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DEVELOPMENT OF CREATIVE ABILITIES AT FOREIGN LANGUAGE LESSONS

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Annotation. This paper considers the problem of developing students' creative abilities in foreign language learning. Special attention is paid to innovative methods, including digital tools and artificial intelligence technologies. The effectiveness of combining traditional and modem approaches in foreign language teaching, which contribute not only to the development of language skills, but also to the discovery of students' creative potential, is considered.

Key words: creativity, creativity, creativity, artificial intelligence (AI), English language, chatbot.

THE POTENTIAL OF VIDEOGAMES IN EDUCATION: DEVELOPING CRITICAL THINKING IN ENGLISH LANGUAGE LESSONS

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Abstract. This study explores the potential of video games as an innovative tool for enhancing critical thinking skills in English language lessons. Conducted at the Municipal State Enterprise on the Right of Economic Management «Pavlodar College of Service and Catering» in Pavlodar, the experiment involved 36 first-year students, divided into experimental and control groups. Through empirical methods such as observation, surveys, and testing, the research assessed the impact of interactive games like Storyteller and The Lion's Song on cognitive abilities. Results indicate moderate improvements in analysis, interpretation, and problem-solving skills, affirming the value of video games in fostering 21st-century competencies despite certain limitations.

Key words: Video games, critical thinking, English language lessons, educational technology, cognitive skills, student engagement, interactive learning.

The tendency of using information and communication technology (ICT) in the educational process plays a vital role. Thus, L.G. Gordon (UNESCO Institute for Information Technologies in Education) emphasized in his work that the implementation of ICTs and multimedia tools has the potential to fundamentally transform the existing learning system. This creates prerequisites for developing a more innovative approach to organizing the educational process, where emphasis will be placed on the extensive use of analytical, practical, and experimental learning methods, allowing for the consideration of each student's individual characteristics and needs. [Gordon, 2007, p. 1]. In this regard, authentic media materials in education have become widely used and integrated into the classroom. The new Dictionary of Methodological Terms and Concepts defines «authentic materials» as resources for language learners that are used in real-life contexts within a given country. This category includes newspapers, magazines, theater and transportation tickets, letters, advertisements, radio and television broadcasts, public announcements, and other real-world materials [Azimov, 2009, p. 25]. Video games are also considered a form of authentic material, as they involve interactive play using visuals generated by electronic devices [Gufo, n.d.]. In today's technological world, video games are popular among people worldwide. According to Inbusiness.kz, by the end of 2024, the global number of video game players increased by 4.5%, reaching 3.42 billion. This figure is projected to grow to 3.76 billion by 2027. The majority of players – approximately 2.85 billion – prefer mobile games. Meanwhile, 908 million people play on personal computers (PCs), and 630 million use gaming consoles [Rynok komp'yuternykh igr v Kazakhstane ..., 2025]. This suggests that a significant portion of the population is interested in video games, highlighting the relevance of this issue.

The use of video games in the educational process not only enhances language skills and increases classroom engagement but also actively stimulates the development of critical thinking. As a key competence of the 21st century, critical thinking involves the ability to analyze, evaluate, and interpret information, as well as to draw well-reasoned conclusions. The term «critical thinking» was first introduced in an educational context by the American philosopher John Dewey in 1910. He primarily used the concept of «reflective thinking,» defining it as «active, persistent, and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it and the further conclusions to which it tends» [Dewey, 1910; 1933]. Dewey associated this concept with a scientific approach to the thinking process, drawing on the works of thinkers such as Francis Bacon, John Locke, and John Stuart Mill, who had previously emphasized the importance of developing a scientific approach to cognition within educational activities [Hitchcock, 2024].

John Dewey identified five key stages in the critical thinking process [Hitchcock, 2024]:

- Proposal formation, where the mind spontaneously suggests possible solutions.
- Defining the problem, transforming a difficulty or uncertainty into a problem that requires a solution.

- Using ideas or hypotheses, guiding observations and gathering factual material.

- Developing an idea or hypothesis, refining it through reason.

The critical thinking process described by John Dewey entails active engagement in analysis, hypothesis generation, data collection, reasoning, and testing assumptions. These stages are reflected in the mechanics of contemporary video games, where players must overcome obstacles by making strategic choices and decisions in the face of ambiguity while considering the consequences of their actions. Thus, video games create a unique environment that fosters both engagement and the development of critical thinking skills through interactive, immersive scenarios.

The test findings from the study by A. C. Bayambaeva et al. revealed that no students in the 7th or 9th grades demonstrated a high level of critical thinking [Bayambayeva, 2020].

However, the number of students with a low level of critical thinking remained nearly the same across both age groups, while the proportion of students with an average level of critical thinking was slightly higher in the seventh grade than in the ninth. Based on these findings, the study demonstrated that critical thinking skills – such as analyzing information, forming hypotheses, and drawing conclusions – are effectively developed when interactive teaching methods are employed. The experiment further showed that after the introduction of appropriate techniques, the proportion of students with a high level of critical thinking increased from 0% to 10% in the 7th grade and to 16% in the 9th grade, while 68.4% of students reached an average level of skill development [Bayambayeva, 2020].

To investigate the impact of video games on the development of critical thinking skills during English language lessons, an experiment was conducted. The study was carried out at the Municipal State Enterprise on the Right of Economic Management «Pavlodar College of Service and Catering» in Pavlodar. A total of 36 first-year students from three academic groups participated in the research, with 25 students forming the experimental group and 11 comprising the control group. The educational process was implemented in accordance with the curriculum approved by the institution.

To assess the effectiveness of the applied educational strategies and gather data for subsequent analysis, empirical approaches such as observation, surveys, and assessments were employed. Throughout the experiment, it is hypothesized that the group utilizing video games will demonstrate a significant improvement in critical thinking abilities compared to the control group. The integration of video games, which emphasize interaction, analysis, and decision-making, is expected to enhance cognitive skills such as information evaluation, interpretation, logical reasoning, and creative thinking.

Moreover, incorporating video games as an interactive instructional tool is likely to increase student engagement, potentially exerting a positive influence on their ability to tackle complex challenges, assess diverse approaches, and independently formulate well-reasoned judgments. As a result, the instructional process is expected to become more dynamic, engaging, and aligned with the development of essential 21st-century competencies.

A survey-test was conducted based on the methodology of a critical thinking development school to assess the level of critical thinking skills [Test po kriticheskomu

myshleniyu CTT-1, n.d.]. The test comprised questions addressing eight key dimensions: analysis and synthesis, evaluation, interpretation, reasoning, logic, emotional self-regulation, problem-solving, and creative thinking.Each aspect was evaluated through the students' answers, allowing for a numerical assessment of their competencies in the corresponding domains.

The survey-test was conducted in an environment structured to maintain the impartiality of the findings. Participants carried out the assignments within a specified period and under consistent circumstances, thus reducing the impact of external variables on the results. The outcomes were then examined and grouped based on established thresholds, which helped pinpoint areas needing focused training and improvement.

Table 1 – Outcomes of the initial survey-test

Sections	Value range (%)	Description
Analysis and Synthesis	20-38	Insufficient ability to evaluate information and break it down into components.
Evaluation	10-14	Difficulties in identifying the strengths and weaknesses of phenomena or objects.
Interpretation	25-35	Limited ability to define concepts and assess the strength of evidence.
Justification	15-18	Insufficient use of arguments to support one's position.
Logic	30-40	Moderately low ability to determine cause-and-effect relationships.
Emotional control	5-10	Low results, reflecting difficulties in making rational decisions without the influence of emotions.
Problem solving	10-11	Low ability to find optimal strategies and solutions.
Creative Thinking	10-15	Limited ability to develop non-standard and innovative solutions.

The findings from the preliminary survey-test, as presented in the table, indicate an overall low level of critical thinking development among the experiment's participants. Each of the assessed key categories highlights specific deficiencies in the students' cognitive and analytical abilities.

The subsequent phase involved selecting and designing a plan for integrating video games into the educational process. For the experimental group, two games were chosen: Storyteller and The Lion's Song.

Storyteller is an interactive puzzle game that allows players to craft their own narratives based on predefined themes and characters [Benmergui, 2023]. The game's mechanics involve arranging story elements sequentially on a timeline, which demands an understanding of the relationships between characters, actions, and events. Players must consider cause-and-effect dynamics and the consequences of their choices, thereby fostering critical thinking skills such as interpretation, prediction, and analysis.

The Lion's Song is an episodic adventure game that focuses on unraveling the stories of characters set in the early 20th century [Mi'pu'mi, 2016]. Its mechanics center on player-driven choices in actions and dialogues that shape the storyline. Each decision carries long-term consequences, encouraging players to evaluate situations, reflect, and plan strategically. The game enhances critical thinking by engaging players

in the analysis of complex social and personal dilemmas, providing a rich context for interpretation and reflection.

These games were selected for their potential to stimulate learners' cognitive engagement and encourage decision-making, as well as for their alignment with the students' English language proficiency. The participants' language proficiency was determined through prior English language assessments.

Table 2 – Outcomes of the Preliminary Assessment of Language Proficiency Among Experiment Participants

Language proficiency level	EG	CG
Beginner, Elementary	11	5
Pre-Intermediate	10	5
Intermediate	1	1
Upper-Intermediate	0	0
Advanced	0	0
Proficiency	0	0

Note: Abbreviations: EG – experimental group, CG – control group

The results of the initial evaluation indicated that most participants, from both the experimental group (EG) and the control group (CG), exhibit a limited proficiency in the foreign language, aligning with the Beginner and Pre-Intermediate levels. Only one individual in each group achieved an Intermediate level, with no participants attaining the Upper-Intermediate, Advanced, or Proficiency levels.

The subsequent stage entailed incorporating games into the learning process and monitoring the resulting developments. When engaging with video games, students were organized into groups of 4–5 members and given specific roles to perform.

Table 3 – Assignment of Roles

Speaker	State the group's opinion.
Secretary	Summarizes the main ideas discussed by the group, clearly justifying your chosen answer (e.g., for reasons: 1. [reason one]; 2. [reason two]).
Lexical Analyst	Makes sure that newly introduced vocabulary is used accurately.
Strategist (1-2 people)	Responsible for justifying the choices.

Each team was allocated 1–2 minutes to discuss their decisions. Each group made an individual choice, and then the next group advanced by making its own choice in the next phase, ensuring a conversation and multidisciplinary engagement.

In this phase, observational methods were used to document changes in student behaviors, patterns of interaction, and strategies for decision-making. This approach provided rich information about students' role fulfilment, the process of group decision-making, active participation levels within the group and their use of newly acquired vocabulary. Moreover, observational studies were crucial to determining students' growth in critical thinking, collaborative skills, and situational analysis expertise. The organized gathering and analysis of observational data allowed for

assessment of participant growth and demonstrated the impact of educational practice that has embraced game-based methodologies.

In the final phase the research was evaluated using a final questionnaire and evaluation. The experimental group showed significant enhancement of the critical thinking-related main components. On the other hand, the improvement in cognitive skill acquisition during the experiment was also not fortunate, since the difference between the initial and the final valuation hardly match between 4 % to 7 % only. The final phase was the evaluation of the research focus using a questionnaire & evaluation. The experimental group showed significant improvements in essential aspects of critical thinking. Despite these differences, the initial and final evaluations differed only between 4% and 7%, showing moderate improvement of cognitive skills throughout the experiments. Collecting data before and after the intervention to compare those helped to inform on improvements of critical thinking parameters.

Table 4 – Comparative critical thinking findings between experimental and control groups

Classification	Before (%)	EG (after) (%)	Changes (%)	CG (after) (%)	Changes (%)
Analysis and Synthesis	20-38	25-44	+5-6	22-39	+2-3
Evaluation	10-14	14-20	+4-6	11-15	+1-3
Interpretation	25-35	30-42	+5-7	27-36	+2-3
Justification	15-18	19-25	+4-7	16-19	+1-2
Logic	30-40	35-47	+5-7	31-42	+1-3
Emotional control	5-7	9-13	+4-6	6-8	+1
Problem solving	10-11	14-17	+4-6	11-13	+1-2
Creative Thinking	10-15	15-21	+5-6	12-17	+2-3

However, within the control group there were only quite minimal changes, ranging from +1% to +3%. Problems such as evaluation, emotional self-control, and proficient problem solving saw an increase of just 1% to 2%.

The results of the control group reflect an almost unchanged level of critical thinking development in the absence of innovative teaching approaches. These findings point us to the need for a more dynamic pedagogy, such as incorporating computer games into classes, in order to make real progress in the development of cognitive competences.

Nevertheless, the strengths and limitations of this experiment, which aimed to explore the impact of video games on the training level of thinking, must be considered in analyzing results and designing future research projects.

The positive aspect of the whole is the high degree of engagement on the part of all participants. The use of video games created an interactive and motivating environment that kept cognitive activity going among students. Also, the games chosen were at the participants' level of English language proficiency so that the game content was accessible and the participants could fully interact with it. By employing various empirical methods, including testing and observation, we were able to come up with a comprehensive approach for assessing changes in cognitive skills; this contributed to the gathering of reliable data and an objective appraisal of the method's effectiveness.

However, various limitations must be acknowledged or considered. For example, participants differed widely in their interests, attitudes toward video games and particular cognitive characteristics, all of which could affect their engagement and what they got out of the experiment. And the small sample size of participants means that findings are not representative. Another large drawback is that this piece of research did not reveal what was the balance of power between the improvements in critical thinking and their eventual durability.

While the result of an innovative educational approach is clear to see, future improvements are needed. Specifically, future experiments should be conducted with a large number of participants, take into account the unique characteristics and strengths of individuals, and conduct an extended period of time to raise both scientific reliability and practical implications.

In this study, completely relying upon the fact that the integration of games in education does help improve one's critical thinking ability. In such a learning environment, where students experienced authentic media materials-being utilized, for example video games, these enhanced the students' cognitive engagement and led to an improvement in analytical skills, critical reasoning abilities, interpretation capability, syntheses etc.

The results of the final assessments in the experimental group clearly demonstrate the benefits of integrating video games to develop key competencies that are critically needed in the 21st century.

However, certain limitations were also visible in this study, the most obvious being the limited number of participants, the lack of long-term evaluation and possible differences resulting from individual student characteristics. These constraints suggest a need for thorough investigation into how video games affect critical thinking development. Future research should aim for a larger sample size, longer experimental periods along with full scale investigations on the cognitive processes in play.

To conclude, the research results show that blending video games into the curriculum as a means of instruction helps to increase teaching effectiveness and increase motivation. Subsequent research in this area will help improve our understanding and refining the methods for getting video games into educational programs at different levels.

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ПОТЕНЦИАЛ ВИДЕОИГР В ОБРАЗОВАНИИ: РАЗВИТИЕ КРИТИЧЕСКОГО МЫШЛЕНИЯ НА УРОКАХ АНГЛИЙСКОГО ЯЗЫКА

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Аннотация. Исследование направлено на изучение потенциала видеоигр как инновационного инструмента для развития навыков критического мышления на уроках английского языка. Эксперимент проводился на базе коммунального государственного предприятия на праве хозяйственного ведения «Павлодарский колледж сервиса и питания» в г. Павлодар. В исследовании приняли участие 36 студентов первого курса, разделённых на экспериментальную и контрольную группы. С помощью эмпирических методов, таких как наблюдение, анкетирование и тестирование, была оценена эффективность интерактивных игр Storyteller и The Lion's Song на развитие когнитивных способностей учащихся. Полученные результаты демонстрируют умеренное улучшение навыков анализа, интерпретации и решения

проблем, подтверждая значимость использования видеоигр для формирования компетенций XXI века, несмотря на наличие определённых ограничений.

Ключевые слова: видеоигры, критическое мышление, уроки английского языка, образовательные технологии, когнитивные навыки, вовлечённость учащихся, интерактивное обучение.

THE USE OF ARTIFICIAL INTELLIGENCE IN TEACHING ENGLISH TO HIGH SCHOOL STUDENTS

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Abstract. This article explores various methods of using Artificial Intelligence in education, particularly in high school. Special attention is given to successful examples of AI implementation in schools. The principles of integrating AI into high school education are highlighted.

Key words: AI, education, pedagogy, high school, English language.

English is one of the most widely spoken language in the world. Being most popular foreign language to study, it is important to stay up-to-date with any new developments. Over past few years Artificial Intelligence became dominant in different fields, including education and especially in teaching foreign languages. Being a set of technological solutions that allows imitating human cognitive functions (including the search for solutions without a predetermined algorithm) and obtaining results comparable or superior to the results of human intellectual activity when performing specific tasks, it is seen as a powerful support tool that is able to enhance learning experience, provide new strategies and ways to overcome challenges in teaching English in high school.

First and foremost, Artificial Intelligence can be used to develop speaking skills of high school students. The most widely discussed way to do so is to use AI chatbots. Researchers note that the ability of chatbots to be utilized at any moment and give answers immediately or almost immediately positively influences ability of pupils to boost and retain skills that are needed for spontaneous speech [Filatov, 2024, p. 1253]. Character.AI enables deep AI customization, allowing teachers to preconfigure models based on the requirements of communicative tasks. On the other hand, for developing speaking skills in high school students, Artificial Intelligence can be utilized to check and correct pronunciation. It is noted that AI-powered speech recognition programs can assess a student's accent, providing individualized evaluations and guidance. The most popular solutions in this context are applications like Elsa Speak and Lyra. These programs can detect pronunciation errors with 90% accuracy, and the provision of varied and instant feedback is highlighted as their key strength, a view supported by students' feedback [Aryanti, 2024, p. 107]. In a study conducted at a school in