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**GAMIFICATION IN EDUCATION: BOSS FIGHT**

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*Abstract*

The article substantiated the educational importance of gaming activity in the learning process, systematizes pedagogical functions of gamification in higher school. For students it is important to identify themselves culturally and professionally. Gamification allows them to be engaged in these processes in a conditional form, however, to use system approach to the world, to apply their subcultural traditions, rules and habits. The authors introduce the description of the elements of communicative educational game situation, justify the possibility to extrapolate gamified framework "Hero-Boss" on the media practices of the future journalists and experts in public relations. The authors submit their suggestions for the distinguishing of different generations of teachers and students and describe their archetypes. The publication presents experimentally derived data and analysis on the special features of perception of the educational game by different generations and views the experience for the creation of the textbook for the target audience of students, teachers and experts (professional copywriters).

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**Keywords:** Gamification, higher school, education, match-game with boss, boss fight.



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## 1. Introduction

The game as kind of activity, carried out in conventional situations, traditionally is a subject of study of pedagogy. Social experience of the game, conditional circumstances and actions, the possibility to code the experience in various symbols or signs, all this contributes to the social development of the person which in fact is also the task of pedagogy as a social institution.

Under the new learning paradigm, learning is student-centred and controlled, and essentially experiential, replacing the old instruction paradigm where learning is instructor-and content-centred (Barr, Tagg, 1995; Bartle, 2003; Pink, 2006; Chou, 2015). This shift emphasizes a student participation and involvement in the learning process, and places lecturers in the position of acting not only as knowledge creators and disseminators, but also as learning facilitators (Tennie, Call, & Tomasello, 2006; Cruz-Cunha, 2012; Scott, 2013).

Despite the obvious educational importance of gaming activity, it has long been regarded in higher school pedagogy as some additional and optional factor to increase the efficiency of the educational process. It seems that one of the reasons is equivalence of semantic and emotional aspects of the game and the underestimation of game's emotional role in professional education. Fun (Werbach, Hunter) or play (Sutton-Smith) is emotional involvement in process that is recognized as an essential element of gamified studies. Play is not only an imaginative activity of amusement. Play is described as a pleasant experience; one might equate being in a playful mood with happiness. One can increase motivation and engagement by emphasizing learning through play. It is essential to take fear out of learning. The practice of high stakes testing, and standardization is in many ways a fear-based pedagogy. Play happens in the absence of threat, and in the presence of feelings of safety and unconditional positive regard (Schrier, 2016). Play and games serve important roles in cognitive and social development (Dubbels, 2014; Cabrera, 2014). Current pedagogical practices which involve fast training of selected professional skills often include game techniques to teach certain disciplines, to design trainings and workshops.

## 2. Research Questions

Gamification in pedagogy can be considered as the algorithm of use of the game elements and game thinking in the educational process in order to achieve the educational and training objectives. According to experts (Desyaeva, 2013; Karpov, 2004; Marczewski, 2015; Volkova, 2014; Zarubina, 2011; Zichermann, Linder, 2013), gamification allows to intensify the emotional component of the cognitive process and stimulate the imagination of the participants. The connections and relationships that occur in game's framework create a special atmosphere, characterized by certain intellectual and emotional stress. That stress is the most important condition for the development of creativity, the ability to act in unusual situations and under changing conditions.

Learning process generated in the context of play, especially social play, can lead to greater engagement, improved recall, comprehension, and being more innovative. Juveniles can observe behaviors and strategies performed by adults but then recombine elements of these behaviors in novel routines in play (Bateson, 2005; Bruner, 1972; Fagen, 1981; Sutton-Smith, 2009).

The use of educational games in the modern higher school education is driven by the possibility to recreate many variants of the situation and find alternative solutions to tackle professional issues. However, other functions of educational games are also important. Firstly, during the game the possibility to “win or lose” triggers reflexive activity based on the desire to overcome difficulties and involves the analysis of the origin of the difficulties. After all, if you do not understand the nature of the error made during the game, you will lose again. As a result a student's knowledge becomes more stable; game also gives the opportunity to prevent errors in the real professional life. Secondly, game allows overcoming emotional barriers in the cognitive process and in professional activity. A student involved in a game is likely to show his or her best skills. He understands that the game allows him to make a mistake, even to lose, but then he would be able to retry and solve the problem. Thirdly, the game promotes the development of professional communicative skills of the student, teaches him how to negotiate, to control his own actions and those of the team members, how to find a way out of a conflict situation and to prevent it, in other words - to communicate efficiently. Finally, the participation in the educational game helps to shape the identity of a student: to evaluate how external and internal features of the individual are related to the expectations and standards of his social environment. It happens due to the fact that the game framework accelerates the formation of a sense of community and unity.

Scientists proved that different types of social identities (subcultural, ethnic, regional, etc.) interact in the structure of one's personality. A student as a team member during the educational process chooses a certain type of behavior and his subcultural identity often comes to the first place (Zarubina, 2011). However, in the higher school it is important to shape the professional identity, the sense of “I” through the communication with professional community. Such identity can be developed in daily practice. “Well-known cases based on self-evident expectations” (Zarubina, 2011) are stable actions which allow to representatives of different social groups to use system approach to the world, to apply their subcultural traditions, rules and habits. Gamification activates this process, allows to recreate the professional situation in a very conditional form, without involving complicated and unpredictable factors and components. Some researches call this process emulation (competition). Emulation is an activity that promotes exploration, discovery, and creation (Whiten, McGuigan, Marshall-Pescini, & Hopper, 2009). Emulation happens when learners observe behaviors and strategies performed by others, but then recombine elements of these behaviors into novel variations. In an emulation, the learner creates the process or model that serves as evidence and constructs an outcome (Sutton-Smith, 2009).

Another feature of educational games is that each of them finishes with a certain result created under special – learning while playing – communicative framework. Due to the fact that the communicative framework should be considered in the design of educational games, let us have a look at its special features (as an example, we would consider activities of university students who master the professions related to philology: pedagogy, media, and for whom the result of the game is a text).

Among the components of communicative framework traditionally are a) the scope of communication (context of the activity); b) the communicative intention; c) the subject of the speech; d) the image of communicator; e) the audience; f) the circumstances of communications (specific conditions: the number of participants, the time allotted for communication, direct or indirect nature of communication).

Context of the activity. The context of the student's activities in gamification framework is a virtual synthesis of professional activity and the game. Students must solve professional problems, which are similar to the real ones, but the result of decision-making process is conditional (it does not affect a real professional career). Actions are limited by the rules of the game. The rules also reflect dominance of professional (“to take the decision, you have to note the following limitation of resources...”), or gamified (“forbidden to use additional sources of information ...”) components. An example of gamified activity where professional component has maximum prevalence is case-study.

Communicative intention. Communicative intention during an educational game - the desire to achieve a particular result of communication - is characterized by complexity due to three factors. Firstly, there is an intention to fulfil professional task: to create a particular text as the product of professional activity. Secondly, there is a need to make this product competitive (which leads to the presence of motivational component “do better than the opponent”). Thirdly, new situational intentions arise during the interaction between the participants of the game. The rules of the game should reflect all kinds of intentions: problem description, requirements to the final product, limits (precision) and conditions of interaction.

The subject of the speech includes range of issues for which communication is needed: it is the game itself, the field of professional activities for which the game is designed, the roles of participants, the rules of the game. The last component is discussed the most during the game (rules need to be fixed, accepted and followed). According to the researchers “the rules do not only unite players in one team, but also allow players to shape it. The more complex rules are and more fully they describe the reality, the more deeply and comprehensively reproduce it, the more game becomes comprehended” (Shinkarenko, 2006). Rules during the game are constantly discussed, since they not only define the nature of the players’ actions and the degree of freedom to choose the solutions, but also can be violated (and are violated).

The subject of communication in the game situation includes traditional rhetorical components: logos, ethos and pathos (essential, valuable and emotional aspects of the topic). The logos refers to the conceptual and factual basis of the game, the ethos – to the respect toward the rules of the game and communication, the pathos refers to the excitement, the sense of competition, to the sense of team identity.

The image of communicator is one of the most important components of the game. In communicative sense this phenomenon is the image of the author, the personalization of the speech, someone who develops his position, his attitude to the subject of the speech, to his addressee, through the language. During the game, communicator assume certain roles: journalist (in the game, “I’m the editor”), Prime Minister (in the “Parliamentary debates”), etc. During team games, the communicators perform not only direct roles chosen in game but also social and psychological roles: leader and team player (roles can be specifically shaped for the leader to express confidence and determination in his speech, and for the team to show tolerance during the communications). It is also obvious that in team games it is important to run open rhetoric strategies (to focus on the interlocutor, to listen, to express approval), as it helps to overcome communication barriers and to develop the participants’ personalities better.

The audience in the gamified communications is primarily a jury. Their conclusion and assessment are the final stages of the game that determine the result, appoint winners and losers. Participants of the

game always take into consideration who the members of the jury are and based on this create the final product (text) and formulate their statements.

As for circumstances of communication, the most important factor here is time. It affects the activity of the players, the game and intensity of communications.

The communicative situation of the game determines the nature of members' activities in general. However, during the game (or its body, "dynamic component of development and course" (Shinkarenko, 2006) one or another component of the communicative situation can become more obvious and might be considered by the participants (actual or potential) as more important than the others.

### **3. Purpose of the Study**

In his study on gamification Kevin Werbach (Hunter, & Werbach, 2012) explains the essence of the game simulation by building a pyramid from gaming elements and connecting hierarchically semantic blocks and tools. On the top of the pyramid he places the Dynamics (gameplay concept), in the middle - Mechanics (actions that direct play forward), at the bottom - the game Components (practical realisation of Dynamics and a Mechanics). According to Werbach, the Boss fight is the component of the game which lays at the base of the pyramid along with the record of achievements, levels, points, badges, gifts and other motivation moments for players.

In the framework of marketing and advertisement communications three most widely used components are: badges, points and leaderboards or PBL. How efficient are they to motivate university students?

Our academic experience of many years allows us to state that the present-day university students majoring in media professions such as "journalism", "advertisement" and "public relations" are to respond emotionally to the component the Boss fight. In other words, their strongest motivation during gamified classes is a desire to measure themselves against the teacher, to challenge him or her.

### **4. Research Methods**

Probably, this assumption could be extrapolated to the teaching process in general, taking into consideration the preferences, competencies and personal characteristics of post-modern gamified generation. We have decided to test this hypothesis by deriving experimental data from two research projects started in 2013. They are called "Ethical and Gamified Guidelines of the Communicators of Different Generations" and "The Game and I". The Laboratory of Gamified Communications (LGC) of the Russian University of People's Friendship holds this research using special algorithm (monitoring, brief-interviews, questionnaires, in-depth interviews). The interim results are published annually, performance indicators are tracked.

In the framework of the generational theory we have studied (with the participation of Lazutova, N.M., the researcher from the Moscow State University) the orientation of young Generation Y (born between 1981-2000) toward ethical and gaming components. This generation represents now university students that are about to graduate. There are some conclusions that prove our hypothesis (Lazutova, & Volkova, 2013). The archetype of this generation is the Hero. This archetype implies that for the Hero the information about social and political issues, such as human rights violation for example, is essential, but

at the same time he is receptive to it only if the information is presented in a way that offers quick and successful resolution of the problem.

Representatives of Generation Y vote for so-called civil journalism, meanwhile they are not looking for alternative search for the truth but for pathos to be in the opposition, no matter whether it is justified or not. Generally “Y”s ignore whether judgments are true or false, but concentrate on unusual presentation of facts and stylistic freshness. They appreciate short and original forms when choosing messages in information flow.

The research project “The Game and I” revealed generational features of the Y-students toward the game process (Volkova, 2014): they associate the game (57.7 percent of respondents) with the word “competition” (semantic series: competition, victory, achievement, fight). The other three basic associations arising from the etymology of the word “game” are reflected much less: 22.8 percent – “creativity” (self-revelation, lightness), 15.2 percent – “fantasy” (a journey, inner world, dreams), 4.3 percent – “intrigue” (juggling, collusion, manipulation).

## 5. Findings

We used short survey to investigate which of these three associations students are to link with word’s combination the “Boss fight”. Eighteen students of the philological faculty of Peoples’ Friendship University were asked to complete the sentence: “Boss fight is...”. The survey revealed that almost all the students (17) associated this phrase with games. In most cases (12) the answer had a reference to computer games where the boss was a character who confronted the hero. Let’s recall that the archetype of Generation Y is a hero, and the dramatic conflict in video games of any genre is a confrontation between the Hero and the Boss. Here there are some responses: “protection of the project, rite, where my role is to convince the boss that I my idea of the project is the best one and his role is to agree under the pressure of my arguments”, “something from the old-fashioned games on CDs”, “it’s a cover of a Hollywood blockbuster”, “game of minds”, “some kind of game where you have to win”.

The game for students is not just a competition, but two-way communication. This approach meets modern realities of media space when one-way hierarchy (similar to traditional media) is replaced by network model of communications. In fact, three main components of gamification framework “points, leaderboards and badges” have already been implemented in the educational process: scoring system, student’s ratings and personified scholarships. Still this approach reflects the external motivation, when the game is a means to achieve the goal (to increase the level of performance), and communications are based on one-way transmission from the teacher (the subject) to the student (the object). It is usual for the traditional academic educational system, however today’s realities of the global accumulation and transfer of knowledge via Internet, force us to rethink the rules. The “Boss fight” approach works differently, reflects different attitude to the game and is welcomed by the students.

And what about the teachers? To continue the phrase “The Boss fight is...” none of the teachers (12 respondents who worked with the same students previously) thought about video games, there was only one analogy with sport (boxing). Here there are some opinions that reflect the global sense of the other answers: “the revolt of the masses”, “unnecessary conflict”, “showdown”, “something to avoid”.

Remarkable, that almost nothing has changed in the answers when we launched the question: “If I’m the boss, the Boss fight is...”.

The most active part of the university professors are the representatives of Generation X (born between 1961 - 1980). It is them who design university courses and develop creative abilities of the students. Their archetype is a Wanderer and the game for them is goal setting, the identification of opportunities, the search for truth, and the way to perform their social role. In order to understand why teachers respond differently to the Boss fight, we shall see which associations they do have with the word “game”. 45 percent recalled the competition, 35 - work, 10 – fantasy, 10 - intrigues. There is a high percentage of associations linked with creativity and self-knowledge. This is the reason, a stumbling-stone which makes the teachers to avoid the Boss fight. Among their generational values are individualism, pragmatism, self-confidence and high self-esteem. If a particular teacher overcomes his internal resistance, he would be able to design a class with students based on the Boss fight. And it could become not just a component of gamification course, but the basis to create a narrative story as a way to organize the professional experience for students under educational framework.

## 6. Discussion

One practical example of the class based on the Boss fight game is a training course in PFUR “Copywriting: Custom Text Production Technology”. The goal of the course is to develop creative thinking, client-oriented (communicative) approach. The objective is to show the algorithm how to create the content. We shall note that this methodology is not universal, it cannot be used at all times, depends on the student’s team and personality and qualification of the teacher. It is the author’s version that however was implemented successfully.

The narrative story offered to the students at the first lesson was the story of Alice (Lewis Carroll’s Alice in Wonderland modernized version), who could become a copywriter, but, alas, did not possess minimal knowledge and had no textbook. This very textbook based was offered to be written to the groups of students and the teacher during the semester. This gamified situation allowed each student to become a hero, the author, to compete with the author-boss (the teacher). The introduction seminar was devoted to the discussion of the textbook format, but previously “creative groups” and the teacher got acquainted with one brief where the target audience, Alice herself, was described in details. Here there is a small fragment from it: “she is able to formulate her thought and she likes it. She has a couple of blogs on different platforms, she knows that it is possible to get paid for her writings, but never thought about it seriously; she is likely to spend some money on the book “How to become a new J.Rowling in three months”; she plays three musical instruments; at the age of 11 she wrote a song (music and lyrics) to her dad...”. When preparing the brief, the teacher pursued several objectives: to show an example of a document made by a copywriter (the training), to emphasize the importance of target audience (highlighting the important), to motivate and inspire students to follow-up (the awakening of the inner motivation). During the discussion of the future format of the textbook students noted that Alice looked like one of them which meant they were about to write the textbook by themselves and for themselves. This turn of the discussion gave the teacher the opportunity to show the possibilities and advantages of

crowdsourcing, practice that is widely used in modern journalism. It was also decided that the textbook would necessarily contain pictures and have a small size to fit in a handbag.

Afterwards the teacher suggested the overall concept of the textbook and gave creative briefs for each chapter. During the semester and university course of copywriting, the Boss and the Heroes created their own versions of the text and design of chapters. The culmination of the game was the presentation of complete textbook designed for the target audience (students of PFUR and MSU) and experts (professional copywriters). This presentation represented the Boss fight: invited guests evaluated the work and selected the winner by secret elections. The final sessions were devoted to the collective reflection on the gameplay. It is noteworthy that from the very beginning students welcomed the readiness of the teacher for the horizontal communication, the teacher to perform the role of first among equals. Students were also attracted by the opportunity to learn by teaching the others and explaining the subject to others. This experience was especially significant for the students who were finishing their studies in six months and preparing to start their career. The game “Boss fight” helped them to play over some of the real difficult situations which could have happened in creative teams. For the teacher the participation in the game also became a kind of training which helped to refresh and renew his skills. Experimental textbook based on the final results was published under the title “Game of Copywriting” (Volkova, 2014), and had two large sections: “View from the rostrum” and “View from the audience”. The final discussion showed that to get the victory over the Boss for the Heroes was not easy, as in any computer game. The secret weapon of students was perfect knowledge of the discourse of their generation, informal style, gamified way of thinking and skills to work in the Internet acquired from the early age.

For the teacher the most informative and useful part of the textbook was “How we did it” written by the students as the authors.

## 7. Conclusion

We believe that the model of gamified lessons based on the idea of competition between students and the teacher (Boss fight and others) could be useful for the university students during the last semester, just before the presentation of final thesis. This could be an opportunity to enter into adulthood and professional community, to understand that modern media are based on subject-to-subject relations and that the courage to accept the challenge and take responsibility for the decision is required. The main remaining problem to implement gamification in education is that the teachers themselves in most cases are not ready to change the subject-to-object paradigm of relations with the auditorium, being afraid to lose the power of “human valuer”. However, soon it will be necessary to answer new challenges imposed by the current “game generation”, as the competition in the field of education does not leave any chance to rely only on conservative methods.

## References

- Barr, R., Tagg J. (1995). *From Teaching to Learning: A New Paradigm for Undergraduate Education*. Higher Education, 60, Kluwer Academic Publishers, 13-26.
- Bartle, R. (2003). *Designing Virtual Worlds*. San Francisco: New Riders.
- Cabrera, C.W. (2014). *Game the Plan: Every Sales Rep's Dream; Every CFO's Nightmare*. Austin: River Grove Books.

- Chou, Y.-K. (2015). *Actionable Gamification: Beyond Points, Badges, and Leaderboards*. Fremont: Octalysis Media.
- Cruz-Cunha, M.M.(ed) (2012). *Handbook of Research on Serious Games as Educational, Business and Research Tools: Development and Design*. IGI Global.
- Desyaeva, N.D. (2013). *Pedagogicheskaja ritorika*. Moscow: Akademija. [in Rus].
- Dubbels, B. (2014). Play: A Framework for Design, Development, & Gamification. *InTensions Journal*, 4. York University (Toronto, Canada).
- Hunter, D., Werbach, K. (2012). *For the Win: How Game Thinking Can Revolutionize Your Business*. Wharton Digital Press.
- Karpov, A.V. (2004). *Psihologija reflektivnyh mehanizmov dejatel'nosti*. Moscow: Institut psihologii RAN. [in Rus].
- Lazutova, N.M., Volkova, I.I. (2013). Jeticheskoe i igrovoe v ustanovkah komunikatorov raznyh pokolenij. *Eur. Soc. Sci. Journal*, 11, Book 1, 285-291. [in Rus].
- Marczewski, A. (2015). *Even Ninja Monkeys Like to Play: Gamification, Game Thinking and Motivational Design*. CreateSpace Independent Publishing Platform.
- Pink, D. (2006). *A Whole New Mind: Why Right-Brainers Will Rule the Future*. NY: Riverhead Books.
- Scott, (2013). *Boss Fighting and Other Gamification Thoughts*. Blog Teaching From Here. Retrieved from <https://haselwoodmath.wordpress.com/2014/09/30/>
- Schrier, K. (2016). *Learning, Education and Games, Volume Two: Bringing Games into Educational Contexts*. Pittsburgh, PA: ETC Press.
- Shinkarenko, V.D. (2006). Struktura i funkcija igry. *Filosofija i obshhestvo*, 6, 96-116. [in Rus].
- Sutton-Smith, B. (2009). *The Ambiguity of Play*. Harvard University Press.
- Tennie, C., Call, J., Tomasello, M. (2006). Push or Pull: Imitation vs. Emulation in Great Apes and Human Children. *Ethology*, 112, 1159–1169.
- The Art Business of Making Games: Gamastura*. Retrieved from <http://www.gamasutra.com/>
- Volkova, I.I. (2013). Four Pillars of Gamification. *Middle-East Journal of Scientific Research*, 13. IDOSI Publications, 149-152.
- Volkova, I.I. (2014). *Homo ludens jepohi jekrannyh komunikacij*. Moscow: PFUR. [in Rus].
- Volkova, I.I. (2014). *Igra v kopirajting: Jeksperimental'nyj uchebnik*. Moscow: MediaPress. [in Rus].
- Zarubina, N.N. (2011). Povsednevnost v kontekste sociokulturnyh transformacij. *Obshhestvennye nauki i sovremennost*, 4, 52-62. [in Rus].
- Zichermann, G., Linder, J. (2013). *The Gamification Revolution: How Leaders Leverage Game Mechanics to Crush the Competition*. McGraw-Hill Education.