

M.B. Yelikbayeva, Z.M. Sadvakassova 

Al-Farabi Kazakh National University, Kazakhstan, Almaty,
e-mail: elfulgura@gmail.com, e-mail: zuhra76@mail.ru

EDUCATIONAL COMPUTER GAMES AS A TOOL FOR QUALITATIVE TRANSFORMATION OF PERSONALITY AT THE LEVEL OF PSYCHOLOGICAL, PEDAGOGICAL AND SOCIAL NEEDS

The article shows that thanks to computer games, the world has irrevocably “split” into two parts—real, existing in reality and virtual, existing in the form of an electronic model of objects and processes. The aim of the work is to analyze the possibilities of using computer games in the educational process, contributing to the development of personal qualities of adolescents. An analytical review of the scientific literature has shown that in order to achieve mastery in any field of activity, it is necessary to take part in that activity in the amount of at least 10,000 hours (time required for students in school from 5th to 12th grade). The average gamer at the age of 21 spends the same amount of time in multiplayer online games. It is noted that computer games, despite their socio-cultural institutionalization, still do not have scientific and psychological development. The survey method used in the current study showed the interest of adolescents (73,2 %) and teachers (40 %) in the use of computer games in the classroom. Mathematical planning of pedagogical experiment allowed to find empirical dependence describing influence of investigated factors on final result, in our case on feature of development of personal (on self-assessment of teenagers towards educational game achievements) and communicative qualities (communicative and organizational abilities) of students. The analysis of the generalized equation showed that the program of synthesizing virtual learning with traditional teaching methods has a positive effect on the development of personal and communicative qualities of adolescents, since the level of changed personal qualities in the process of forming research and on the basis of the method of mathematical optimization of the pedagogical process amounted to 9.4 %.

Key words: computer games, educational games, self-esteem, personality, educational process, learning process

М.Б. Еликбаева, З.М. Садвакасова

Әл-Фараби атындағы Қазақ ұлттық университеті, Қазақстан, Алматы қ.,
e-mail: elfulgura@gmail.com, e-mail: zuhra76@mail.ru

Компьютерлік білім беру ойындары психологиялық-педагогикалық және әлеуметтік қажеттіліктер деңгейінде тұлғаны сапалы түрлендіру құралы ретінде

Мақалада компьютерлік ойындардың арқасында әлем екіге – нақты ақиқат өмірде, шындықта және виртуалды, нысандар мен процестердің электронды үлгісі түрінде екіге «бөлінгенін» көрсетеді. Жұмыстың мақсаты – жасөспірімдердің жеке қасиеттерін дамытуға ықпал ететін компьютерлік ойындарды оқу процесінде қолдану мүмкіндіктерін талдау. Ғылыми әдебиеттердің аналитикалық шолуы кез келген қызмет саласында шеберлікке жету үшін кем дегенде 10 000 сағат көлемінде қарқынды жаттығу қажет екенін көрсетеді (мектепте оқитын оқушылар үшін 5-тен 12-ші сынып аралығын игеруге қажетті уақыт). 21 жасқа толған орташа статистикалық геймер көп қолданушысы бар онлайн ойынына жалпы шеберлікке жетуге қажетті уақытпен бірдей уақыт жұмсайды. Компьютерлік ойындар, олардың әлеуметтік-мәдени институттандырылуына қарамастан, әлі күнге шейін ғылыми-психологиялық тұрғыда талданбаған. Сауалнама әдісі арқылы жасалған зерттеулерде жасөспірімдер мен мұғалімдердің компьютерлік ойындарды сабақта қолдануға деген қызығушылығын сәйкесінше 73,2% және 40% көрсетті. Педагогикалық экспериментті математикалық жоспарлау арқылы зерттелетін факторлардың соңғы нәтижеге әсерін сипаттайтын эмпирикалық тәуелділікті табуға мүмкіндік берді, біздің жағдайда эксперимент үшін жақындау мүмкіндігі бар оқушы-жасөспірімдердің тұлғалық даму ерекшелігіне (оқыту ойын жетістіктеріне қатысты жасөспірімдердің өзін-өзі бағалауына) және коммуникативтік қасиеттеріне (коммуникативтік және ұйымдастырушылық қабілеттеріне) байланысты. Жалпыланған теңдеуді талдау виртуалды оқытуды дәстүрлі оқыту әдістерімен синтездеу бағдарламасы жасөспірімдерде тұлғалық және коммуникативтік қасиеттердің

дамуына оң әсер ететінін көрсетті, өйткені қалыптастырушы зерттеу жүргізу үдерісінде және педагогикалық үдерісті математикалық оңтайландыру әдісі негізінде тұлғалық қасиеттердің өзгеру деңгейі 9,4%-ды құрады.

Түйін сөздер: компьютерлік ойындар, оқыту ойындары, өзін-өзі бағалау, тұлға, оқу процесі, оқу процесі.

¹М.Б. Еликбаева, ²З.М. Садвакасова

Казахский национальный университет им. аль-Фараби, Казахстан, г. Алматы,
e-mail: elfulgura@gmail.com, e-mail: zuhra76@mail.ru

Компьютерные образовательные игры, как инструмент качественного преобразования личности на уровне социально-психологических потребностей

Благодаря компьютерным играм мир безвозвратно «раскололся» на две части – реальный, существующий в действительности, и виртуальный, существующий в виде электронной модели объектов и процессов. Целью работы является анализ возможностей использования компьютерных игр в образовательном процессе, способствующего развитию личностных качеств подростков. Аналитический обзор научной литературы показал, что для достижения мастерства в какой бы то ни было области деятельности, необходимо усиленное обучение этому в объеме не менее 10 000 часов (требуется для обучающегося в школе с 5-го по 12-й класс). Среднестатистический геймер по достижению 21 года проводит в многопользовательских онлайн- играх такое же количество времени. Отмечено, что компьютерные игры, несмотря на своё социокультурную институционализацию, до сих пор не имеют научно-психологическую разработку. Примененный в исследованиях метод опроса показал заинтересованность подростков и учителей в использовании компьютерных игр на занятиях в 73,2 % и 40 % соответственно. Математическое планирование социального эксперимента позволило найти зависимость эмпирическую, описывающую влияние исследуемых факторов на конечный результат, в нашем случае на особенность развития личностных (на самооценку подростков в отношении обучающихся игровых достижений) и коммуникативных качеств (коммуникативных и организаторских способностей) школьников-подростков с возможным для эксперимента приближением. Анализ обобщенного уравнения показал, что программа синтеза виртуального обучения с традиционными методами обучения положительно влияет на развитие у подростков личностных и коммуникативных качеств, т.к. уровень изменения личностных качеств в процессе проведения формирующего исследования и на основе метода математической оптимизации педагогического процесса составил 9,4 %.

Ключевые слова: компьютерные игры, обучающие игры, самооценка, личность, образовательный процесс, процесс обучения.

Introduction

The development of computer games at the present stage has reached such a level when, the line between the virtual and the real world is fading away for a teenage gamer. In support of this, we can cite the words of N.A. Nazarbayev: "... an imitation of violence in the name of justice, which makes up the "plot outline" of most of these games, softens the soul somewhat and simply "diverts" aggressiveness, rather than adding anything to it (Nazarbayev, 2001).

Intensive training is required in the amount of at least 10,000 hours in order to achieve mastery in any field of activity (Gladwell, 2010). The average gamer after reaching the age of 21, spends the same amount of time in the multiplayer online games gamer (McGonigal, 2011). It is interesting to note that a similar amount is required for a student to study in the school from the 5th to the 12th

grade. So, we have a whole parallel educational course where young people study what it means to be a "good" gamer as diligently as all other subjects at school. And now we have a whole generation of young people, virtuoso gamers. Question: what exactly do gamers become virtuosos of? After all, if we could find out, we would get in hands an unprecedented human resource.

In the article by N.A. Nazarbayev, the key to success and one of the indicators of open consciousness are its three key features: global perception of the world (constant understanding of what is happening in the world), openness to technological innovations (readiness for change), the ability to adopt other people's experience and adapt it to your own culture (ability to learn from others).

Thus, computer games, as a phenomenon of the information society, are the "calling card" of the XXI century. Despite its socio-cultural institutionalization, the place of computer games in the digital

information system has not yet been determined and their scientific and psychological development has not yet been obtained. The difficulties lie not only in the novelty of perception of computer games, but also in their development and use to optimize and improve human life.

Computer games, as a new area of research, were firstly observed and tested in America and Western Europe due to the developed industry of computer games. Due to the lack of a developed media entertainment industry in the Eurasian Union, research of computer games is insignificant in comparison with the countries of the Western world. Most of the studies carried out on the topic of computer games, considers them from the technical side, not humanitarian, i.e. from the point of the origins of this phenomenon.

The trend of informatization in the world has its advantages, but there is always another side of the coin.

Thanks to computer games, the world has irrevocably “split” into two parts – real and virtual. The first exists in reality and gives us the opportunity to “taste” life, while the second, existing in the form of an electronic model of objects and processes, allows not only to “plunge” into the world of illusions, but also provides a guarantee in solving problems that are not solvable in reality. These two worlds, in a complex, solve a global problem for man, because they are aimed at ensuring the evolutionary development of *Homo sapiens*. It is the relevance of this topic does not allow to ignore the fact that the computer game is not only designed for leisure, but also for the development of certain, depending on the type of game, personal qualities of a person.

No matter how discussions about computer games unfold, most of the time extreme sides of which are identified either with their harm or with benefit, some scientists will agree that computer games play a significant role in the life of a gamer and already irreversibly affect his consciousness and development (Pinchuk, 2010; Heron & Belford, 2014).

Thanks to computer games, a gamer gets a unique opportunity to improve, as he is able to get involved in events and the process of games to the level of hyperactivity. If the reader and viewer passively observe events while reading books, watching a movie or a play and only empathize with the hero and events, then the gamer selects a character in computer games and actively participates in the whole process, influencing events, changing the world at will, neglecting the “laws of physics, morality and the criminal code”(Denisova, 2010). In

addition, it should be noted that the gamer “writes a new script” for his character while making decisions on his own while wanting to “win” and “dominate” in the virtual reality.

The virtual world in various game situations more rigidly treats gamers since does not allow them to exceed or lower self-esteem owing to instant elimination from a game after the slightest mistake (for example, virtual death). This is a significant difference between the virtual world and the real world, where on the contrary, we are often faced with the fact that many people either overestimate or underestimate their qualities and abilities (a common phenomenon in various spheres of human activity) and, due to the lack of strict requirements or instant consequences of the real world, they can live with it all their lives.

Self-esteem is a broad and multifaceted concept, since it incorporates a subjectively estimated complex of socio-psychological, behavioral and physical expressions of personality.

Self-assessment, according to:

– Vygotsky L. S., is a component of self-consciousness (Vygotsky, 1954),

– Rubinstein S. L., self-esteem demonstrates the fundamental properties of personality (Rubinstein, 1989),

– Belobragina O. A. is the basic core of the person (Belobragina, 2000),

– Asimova R. is an energetically active system that determines the structure of intentions and actions of a person (Anisimova, 1969),

– Burns R. is an expansive component of the Self-concept (Burns, 1986),

– Shibutani T. is an organization of values (Shibutani, 2003),

– Rogers K. is the “Self-concept” of personality, formed in society in the process of socialization (Rogers, 1959),

– James W. is the “image of himself,” the hierarchy of the position of the individual in society and life (James, 1991).

In addition, it should be noted that W. James gave a mathematical expression for this concept, because, in his opinion, the “division” of success on the claims of the individual formed a level of self-esteem. Enhancing success or decreasing pretensions increases, i.e. the “stronger” the level of self-esteem (James, 1991).

The basis of self-esteem is laid by nature in infancy, is formed in childhood and develops in adolescence (Kovalenko, 2011).

The functions of self-assessment are aimed at regulating human activity, so people tend to con-

stantly correlate their capabilities with the goals of activity. An important aspect of the productivity of educational activities for adolescents is self-assessment of cognitive abilities.

Forms of self-esteem (James, 1991):

- emotional,
- cognitive,
- volitional,
- behavioral.

At the same time, self-esteem carries out such functions as the function of self-regulation of behavior, and the function of cognition and protection.

Adequate self-esteem is an indicator of social and psychological adaptation, deformed self-esteem – of social maladaptation.

The most receptive stage in the process of formation and development of personality and its socialization is adolescence (the final stage of primary socialization) due to the dominance of such a principle as authority and respect. Therefore, the self-esteem of “self” and the hierarchical place of “self” in society play a major role in the formation and development of personality (Demidova, 2011).

Self-esteem of a teenager is associated with person’s (Kurbanova, 2006):

1) status among peers, as owners (Figure 1):

- of high social status have an adequate and high self-esteem,
- of average social status have more adequate self-esteem, but adolescents with high and low self-esteem are not excluded,
- of low social status have, mainly, low self-esteem, but adolescents with high self-esteem are also not excluded;

2) attitude to peers (Figure 2):

- “strangers” is identified with high or low self-esteem,
- “lack of sympathy”, “presence of contradictory”, “aggressive” and “unfavorable” – with high self-esteem,
- “subordinates” – with low self-esteem.

It is also noted that adolescents with high and low self-esteem are not socially adapted (Kurbanova, 2006). Inadequate self-esteem in childhood and adolescence contributes to the destruction of the system of interaction between the individual and society. That is why it is important to help the child gain adequate self-esteem.

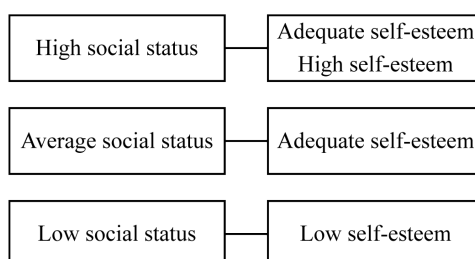


Figure 1 – Connection of self-esteem of a teenager with his social status among peers

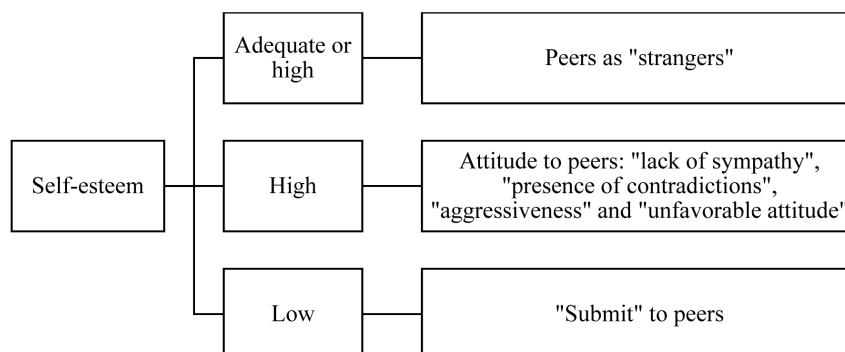


Figure 2 – The relationship of adolescent self-esteem with attitudes towards peers

The level of flexibility of a person in society is determined by the subject due to (Todysheva, 2013):

- his own abilities,
- achieving an acceptable level of self-realization,
- achieving an acceptable level of self-regulation,
- mastery of conscious reflexive techniques,
- the development of the ability to self-design behavior, actions and activities.

Self-esteem has a significant impact on the subjective perception of yourself and your “I”. In addition, it should be noted that adolescents with adequate self-esteem perceive the world calmly and are open to the world, while those with inadequate assessment are closed and tense

towards surrounding outside world. A student with adequate self-esteem has the conditions and means to achieve effectiveness in self-education and self-development. Student develops self-awareness in the learning process, aimed at implementing a set of interactions to acquire knowledge, skills, as well as desired personal qualities and values (Sokolova, 2015).

- From the foregoing, it follows that self-esteem:
- is a means of determining the quality of education,
 - is the driving force of the learning process,
 - affects the course and effectiveness of the educational process.

According to studies educational computer games (ECG) have several advantages (Figure 3).

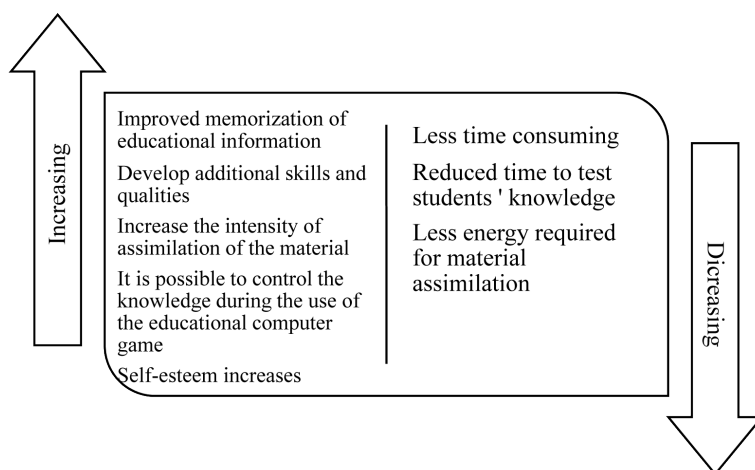


Figure 3 – The advantages of educational computer game (ECG) as learning tools (Tymchenko & Skotnikov, 2015)

The following questions may be asked:

What can the virtual world give in the form of a computer educational game to the pedagogical process of the real world?

How will the virtual world in the form of a computer-based educational game allow a teenager to acquire adequate self-esteem in order to successfully design their thoughts, behavior and actions in the real world?

When using computer training games in training sessions:

- it takes less time compared to traditional activities,
- students develop new skills and qualities, such as enthusiasm for the virtual world, efficiency in actions, attentiveness and composure to move to the next stage, determination to achieve the goal, confidence in decision-making that cannot be developed with the traditional approach,

- the volume of educational information is increasing,
- there is an intensive assimilation and memorization of educational information,
- detailed control of students’ knowledge during the game,
- reduced time for a specific test of knowledge of students,
- students “mature” to solve practical problems in the process of game situations,
- provokes the inclusion of reflexive processes among students,
- provides students with the opportunity to interpret and analyze the results,
- students form attitudes of active problem-solving,
- students overcome stereotypes more easily,
- students’ self-esteem is adjusted,

– feedback from the teacher is activated at a more meaningful level compared to the traditional approach.

One of the main tasks of interactive learning with the use of computer learning games is to ensure the conditions under which the student will strive to achieve productivity in the learning process through qualities such as success, intellectual ability, adequate self-esteem.

Thus, the introduction of interactive forms of learning, in particular, educational computer games, is one of the most important areas for improving the educational process in a modern educational institution.

Materials and Methods

Research design and sample

As a confirmation of the above, we can cite the results of a survey of students and teachers of school-lyceum No. 126 of Almaty, which we conducted in 2017. At the final stage of the study, a stating study was conducted, aimed at identifying the interest of teenage students and teachers in the use of educational computer games in academic studies.

The respondents were asked a questionnaire with one question:

– Do you want educational computer games to be used in training sessions?

The survey involved 40 adolescents of school-lyceum No. 126 of Almaty and 15 teachers.

As a proof of the effectiveness of the use of educational computer games, we conducted a formative experiment on the basis of the school-lyceum No. 126, in which students of 7 classes participated. We have implemented a program consisting of a series of computer games aimed at developing the personal qualities of students.

Results

As can be seen from Figures 4 and 5, the analysis of the answers showed the following results: 73.2% of teenagers and 40% of teachers from the number of respondents accepted in the survey want to use educational computer games in the classroom. At the same time, 33.4% of teachers consider it possible to use ECG in the study of individual subjects.

Thus, as can be seen from the study, most students would like to diversify the learning process through the use of educational computer games in the classroom.

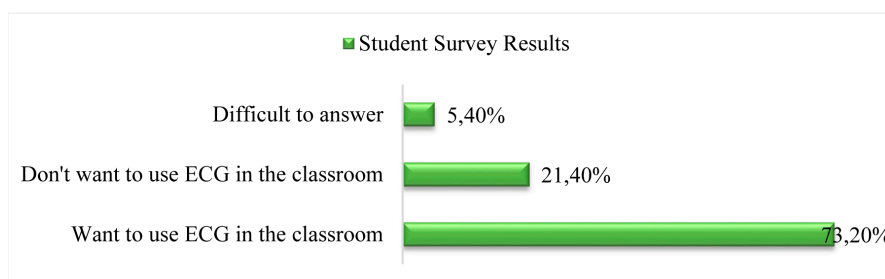


Figure 4 – Student survey results

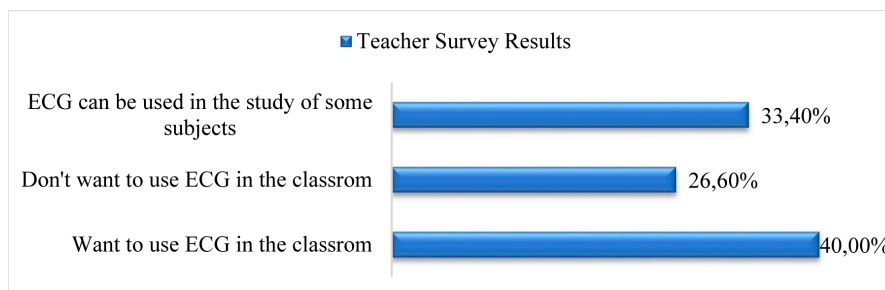


Figure 5 – Teacher survey results

As a proof of the effectiveness of the use of educational computer games, we conducted a

formative experiment on the basis of the school-lyceum No. 126, in which students of 7 classes

participated. We have implemented a program consisting of a series of computer games aimed at developing the personal qualities of students. Mathematical planning of pedagogical experiment allowed to find empirical dependence describing influence of investigated factors on final result, in our case on level of development of personal (on self-esteem of teenagers towards educational game achievements) and their communicative qualities (communicative and organizational abilities) of teenagers with possible for experiment approximation. Analysis of the generalized equation showed that the program aimed at combining virtual learning through computer games with traditional learning activities positively affects the development of adolescents personal and communicative qualities, because the level of change of personal qualities in the process of forming research and on the basis of the method of mathematical optimization of the pedagogical process was 9.4 %.

Discussion

For the possibility of using an educational computer game in the framework of education, it is necessary to consider the requirements for their use.

Requirements for the structure of the training game:

1) the game world in the learning process should be:

- agreed,
- whole,
- harmonious;

2) in an educational computer game should be present elements of randomness, because it makes the game interesting and exciting;

3) taken in the process of game training:

- decisions must be consistent,
- actions must have feedback and hold the player's attention;

4) the gameplay should be coherent and continuous; the game should be interactive;

5) all tasks in the training computer game must be fundamentally feasible;

6) performing all tasks during the passage of the educational game, the student must clearly understand the purpose of training;

7) educational computer games should have clear evaluation mechanisms for the effectiveness and achievement of the set learning goals;

8) indicators of success in educational computer games should be:

- leaderboards and top scores,
- win or lose in the scenario,

- level completion,
- incentive mechanisms have been worked out (for example, reward with a prize);

9) acquired in the game knowledge and skills must be feasible in reality;

10) educational computer games should:

- automatically adapt to the abilities of the gamer learner,
- collect data on what kind of student is inclined to make choices,
- give feedback and information necessary for the teacher;

11) educational computer games should be very rich;

12) educational computer games should be limited in time.

In conventional education, educational computer games have not found widespread use due to the fact that for their use:

- required equipment costs, licenses, technical support,
- it also requires a holistic understanding of how to use them in accordance with the objectives of the curriculum and how to evaluate the results.

Educational computer game should have the following criteria:

- technical applicability and convenience,
- compliance with educational goals,
- holistic integration of game and training goals.

Educational computer game should correspond to the main principle-the need for learning in action, that is:

- students should experience learning (“pass through”), and not just read the text,
- students should receive exactly as much information as necessary for independent reasoning,
- training during the process of gaming should be consistent and step-by-step.

When using educational computer games there should be a balance between learning the game and learning through the game in the educational process, nobody can't just put the game in the learning process because it will not guarantee a success in the end.

Conclusion

Thus, educational computer games allow students to get acquainted with the educational material in an exciting way in unlimited quantities, master professional skills, acquire the necessary practical knowledge and skills, evaluate the knowledge gained.

Multimedia tools based on the use of modeling tools and computer technologies and created for the

functioning of virtual reality, have taken a strong position in the field of education, because they allow on the one hand to create a psychological and pedagogical environment and connection between the teacher and the student and on the other – to provide multifaceted educational and scientific information for the gamer (visual, sound, tactile, etc.) and participate in the educational process (to move in 3D space in real time, to contact the virtual environment, to actively influence the learning process).

The formation and development of personality fundamentally depends on the progress of mankind, identified with cultural, social, scientific, scientific and technological development. Human being is being transformed “globally” taking into account evolutionary development as a result of

qualitative transformations of living conditions. Thanks to economic (growth of living standards), technological (growth of comfortable living conditions), scientific (increase in the quantity and quality of vital services – health, education), social (growth of self-awareness and culture) and informational (growth of information flow through the media and through expansion of contacts – migration, emigration, Internet) transformations, a person perceives himself and his world in a new way, which he himself changes qualitatively and transforms himself at the level of physiological and social needs. In the last three decades, a new need has arisen for a person – the need for expansion of digital space, including computer games, thanks to which the boundaries for communication and self-affirmation are expanding.

References

- Azimova R.N. (1969) Sotsial’no-psikhologicheskaya priroda samoootsenki i yeye nrvstvennyy aspect [The socio-psychological nature of self-esteem and the moral aspect]. News of the Academy of Sciences of the Azerbaijan SSR. Moscow, 14 p.
- Belobrykina O.A. (2000) Psikhologicheskkiye usloviya i faktory razvitiya samoootsenki lichnosti na rannikh etapakh ontogeneza [Psychological conditions and factors for the development of self-esteem in the early stages of ontogenesis]. Novosibirsk, 24 p.
- Burns R. (1986) Razvitiye ya-kontseptsii i vospitaniya [Self-concept development and education]. Moscow: Progress, 421 p.
- Demidova A.G. (2011) Osobennosti samoootsenki intellekta podroostka [Features of self-assessment of adolescent intelligence]. News of Tomsk State University, Humanities, no 2, pp. 361-371.
- Denisova A. I. (2010) Komp’yuternyye igry kak fenomen sovremennoy kul’tury [Computer games as a phenomenon of modern culture]. Analysis of cultural studies. Culturology, no 18, pp. 18-20.
- Gaifulin A. V. (2009) Razlichnyye teoreticheskiye podkhody v opredelenii ponyatiya samoootsenki [Various theoretical approaches in definition of self-esteem]. Tomsk State University Journal, no 1, pp. 73-76.
- Gladwell M. (2010) Genii i outsaidery. Pochemu odnim vso, a drugim nichego? [Geniuses and outsiders]. United press, 264 p.
- Heron M., Belford P. (2014) ‘It’s only a game’ - ethics, empathy and identification in game morality systems. The Computer Games Journal, no 3(1), pp. 34-53.
- James W. (1991) Psikhologiya [Psychology]. Moscow: Pedagogy, 368 p.
- Kovalenko V. A. (2011) Genezis samoootsenki lichnosti kak psikhologicheskoy kategorii [Genesis of self-esteem as a psychological category]. Bulletin of Adygeya state University. Series 3: Pedagogy and psychology, no 3, pp. 168-172.
- Kurbanova Z.S. (2006) Problema razvitiya samoootsenki lichnosti podroostka pod vliyaniem vzaimootnosheniy so sverstnikami [The problem of developing self-esteem of a teenager’s personality under the influence of relationships with peers]. News of the Southern Federal University. Technical science, vol. 68, pp. 91-95.
- McGonigal J. (2011) Reality is Broken. Why Games make us Better and How They can change the World. Londres, Penguin Books, 400 p.
- Nazarbayev N. A. Vzgl’yad v budushcheye: modernizatsiya obshchestvennogo soznaniya. Ofitsial’nyy sayt Prezidenta RK [Looking to the future: modernization of public consciousness]. Retrieved from: <http://www.akorda.kz/ru/> (15.11.2019).
- Nazarbayev N.A. (2001) Epitsentr mira [Epicenter of the world]. Astana, 294 p.
- Pinchuk D.V. (2010) Motivy obrashcheniya k komp’yuternoy igr. Tsarskosel’skiye chteniya [Motives for accessing a computer game]. Tsarskoye Selo readings, no 14, pp. 149-152.
- Rogers C.R. (1959) A Theory of Therapy, Personality and Interpersonal Relationship, As Developed in The Client-Centred Framework. Psychology: A Study of a Science. N. Y.: McGraw-Hill, Vol. 3, pp. 134-256.
- Rubinstein S.L. (1989) Osnovy obshchey psikhologii [Fundamentals of General psychology]. Moscow, 230 p.
- Shibutani T. Y. (2003) Kontseptsiya i chuvstvo sobstvennogo dostoinstva. Samosoznaniye i zashchitnyye mekhanizmy lichnosti [Self-concept and self-esteem. Identity and defense mechanisms of personality]. Samara: «Bakhrakh», 297 p.
- Sokolova O.A. (2015) Samoootsenka rezul’tatov obucheniya kak faktor povysheniya kachestva obrazovaniya [Self-assessment of learning outcomes as a factor in improving the quality of education]. Science, art, culture, no 1 (5), pp. 167-173.
- Todysheva T.Y. (2013) Vzaimosvyaz’ gibkosti lichnosti i samoootsenki lichnosti [The relationship between the flexibility of the individual and self-esteem of the individual]. Bulletin of Krasnoyarsk state pedagogical University. V. P. Astafiev, no 4 (26), pp. 138-142.
- Tymchenko Y.V., Skotnikov I.I. (2015) Modeli komp’yuternoy delovoy igry kak instrument obucheniya [Computer business game models as a learning tool]. Prospects of science and education, no 1 (13), pp. 75-80.

Литература

- Азимова Р.Н. Социально-психологическая природа самооценки и ее нравственный аспект // Известия Академии Наук. Азербайджанская ССР. – 1969. – № 3. – С. 10-11.
- Белобрыкина, О.А. Психологические условия и факторы развития самооценки на ранних этапах онто- и социогенеза: дис. ... канд. психол. – Новосибирск, 1998. – 368 с.
- Бернс Р. Развитие Я-концепции и воспитания. – М.: Прогресс, 1986. – 421 с.
- Гладуэлл М. Гении и аутсайдеры. Почему одним всё, а другим ничего? // Юнайтед пресс. – 2010. – 264 с.
- Гайфулин А. В. Различные теоретические подходы в определении понятия самооценки // Вестник Томского государственного педагогического университета. – 2009. – № 1. – С. 73-76.
- Демидова А.Г. Особенности самооценки интеллекта подростка // Известия ТулГУ. Гуманитарные науки. – 2011. – №2. – С. 361-371.
- Джемс У. Психология. – М.: Педагогика, 1991. – 368 с.
- Денисова А. И. Компьютерные игры как феномен современной культуры // Аналитика культурологии. – 2010. – №18. – С.18-20.
- Назарбаев Н.А. Эпицентр мира. – Астана «Елорда», 2001. – 294 с.
- Назарбаев Н. А. Взгляд в будущее: модернизация общественного сознания // Официальный сайт Президента РК. <http://www.akorda.kz/ru/> (дата обращения: 15.11.2019).
- McGonigal J., Reality is Broken. Why Games make us Better and How They can change the World, Londres, Penguin Books, 2011. – 400 p.
- Пинчук Д.В. Мотивы обращения к компьютерной игр // Царскосельские чтения. – 2010. – № 14. – С. 149-152.
- Коваленко В. А. Генезис самооценки личности как психологической категории. Вестник Адыгейского государственного университета. Серия 3: Педагогика и психология. – 2011. – № 3. – С. 168-172.
- Курбанова З.С. Проблема развития самооценки личности подростка под влиянием взаимоотношений со сверстниками. Известия Южного федерального университета. Технические науки. – 2006. – № 13. – С. 91-95.
- Рубинштейн С.Л. Основы общей психологии. – М., 1989. – 230 с.
- Rogers C.R. A Theory of Therapy, Personility and Interpersonal Relationship, As Developed in The Client-Centred Framework // Psychology: A Study of a Science. – N. Y.: McGraw-Hill, 1959. – №3. – P. 134-256.
- Соколова О.А. Самооценка результатов обучения как фактор повышения качества образования // Наука. Искусство. Культура. – 2015. – № 1 (5). – С. 167-173.
- Тодышева Т. Ю. Взаимосвязь гибкости личности и самооценки личности // Вестник Красноярского государственного педагогического университета им. В.П. Астафьева. – 2013. – № 4 (26). – С. 138-142.
- Тымченко Е. В., Скотников И. И. Модели компьютерной деловой игры как инструмент обучения. Перспективы науки и образования. – 2015. – № 1 (13). – С. 75-80.
- Шибутани Т. Я-концепция и чувство собственного достоинства. Самосознание и защитные механизмы личности. – Самара: «Бахрах», 2003. – 297 с.
- Heron M., Belford P. 'It's only a game' – ethics, empathy and identification in game morality systems // The Computer Games Journal. – 2014. № 3(1). – P. 34-53.