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Man's Values and Ideologies as a Basis of Gamification

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ABSTRACT

Gamification is becoming more and more popular in education. The consequences of the use of games for learning are not sufficiently investigated yet, although it is known that using games for learning does not always have a beneficial effect on students. Besides, practical rather than theoretical problems related to use of gamification in education have been more the focus of research by now. It is therefore desirable to consider at the theoretical level the role of game technologies in education taking into account the systemic nature of man's spiritual life and values and ideologies as its constituent parts. The research aim is to determine the degree of applicability of gamification in education determined by a specific system of values and ideologies every participant of educational process has. To achieve this goal, secondary analysis of scientific literature on this problem was applied, main approaches to gamification were singled out and evaluated. Secondly, using systematic approach it is shown that the nature of the impact of gamification depends on the level and character of the development of a person's values and ideologies. The research employs basic scientific and special scientific methods typical of social and humanitarian studies. At the same time, the important role among them is played by the system analysis method that allows us to consider the use of games for learning in educational not in isolation but taking into account the role of basic factors of a person's spiritual life, especially his world outlook. This allows for a many-sided analysis of causes of difficulties which appear when using games for learning. The novelty of this research lies in showing the dependence of the character and results of gamification on man's values and ideologies.

KEYWORDS
gamification, using games for learning, ideology, values and ideologies as a basis of gamification.

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Introduction

At present our information society is quickly developing and the research into the efficiency of using computer games in education taking into consideration the degree of development and characteristics of young people's

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spiritual world has acquired vital importance. Gamification (using games for learning) has become one of the urgent research problems recently. There have been published a number of articles dealing with prospects of using gamification in education, the authors of which explain the necessity of using games for learning and develop different forms of using gamification in teaching (Deterding,et. al. 2011; McGonigal 2011; Werbach, n. d.; Mazelis 2013). However, some researchers are critical about gamification and doubt its value as a modern tendency in education (Cluev, n. d.; Grechkina and Bogatyreva 2016; Chetverikova, n. d.). At the same time, many of the professionals in general support gamification as a modern educational tendency and try to examine and assess specific forms of its application, to determine the extent of its applicability in different areas of education (Zichermann and Linder 2012; Herger 2012; Eliseeva, et. al. 2015). On the other hand, many scientists admit a complex character of the influence of computer games on man, and thus suppose that gamification in education can have both beneficial and detrimental effects (Lee and Hammer 2011; Alchebaev and Gaidukov 2014; Gabdulakhov and Galimova 2014). So, it is necessary to research into the reasons for the complex impact of computer games on man in the educational process taking into account the systemic character of his spiritual world and the presence in it of certain values and ideologies.

The aim of the given research is to study the application of computer games in education taking into consideration its dependence on values and ideologies of learners. To achieve this goal, we carried out analysis of modern scientific literature on the problem of gamification in education, main approaches to gamification are singled out and evaluated. Secondly, in the framework of the systematic approach, we demonstrate that the character and degree of successful impact of computer games on achieving educational goals depend on the level and specificity of the development of values and ideologies of schoolchildren / students.

The research employs basic scientific and special scientific methods typical of social and humanitarian studies. At the same time, the important role among them is played by the system analysis method that allows us to consider the use of games for learning in educational not in isolation but taking into account the role of basic factors of a person's spiritual life, especially world outlook. This lets us define conditions for the most successful use of games in modern education and single out ways of avoiding possible negative consequences when using games in education very frequently. The novelty of this research consists in showing the dependence of the character and results of gamification on man's values and ideologies.

Gamification problem in research literature

The notion of "gamification" was first used as a scientific term in 2011 by a group of researchers (Deterding, et. al. 2011; Deterding 2011). However, the use of games in education had been discussed long before computer games appeared (Avedon and Sutton 1971). Mark J. Nelson speaks about games used in education in the USSR (in the 20th century) and the USA (the beginning of the 21st century) which were the precursors of gamification (Nelson 2012). Gabe Zichermann considers that gamification is a new discipline possessing a huge potential but in need of "systematic research" (Zichermann and Linder 2012;

Gamification: Concepts, Methodologies, Tools, and Applications, 2015). There are solid researches into the essence and distinctive features of gamification (McGonigal 2011; Herger 2012). For instance, Lee Sheldon puts forward the conception of transforming a lesson into a game (Lee 2012). However, too little time has passed since the beginning of the study of the problem; besides, these are practical, not theoretical aspects of using gamification in education that were the main focus of research. Therefore it is necessary to give theoretical generalizations of the research results.

One of the reasons why using games for learning is an urgent problem at present is new educational needs, for example, “the game culture” has acquired a mass character. It is believed that the introduction of gamification is conditioned by society's transition into a new "professional era" when every worker becomes “a man playing games” aiming to achieve in "the system of gaming strategies" (a virtual map of a company and role-plays, a personal profile and levels) certain professional heights and statuses (Trends of the Future: distributed robot production, gamification, sport Internet). Gamification is the application of techniques typical of computer games in non-game contexts (involving users and consumers, enhancing their engagement in solving applied problems) (Gartner 2015). Nowadays gamification is used in personnel management, innovation management, marketing and personal financing planning. The American research and advisory firm *Gartner, Inc.* believes that one of the "objects to implement gamification" is "globalization of advanced education" (Burke 2012). The prevailing opinion now is that in education gamification can be used in many processes - from paper work to meta-games within an institution (Kubekov, et. al. 2015, p. 75). It enhances students' motivation to acquire new knowledge, professional skills (such as critical thinking and decision-making abilities), reveals creative potential and is "an effective means of improving vocational education at universities" (Eliseeva, et. al. 2015, p.70).

According to K.Werbach, gamification is a solution of real-life problems which are not directly related to games with the help of game-designed elements and techniques (e.g., acquiring new knowledge and skills) (Werbach, n. d.). The basis of gamification is a simulation process of putting people in situations “which imitate real life” with the purpose of training or assessment. The educational simulation is a scenario with a system of rules and strategies created with the purpose of "forming competences that can be transferred and used in real life" (Plyusnina, n. d.). The typical feature of gamification is the use of the game not only as an element of educational process but also as a form of its organization "when learning a discipline acquires the features and character of a game" (Diakonov 2016, p. 144). Gamification can be carried out on the basis of *online* learning *platforms Goalbook* and *Course Hero*, virtual simulators “serious games” (recreating real processes and teachers), Game Code School projects (teaching programming skills with game elements), Motion Math Games (mobile mathematics games) and many others (Nitsa 2012). D.Hunter teaches Geography using instead of a textbook a game about a zombie (Werbach and Hunter 2012). According to A.Mazelis, the basic principle of gamification is to ensure a constant and measurable feedback from the user providing the possibility of "dynamic adjustment of the user’s behavior" (Mazelis, 2013, p.4). Game elements of gamification include scoring and achievement counting, levels of difficulties and skills, leader-boards and ratings, indicators of successful

performance and rewards (Salin, n. d.). The positive aspects of gamification are students' increased motivation and better learning of the material while using the same teaching forms but filling them with new contents in accordance with the specificity of a subject / discipline (Muratova and Muratova 2015, p. 42). Using training games creates a really good basis for students' self-development (Polutina 2010, p. 94). It is also noted that gamification motivates our modern generation which is keen on playing various games for their future professional activities, helps them to become absorbed into educational tasks and goals, contributes to "forming values of man's professional fulfillment" (Eliseeva, et. al. 2015, p.59). Some authors believe that it creates a joyful and happy emotional background which helps to overcome problems without getting stressed (Vorobyev 2015). It is stated that students' motivation is to grow "with the increasing use of gamification" (Demchenko 2016, p. 57). O.V.Orlova considers that "inherent mechanisms of gamification allow us to make a child very active" (Orlova and Titova 2015, p. 62). Other advantages of this method are also pointed out - increased motivation for self-education, obtaining professional skills, revealing creative potential, forming critical thinking, decision-making and team-working abilities (Shirshova, n. d.). It is believed that people who are keen on computer games have a mind different from those who do not play computer games because they have "well-developed logical thinking, emotional stability, dominance and rationality" (Polyakova and Kozlov 2015, p. 516). Dian Schaffhauser points out that the use of a game environment helps to bond together a student's experience and learning, to stimulate the competitive spirit and healthy competition, to encourage teamwork, to form system thinking (as a well-designed game contributes to better understanding relations within and between components of the material under study) (Schaffhauser 2014).

However, some researchers point out some disadvantages of using games in education. D.Klyuev believes that "gamification techniques are limited. At best, it creates only a temporary motivation", but its transformation into long-term behavior changes is difficult (Cluev, n. d.). According to V.F.Gabdulkhakova, "the efficiency of electronic educational resources is obviously inferior to traditional educational methods". They are likely an addition to traditional forms of teaching. Digital pedagogy should be based on "humanitarian ideas" of education and IT developers should always be aware of their possible negative impact on man (Gabdulakhov and Galimova 2014, p.42). Some researchers even consider gamification as a result of certain "machinations of enemies" of our country and national education (Grechkina and Bogatyreva 2016; Chetverikova, n. d.).

The analysis of special literature shows that the majority of researchers hold a positive opinion about gamification as a modern tendency in education and support wide use of games for learning. But they almost neglect such important issues as the impact of social conditions on gamification and the impact of gamification on man's spiritual world. For example, some scholars believe that for using gamification only two conditions are necessary, i.e. access to modern computers and software and a teacher's proper training. It is assumed that children are fully prepared for learning any material if taught by using games (Borzenko 2016, p. 81). Thus it is logical to consider the use of games in education in a wider social and philosophical context, to study this problem taking into consideration the fact that man's consciousness is complex, multi-level and systemic by nature. The specificity of the spiritual world of every

single person is also important, i.e. the most important beliefs and ideals, values and principles which make up his personality. Only in this case you can more precisely figure out limitations of using games in teaching this or that student / student group. Conclusions that gamification could solve all educational problems or that it is dangerous for man's spiritual world are unreasonable and ungrounded.

Theoretical background. Gamification in the context of man's values and motivations as elements of his spiritual world

To theoretically prove the worth of using gamification in education the structure of man's spiritual world should be considered, namely, man's world outlook which is its core element, i.e. a system of knowledge and beliefs, principles and ideals that define man's attitude to the world and help to find answers to important questions in life. It is the most stable form of human spiritual existence. To a great extent, due to world outlook man exists as a personality and has a system of values which control his choice of physical and intellectual activities. Values and ideologies are formed in man since childhood under the influence of social conditions, first of all, influenced by the way of communicating with parents and other people. Thus, it is important to form in children certain values and ideologies so as to define the main ways of their further development. Willingly or unwillingly man evaluates any information relying on his ideological beliefs and principles. The character of man's attitude to games is also determined, first of all, by world outlook. Using this approach, it is poor development of a learner's values and ideologies, instability of beliefs, principles and ideals which are a serious obstacle for successful use of gamification. When using gamification certain characteristics of instrumental thinking can be developed well enough because a learner who plays games trains skills of performing certain activities. However, if as a result a skill is formed to do something simply faster or better, it does not guarantee that a learner will perform an activity well unless he develops those values and ideologies which determine his choices in life. Teaching using gamification does not always have a positive result if a learner's world outlook remains undeveloped.

One of the problems of gamification is to theoretically prove the possibility and necessity of its use in education because originally it was meant for business **(**Duggan and Shoup 2013). It is considered that gamification principles are applicable in any sphere - innovation, technology development, teaming and motivating people, and, consequently, in education. For example, some authors speak about their successful application in business education at the Washington University (Gabitova and Frolova 2014, p. 252). However, the educational sphere has its own specifics that should be taken into account. For example, game elements are used in controlling behavior, promoting healthy lifestyle and financing. At the same time, their impact on behavior, propaganda, economic incentives can affect people so much that care should be taken how to use them precisely in education. Therefore, when transferring game forms from different areas into education it is necessary to rethink their theoretical basis adapting them to education and test them in practice.

One of the arguments in favor of gamification is its economic efficiency. An educational institution is viewed as a seller and a student as a buyer. For example, as games satisfy our emotional need, "emotions can be sold now" and

"we follow this tendency" (Gorshenin, et. al. 2015, p. 91). So, a student can be viewed as a customer and the education system should follow his needs (proceed from his motivations) (Kubekov, et. al. 2015, p. 75). However, the choice of a student as a consumer may not coincide with society's interests. And it may be contrary to the interests of a student because not always can he understand them correctly. For example, his level of development of values and world outlook can be such that he is unaware of any usefulness of forming certain educational competencies and he wishes to play games (if offered) to get a formal certificate of education at the end. According to some researchers, the fact that lessons which bring joy make students more motivated and active than routine lessons speaks in favor of gamification (Kubekov, et. al. 2015, p.76). Indeed, it is possible to use man's desire for pleasure to stimulate his motivation. However, the purpose of education is to give knowledge, skills and competences, but not having fun. Therefore, if a student or a schoolchild does not feel the need to develop certain educational competencies, this motivation would be rather formed for playing games but not for learning.

There is another approach to "economically" prove the efficiency of gamification in education. According to E. D. Matveeva, gamification (as a business concept) combines elements of loyalty programs, behavioral economics and game mechanisms thanks to which it is possible to reduce costs, to involve participants in various activities (education included), to get them interested and to manage them (Matveeva 2015, p. 44). In this case we speak of an active influence on a person with the purpose of changing his spiritual world. This approach differs but little from traditional educational methods and when using it, it would be more difficult to make students active. In addition to it, the inherent property of gamification, i.e. optionality which "will motivate students", will be lost (Matveeva 2015, p.45).

In our opinion, only those students / school-children will have motivation who have appropriate and well-developed values and ideologies and a strong belief in the necessity of acquiring educational competencies. Another proof that gamification is useful, and the one with which many researchers agree, is its function of ensuring teamwork. Games teach us to be team-wise and with their help students are better involved in learning (Karpenkova 2015, p. 562). At the same time, students' joining in a team (and their collective interests and goals) must be properly combined with many individual forms of reporting and responsibilities necessary when using games.

One of the arguments in favor of gamification is a reference to the fact that traditional teaching (viewed as the transmission of knowledge by teacher to students) in the information society has become outdated (Kapustina 2015, p. 561). According to E.V.Kapustina, it is due to the peculiarities of children of "Generation Z" who perform actions, and learning is among them, only which are interesting and meaningful for them. The new generation is characterized by a short-term memory, they remember not the information itself but first of all its location, ways and means of information retrieval; by multitasking, decreased concentration, as well as "clip thinking" (Kapustina 2015, p. 48). However, in our opinion, it only makes more urgent the issue of forming motivation to learn when education is viewed as a real value. To form this motivation one should develop a child's personality and create social conditions that will awake interest in education.

Scientists are not unanimous yet regarding a possible decrease in learning efficiency under multitasking. Thus, G.*Small and G.Vorgan* assume “effective multitasking” can be formed (Small and Vorgan 2011, p. 122). M.Chorost (Chorost 2011, p.239) and M. Jackson (Jackson 2009, p. 80) believe that a thoughtful man who can focus on one problem will always achieve the best result. The both sides can be right in their own way. A man with well-developed values and ideologies is capable, if necessary, both to focus on one problem, and at the same time to consider a whole range of issues.

T.V.Semenovskikh points out that "clip thinking" is illogical, with "high speed of switching between parts, pieces of information", it lacks a view of the world as a whole. This way of thinking cannot be called degradation but it is just the development of "some cognitive skills at the expense of others", so it has some positive features which can be exploited when using gamification in education. Any material should be offered in forms that appeal to this way of thinking so as to arouse students' interest (Semenovskikh n. d.). It is assumed that when teaching students who possess "clip thinking”, the usage of simulation games can be more effective compared to traditional methods (Korobanova, et.al. 2014, p.127). However, even if the latter opinion is true, it does not mean that you need to rely only on this thinking without developing students' ability to abstract-logical thinking; as abstract-logical thinking is an important trait not only of a present-day university graduate, but of any average educated man.

"Clip culture" is known to be based on "flashing of segments of information" and "clip thinking" involves simplification (Frumkin 2010, p. 28). It reduces “proper material absorption, reduces capacity for analysis and building long logical chains". However, the main advantage of “clip thinking” is high speed of information processing (Frumkin 2010, p. 29). “Clip thinking" is really a kind of protection from excessive information, but this is a way of adaptation, simplification. However, another direction of man's development is also possible – his development as a personality with firm beliefs, ideals and principles helping to deeply understand information. Zh.V.Korobanova believes that as man now faces so much information, "one of the main criteria when selecting its source is time" (Korobanova, et.al. 2014, p.129). In other words, the faster man finds information on any issue, the better. We believe that it is not the speed of finding information that is important, but its significance, adequacy and also the possibility to verify it. Besides, man must have own values and world outlook, which let correctly treat any information he receives. If he is bad at fact analysis or cannot build correct logical chains, the speed with which he perceives information will be useless in most cases.

Quick solution of problems can often be harmful from the point of view of the strategies used, as man can be wrong about evaluating his success (which is “success” to his mind only). If man with the help of games manages to develop a quick reaction when performing certain actions, but at the same time wrong life values are formed (for example, the principles of indifference or immorality), it is likely to result in problems in future. Life values that are more adequate in the given society (e.g., social responsibility, importance of being an active member of society) are likely to compensate for a slower reaction in situations requiring quick actions and their less accurate performance (Emel'yanenko 2016, p. 56).

The way gamification influences a young man when learning to a great extent depends on the development of his spiritual world. More stable (positive

for man and society's keeping safe and developing) values and ideological principles to a much greater extent give man a chance to benefit from games. On the contrary, negative (or unstable) values and ideologies of teenagers and young people (for example, the prevalence of immorality and indifference) may reduce their motivation to learn. This, in its turn, can result in the fact that gamification will rather make them game-addicted than motivated to learn.

B.P.Diakonov explains the introduction of gamification into education by the fact that it makes teachers use a completely new approach of acquiring knowledge – using games for learning. The traditional pedagogy, in his opinion, had a "paved with pain" approach when a student took pains to learn something new, he overcame many difficulties. Using game elements in education allows students to be enthusiastic about learning, and game techniques can lead to "minimizing negative connotations" associated with learning (Diakonov 2016, p. 144). T.Reiners and L.C.Wood believe that gamification allows students to unconsciously overcome their "negative connotations" and education acquires "many positive, funny elements typical of games" (Reiners and Wood 2015, p. 165). B.P.Diakonov also speaks about deep psychological rejection which is not a rare case when people face the fact that learning involves "working hard at something new and proving that you have learnt it". However, we think that this circumstance does not mean that the education system should be based on the "deep" (i.e. unconscious) level, as its main task is forming man's reasonable social motivation. Besides, everyone in his life, sooner or later, has to overcome difficulties, and there are many things which he still has to do even if he has some "negative connotations" about them.

Some authors believe that the development of game technology is contrary to the traditional view that hard work, diligence and perseverance are important to learn well, and that the time when students were forced to learn by fear of punishment or poor grades has come into oblivion. Now you can learn by playing a game – "without effort" (Diakonov 2016, p. 145; Gabitova and Frolova 2014, p.253; Karpenkova 2015, p.562]. And the introduction of games can help to make learning enjoyable, to make such a serious activity as learning easy (Karpenkova 2015, p.563). But the less serious learning becomes, the less responsibility students feel. Besides, positive emotions are not permanent, and as motivation by games is superficial so gradually it is reduced. In the end, having no other deeper motivation teachers will have to apply some new forms of teaching. However, if schoolchildren and especially students have no ability to do what they do not like, teachers cannot hope to achieve general success in learning.

It should be noted that a number of features of the educational process which is built on using games (the way some researchers describe it) are in fact contrary to the idea of "learning without effort". Thus, game elements (points, badges, levels and rewards) are used to assess students' achievements and engage them in competition. The rating system with its motivational part, rating tables and available to parents and other schools' representatives serves the same purpose. Finally, in order to prevent any possible manipulation on the part of teachers (to make their school higher in the ratings) there are elements of control and even punishment (Matveeva 2015, p. 45). These peculiar features of the game system seem unlikely to help learners and teachers to relax and relieve stress (though it is one of the aims of gamification). One of the famous statements by Joey J. Lee is worth paying attention to, namely he says that "you

can enjoy yourself getting scores but at the same time the game helps you to understand better such abstract subjects as, for example, algebra" (Lee 2015). The words "understand better" are very significant to our mind. In other words, it is impossible to learn abstract subjects from scratch with the help of games. Students first make efforts to understand complex phenomena (obviously, guided by teachers). And only then, after acquiring necessary theory, games help to better understand abstract things and to consolidate knowledge and skills. You cannot master algebra with games only, but you can better understand what you have already learnt about it. Similarly one can explain the example given by Joey J. Lee about 3,500 Chinese students who learnt English better (95% of their teachers admitted that their motivation increased!) when video games were used. It is known that Chinese students are hard-working, focused on really learning and getting decent education, so they already had a very good motivation even before the start of the experiment. Video games made the perception of information more interesting and the students (already motivated to study well!) responded to it by absorbing information even better.

According to N.V.Karpenkova, using game forms will result in students' being more open and free in the classroom and so "being more interested in knowledge" (Karpenkova 2015, p.563). The popularity of computer games will enhance efficiency of education because the game "involves and keeps students interested" (Karpenkova 2015, p.563). However, if students have no motivation to learn which depends on poor development of their values and world outlook, they will be interested more not in knowledge but in the game itself as an emotionally positive process. As a result, it is not efficiency of learning that can increase but the popularity of games. Besides, as any activity forms can become boring with time, it can also be doubtful that games can be successfully used to involve students into learning for a long time.

Another argument in favor of gamification is the assumption that it will make modern education less boring and will make the process of knowledge acquiring more interesting (Gabitova and Frolova 2014, p.253; Karpenkova 2015, p. 563). However, in our opinion, the matter is not only in the shortcomings of education (no one would deny that there are some) but also the problem is to form a socially determined motivation to get real educational competencies (which is conditioned by the state of modern education and its role in society). In such circumstances a strange situation arises when the task is set (not only for schoolchildren, but for students as well) not even to convince students to take efforts to acquire certain competences but to teach them in such a way so that the process of learning for them would be like playing a game.

One more argument in favor of gamification is that as children are the best at playing games it should be the game to help them learn (Gabitova and Frolova 2014, p. 252). This argument can be taken into account only if setting reasonable limitations to game using (when they are applied to specific schoolchildren / students with a certain level of intellectual development and in specific social circumstances). Some researchers also believe that as the game allows "to simulate any situation and scenarios" a student gets "huge experience" within a very short time (Gabitova and Frolova 2014, p. 253). To make the results of games remain in the memory of a student "as part of life experience", it is necessary to use a very realistic and properly designed simulator (Gabitova and Frolova 2014, p. 253). However, one should not forget that first of all a game is not the same as real life, and a student acquires not

some practical real-life experience but game experience (which still needs to be tested in real situations). Secondly, to assimilate any new experience man needs a strong desire to do it (and this desire depends on the development of values and ideologies).

Some researchers recognize the existence of certain problems when trying to prove the efficiency of gamification. It is observed that it is methodologically complex by nature, it requires much time on the part of a teacher and creating learning resources is rather expensive (Semenovskikh, n. d.). There also can appear "problems with motivating and involving students into learning" (Lee and Hammer 2011). Rewards used in games are only an outward motivation which disappears at once when the game is over, whereas inner motivation is more important and more effective (Shirshova, n. d.; Karpenkova 2015, p.564). Gamification is not suitable for all schoolchildren / students as some of them "came here to get knowledge" and not to play games. Some teachers consider games useless and even harmful. In addition to it, it is not always easy to integrate games into the learning process. And finally, if an educational game is not interesting and not optional, it can just irritate students (Kubekov, et. al. 2015, p. 77).

The economic reasoning why gamification should be used in education is best known. Students are treated as consumers whose needs and preferences should be taken into consideration. However, treating education as a service only, when the motivation to get it must be ensured by any possible means, entertainment included, is one-sided. Education is not only a service but also a benefit having certain social value. It is natural that consuming such values in form of personal benefits is regulated by society. Society can set such complex tasks for education the essence of which is hard for a student to understand because the system of his values may be not properly developed yet. In this case, planning his strategies a teacher must proceed from both the real state of the development of student's spiritual world and from personal development prospects conditioned by social standards.

The economic reasoning of using gamification explains the appearance of an argument in favor of games based on the peculiarities of modern youths' thinking process. According to some scholars "clip perception" of information results in the fact that games are the best means to increase their motivation to learn. If to treat a student as a consumer it is natural that such opinions should appear that gamification makes learning easy and optional, removes stress and reduces tension, causes joy and interest (and even helps to overcome the "paved with pain" approach typical of former education). It is good when knowledge is perceived without effort and learning is associated with entertainment.

However, this can be achieved only in certain situations and cannot become a universal principle of learning. Besides, if knowledge and skills are acquired without any effort they are unlikely to be adequately appreciated. And moreover, this passive ("playing a game") approach to life cannot help to form an active attitude towards real-life problems. To develop personality one must learn how to overcome hardships, to focus on problems, to make efforts to achieve goals but not "to live an easy life." Man is to some extent the result of own game but to a much greater extent is the result of his labor.

One of the motives for using gamification is also the fact that educational game technologies can become quite an effective means of monitoring schoolchildren / students (via organizing teamwork too). However, when

students realize this fact (and sooner or later they do) their educational motivation can decrease.

The problem of proving the efficiency of using gamification in modern education should be viewed in the context of a broader and deeper approach to educational motivation which is formed under the influence of the state of society in general and which depends on a complex of social, economic and spiritual factors.

Problems of using games in education

While game technologies are developing, a number of specific educational problems arise which require theoretical understanding. One of them is visualization of education. According to T.V.Semenovskikh as video games are a dominant form of entertainment they serve "a powerful means of students' motivation" (Semenovskikh, n. d.). Rapid development of visual technologies helps man rely on visual thinking and visual perception conveying "information via images and graphics" (movies, presentations, simulation games). This will help to quickly learn much more information than before. Another good thing is that "linear thinking" will be less engaged as fewer texts have to be read (Semenovskikh, n. d.). However, man's intellectual development is connected with abstract reasoning. Therefore, in our opinion, this approach will lead to problems of developing abstract reasoning because it will not be properly trained. Experts say that "pictures and diagrams are becoming more and more popular" as they "reduce the time of perception" (Gorshenin, et. al. 2015, p. 91). However, being in demand does not mean that games can be useful in education too. Besides, it is not only time that is important but also the character of information perception (e.g., adequacy), the ability to comprehend it at the abstract level. Neither can we agree with the opinion that visual technology is appropriate to the nature of "human thinking as man thinks, first of all, in images" (Gorshenin, et. al. 2015, p.91).

Man created the modern information civilization thanks to abstract reasoning. However, the supporters of this approach admit that game technologies develop, first of all, visual thinking. In our opinion, this is a consequence of simplifying educational material. Indeed, visual images are easier to grasp than concepts. For example, it is usually more difficult to read because it is not enough to passively perceive palpable images of reality as one must also try to imagine a situation as a whole.

Our notion about something has more abstract elements than our perception. The ability to understand what this or that notion is can even become an unsolvable problem in learning which is based only on visualization. If we use visualization without any limitations which are determined by the degree of development of students' abstract reasoning, it will damage the future development of abstract reasoning. We should also note that to a person with more or less well developed abstract reasoning and the system of values and ideologies, visualization can hardly be harmful but will let him learn greater amount of information at a greater speed. Another important thing is that excessive use of games makes participants of the educational process get used to performing a set of regular and rapid but usually meaningless actions. These actions do not demand much thinking about and this may also result in worsening the skills of analytical, complex thinking.

Introducing games in education is accompanied by the problem of the changing role of the teacher. Long before gamification appeared I.V.Bulgakov had written that a man of a new type was coming into existence - "*Homo Gamerus*" ("The man playing games" for whom the basic thing in life is playing games), and games are so important for teenagers that they can do very well without a teacher in the educational process (Bulgakov 2000, p. 121). Some authors believe that gamification changes the role of the teacher – he/she and a student "are becoming partners" (Gorshenin, et. al. 2015, p. 90). The teacher is now an advisor and consultant helping students to understand the process of learning itself. It is not the teacher who is the most active participant in the education process but a student, and now the ultimate goal for the teacher is to create necessary conditions for students to be active. The teacher controls and organizes the educational process, monitors the time and fulfillment of the study plan, gives advice and helps students in difficult cases (Karpenkova 2015, p. 562). Games really give schoolchildren / students a chance to demonstrate how active they can be. But this activity is productive only when students have a well-formed motivation to learn and get educated. Only in this case partnership relations between a teacher and a student can be established. It is an indisputable fact that the personality of the teacher is important whatever teaching method is used.

One of the problems of gamification is a fundamentally different attitude to mistakes if compared with the traditional education (Karpenkova 2015, p. 563). The possibility to easily correct them is seen as a major advantage of gamification (Kubekov, et. al. 2015, p.76). In the traditional education students are punished for mistakes and are rarely praised for offering correct solutions, so students are more concerned with grades but not the knowledge they get or contents of the materials they learn (Karpenkova 2015, p. 563). Some researchers believe that a student is no longer afraid of making mistakes and "focuses on learning" because in the game you can make mistakes as many times as it happens (Gorshenin, et. al. 2015, p. 91). Unfortunately, this outcome is not guaranteed as it is quite possible that a student can become focused not on learning but on playing a game. At the same time, no matter how useful a game is for the development of certain skills, it remains a virtual reality. As a result, repeating the same game situations students develop an understanding that sooner or later the goal will be achieved. Besides, they believe that it can be possible "to replay" a real life situation the way they replayed a game (it makes a student feel less responsibility for real life situations). However, life and game are different things and in it consequences of mistakes cannot be so easily corrected. There is some responsibility in the world of games too but it is absolutely different from responsibility in real life. One of the main difficulties of gamification is the student's reduced responsibility because he has an idea that "all this is just a game" (Karpenkova 2015, p. 564).

Therefore, it is a very valuable skill to be able to correct mistakes in real life but not only in the game. Much less important is the correction of mistakes by selecting different options in educational games. In real life it is impossible and to achieve success one is to be patient (although this does not guarantee success). It is also noted that an important positive aspect of gamification is lack of punishment and so there is no "fear of taking a wrong step" (Karpenkova 2015, p. 563). However, fear is a natural and necessary emotion which keeps a person from dangerous actions (reasonable fear, of course). So, an individual or a

specialist in any area can hardly be considered well prepared for life if he has never experienced any fear. Besides, obsession with virtual reality has a negative impact on man's ideological sphere. In virtual reality you can have an illusion of being able to satisfy your demands even violating social norms and values. This allows you to avoid taking life challenges and does not help to form beliefs, ideals and principles. Therefore, students develop casual attitude to learning and do not treat it as a preparation for adult life and professional activities. However, when they learn, schoolchildren and especially students understand the difference between the game and reality. They will rather perceive learning as a game but are unlikely to take life as a game. This approach stimulates the behaviour principle "One must live without effort" which cannot motivate a person who sets serious goals in life.

According to some researchers, one of the positive effects of gamification is additivity of educational process when students become "psychologically dependent", and "are involved into it seriously and emotionally" (Diakonov 2016, p. 144). According to K.M.Kapp, additivity is achieved by using points and scores, passing levels and "fear of losing the achieved level" by being fined (Kapp 2012, p. 49). Gamification techniques will make the boring process of transmitting skills and educational information "an additive educational process", will help to overcome "the natural resistance of students" and to spend less effort on presenting educational material (Kapp 2012; p. 49). In other words, the author relies only on the game motivation but the ultimate goal of gamification is still in acquiring educational competencies, not game achievements. Besides, many students are already psychologically dependent on games, which may result in increased game addiction, not learning addition. And the motivation which is formed by games is "superficial" (Gorshenin, et. al. 2015, p. 91), though some scientists believe that strong motivation can also be formed and a student "becomes enthusiastic" about learning (Gorshenin, et. al. 2015, p. 91). However, there is a possibility that this enthusiasm is not only for learning but for playing games, and students will no longer "accept the educational process if no games are played", they will be more concerned with getting awards and various kinds of rewarding without understanding educational goals of games they play and no inner motivation to learn will be formed (Salin 2015, p.125). It is the student's value of learning motivation which will get him involved in the educational process. This motivation which is a consequence of the development of man's values and ideologies enables to form educational competences.

Special attention should be paid to specific requirements to game technologies so that their use in education could be justified and effective. K.Werbach, for example, states the need for a balanced application of games. Gamification does not mean "transforming everything into a game," it should not take you away from real life but it should help students to make their real life experience better, define its key points and add extra motivations (Werbach, n. d.). We should speak only "about gamification elements: the game should not overshadow the main educational contents; like any other means it cannot be a universal learning method" (Werbach, n. d.). As M.A.Alchebaev and A.A.Gaidukov point out that the game should be of practical significance, should improve understanding of clearly formulated and achievable goals, should develop cooperation between a student and a teacher, should stimulate balanced feedback between them, should create good mood, develop students' self-reliance

and self-organization, it shouldn't be imposed upon students but should be interesting for them (Alchebaev and Gaidukov 2014, p. 223). The game should be an accurate reflection of reality, its purpose should coincide as much as possible with learning objectives. The efficiency of using games in education depends on how naturally and well game technologies are integrated into the general education strategy (Gabitova and Frolova 2014, p. 254). In this context, it is admitted that gamification cannot be regarded as a universal method of organizing the educational process and its methods cannot replace knowledge (Lee and Hammer 2011; Karpenkova 2015, p.564). It is noted that gamification is not intended to change the contents of learning but only to use a new form of presenting educational material; and this is what should increase the motivation of learning (Gabitova and Frolova 2014, p. 254). One cannot say that game technologies are the only means that absolutely affect the success of learning, they are just one of the means of education. And these means, according to Manuel *Castells,* can be good or bad depending on the way they are used because they are "a continuation of our own self" (Castells 2003, p.217). Game technologies are useful for students well motivated to learn. B. P. Diakonov admits that to implement gamification worldwide it is necessary to test it "to prove its efficiency and effectiveness" (Diakonov 2016, p. 147).

It is necessary to distinguish between the game as a means of presenting concrete material for its better comprehension while learning, and the game as a form of organizing the educational process. In both cases, game technologies are quite applicable but not every material should be presented in form of a game and not into every educational process games can be necessarily brought (it depends on specific circumstances). For example, the result of using game technologies may not be the same when applied to different subjects / disciplines and different themes. Games seem difficult to be used in Philosophy classes as Philosophy is quite an abstract science. But in the History classroom where most of educational material is concrete facts game elements can be well used. However, the ultimate goal of History as a subject is forming abstract notions explaining historical events. So it is obvious that abstractions cannot be formed on the basis of visual aids only and other teaching forms are also necessary which will help to develop logical thinking. It should be mentioned that the possibility of forming mostly visual thinking using game technologies (diminishing the possibility to develop abstract reasoning) is a serious problem. Besides, under certain circumstances game technologies may motivate students not to learn but to play games (students can even become game-addicted). In this context students can become more interested in getting good grades but not proper education and education materials (at best), and the worst case is when a student becomes disappointed about game techniques and learning in general.

Gamification changes the role of the teacher and students in the educational process making schoolchildren / students more active. Besides, game technologies make it possible for a student to make mistakes and to correct them. These positive aspects of games can be used to form necessary competencies in students. However, there is a problem of transferring skills of schoolchildren / students formed in virtual games into real life. Gamification should not be a goal itself, it should not be treated as a general tendency but rather as an important form of learning which enhances the possibility of getting positive results from learning.

Conclusion

The use of game forms in education provides great opportunities for both teachers and students. However, the impact of game technologies on success of the educational process is complex as they are only one of teaching means. Evaluating them, it is necessary to take into consideration the character and degree of the development of values and ideologies of a schoolchild / student and social conditions in which the system of education exists.

Gamification is a complex of educational and upbringing resources applicable for students who already developed beliefs, behaviour principles and ideals at the previous stages of socialization. Therefore, the success of using games in education depends to a large extent on the values and world outlook of a student in specific social conditions.

It is much easier to teach a schoolchild / student using game techniques if he has a motivation to learn rooted in his system of values and ideologies which were formed in childhood in the process of upbringing, communication with parents and school and in more or less beneficial social conditions. If a student focuses on personal development which is determined by the system of values with stable positive beliefs, principles and ideals it will result in increased efficiency of using gamification in education.

Developing world outlook helps a student to understand the role of game as only a substitute for real life, as a skill-training instrument, to have a clear picture what real life is and what game is. The reason for possible failures in using games in education should be sought for not in games themselves but in negative processes in those social structures which determine the way a student's world outlook is formed. One should not over-emphasize the role of games treating them as the only general tendency in education. However, games can help students to absorb the material better and can make learning more efficient.

An important condition for successful use of game technologies is the development of a motivation to learn on the basis of stable ideologies in a teenager / student which have a positive social and individual orientation. Stable principles and ideologies and students' orientation on acquiring educational competencies have a beneficial effect on learning results. On the contrary, treating education as a formal process, the result of which is only an officially issued certificate but not personal development greatly reduces the beneficial impact of gamification.

The extent of using games depends on a student's level of development, his social environment and the subject (theme) which is studied with the help of games. An individual with positive and stable life values and principles is more capable of reflection and so can more adequately treat the role of games. It is of social importance that forming beliefs, ideals and principles of young people should result in their having a real and unchangeable need to get real educational competences. Only this can help to increase the efficiency of gamification in education.

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