types, documentary or short videos and interactive games or quizzes represented important preferences among the 27 respondents and therefore provide relevant empirical input for the development of the proposed learning platform. The results also identified specific course topics that students perceived as difficult. The content areas identified by the respondents included:

- a) the geographical location of France (*Letak Geografis Negara Perancis*);
- b) immigration phenomena in France (*Fenomena Imigrasi di Perancis*);
- c) French family life (*Kehidupan Keluarga Masyarakat Perancis*);
- d) the French educational system (*Sistem Pendidikan Perancis*);
- e) relationships and partnerships (*Kehidupan Berpasangan*);
- f) culinary heritage; and
- g) national holidays.

As with the media preference question, students may have identified more than one difficult topic. Therefore, the frequencies across content categories may exceed the total number of respondents.

Perceptions of Gamification Mechanics and Student Motivation

The perceptions of the 27 participating students regarding gamification mechanics were evaluated using a 5-point Likert scale ranging from Strongly Disagree to Agree Strongly. Regarding visual appeal, 33.3% selected Agree, while 29.6% selected Strongly Agree. The remaining respondents selected Neutral, Disagree, or Strongly Disagree.

Regarding interactive and competitive learning activities, 40.7% selected Agree, and 14.8% selected Strongly Agree, indicating generally positive perceptions among the respondents. Students also demonstrated a preference for concise learning materials. A total of 13 respondents selected Agree or Strongly Agree that learning content should be concise and point-focused.

Similarly, 11 of the respondents selected Agree or Strongly Agree that points, badges, and leaderboards could increase learning motivation. Overall, the responses of the 27 students

demonstrate generally positive perceptions of visual presentation, interactivity, competition, concise content, and reward-based gamification mechanisms.

Functional Feature Prioritization and Operational Requirements

The 27 respondents also evaluated the functional features expected from the proposed ZepQuiz platform. Instant feedback (*Umpan Balik Instan*) was rated as Very Important by 40.7% of the students and as Important by 59.3%. Similarly, pre-quiz introductory summaries (*Materi Pengantar Singkat*) were rated as Very Important by 40.7% and as Important by 59.3%. Students also evaluated multiplayer modes, leaderboards, and point and badge systems. These features were generally perceived as important, although the distribution of responses varied among the 27 respondents. Regarding optimal single-session duration for digital media in this course, 48.1% (n = 13) preferred 30 – 45 minutes, 29.6% (n = 8) preferred 15 – 30 minutes, 14.8% (n = 4) preferred more than 45 minutes, and 7.4% (n = 2) preferred less than 15 minutes.

The qualitative responses provided by the participating students identified four major requirements for the proposed learning platform. First, students requested explanatory feedback rather than simple correct or incorrect indicators. Second, they preferred varied question formats involving images, maps, and terminology matching. Third, students emphasized technical accessibility, including the possibility of offline access. Fourth, they highlighted the need for intuitive navigation and introductory guidance for new users. Taken together, the findings from the 27 undergraduate students provide the empirical basis for identifying the instructional and technical requirements of the proposed ZepQuiz platform.

4. Discussion

The findings of this study provide important insights into the instructional challenges experienced by students in learning *Civilisation Française* and the potential role of gamification-based learning media in addressing these challenges. The discussion focuses on four major issues: the instructional gap between the availability of digital media and students' learning difficulties, the role of visual and gamified learning in addressing cognitive challenges, the relationship between the findings and previous studies on gamification in FLE learning, and the implications and limitations of the present study.

Students' Learning Needs and the Instructional Gap

One of the most important findings of this study is the coexistence of two conditions: digital learning media were already frequently used and generally perceived as effective, yet a substantial proportion of students continued to experience *Civilisation Française* as moderately to highly difficult. This finding suggests that the availability of digital technology alone is insufficient to ensure effective learning.

The difficulty of *Civilisation Française* may be associated with the complexity of its subject matter. Students are required to understand and connect historical events, geographical conditions, political systems, cultural practices, and contemporary social phenomena. From the perspective of Cognitive Load Theory (Sweller, 2011), such learning tasks may impose substantial intrinsic cognitive load because learners must process multiple interconnected concepts simultaneously.

The findings also suggest that conventional digital media may not always provide sufficient instructional support for organizing complex information. Static presentations and text-heavy materials may deliver information effectively but may not necessarily facilitate active knowledge construction. Therefore, the results support the need for learning media that not only digitize instructional content but also structure learning activities in ways that reduce unnecessary cognitive demands and support the gradual construction of knowledge.

This interpretation is consistent with instructional design principles emphasizing the importance of needs analysis in identifying the gap between existing learning conditions and desired learning outcomes (Branch, 2009; McKillip, 1987). In the present study, the identified gap provides the pedagogical foundation for developing ZepQuiz as a structured learning environment rather than merely as a digital quiz application.

Visual Learning, Gamification, and Student Motivation

The strong preference for short videos, interactive games, and visually attractive learning materials indicates that students favor learning experiences that combine information presentation with active participation. This finding is particularly relevant for *Civilisation Française*, where many topics involve spatial, historical, and socio-cultural concepts.

The preference for visual learning can be interpreted through Dual-Coding Theory (Paivio, 1991), which proposes that verbal and non-verbal information can be processed through complementary cognitive systems. The integration of images, maps, illustrations, and concise textual explanations may therefore support students in constructing more meaningful representations of complex concepts. This approach may be particularly useful for difficult topics identified in the present study, such as French geography and immigration phenomena.

The positive perceptions of interaction, competition, points, badges, and leaderboards also indicate that students are receptive to gamification-based learning. From the perspective of Self-Determination Theory (Ryan & Deci, 2020), these features may support learners' psychological needs for competence, relatedness, and autonomy. Points and badges can provide visible indicators of progress and achievement, thereby supporting competence. Multiplayer activities and leaderboards may facilitate social interaction and relatedness, while interactive and self-paced learning activities may support autonomy.

However, the findings also suggest that gamification should not be understood solely as the addition of reward elements to instructional content. The importance students assigned to introductory summaries and instant feedback indicates that they expect the platform to provide pedagogical support in addition to motivational features. Therefore, effective gamification in *ZepQuiz* should combine motivational mechanics with instructional scaffolding.

Comparison with Previous Studies on Gamification in FLE Learning

The findings of the present study are broadly consistent with previous research indicating that gamification can support motivation, engagement, and active participation in foreign language learning. Studies in the broader field of language education have frequently reported that gamified learning environments can increase learners' willingness to participate and sustain engagement through mechanisms such as points, badges, challenges, feedback, and competition.

Within the context of French as a Foreign Language (FLE), the present findings contribute a more specific perspective. While previous gamification studies in language learning have often focused on linguistic competencies such as vocabulary acquisition, grammar practice, speaking activities, or general learner engagement, the present study applies gamification to the learning of French civilization and socio-cultural content. This distinction is important because *Civilisation Française* involves not only language knowledge but also the interpretation of historical, geographical, political, and socio-cultural information.

The present study therefore extends the application of gamification in FLE by identifying how students' learning difficulties and media preferences can be translated into specific instructional design requirements. Rather than assuming that standard gamification elements will automatically improve learning, the *ZepQuiz* design is based on a needs analysis that identifies which content

areas students find difficult, which media formats they prefer, and which instructional features they consider important.

The findings also highlight an important convergence with previous FLE gamification research: learner engagement is more likely to increase when gamification involves active interaction rather than passive reward accumulation. The positive student responses toward interactive quizzes, visual content, and varied question formats suggest that the effectiveness of gamification depends not only on competition and rewards but also on the quality of the learning activities embedded within the gamified environment.

At the same time, the present study differs from studies that emphasize competition as the primary motivational mechanism. Although multiplayer modes and leaderboards were considered important by many respondents, students placed particularly strong importance on instant feedback and concise introductory material. This indicates that instructional scaffolding may be equally, or potentially more, important than competitive mechanics in the context of learning complex FLE civilization content.

Consequently, the contribution of the present study lies in positioning gamification as an integrated instructional strategy. The proposed ZepQuiz model combines concise conceptual preparation, visual representation, interactive retrieval activities, immediate explanatory feedback, and motivational mechanics. This combination is particularly relevant for FLE courses involving complex cultural and civilization content, where students may require both motivational support and cognitive scaffolding.

Implications for the Design of ZepQuiz

The findings provide several implications for the instructional and technical design of ZepQuiz. First, learning content should be segmented into concise instructional units. Because students experience difficulties in processing complex civilization content, lengthy and text-heavy explanations should be avoided. Short summaries can provide learners with essential conceptual information before they engage in interactive activities.

Second, visual representations should be integrated into the learning process. Maps, images, cultural illustrations, and other relevant visual materials can support the understanding of geographical and socio-cultural topics.

Third, ZepQuiz should provide varied forms of interaction. In addition to conventional multiple-choice questions, the platform can incorporate image matching, visual identification, concept association, and other interactive tasks that encourage active retrieval and knowledge application.

Fourth, immediate explanatory feedback should function as a core instructional feature. Feedback should not simply indicate whether an answer is correct or incorrect but should provide concise explanations that help learners understand and correct misconceptions.

Fifth, gamification mechanisms should be integrated in ways that support rather than replace instructional objectives. Points, badges, leaderboards, and multiplayer activities can strengthen motivation and engagement, but these features should remain connected to meaningful learning activities.

Taken together, these implications suggest that ZepQuiz should be designed as an instructional environment that combines cognitive scaffolding and motivational support. The results indicate that gamification is likely to be most beneficial when it is integrated with pedagogical strategies that address learners' actual cognitive and instructional needs.

Research Limitations

Several limitations of this study should be acknowledged. First, the study was conducted with undergraduate students from a single institution, Universitas Negeri Medan. Therefore, the findings may reflect the specific characteristics, learning experiences, and technological conditions of the participants and cannot be generalized directly to all FLE learners or higher education contexts.

Second, the findings were primarily based on students' self-reported perceptions. Although questionnaires and open-ended responses provide valuable information about learners' needs and preferences, self-reported data may not always correspond directly to actual learning behavior or learning outcomes. Future studies should therefore complement perception-based data with observational data, learning analytics, or experimental measures of learning performance.

Third, the present study focused on the needs analysis and instructional design requirements for developing ZepQuiz. The effectiveness of the proposed platform in improving students' learning outcomes, motivation, engagement, or long-term retention has not yet been empirically tested. Consequently, the present findings should be interpreted as evidence supporting the design and development of the platform rather than evidence demonstrating its effectiveness.

Fourth, although the study identifies several gamification features preferred by students, the findings do not establish the relative effectiveness of individual game mechanics. For example, points, badges, leaderboards, competition, and instant feedback may influence learners differently depending on their individual characteristics and learning preferences. Future research could therefore investigate the specific contribution of individual gamification elements to learning outcomes and motivation.

Finally, the technological requirements identified in the needs analysis may change as students' digital access and familiarity with learning technologies evolve. The design of ZepQuiz should therefore remain adaptable and should be evaluated through iterative usability testing and implementation studies.

Despite these limitations, the study provides an empirical foundation for developing a gamification-based learning medium that is grounded in students' identified instructional needs. Future research should evaluate the implemented ZepQuiz platform through usability testing, expert validation, pilot implementation, and experimental or quasi-experimental studies to determine its effectiveness in improving learning outcomes and motivation in *Civilisation Française* learning.

5. Conclusion

This study conducted a needs analysis involving 27 undergraduate students to examine the necessity, baseline conditions, learner preferences, and functional requirements for developing ZepQuiz as a gamification-based learning medium for the *Civilisation Française* course at Universitas Negeri Medan. The findings indicate that a substantial proportion of students experience moderate-to-high difficulty in learning the course, particularly when dealing with complex geographical, socio-cultural, and contemporary social topics, such as French geography and immigration. Although digital learning media are already frequently used and generally perceived as effective, students continue to experience difficulties with complex course content. The results further reveal a preference for visual, concise, interactive, and gamified learning experiences, particularly short videos and interactive quizzes. Students also emphasized the importance of pre-quiz introductory summaries, instant explanatory feedback, varied interactive question formats, and motivational elements such as points, badges, and leaderboards. Collectively, these findings provide an empirical and pedagogical basis for the development of ZepQuiz as a learning medium designed to support the processing of complex *Civilisation Française* content while promoting student engagement and motivation.

The findings have several implications for the design and future development of ZepQuiz. The platform should translate the identified learner requirements into concise and visually supported learning units, pre-quiz conceptual summaries, varied interactive activities such as image-matching tasks, and immediate explanatory feedback. Gamification elements, including points, badges, leaderboards, and optional competitive activities, should be integrated as pedagogical support mechanisms rather than as isolated reward features. The platform should also consider technical accessibility, including offline functionality where feasible, intuitive navigation, and learning sessions of approximately 30–45 minutes. Future research should proceed to the subsequent stages of Educational Design and Development Research, including prototyping, expert validation, usability testing, and implementation. Further studies should also empirically examine the effectiveness of the ZepQuiz prototype in improving students' learning outcomes, retention, engagement, and motivation through larger samples and experimental or quasi-experimental research designs across different FLE learning contexts.

6. References

- Borg, W. R., & Gall, M. D. (2020). *Educational research: An introduction* (5th ed.). Longman.
- Branch, R. M. (2009). *Instructional design: The ADDIE approach*. Springer Science & Business Media.
- Byram, M. (2021). *Teaching and assessing intercultural communicative competence: Revisited*. Multilingual Matters.
- Deterding, S. (2015). The lens of intrinsic skill development: Experiences of competence and game design. *Human-Computer Interaction*, 30(3–4), 294–335.
- Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: Defining “gamification.” In *Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments* (pp. 9–15). Association for Computing Machinery.
- Dichev, C., & Dicheva, D. (2017). Gamifying education: What is known, what is believed and what remains uncertain: A critical review. *International Journal of Educational Technology in Higher Education*, 14(1), Article 9.
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1–4.
- Feriansyah, F., & Titaley, E. (2024). Gamification-based learning with ZepQuiz: Enhancing language learning motivation and comprehension in higher education. *Journal of Foreign Language Teaching and Learning*, 9(1), 45–58.
- Field, A. (2018). *Discovering statistics using IBM SPSS statistics* (5th ed.). SAGE Publications.
- Kramsch, C. (2013). Culture in foreign language teaching. *Iranian Journal of Language Teaching Research*, 1(1), 57–78.
- Krashen, S. D. (1982). *Principles and practice in second language acquisition*. Pergamon Press.
- McKillip, J. (1987). *Needs analysis: Tools for the human services and education*. Sage Publications.
- Paivio, A. (1991). Dual coding theory: Retrospect and current status. *Canadian Journal of Psychology*, 45(3), 255–287.
- Pegrum, M. (2019). *Mobile learning: Languages, literacies and cultures*. Palgrave Macmillan.
- Richey, R. C., & Klein, J. D. (2007). *Design and development research: Methods, strategies, and issues*. Lawrence Erlbaum Associates.
- 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, Article 101860.

- Sweller, J. (2011). Cognitive load theory. *Psychology of Learning and Motivation*, 55, 37–76.
- ZEP. (2024). *ZEP QUIZ: Interactive gamified e-learning platform*. Google Workspace Marketplace.