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IMMERSIVE GAMIFIED LEARNING ENVIRONMENT FOR FOREIGN LANGUAGE EDUCATION OF FUTURE TOURISM PROFESSIONALS

The rapid digitalization of higher education has increased the need for innovative approaches that improve foreign language education for future tourism professionals. Although immersive technologies and gamification have demonstrated educational potential, their systematic integration through pedagogically grounded instructional design remains insufficiently explored.

This study aims to develop and experimentally validate an Immersive Gamified Learning Environment (IGLE) for enhancing foreign language communicative competence, learning motivation, engagement, and professional readiness among future tourism professionals.

A mixed-methods quasi-experimental design was employed involving 84 undergraduate tourism students. Participants were assigned to an experimental group (n = 42), which studied through an immersive gamified learning environment, and a control group (n = 42), which received traditional instruction. The twelve-week intervention incorporated Virtual Reality (VR), Augmented Reality (AR), AI-assisted conversational practice, authentic tourism scenarios, and gamification elements. Data were collected through communicative competence tests, motivation and engagement questionnaires, classroom observations, and semi-structured interviews.

Students participating in the immersive gamified environment significantly outperformed the control group in communicative competence, motivation, engagement, and communication confidence ($p < .001$). Authentic tourism simulations, adaptive feedback, and game-based learning promoted active participation, reduced speaking anxiety, strengthened intercultural communication, and improved professional language performance.

The proposed instructional model offers practical guidance for designing technology-enhanced foreign language courses in tourism education and may be adapted for hospitality, aviation, and other professionally oriented university programs.

The study proposes and empirically validates an original Immersive Gamified Learning Environment that integrates pedagogical design, immersive technologies, authentic tourism communication, and gamification into a unified competency-based framework for foreign language education.

Keywords: Immersive learning, gamification, foreign language education, tourism education, pedagogical design, virtual reality, higher education, communicative competence.

MAIN PROVISIONS

This study is based on the existing theories in relation to language learning, educational pedagogy, experiential learning, constructivism, and gamification. The study utilizes the instructional design models proposed by Branch (ADDIE), Wiggins & McTighe (Backward

Design), CAST (Universal Design for Learning), Kolb's Experiential Learning Theory and constructivism in terms of learner centered education.

The study makes use of the assumption that efficient foreign language instruction aimed at preparing future tourism professionals is inseparable from the combination of immersive technologies and pedagogically grounded instructional design. Such assumptions are justified by recent studies that identify the learning potentials of VR, AR, MR and 360° experiences for foreign language education.

Moreover, the research is based on the modern gamification theory that states that the elements of gaming such as points, badges, missions, storytelling, leaderboards and adaptive feedback are not simply motivational tools but rather parts of the whole instructional system.

According to the theoretical base of the study, the research presents an original Immersive Gamified Learning Environment (IGLE) for Foreign Language Education based on pedagogical design, immersive technologies, authentic tourism communication situations, formative assessments and adaptive feedback.

INTRODUCTION

The rapid digital revolution of higher education has restructured foreign language instruction through immersion of modern technologies, artificial intelligence and virtual learning environments. The changes are characterized by learner-centered and competency-based approach that implies participation and personalization of the learning process.

The tourism sector is one of the internationalized fields of activity requiring graduates to work in multicultural environment. As a result, the development of foreign language communicative competence, intercultural awareness, problem-solving skills and customer communication becomes the crucial competencies for future tourism professionals. Nevertheless, the traditional language learning is mainly based on text-book activities and grammar instruction offering little chances to learn authentic professional communication.

Recent researches show the effectiveness of Virtual Reality (VR), Augmented Reality (AR), Mixed Reality (MR), 360° environments and gamification in terms of increasing learner motivation, engagement and contextual language learning. However, previous investigations have mainly considered the issues of immersive learning and gamification separately paying little attention to their pedagogical integration within professionally oriented foreign language instruction.

Hence, the justification for this investigation is the need to create a model of pedagogical integration of immersive technologies, gamification and instructional design aimed at the improvement of communicative competence and professional preparation of future tourism specialists.

The object of the research is foreign language education in higher education institutions training future tourism professionals.

The subject of the research is the pedagogical design of an immersive gamified learning environment for professionally oriented foreign language instruction.

The aim of the study is to develop and experimentally validate the Immersive Gamified Learning Environment (IGLE) improving foreign language communicative competence, motivation, engagement and professional preparation.

To achieve this aim, the following goals were set:

- to review contemporary research on immersive learning, gamification and instructional design;
- to create a model of an immersive gamified learning environment;
- to implement this model in foreign language education of tourism students;
- to estimate the effectiveness of the developed model.

The study is based on the following hypothesis: the integration of immersive technologies with pedagogically grounded gamification will significantly increase the levels of communicative competence, learner motivation, engagement and professional preparation as compared with traditional language instruction.

The scientific novelty of the research consists in the creation and validation of the original competency-based Immersive Gamified Learning Environment (IGLE) that incorporates instructional design approaches, immersive technologies, authentic communication scenarios of the tourism sector and gamification into the unified pedagogical model.

The theoretical significance of the investigation is in the contribution to research in technology-enhanced foreign language education due to the integration of instructional design theory, experiential learning, constructivism and immersive learning.

The practical significance of the research is in the provision of an evidence-based model that can be used in the instruction of tourism students and adapted for other professionally oriented university programmes.

The review of recent studies shows the increasing interest to the issues of immersive learning and gamification; however, comprehensive pedagogical models of the mentioned technologies incorporation in foreign language education of future tourism specialists are still underdeveloped. It means that this research will be helpful in creating and validating of the integrated instructional model.

Foreign language education of future tourism professionals is connected with the development of communicative, intercultural and professional competencies. Being the sector of the economy, where English language is used for business purposes, tourism requires the development of linguistic, intercultural and professional competencies of specialists in English language. Hence, future tourism professionals have to possess not only linguistic skills but also pragmatics, intercultural competence and service communication in order to work in unpredictable professional situations.

According to Ho (2020), communicative language teaching is useful for the improvement of students' confidence and communicative competence in Tourism English. The current research projects in the Kazakhstani context point out the necessity to enhance communicative and cognitive competence of tourism specialists using digital technologies. Hence, foreign language instruction should not be limited to textbook-based learning but include authentic, task-based and simulation-based activities [1].

Immersive learning environments provide presence, interaction and contextual experience. In foreign language instruction, immersive technologies help students to use language in realistic communicative situations. Virtual Reality (VR) allows learners to interact with three-dimensional environments and to participate in simulated professional scenarios. Zheng (2023) demonstrates that VR has been widely used in language instruction to increase motivation, engagement, interaction and contextual language learning [2].

Augmented Reality (AR) is also helpful for language instruction due to its possibility to connect digital information with the real environment. Schorr et al. (2024) note that AR can increase motivation, interaction and contextual understanding in foreign language learning [3]. Christou (2025) emphasizes that the area of AR-based language learning has become one of the most interesting topics of recent research in education. For tourism education, VR, AR, MR and 360° environments can simulate hotels, airports, museums, travel agencies, cultural sites and guided tours helping students to develop their professional vocabulary and communication strategy in safe conditions [4].

Gamification implies the use of game design elements in non-game contexts. According to the definition by Deterding et al. (2011), gamification is the usage of game elements to increase engagement and gameful experience. In higher education, gamification is widely used in order to increase motivation, participation and persistence [5]. Khaldi et al. (2023), conducting a systematic review of gamified e-learning, point out such elements used in university learning environments as points, badges, leaderboards, challenges, feedback and levels [6].

In foreign language education, points and badges can reward task completion, while missions, quests, storytelling and adaptive feedback can personalize the learning process. However, gamification should not be used in mechanical way. The effectiveness of gamification depends on its alignment with learning outcomes, assessment criteria and needs of students. As a result, in the

instruction of tourism professionals, gamification should be connected with authentic communicative tasks like tourist problem solving, giving directions, complaint management or presenting cultural sites [7].

The use of immersive technologies and gamification in learning is impossible without pedagogical design that turns attractive technologies into efficient learning environments. Otherwise, VR, AR, 360° environments and game elements may become attractive and pedagogically ineffective tools. The current study is based on several theoretical foundations: ADDIE, Backward Design, Universal Design for Learning, Experiential Learning and Constructivism.

The ADDIE model by Branch provides the systematic framework for analysis of learners' needs, design of learning outcomes, development of instructional materials, implementation of learning activities and evaluation of results. The Backward Design, created by Wiggins and McTighe, starts from the estimation of intended learning outcomes and alignment of assessment and learning activities with these outcomes [8]. The Universal Design for Learning emphasizes accessibility, flexibility and multiple ways of engagement and expression. The Experiential Learning Theory by Kolb is especially useful for tourism education as professional competence is developed through experience, reflection, conceptualization and repeated practice. Constructivism promotes active learning due to problem-solving, collaboration and authentic tasks [9].

Thus, the review of recent literature showed the high potential of immersive technologies and gamification in foreign language instruction. However, existing researches mainly consider the issues of immersive learning and gamification separately paying little attention to their pedagogical integration through instructional design in foreign language education of future tourism professionals. This lack of research justifies the development of the Immersive Gamified Learning Environment.

MATERIALS AND METHODS

In this research, a quasi-experimental design was applied to test the impact of Immersive Gamified Learning Environment (IGLE) on the improvement of foreign language communicative competence of future tourism professionals. Twelve weeks intervention was carried out comparing an experimental group of participants who underwent immersive gamified learning with a control group of participants receiving traditional instruction.

The study took place in Spring 2026 at the International University of Tourism and Hospitality (Turkistan, Kazakhstan). Participants of the study were 84 undergraduates of Tourism major (aged 18-22 years, CEFR B1-B2) equally distributed into experimental (n=42) and control (n=42) groups. As pre-test results revealed no statistically significant differences between the groups in terms of communicative competence and learning motivation ($p>.05$), participation was completely voluntary and conducted in accordance with institutional ethical standards.

Both groups studied in compliance with the same curriculum, learning outcomes, instructional hours and criteria for assessment. The difference lied in the methodology of instruction. While a control group was receiving traditional communicative English instruction, an experimental group learned English through IGLE involving Virtual Reality (VR), Augmented Reality (AR), real-life tourism situations, conversation practice assisted by AI, and gamification techniques such as points, badges, missions, leaderboards, storytelling, and adaptive feedback. The instructional model was designed according to ADDIE framework, Backward Design, UDL, Experiential Learning Theory, and Constructivism principles.

For data collection, standardized pre- and post-tests of communicative competence, surveys on motivation and engagement, satisfaction survey, classroom observation, and semi-structured interviews were used. Quantitative data were analyzed using IBM SPSS Statistics 29 with help of descriptive statistics, paired- and independent-samples t-tests, Cronbach's alpha, and Cohen's d ($p<.05$).

RESULTS

The results demonstrate that the immersive gamified learning environment positively influenced the development of foreign language communicative competence, learning motivation, student engagement, and communication confidence among future tourism professionals. Both the experimental and control groups showed improvement after the twelve-week instructional period; however, the magnitude of improvement was considerably greater in the experimental group. Statistical analyses confirmed that the observed differences were significant ($p < .05$), indicating that the proposed pedagogical model contributed to enhanced learning outcomes.

The pre-test results indicated that both groups possessed comparable levels of communicative competence before the intervention. Following twelve weeks of instruction, students in the experimental group demonstrated substantially greater improvement than those receiving traditional instruction.

Table 1. Foreign language communicative competence scores

Group	Pre-test (M $\pm$ SD)	Post-test (M $\pm$ SD)	Gain
Control Group (n = 42)	63.2 $\pm$ 7.1	74.5 $\pm$ 6.8	+11.3
Experimental Group (n = 42)	62.9 $\pm$ 6.9	86.8 $\pm$ 5.7	+23.9

The results obtained from paired samples t-test show statistically significant improvement in the performance of the subjects belonging to each group ($p < .001$). Nevertheless, independent samples t-test results indicate that post-test performance of the experimental group subjects is much better compared to the performance of the subjects from the control group ($t = 8.42$, $p < .001$, $d = 1.52$).

Immersive gamified instruction made students feel significantly more motivated to learn than conventional teaching did. Learning motivation increased during the intervention due to real-life tourism cases, digital badges, teamwork, and instant feedback.

Table 2. Learning motivation

Group	Pre-test (M $\pm$ SD)	Post-test (M $\pm$ SD)	Gain
Control Group	3.46 $\pm$ 0.49	3.82 $\pm$ 0.45	+0.36
Experimental Group	3.43 $\pm$ 0.47	4.48 $\pm$ 0.39	+1.05

It means that the distinction between the groups was statistically significant ($t = 6.87$, $p < .001$), which means that gamification significantly impacted the level of intrinsic and professional motivation of students for the study of English language.

The engagement level of students increased in both groups; however, the improvement rate was much higher in the case of those who participated in immersive learning activities..

Table 3. Student engagement

Group	Pre-test (M $\pm$ SD)	Post-test (M $\pm$ SD)	Gain
Control Group	3.58 $\pm$ 0.43	3.91 $\pm$ 0.41	+0.33
Experimental Group	3.55 $\pm$ 0.46	4.63 $\pm$ 0.34	+1.08

The independent-samples t-test indicated statistically significant differences in engagement after the intervention ($t = 7.41$, $p < .001$). Classroom observations also revealed increased

interaction frequency, higher task completion rates, and stronger collaborative learning among students in the experimental group.

One of the most substantial improvements concerned students' confidence in professional English communication. Students exposed to immersive scenarios demonstrated greater willingness to communicate with international tourists, solve authentic professional problems, and participate in spontaneous conversations.

Table 4. Communication confidence

Group	Pre-test (M ± SD)	Post-test (M ± SD)	Gain
Control Group	3.39 ± 0.52	3.84 ± 0.47	+0.45
Experimental Group	3.36 ± 0.51	4.57 ± 0.36	+1.21

The findings from the interviews were consistent with the findings from the quantitative data analysis. Majority of the students agreed that immersive simulations lowered their speaking anxiety levels, enhanced their communication confidence and allowed them to communicate in practical real-life situations in English.

Table 5. Learning Objectives of the Immersive Gamified Course

Learning Outcome	Tourism Context	Learning Activity	Assessment
Communicate with international tourists	Hotel reception	VR role-play	Speaking assessment
Provide travel information	Travel agency	AI chatbot simulation	Scenario evaluation
Explain cultural attractions	Museum guiding	Virtual экскурсия	Oral presentation
Solve customer complaints	Hotel and airport	Escape room	Problem-solving task
Demonstrate intercultural competence	International tourism	Collaborative missions	Observation rubric

The relationship between the learning outcomes, authentic tourist settings, learning tasks, and assessment methods can be seen in Table 5. The competencies have been created based on real-life professional settings such as hotel receptionist, travel agent, museum guide, and customer service. The performance is assessed by using authentic assessment tools such as speaking test, scenario assessment, presentation, and observation rubric. The overall framework reflects competency-based education integrated well with immersive technology.

Table 6. Immersive Learning Activities

Technology	Learning Activity	Target Competency
Virtual Reality	Hotel reception simulation	Professional speaking
Virtual Reality	Airport communication	Customer interaction
Augmented Reality	Museum information	Vocabulary development
Mixed Reality	Team-based travel planning	Collaboration
360° Environment	Virtual city excursion	Descriptive communication
AI Chatbot	Conversational practice	Fluency and pronunciation
Escape Room	Tourism problem-solving	Critical thinking

The Table 6 below highlights how the immersion technologies were associated with the learning tasks and competencies. All technologies addressed a different competency, such as

speaking, dealing with clients, building vocabulary, teamwork, fluency, and critical thinking. Thus, the findings prove that using various types of immersive technologies helps create realistic learning opportunities for the future profession.

Table 7. Practical Recommendations for Implementing the IGPD Model

Recommendation	Practical Application
Conduct learners' needs analysis	Identify language and professional requirements before course design
Design authentic tourism scenarios	Integrate hotels, airports, museums, restaurants, and travel agencies
Combine multiple immersive technologies	Use VR, AR, MR, AI chatbots, and 360° environments
Integrate meaningful gamification	Employ points, badges, missions, storytelling, and adaptive feedback
Ensure continuous formative assessment	Combine self-, peer-, teacher-, and AI-based feedback
Align learning outcomes with tourism competencies	Focus on communicative competence and workplace readiness
Promote collaborative learning	Include team-based simulations and problem-solving tasks
Evaluate learning continuously	Apply competence tests, observation, surveys, and interviews

Practical suggestions on the implementation of the IGPD model in FLT for tourism students are presented in Table 7 below. The suggested guidelines focus on such aspects as the needs analysis, authentic situations from the sphere of tourism, immersive technology tools, meaningful game design, formative assessment, and collaboration. All these elements form a coherent framework for teaching.

Figure 1. Pedagogical model of an immersive gamified learning environment for foreign language education of future tourism professionals

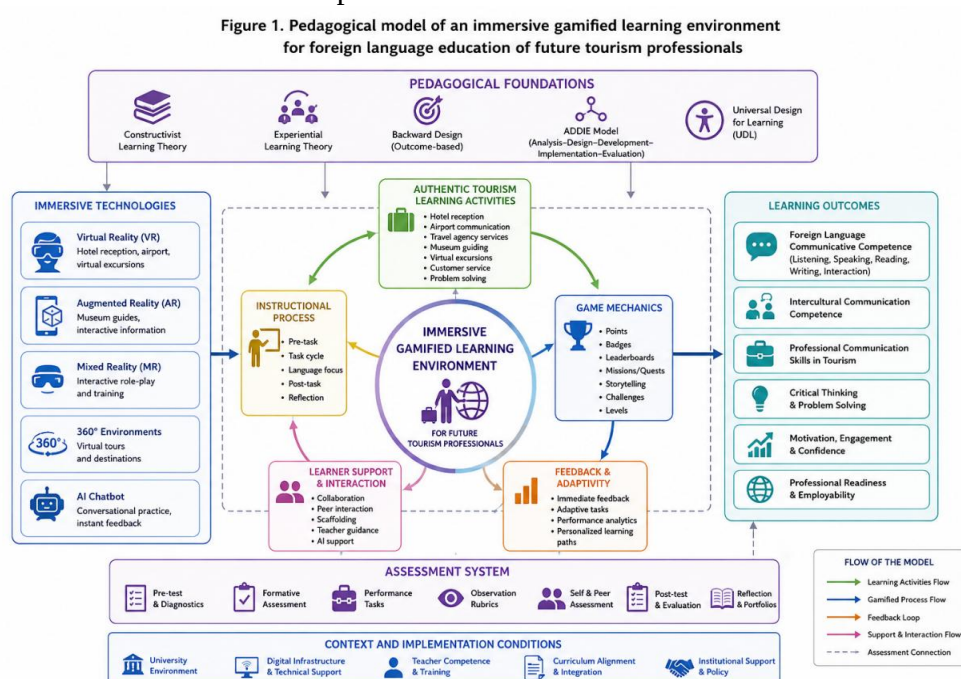


Figure 1 illustrates the developed pedagogical model of an Immersive Gamified Learning Environment (IGLE) for foreign language education of future tourism professionals. The model depicts the systemic interrelation between pedagogical foundations, immersive technologies, authentic learning activities, gamification, assessment, and educational outcomes.

Pedagogical model is based on instructional theories, among which there are Constructivism, Experiential Learning, Backward Design, the ADDIE model, and Universal Design for Learning. Pedagogical foundations facilitate the design of student-centered instruction and the alignment of learning goals, instructional methods, assessment, and competencies.

Immersive technologies include Virtual Reality, Augmented Reality, Mixed Reality, 360 degrees virtual environments, and artificial intelligence supported conversational practice. These technologies enable the creation of authentic professional context, where students actively participate in the process of professional communication in tourism field. Immersive technologies are associated with authentic learning activities such as hotel reception, airport communication, museum guiding, travel agency consultations, and customer service problem solving.

The central element of the model is the Immersive Gamified Learning Environment, which unites all aspects of instructional processes, gamification features, learners' support, and feedback. The continuous interconnection of these elements facilitates active participation, self-regulation, collaboration, and performance improvement.

The assessment system comprises diagnostic, formative, and summative assessment along with self and peer assessment enabling the continuous monitoring of learners' progress during instruction.

The proposed pedagogical model consists of five interrelated components. The first component is represented by pedagogical foundations, such as the ADDIE model, Backward Design, Universal Design for Learning, Experiential Learning Theory, and Constructivism. The second component embraces immersive technologies, including Virtual Reality, Augmented Reality, Mixed Reality, and 360 degrees virtual environments. The third component includes the gamification elements such as points, badges, leaderboards, missions, storytelling, adaptive feedback, and artificial intelligence supported conversational practice. The fourth component is focused on authentic tourism learning activities, including hotel reception, airport communication, travel agency consultations, museum guiding, virtual excursions, and customer service problem solving. Finally, the fifth component involves the expected educational outcomes, such as improved foreign language communicative competence, increased motivation to learn, engagement, communication confidence, intercultural competence, and professional readiness for work in the field of tourism.

In conclusion, the results illustrate that the integration of immersive technologies with pedagogically based gamification considerably increases the effectiveness of professionally oriented foreign language education. Compared to conventional instruction, the proposed instructional model ensured better levels of communicative competence, motivation to learn, engagement, and confidence of learners.

DISCUSSION

First of all, the results obtained in the course of this study prove the high efficiency of using immersive technologies with gamification for future tourism specialists' foreign language education. In comparison with traditional approaches to teaching, the proposed learning environment brought about considerable improvements in learners' communicative competence, motivation, engagement, and confidence. Thus, these results correlate well with a significant number of findings proving that immersive learning technologies become effective when used with the help of appropriate pedagogical design and professional learning.

The positive effect observed in the level of students' communicative competence can be regarded as the result of applying immersion in teaching foreign languages to tourists. Zheng (2023) proved that Virtual Reality technology ensures authentic communicative situation and thus helps

students acquire the language. Similarly, Schorr et al. (2024) found out that Augmented Reality technology helps students acquire new vocabulary, interact with each other, and understand the context. However, the present study extends these findings since the results prove that the integration of immersion and gamification within tourism education makes it possible to improve students' language communication skills.

Thus, one of the main advantages of the proposed pedagogical approach consists in the fact that it implies contextual learning. In contrast to isolated training related to the practice of vocabulary and grammar structures, students were involved in professional activities such as hotel reception, airport communication, museum guides, tour agency consultations, and virtual tours. This type of authentic learning makes it possible to apply class room knowledge in the future professional activity.

The study also proves that authentic communication is an important aspect of the professionally oriented language education. As a result of the use of immersion, students continually negotiate meaning, solve customer service problems, provide tourists with information, and cooperate with peers within professional situation simulation. Authentic communication promotes not only language acquisition but also the development of intercultural communication skills, decision-making skills, and professional communication skills.

Moreover, it should be noted that immersion technology positively influences experiential learning since it transforms students from recipients of information into active participants of communication processes. In contrast to memorization of linguistic forms, students are involved in real life situations that require decision-making, collaboration, and communication. This finding is consistent with Kolb's experiential learning model and constructivist principles of knowledge acquisition through active involvement.

Furthermore, another positive effect of immersive technology is its contribution to the reduction of language anxiety. During semi-structured interviews, it was discovered that students feel more confident when communicating in English with virtual clients, AI-conversationalists, and professional situations simulation. The opportunity of repeating the task, getting adaptive feedback, and learning in a psychological comfortable digital environment reduces fear of making mistakes. It is similar to the findings of the last studies devoted to the effect of immersion on learning language.

However, the last but not least advantage of the proposed approach consists in its motivational effect. In accordance with Khaldi et al. (2023) and González-López (2025), the present study confirms that game mechanics such as digital badges, leaderboards, missions, and adaptive feedback have a positive impact on the students' intrinsic motivation. However, the results also prove that gamification becomes effective in case of integration with professional tasks rather than functioning as the motivational strategy alone. This finding proves the thesis of Fischer (2019) about the importance of learner experience in educational games.

Finally, the results show that the use of immersive gamified instruction promotes students' professional readiness. Besides language competence, learners acquired the skills of practical communication that are necessary for tourism profession. As a result of participation in various professional situation simulations, students develop customer service communication, intercultural communication, problem-solving skills, teamwork, and professional decision-making. Therefore, the proposed pedagogical approach promotes language and employability at the same time.

In general, the results of the study prove that immersion does not lead to successful learning results. The efficiency of learning technologies depends on systematic pedagogical design, authentic tasks, adaptive feedback, learner-centeredness, and assessment. Thus, the integration of immersion and gamification within pedagogical framework is a promising direction for future foreign language education.

CONCLUSION

The present study explored the use of immersive gamified learning to educate future tourism professionals on a foreign language and proved the proposed approach to be highly effective in improving the communicative competence and professional preparedness of the target learners.

Through the use of immersive technologies, authentic tourism scenarios, and gamification, the current research offers an example of how the integration of technology with pedagogy can be used to improve the quality of professionally oriented language education.

It was found that immersive learning has a strong impact on the learners' ability to speak and perform in terms of their general communicative competence in a foreign language. Being engaged in realistic professional simulation activities, including hotel reception, airport communication, museum guiding, consulting in a travel agency, and virtual excursions, the learners had an opportunity to practice their English in the context very similar to future professional practice. Hence, learners gained fluency, communicative accuracy, interactional competence, and professionalism in communication.

It was shown that gamification can increase learners' intrinsic motivation and engagement greatly. Game elements, like digital badges, experience points, missions, leaderboards, adaptive feedback, and conversational practice with AI, supported participants' active involvement in the process of learning and made this process more meaningful and fun. Instead of acting as motivation tools only, these elements were able to support the process of continuous learning and competence development.

One more key point discussed in this study is the value of authentic tourism scenarios as regards the educational process. Authentic communicative tasks provided opportunities for contextual learning by asking learners to solve professional problems, work together with their peers, negotiate meanings, and communicate with virtual tourists using English. Therefore, language learning became directly connected to future professional practice and contributed to the development of learners' intercultural communication skills and customer service competence.

Finally, it should be noted that pedagogical design plays a key role in ensuring systematic integration of immersive technologies and gamification. The instructional effectiveness of the proposed approach was reached not due to the use of technology itself but due to its integration with pedagogical foundations, including ADDIE, Backward Design, Universal Design for Learning, Experiential Learning Theory, and Constructivist Learning Theory.

The main contribution of the current study is the introduction of the Immersive Gamified Pedagogical Design (IGPD) Model that serves as a basis for designing immersive language learning environments in higher education. The model includes needs analysis, learning outcomes, immersive scenario design, gamification strategy, reflection, and assessment as means for developing both foreign language communicative competence and professional competence.

The proposed model has a number of practical implications for curriculum developers, university instructors, instructional designers, and educational policymakers. Although created in the context of tourism education, this IGPD Model can be easily adopted in hospitality, hotel management, event management, travel services, aviation, and many other professionally oriented educational programs that imply communicative competence and intercultural competence.

Several limitations need to be mentioned. First, the study was done in one university and covered a relatively small sample size. Second, the intervention lasted twelve weeks only. In the future, researchers should look for the long-term effects of the proposed approach, test various immersive technologies, analyze AI-driven adaptive learning environments, and implement the proposed pedagogical model in other universities and countries.

To conclude, the results show that the systematic integration of immersive technologies and gamification has a great potential for the future of foreign language education. The proposed Immersive Gamified Pedagogical Design (IGPD) Model has both theoretical and practical contributions to this field.

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Иммерсивная геймифицированная образовательная среда для обучения иностранному языку будущих специалистов туристской отрасли

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Стремительная цифровизация высшего образования обусловила необходимость поиска инновационных подходов к обучению иностранным языкам будущих специалистов туристской отрасли. Несмотря на значительный образовательный потенциал иммерсивных технологий и геймификации, их системная интеграция в рамках педагогически обоснованного образовательного дизайна остается недостаточно изученной. Целью настоящего исследования является разработка и экспериментальная проверка эффективности иммерсивной геймифицированной образовательной среды (Immersive

Gamified Learning Environment, IGLE), направленной на развитие иноязычной коммуникативной компетенции, учебной мотивации, вовлеченности и профессиональной готовности будущих специалистов туристской сферы.

В исследовании использован квазиэкспериментальный дизайн, основанный на смешанной методологии. В эксперименте приняли участие 84 студента направления подготовки «Туризм», разделенные на экспериментальную ($n = 42$) и контрольную ($n = 42$) группы. В течение двенадцати недель студенты экспериментальной группы обучались с использованием разработанной модели IGLE, включавшей технологии виртуальной (VR) и дополненной (AR) реальности, разговорную практику с применением искусственного интеллекта, аутентичные туристские сценарии и элементы геймификации. Сбор данных осуществлялся посредством тестов коммуникативной компетенции, анкетирования мотивации и вовлеченности, педагогического наблюдения и полуструктурированных интервью.

Полученные результаты показали, что студенты экспериментальной группы статистически значимо превосходили обучающихся контрольной группы по уровню иноязычной коммуникативной компетенции, учебной мотивации, вовлеченности, уверенности в профессиональном общении и профессиональной готовности ($p < 0,001$). Иммерсивные симуляции, аутентичные туристские ситуации, адаптивная обратная связь и игровые механики способствовали активному участию студентов в образовательном процессе, снижению языковой тревожности и развитию профессиональных коммуникативных навыков.

Предлагаемая педагогическая модель может быть использована при проектировании цифровых курсов иностранного языка для подготовки специалистов в области туризма, гостиничного бизнеса, авиации и других профессионально ориентированных образовательных программ.

Научная новизна исследования заключается в разработке и экспериментальном обосновании оригинальной модели иммерсивной геймифицированной образовательной среды, интегрирующей педагогический дизайн, иммерсивные технологии, аутентичные профессиональные ситуации общения и геймификацию в единую компетентностно-ориентированную систему обучения иностранному языку.

Ключевые слова: иммерсивное обучение, геймификация, обучение иностранному языку, туристское образование, педагогический дизайн, виртуальная реальность, высшее образование, коммуникативная компетенция.

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Болашақ туризм мамандарын шет тіліне оқытуға арналған иммерсивті геймификацияланған білім беру ортасы

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Жоғары білім беру жүйесінің қарқынды цифрландырылуы болашақ туризм мамандарын шет тіліне оқытудың инновациялық тәсілдерін енгізу қажеттілігін күшейтті. Иммерсивті технологиялар мен геймификацияның білім беру әлеуеті ғылыми еңбектерде дәлелденгенімен, оларды педагогикалық тұрғыдан негізделген білім беру дизайны аясында кешенді түрде кіріктіру мәселесі әлі де жеткілікті зерттелмеген. Осы зерттеудің мақсаты – болашақ туризм мамандарының шетел тіліндегі коммуникативтік құзыреттілігін, оқу мотивациясын, білім алуға тартылуын және кәсіби дайындығын дамытуға бағытталған **Immersive Gamified Learning Environment (IGLE)** моделін әзірлеу және оның тиімділігін эксперименттік тұрғыдан дәлелдеу.

Зерттеу барысында аралас әдістерге негізделген квазиэксперименттік дизайн қолданылды. Зерттеуге «Туризм» білім беру бағдарламасының 84 студенті қатысып, олар эксперименттік ($n = 42$) және бақылау ($n = 42$) топтарына бөлінді. Он екі апта бойы эксперименттік топта виртуалды (VR) және толықтырылған шынайылық (AR) технологиялары, жасанды интеллект негізіндегі сөйлесу тәжірибесі, туризм саласына бағытталған аутентті жағдаяттар және геймификация элементтері қолданылды. Деректер шетел тіліндегі коммуникативтік құзыреттілік тестілері, мотивация мен оқу белсенділігі сауалнамалары, педагогикалық бақылау және жартылай құрылымдалған сұхбаттар арқылы жиналды.

Зерттеу нәтижелері эксперименттік топ студенттерінің шетел тіліндегі коммуникативтік құзыреттілік, оқу мотивациясы, білім алуға тартылуы, кәсіби қарым-қатынасқа сенімділігі және кәсіби дайындығы бойынша бақылау тобынан статистикалық тұрғыдан жоғары нәтижелер көрсеткенін анықтады ($p < 0,001$). Иммерсивті симуляциялар, аутентті туристік жағдаяттар, бейімделетін кері байланыс және ойын механикалары студенттердің белсенді қатысуына, тілдік мазасыздықтың төмендеуіне және кәсіби коммуникативтік дағдыларының дамуына ықпал етті.

Ұсынылған педагогикалық модель туризм, қонақжайлылық индустриясы, авиация және кәсіби бағыттағы басқа да жоғары білім беру бағдарламаларында цифрлық технологияларға негізделген шетел тілі курстарын жобалауда қолдануға болады.

Зерттеудің ғылыми жаңалығы педагогикалық дизайнды, иммерсивті технологияларды, туризм саласына тән аутентті кәсіби қарым-қатынас жағдаяттарын және геймификацияны бірыңғай құзыреттілікке бағытталған оқыту жүйесіне біріктіретін авторлық **Immersive Gamified Learning Environment (IGLE)** моделінің әзірленуі мен оның эксперименттік тұрғыдан негізделуінде көрінеді.

Түйінді сөздер: иммерсивті оқыту, геймификация, шетел тілін оқыту, туризмдік білім беру, педагогикалық дизайн, виртуалды шынайылық, жоғары білім, коммуникативтік құзыреттілік.

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