

ELEMENTS OF GAME TECHNOLOGIES AS A MOTIVATION FACTOR OF AN INCLUSIVE EDUCATIONAL ENVIRONMENT

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Summary

The article describes the effectiveness of the mechanisms of practical use of game technologies in the environment of inclusive education. The search for optimal ways and the effectiveness of the educational process will be as successful as possible if learning is exciting, interesting, informative, motivating and creative. In connection with today's challenges, the issue of optimization, innovation and availability of knowledge has become relevant. The game as a means of sensory influence for the field of inclusion is extremely important, because it allows people with special needs to adapt to life's difficulties in the future. The paradigm of gaming practices grew as a result of the fact that digital education was institutionalized rather quickly and impulsively. An important transition took place in the system of educational values: the acquisition of experience in the form of informative blocks, the possession of a number of facts, statistics were replaced by the ability to effectively apply the necessary knowledge in the field of practical activity, that is, in life; to be able to choose the main thing, to find the necessary information and to be capable of its practical application. The issue of selecting original methodical practices that would be effective for comprehensive training of students with disabilities remains relevant. Participants of the educational process, who are included in the inclusive platform, are forced to undergo another, universal adaptation in the difficult realities of today. The method of pedagogical observation in combination with a Google Form survey made it possible to analyze the functional significance of game elements in classes in the disciplines of the philological cycle and to prove the effectiveness of the game as a sensory tool among people with special educational needs.

Key words: inclusive environment, game technologies, linguistic competence, innovativeness, creativity, sensory and stress-relieving influence, professional skills.

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1. Introduction

Inclusive education as a rather "fresh" practice, not processed by significant experience, is now actively discussed at various conferences, congresses, schools, seminars, which testifies to the relevance and necessity of this topic, in particular, in the dual unity of "war" – "inclusion". It is appropriate to mention the discussion of the sectoral working group "Education and Science" at the MES with the involvement of 145 representatives of international organizations (April 14, 2022) (*Meeting of the sectoral working group "Education and Science" at the MES, April 14, 2022*). Network society accompanies almost all spheres of human life, while not bypassing the pedagogical sphere, in particular the range of teaching methods in an inclusive key. Today's requirements are no longer reduced to the traditional presentation-explanation of program material, but direct the teacher to a constant search for innovative forms of organization of the educational process.

The variability of the world, its globalization, digitization and amorphousness set the tone for the educational environment as well, which can be seen in a number of transformations, innovations and radical modernization of the pedagogical dimension, in particular in the field of inclusive education. In the conditions of martial law, the basic sense of stability in the organization of living space and a safe stay within the walls of educational institutions have been radically shaken, therefore the inclusive policy is presented with a number of measures aimed at improving the quality of education and forming a motivational component.

The paradigm of game mechanisms grew due to the fact that digital education was institutionalized rather quickly and impulsively (*Kultaieva, 2020: 25*). Actualization of person-oriented practices in the field of inclusion directs the teacher to use simulation-game technologies in the educational environment. The growing need to implement effective methods in inclusive education has forced teachers to look for such approaches that would take into account sensory-relieving meaning, without overloading a student with special educational needs with an excessive amount of material. Training should be carried out in such a way that it would make it possible to teach the student to perform work independently as much as possible; to quickly, qualitatively and effectively learn the practices needed in the future.

The introduction of game elements as a sensory mechanism is designed to consolidate and motivate the very process of acquiring knowledge. Success in an inclusive environment is possible under the condition of joint creative work of a teacher-mentor and a student who will be interested in realizing himself as a component of this society.

The purpose of the article is to trace the effectiveness of using game elements in an inclusive environment as a sensory factor through the formation of students' basic professional and communicative competencies.

The modern educational space offers a fairly wide range of various game technologies, thanks to which it is possible to realize programmatic educational goals even in the conditions of inclusive education. Constant updating of the content of educational material, improvement of its delivery mechanisms, adaptation to the maximum possibility of implementing a competent approach – all these things cannot be implemented without the use of innovative game practices.

2. Theoretical and methodological role of game elements in inclusive educational practice

According to H. Dubrovynskyi, the realities of war prompt the teacher "to carry out a certain correlation of the expectation of negative forecasts with the implementation of preventive measures with this category in order to have a psychologically healthy society in the

future" (*Dubrovynskyi, 2016: 20*). The principles of innovation and creativity, the implementation of which is possible with the use of game technologies, become the subject of the laws of Ukraine "On Higher Education", and the content of the doctrine "Strategy for the Development of Higher Education in Ukraine for 2021–2031" clearly prescribes the key rules according to which the development innovative steps becomes a mandatory condition for modernization and optimization of the educational process.

N. Onyshchenko believes that "game technologies are a component of modern pedagogical technologies that allow to intensify the professional training of students in higher education institutions" (*Onyshchenko, 2021: 261*). The use of gaming technologies in the educational space has been the subject of research by both foreign and domestic scientists. Incidentally, this aspect can also be traced in the works of traditional educators: Ya. Komenskyi, K. Ushinskyi, A. Makarenko, G. Speser, J. Locke, G. Skovoroda.

O. Derkachuk, E. Borshch, O. Chuyko, G. Dubrovynskyi, and O. Kosenchuk randomly indicated the problem of organizing education for people with disabilities. The modern pedagogical space is also full of a number of scientific attempts to study game mechanisms in higher education – N. Kravets, O. Hrechanovska, O. Hrom, N. Machynska, N. Holovko, O. Yakovchuk, etc.

Diluting learning with elements of the game makes it possible to include in the work process of students who have cognitive difficulties, an involuntary act of interruption, which allows the soul to live in a different state, and for the process of mastering the world – orderliness of actions and moderate sequence. The game equivalent is multifunctional: it is a factor of harmony, a means for cohesion, a component of the formation of sustainable interest, an intellectual message, a therapeutic tool, a communicative key, a means of self-expression (*Arestenko, 2017: 20–24*).

The main function of the game in inclusive pedagogy consists, first of all, in the formation of educational and cognitive interest as a basic component of successful mastery of knowledge. There is a clear line between the concepts of play as a process and play as a type of activity. The game as an activity involves the presence of certain structural elements, such as: goal formation, planning, concrete implementation-implementation, analysis of results. The game as a process has a slightly different "texture". It is about the presence of roles, which the participants distribute among themselves; the presence of action as a mechanism for implementing the game process; playful use of the necessary means-objects, plot and corresponding content (*Selevko, 2017: 52*). This form allows you to work out the element of socialization of individuals in a normative environment.

The importance of the game and its functional nature was traced by O. Savchenko (*Savchenko, 1999: 7*), highlighting certain constituent elements in the structure of game activity, which, in our opinion, are integral in the conditions of inclusion: motivational (a component that includes needs, motives, interests, aspirations); indicative (this component involves the selection of means and, at the same time, ways of implementing gaming activities into the educational process); executive (it is about a direct set of specific actions and operations, the implementation of which allows the realization of an educational goal); control and assessment (implementation of corrective measures with the aim of additional stimulation to game activity as a means of mental relief in the educational process) (*Savchenko, 1999: 191*).

3. The functional and methodical role of game elements in teaching educational and inclusive activities

Game technologies are an integral component in the educational field, in particular, in the process of forming linguistic skills in those students whose communicative component is impaired due to psychophysiological features. Nowadays, an inclusive environment sees

the importance of activating not only social skills, but also strengthening interaction with the world through the word and its correct use. The methodology of teaching the disciplines of the philological cycle should take into account the demands of time and at the same time take care of the availability and clarity of the educational material, because "the intensification of the educational process sets before the teacher the task of finding means to support students' interest in the material being studied and to activate their activities" (*Dekhtyarova, Skvarcha, 2018: 86*).

The formation of basic competences, among which the communicative one occupies a key place, is the leading goal of the educational program, according to which the training of a linguist specialist is carried out even in the conditions of inclusion. The rational selection of appropriate methods in working with such students requires the teacher's creativity, measured steps, working out the goals and vision of the final result. It is equally important to take into account the reserve capabilities (*Dekhtyarova, Skvarcha, 2018: 86*) of education seekers, in particular, taking into account individual characteristics, cognitive aspects, general development and compensatory components. Students who are endowed with a limited ability to quickly react to any changes process signals from the outside world extremely individually and in a completely different way than do individuals with a normotypical developmental mechanism. Taking into account the importance of introducing game elements into educational inclusive activities, it is worth highlighting a list of functions that can be successfully implemented in work with students who have developmental peculiarities (see Table 1).

Table 1

№	Function	Description
1.	<i>socially-motivating</i>	helps students with special needs to develop a sense of their own social significance; aspirations to learn and discover new things, to overcome educational difficulties and cognitive obstacles;
2.	<i>planned-optimizing</i>	this function allows you to build the learning process according to the principle from simple to complex – from the understanding of the individual to the awareness of the whole;
3.	<i>socio-cultural</i>	by including the game in class, students with disabilities learn to successfully interact with their classmates and the teacher, improve the level of their own culture and social significance, be a strategist and know how to plan;
4.	<i>creative and constructive</i>	game moments under "serious" type of work give a great opportunity to show your own original abilities, your idea, feel yourself the author of an idea or product; persons with developmental disabilities are often endowed with certain skills, the manifestation of which in class will ensure confidence in their own abilities;
5.	<i>sensory-relaxing/motor</i>	game allows you to switch, relax, feel yourself, your body and possibilities. Such components are extremely important for an inclusive environment. Learning a language is not just monotonous sitting at a desk. You can memorize new vocabulary from English or German through singing or dancing, and you can learn atypical accentuations of words in the Ukrainian language by rapping with these words.

4. Research methods and techniques

The effectiveness of the game in the field of inclusion was tested in the process of using game technologies during the study of theoretical program material and practical forms of work. Students who had cognitive difficulties during tasks were given the opportunity to facilitate the process with the format of the game or the inclusion of its individual elements. During the observation, the paradigm of the effectiveness of the implementation of game methods was checked and studied. For students with disabilities, learning was more effective when the teacher used elements of the game. In addition, a survey was conducted among the teaching staff, which showed how often the teacher uses game techniques in working with students with reduced cognitive abilities and how effective such use is.

Let's analyze the experimental part of our research in more detail. The target audience consisted of students of a higher education institution of I and IV levels of accreditation with normative development and those with special educational needs. All students were within the same educational environment, having the opportunity to communicate, interact socially and perform certain types of work as a team. Three groups of students took part in the experiment, including students with disabilities and cognitive impairments. During 2022 and 2023 gaming technologies were actively used in these groups. The pedagogical experiment showed that the level of motivation and social interaction improved significantly, and the performance of the module and final tests gave positive results – the quality indicator increased by 15%.

In the course of pedagogical observation, it was noted that the students had considerable success when using the technique of improvised role-playing (a student with disabilities prepared a separate question in advance and demonstrated it to his classmates). Those types of work that assumed the presence of so-called role expectations (*Onyshchenko, 2021: 202*) appeared to be quite productive. The game evaluation system, the introduction of rules, the building of fruitful interaction – all these factors also proved a positive dynamic not only during the lesson as an educational mechanism, but also contributed to the improvement of the level of memorization in both normal students and students with disabilities. In those groups where game technologies were actively used, it was noticed that students are attracted to tasks that are designed creatively, have a game connotation and involve a problem-motivational component.

Distance learning and the intensive implementation of digitization technologies in the educational process in general contributed to the rather active use of gadget mechanisms during work in classes. Our proposed use of QR codes with a link to an online game has worked well in the process of acquiring practical skills while learning foreign languages. Thus, 82% of students with normative development and 100% of students with limited opportunities noted such a move as quite modern and creative. 15% encountered technical difficulties.

In the process of teaching linguistic disciplines for students studying under modified and adapted programs, it is important to build a step-by-step mechanism. The teacher must establish the time parameters for the duration of the game, structurally present the rules of social interaction, and at the same time be aware of the dosage and appropriateness of game techniques. A laboratory or practical lesson allows you to simulate the appropriate conditions for the playing field, outline scenarios and roles, define a problem situation, involve all students in solving the problem as a team. P. Scherban notes that the effectiveness of the game increases if the so-called competitive effect is included (*Scherban, 2014: 288*). Such a technique contributes to the formation of a motivational component in inclusive students and forms an interest in learning.

The range of game techniques and elements can be quite diverse. In the course of the conducted experiment, the positive effectiveness of the following game practices was noted:

1. "Business performance" – this element of game activity was used during the teaching of the disciplines: "Ukrainian language and academic writing", "Business Ukrainian language", "Foreign language for professional direction". Its effectiveness (55%) was tested during students' modeling of business communication situations (telephone conversation, interview with an employer, business meeting, etc.). Students with disabilities had the opportunity to see a typical communicative situation and record its manifestations through practical implementation. The main task of this method was to form the correct strategy of communicative behavior and establish a business contact, which is extremely difficult for an inclusive environment.

2. Business simulation game – this method allows to realize the motivational factor not only for students with special educational needs, but also encourages other students to be active. The main goal of the simulation game was the formation of problem-communicative situations, where it was necessary to choose ways to solve them and work out with students various communicative and behavioral tactics, functions, social roles and responsibilities. The business simulation game was tested in the following disciplines: "Ukrainian language and academic writing", "Business Ukrainian language", "Professional foreign language", "Culture of business communication", "Media linguistics" (the efficiency was 65%).

3. Game blitz content (the effectiveness was 75%) provides an opportunity to conduct a systematic, competitive survey based on the principle of "brainstorming" (*Halitsyna, 2015: 128*) and at the same time promotes "accumulation" and activation of "forms of active learning" in an inclusive environment. This format provides a motivational factor in the educational activity of all students. The advantages of this game practice are the maximum involvement of the participants and the speed of implementation, obtaining quick results, and most importantly, the involvement of everyone in the work without exception. Multiple repetition, systematicity and planning are important components in the education of children with cognitive impairments (*Lazareva, 2021: 421*).

4. "Show me – I'll guess" (the efficiency was 85%) – in practical classes in general linguistics during the study of the topic "Language as a sign system" there was exactly this practice. Students with disabilities who had communication disorders were very actively involved in this technique, as they communicated non-verbally. This practice develops empathy, creative thinking, and the use of non-verbal means improves communication.

5. Constructive modeling (efficiency was 65%) – this game practice works great when learning foreign languages. Students are offered a task on knowledge of grammatical laws, which is extremely problematic for inclusivist students. On the other hand, they could quickly compose phrases or sentences from a well-chosen set of elements. The task has time limits and a competitive basis, which makes it interesting, improvisational and effective.

6. "Mirror" (effectiveness was 76%) – students with special needs have problems establishing contacts with other people, so this game in pairs is effective in foreign language classes. One of the pair looks into the "mirror", the other is the "mirror". The phrase is first spoken in the native language, the other participant must quickly translate it into a foreign language, keeping the facial expressions and gestures of their "mirror".

The above techniques proved to be extremely effective in organizing an inclusive educational environment. It was noted that in groups where work was diluted with game elements, the learning process was interesting and constructive, social indicators improved, students with disabilities grew motivated, and most importantly, communication became more expressive. The use of game techniques and methods in the student inclusive audience opens up new and universal possibilities for the implementation of the educational process.

5. Conclusions

The use of interactive learning technologies in the inclusive educational space is gaining momentum. The acquisition of new communicative experience by students with special educational needs is possible under the condition of interesting, modern education, therefore the practice of game technologies actively changes and varies, depending on the course of study, specialty and communicative readiness of the students of education. The use of interactive technologies for teaching the disciplines of the philological cycle is a necessary methodical strategy, since students with limited cognitive abilities have higher indicators of the formation of communicative skills.

Comparing the success of students at the beginning of the observation and after the activation of game mechanisms, it was clearly noted the growth of the qualitative indicator, the strengthening of the motivational component, the formation of cognitive interest. Regardless of the format of the work (lecture, laboratory or practical session; remote or face-to-face), any monotonous theoretical work will be more effective if elements of the game are introduced into it. In the future, it would be interesting to study the experience of foreign linguists and their use of game content in inclusive educational practice. Today's realities once again dictate that a modern teacher must be flexible in choosing methods and forms of work, creatively and student-oriented approach to conducting classes, so that learning becomes an exciting and at the same time interesting continuous process.

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