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Media technologies and virtual practices in creative approaches to educational training of a social worker

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Abstract. The educational system has undergone significant transformations in recent decades, the main catalyst of which is the development of the information sphere of society. Both individual elements and the structural, substantive content are modified and updated. Among the vectors that determine the dynamics and direction of this process is the growing socio-cultural role of modern media, which are based on digital technologies as a globalization platform and the main type of communication. The change of the information code - digitalization of the media sphere, creation of new media platforms of social interaction initiates the need to build an educational system that meets the demands of today. Among the many factors that are currently relevant in educational approaches are media technologies. Their role in the training of specialists in various fields is growing symptomatically, as it is associated with the functions of "new media", which for the subject of activity become transgressive guidelines for constructing reality. Educational and further professional activity of a social worker needs to be reconsidered in the context of innovative strategies, first of all formation of media technologies in social work. Their formation is based on modern principles of new media: interactivity of communication and gamification of virtual practices. In social work at different levels of activity of the representatives of this sphere, media competencies are in demand, which include mastery of instrumental methods of implementing game, virtual, art practices as a motivational resource, technology of initiating social activity, cultural-adaptive and creative orientation of social assistance clients. This issue includes the specifics of the profession of social worker through the prism of the possibilities of filling his case with a creative resource - the tools of media technology in social work. The article outlines both the potential of gamification and virtualization of media practices in the educational and further professional activities of a social worker, and points out the possible dangers of implementing these technologies for certain categories of people in need. The article is a research exploration in the formation of a professional strategy of a social worker based on the involvement of the latest media practices as an expansion of media tools, the implementation of a creative approach to helping the client of social services.

1. Introduction

Education as an institutional sphere of society is the basis of socio-cultural progress of the state, through its main mission in forming the paradigmatic foundations of its development, is in a state of continuous renewal and modernization. One of the reformation directions of recent decades is the informatization of education and the creation of a media education system, which is relevant today in various forms: distance communication, online courses, training webinars, scientific and practical conferences on appropriate media platforms etc. Among the various forms of media education, one of the most relevant

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is media technology as a tool for acquiring and testing the practical application of professional competencies of the future specialist. In the zone of experimental, not fully researched and not disclosed in its potential technologies of media education, there are approaches in which the semantic (educational, upbringing) element is the constructs of virtualization of reality.

Gamification processes are also gaining modernized, transformed in terms of updating media practices, as different forms of educational and professional activity of a social worker in a network environment based on virtual reality, interactive communication and digital technologies (L. Manovich [10]). These trends, in their coverage through the prism of the dynamic start of media education, have ambivalent characteristics. That is, in the case of a non-systemic approach and methodological disregard, there are significant risks of irresponsible implementation. First of all, it is the danger of social deformation in the measurement of educational, cultural aspects of educational activities. However, it is obvious that for many professions the involvement of these technologies in the system of educational training today is a popular and even necessary task in the context of prospects and requirements for creativity of specialists in various fields. Among those specialties whose representatives need an updated, modern arsenal of successful self-realization, technologies of instrumental enrichment of their own activities are numerous areas of social work. At the same time, the profession of a social worker belongs to a special field of activity, which cannot be exhaustively described by a set of professional qualities and competencies. Even the most complete list of knowledge and skills in this specialty will not be able to reproduce the core of the profession. Namely: the moral and spiritual strength of man, whose activities should always be at the epicenter of social pain, conflict and life tragedy. And the essence of the profession is not only to be close, but to help overcome difficult circumstances, always dealing with a special life event – someone's dramatic fate. That is, there is an obvious need for delicate training for social work, the balance of creative innovation and maximum awareness of those elements of communicative interaction, which have now become an important part of today's culture. The study and implementation in the educational sphere, both the methods themselves and targeted instrumental technologies in pedagogical, psychological creativity of various professional activities of a social worker determines the demand for understanding this problem.

The rest of paper is organized as follows. Section 2 reveals the names of famous researchers who studied the processes of informatization in education in the context of media education, media technologies in education, gamification etc. Sections 3 and 4 describes the aim, problem statement, methodology and research methods, which are used in the paper. Section 5 describes media communication as a direction of development of educational technologies. Sections 6 and 7 presents media technologies in education and social work. Section 8 reveals gamification as a modern educational media technology, and the next one (Section 9) – the virtual practices in the disclosure of creative, cultural and socially adaptive resource of media technologies in social work. Finally, the last one (Section 10) presents general conclusions to the paper.

2. Literature review

The problem of informatization of the educational process is currently one of the most studied in scientific discourse. At the same time, the pace and scale of digitalization of the socio-cultural sphere in general and its educational platforms in particular, are constantly increasing approaches, practices and tools, and therefore require new understandings and detailed study. Taking into account the direction and subject matter of the article on the system of media technologies in educational training and their further demand in the professional activity of a social worker, we conceptually relied on the ideas of the information age M. Castells [2], M. McLuhan [11]; ideas of the "fourth industrial revolution" of such scientists as K. Kapp [7], K. Schwab [19], K. Schmitt [18]. The principles of understanding the modern educational role of media technology were formed on base of L. Manovych's theory of "new media". The issue of media education is covered in the scientific works of R. Hobbs [5], C. L. Scheibe [17], F. Rogow. The phenomenon of the game in the cultural, socially constructive aspect was addressed by F. Nietzsche [12], J. Huizinga [6], R. Caillois [1], G. Ritzer [16]. The role of gamification of education is studied today by researchers of various scientific schools and methodological strategies, in particular,

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our views were formed under the influence of research by A. V. Tokarieva, N. P. Volkova, I. V. Harkusha and V. N. Soloviev [24]. An important vector of research is the numerical methods of the survey, in particular, those related to the self-reflection of the participants of the game interaction. According to the rules of the game, the subjects of activity register the details of the game process, which are factors in the formation of their qualities of 3D visualization, spatial thinking, developed imagination [3]. First of all, this applies to material presented using a certain semantic code in the content presentation. This area of theoretical research is reflected in the scientific works of such authors, as N. Vidakis, A. K. Barianos, A. M. Trampas, S. Papadakis, M. Kalogiannakis, K. Vassilakis ([13], [14], [26]). Features of virtualization of social reality are analyzed in various researches and concepts of many world scientists. In this article we relied on the work of the Ukrainian authors O. Kochubeinyk [8], L. Ridchenko [15], which is due to the mental, ideological orientation of the main trends in the formation of media reality through the tools of virtual practices in social work.

3. The aim of the article and problem statement

The aim of the article is to clarify the creative potential as a set of new professional opportunities in educational training and further activities of a social worker through filling and diversifying media technologies with innovative virtual practices and addressing the specifics of their gamification for further use in social work. To do this, it is necessary to consider the problem of media education, its current challenges, features of principles and technologies; clarification of the educational strategy for media literacy, that without denying the traditional understanding is considered by us in the context of various directions of application of virtual practices in professional activity of a social worker. It is also necessary to clarify the specifics of gamification and virtual practices both in the educational process and in the forms of media communication. The creativity of the approach appears in the two-dimensional focus of the objectives of this study. First, the identification of socially harmonizing, value-oriented prospects for the development of creative activity of media entities. Second, awareness of the role of virtual and gaming practices in the thesaurus of the social worker's professional case as a necessary technology, but not one that compensates for the live communication and human concern that underlies this activity.

4. Methodology and research methods

The methodology of the article is conditioned by the need to conceptualize the problem of introduction of educational technologies of "new media" in the training and professional activity of a social worker. The integrative, complex approach is based on the general scientific theoretical methods used in research of this problem: a method of convergence from abstract to concrete: through categorical comprehension to conceptual judgment; method of analysis and synthesis: through theoretical reflection of individual elements of the problem (principles of "new media", features of gamification and types of media practices) to the dialectical synthesis of general, individual and special in the areas of social work. The method of imaginary experiment to identify the risks and dangers of certain media technologies in connection with the specifics of certain social groups – clients of the social worker. Also, a method of comparison, as a way of drawing analogies in the educational effectiveness of creative media practices.

The life of a person with special health conditions, certain socially complex contexts, tragic events and many other insurmountable circumstances is always dependent on the immediate environment. In fact, this nature of lack of freedom, in addition to the pressure of life's circumstances, is a factor in the suppression of both human dignity and social activity, belief in their own ability to be in demand, find their purpose, achieve a goal, etc. Understanding this state of affairs and creating conditions for overcoming them should be the basis for ensuring social health, moral climate in the establishment of public relations. In other words, society as a complex single organism develops harmoniously when it is aware of the problems of vulnerable groups of the population as their own, rather than others, superfluous and extraneous. The implementation of this strategy is the basis of the mission of social work, from the formation of public awareness in this regard to the system of development and

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implementation of social protection programs. That is, the professional field of this industry is multi-vector.

There is also an aspect of popularization of value factors, targeted care, effective assistance as a modern attitude of civilized society to vulnerable groups. Also, the initiation and implementation of various programs, projects in a synchronized system of accumulation and adequate allocation of resources (administrative, legislative, financial, etc.) in the prevention and timely assistance to those groups of people who need it. But the main and most difficult direction is direct work with victims, people with disabilities, with those who have survived or are in a situation of social trauma and life tragedy. In this area, specialists are most acutely aware of the need for new developments of medical, technical, psychological nature, which would help and improve the quality of care.

The process of increasing the technologies of social assistance, improving its means has another extremely important professional motivation in relation to the social workers themselves. Their work is most often associated with social problems that do not have the potential to overcome them in the long run. That is, specialists in this field, providing assistance, only in some cases get the result in the form of a resolved, overcome situation. If we compare in the psychological aspect with the profession of a doctor, then recovery does not occur: no matter how much effort is made, they can remain forever. Social assistance is not a solution to the problem, but a qualitative improvement of certain life circumstances in which a person finds himself. Self-identification of this fact by a social worker can lead to professional deformation of the personality: either burnout, or vice versa – distancing, alienation from human needs, indifference to the suffering of others. Thus, the content of the process of providing assistance, diversification of resources, activation of resources, new technologies acquires not complementary but stimulating value in social work.

All these areas of professional activity of a social worker require special attention to his professional training, education – mastery of the arsenal of modern technologies and media literacy. In fact, the vector of media competence appears today as a means, and as a goal, and as an element of the system in various approaches and educational technologies. In particular, these are pedagogical trajectories along which education moves in the organization of the process of acquiring knowledge: information and communication, design, game, case technology, etc. Currently, given the growing role of media education not only as a complementary, and therefore participatory – involved (online courses, virtual workshops and laboratories, etc.) to participate in the educational process, but also a self-sufficient system, there is a need for scientific, methodological structuring of media resources as educational technology. This issue is especially acute in connection with the situation of global challenges and dangers of health (pandemic) and environmental (man-made, climatic threats) nature [20]. Thus, the context of the reality around us stimulates: first, to define and systematize media practices as a structure, methods and mechanisms of educational technologies, first of all, in relation to the goal set in the article – in training a social worker, and secondly, to dwell on those technologies in media communication, which form creative horizons and the latest opportunities to improve the effectiveness of social work.

5. Media communication as a direction of development of educational technologies

The fourth industrial revolution determines the essential transformations in the education system, in particular in its higher level. On the political map of the world, the pace of educational change varies: some countries are only on the verge of digitalization of education (Ukraine); others successfully implement new educational technologies, primarily through distance education formats as an alternative to traditional learning (USA, Switzerland, UK); the third are among the countries that set the educational guidelines for the rest, because these countries are actively promoting the digital transformation of education (Singapore, Malaysia).

In fact, since the 19th century, educational postulates about teaching methods, the role of teachers in most countries have remained unchanged. Today, the professional profile of a teacher is no longer limited to the functions of a lecturer with an academic education, as he must have real practical experience and act as a mentor (educational coach) for his students. If before the teacher could be a monopolist of knowledge, now his task, no less valuable and important, is to be a facilitator, those who

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help students to understand the array of information, in particular, through the procedures of processing and analysis of the latter. Instead, the digitalization of education brings profound changes in both the above aspects and actualizes the emergence of new components of quality assurance in higher education, including the emergence of Smart Small Lab, the development of "smart peripherals"; holography and virtual reality as an alternative to modern educational e-books [9]. Educational institutions of Asian tiger countries (South Korea, Singapore, Hong Kong, Taiwan) use smart-tables connected to the smart-screen, smart-boards, 3D-visualization and holograms, etc. in the educational process. A striking example of a new type of educational institution is one of Singapore's schools called Ngee Secondary School, where students do not use electronic textbooks, replacing them with devices with modern digital technology.

Nowadays students, in our opinion, should learn at least two languages, in addition to the native (state): English and computer, the use of which will take place behind the school / student bench. That is why the list of educational competencies acquired in the education system includes "soft skills", "hard skills" and "technical skills" [21]. In particular, we are talking about the existing schools today, where the implementation of educational inclusion involves the virtual presence of children with disabilities (or children who are absent for other reasons) in the classroom through VGO-robots.

Quite often there is a confusion of online education and distance education, due to the fact that both forms are the result of the process of digitalization in this segment. Online education involves the acquisition of new knowledge, often in the non-formal education system, through the use of modern information and communication technologies (online courses, virtual lectures, videos of workshops, trainings, etc.). Instead, distance education is a specially organized online system for the implementation of the educational process, which includes an information environment with the presentation of the content of training courses and the support of a teacher (mentor, facilitator) [22].

Also, quite often the process of digitalization of education can be reduced to the use of various video conferencing / video meeting services, such as Skype, Zoom, Google Meet. However, these services should be understood as effective technical capabilities for virtual communication and information exchange, but not as learning platforms, providers of digital education. To achieve meaningful educational goals, new platforms for distance education exist and are being created, on which the idea of "digital education" can be properly implemented.

For its implementation there are all the necessary conditions. The media sphere of society at the beginning of the third millennium includes various forms and means of communication, cultural texts and complex landscape of information space integrated into the system of "new media" (L. Manovich), based on digital technologies and in accordance with the updated capabilities of the global communication network – modern practices of social interaction. "New media" changed the value-semantic context of the landmarks of civilization, as they affected, provided information principles and communication platforms to various social spheres and forms of culture.

In this context, it is important to emphasize that it is wrong to identify "new media" with the multimedia of global network communication. Since digital technologies, the structure of media is a system of information development of society, while "new media" [10] is a way (algorithm) and principles of creating media content. That is, "new media" is not a list of new means of communication, but other approaches in the interaction of real reality (world of things, cultural artifacts) and "real virtuality" [2] – designing media objects not as duplicating and improving them material prototype, and those that do not depend on it. The basis of this autonomy is the digitization of information: reality, translated into the language of digital code, does not require "communication" with the original source. That is, in order to improve your image in the photos there is no need to make more and more photocopies. It is enough to use programs that can not only transform the image, but also create a new story: travel, friends, family, interior design, etc. At the same time, do not choose from the options available in the program, but create at your own discretion and taste. None of the above and depicted in real life existed (at least in this form), but there is no longer an obstacle in the form of a connection between two realities: real and virtual. This example illustrates only one of the algorithms of "new media", but there are many more, and they are all related to the virtualization of "screen" content and

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even the leveling of the "screen" barrier in the flow of different "worlds" as modules of modern media reality.

Today, it is easier to name those segments of our existence that remain outside the media sphere than to list those that have moved into digital reality and become entrenched in its media system. It is symptomatic that the first list, if it takes place, will be incomparably smaller than the second. From the first years, or even months after birth, from children's toys, which are accompanied and provided by the process of socialization, a person enters the world of dual combined reality: real, in which complex space is organized, natural colours of material things, no clear visual and sound structure; and the other is a media, virtual reality with a bright screen conciseness, pleasant tactility of gadgets, stereo sound and a slowly fading ban from parents. We have all often witnessed how difficult it is to "exchange" a smartphone for the most attractive toy if it suddenly falls into the hands of a child. We will not analyse the educational aspect of this issue, but as a psychological fact it is representative information of the child's obvious interest in such a presentation of the world, the way of acquaintance with it and the statement of today's media reality of culture in the construction of living space.

Education as a system of organization of the educational process has various directions of its development, one of which is the vector of media education. Modern pedagogical methods, educational technologies are focused on the use in a certain proportion and appropriate content of information and communication resources of the media. This undoubtedly changes, diversifies, accelerates and scales the interaction of those curricula aimed at attracting media platforms of educational communication. However, despite all the changes, this process remains within the framework of an expanded, branched, but educational structure. At the same time, the use of the principles of "new media" involves the reformatting of the educational process in the aspect of media technologies.

6. Media technologies in education

We understand media technologies in education as a comprehensive approach consisting of an instrumental resource for implementing the principles of "new media". This approach is aimed at interactive interaction of communication subjects, to minimize the information load (memory of the subject of activity, computer memory), significant, favourable (in the implementation of individual needs, ideas, meanings, etc.) assistance in the form of "artificial intelligence", as a consequence – saving time, addressing the intellectual resource for the implementation of creative curricula and project goals of a cognitive nature. The digital, programmatic potential of "new media" is focused on the development of thinking that enables virtual, but does not allow real reality. For example, media technologies form stereoscopicity and stereophonic perception of reality in the dynamics of movement, change, development. This question is explored in the works of such scientists as N. Vidakis, A. K. Barianos, A. M. Trampas, S. Papadakis, M. Kalogiannakis, K. Vassilakis ([13], [14], [26]).

Computer intelligence helps the human mind "look" ("hear" and "see") at the problem (object, thing, interior design, complex system as a whole and as individual parts, modules, etc.) simultaneously in different angles, at different distances, many time measurements, etc. That is, what is absent for a person at the level of sensory, perceptual – physical, bodily data, and hence analytical, critical thinking, is designed by the digital code of modern programs. The specificity of "new media" involves multidimensionality in the implementation and online control over the process, stages, individual elements and results of creating a media product. The correction itself is possible without interruption in the operation of this product. And it does not depend on its format and scale of changes in the form of constant information updates, improvement of web design (site, page), etc. Also, the process of working with "new media" makes it possible and aimed at ensuring that joint activities in intersubjective communication realize the synergy of the creative efforts of the team.

The principles of "new media", and therefore the basis of the approach in the organization of media technologies of education, are controversial in relation to traditional educational methods. Thus, there is no motivation to memorize a large amount of information, criteria and implementation of the choice of available options, repetition as assimilation and consolidation of the material. A transparent system and clear mechanisms for quality control of the acquired knowledge are also impossible. In other words,

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to incorporate media technologies into the classical structure of education, even the one that operates today with elements of distance learning courses, media programs, online learning, is problematic. Those milestones, meanings and landmarks that appear as a structural, semantic basis of education, need to be transformed in terms of media technology.

Thus, the introduction of media technologies in the educational process should have fundamentally different goals than training and education in the traditional sense of socio-cultural development and professional growth. Conversely, it is impossible to implement an educational project of intellectual training of a person in terms of basic knowledge, fundamental guidelines of the world, perceiving media technology as an adequate replacement for classical education. In our opinion, unlike other technologies available in education, which implement the modes of its social existence or have a complementary nature of the development of many competencies, modern media technologies reveal those aspects of personality that focus on the civilization of information society: patronage and human interaction over "artificial intelligence" and the complementarity of virtual (augmented, mixed) and real reality in today's social, scientific and art practices. Thus, media technologies for education are a way to actualize new modalities, current meanings of its social, cultural functioning.

7. Media technologies in social work

The activity of a social worker as a readiness to implement professional competencies today requires a dynamic increase in media literacy, in which a special professional resource is media technology as a system of updating the modalities of "new media". The complex of media technologies in social work must be considered from different angles. First, the potential of interactivity as a principle of functioning of "new media". Social workers, receiving a specialty, develop their professional activities in a functioning structure of social services. They fall into a certain team with an established tradition, existing corporate relations, development strategies and more. Social workers are involved in this process in accordance with their job responsibilities. Thus, their acquired competencies are transformed, clarified and built into the established process of social assistance.

Among these competencies, there are obviously those that are becoming more popular in accordance with the industry specifics, the profile of activities, and those that are minimally or only situationally relevant. However, young professionals inevitably face a situation where they cannot fully understand what skills are needed in a given situation – their single efforts, minimal experience may be in vain in solving an urgent problem. However, the interactivity of communication and media interaction not only in the corporate structure, but on various information platforms, websites (with symbolic capital in the form of integrity) provides opportunities for rapid synergy, accumulation of their own professional efforts, supported by colleagues from other organizations and countries in globalized information network. In fact, it is a combination of ambulance strategy and long-term social care, in which the interactivity of media technologies becomes crucial in the incorporation of professional experience, the implementation of modern methods and approaches in social work.

The same principle of interactivity is also key in working with social assistance clients: the basis of prompt response to possible crises and a form of discursive communication, when initiative, ideas, motivation of demand, stimulate the participation of people in need of care. Secondly, the principle of gamification and thirdly, the virtualization of reality in the form of media in social work. These modalities of media technologies are multidimensional, so they need further separate consideration.

8. Gamification as a modern educational media technology

Modern students have such close contact with digital technologies that teachers are faced with the challenge of adapting established approaches to the educational process and the content of the proposed knowledge to the educational needs, preferences and requirements of the younger generation. Teachers should use teaching methods that allow students to be active participants in the process with strong motivation and interest in testing their own strengths in achieving specific educational goals. Under such conditions, the need for the development of the latest pedagogical paradigm, the components of which would take into account modern trends in education, is objectively formed, and one of these components

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is the gamification of learning. The study of this educational tool should begin with the definition of the concept.

In modern scientific discourse, gamification is considered as a process, method and result in relation to a number of areas of human activity. According to Karl M. Kapp, this is "the use of game mechanics, aesthetics and game thinking to attract people, motivate them to action, promote learning and problem solving" [7]. Thus, gamification involves the use of game thinking, approaches and elements in a context other than the game itself. Its main purpose is to improve motivation and learning in formal/informal conditions. Gamification integrates elements of play and game thinking into non-game activities. It is also important to emphasize that it is not essentially related to knowledge, skills, abilities, but to motivation, commitment and influence on human behaviour.

The role of the game, as the beginning of culture, the origins of sociality, was studied in detail by J. Huizinga [6]. The author reveals the nature of game motivation in the formation of social interaction in various social systems and institutions in terms of organization of space, context, meanings of culture. J. Huizinga studied the universality of game thinking, modes of play as a phenomenon of integration of biosocial constants of culture and at the same time the uniqueness of civilizational design (through ritual, art, education, upbringing, sports) of various elements of game impulse of culturogenesis: rules, participants, plot, support system, encouragement and punishment for violating the rules. The dialectic of creation, implementation (reproduction) and destruction of the game reflects the socio-cultural dynamics of civilizational progress of mankind. Thus, the gamification of the media has deep ontological foundations in the organization of cultural space, today it is a multimedia information sphere of network communication of society.

The structure of the gamification process is embedded in the following elements: players (workforce in the case of enterprises; pupils / students – in educational institutions); tasks to be performed by players to achieve specific goals; points that players receive in case of successfully completed tasks; levels that record the progress of players in the implementation of tasks; honours that players receive in addition to points for successfully passing a specific task; ranking of players, depending on the level of their achievements.

According to Gabe Zicherman, the use of game mechanics in the learning process can increase the level of information assimilation by 40%. In addition, it is gamification that has a positive effect on motivation and an overall positive attitude to the processes in which a person is involved. All this fully applies to education, as the main problems in this area are related to the insufficient level of both students in our education. One of the effective ways to change this situation is the introduction of rewards for results and efforts (not everywhere), which stimulates learning and creative activity, and is based on the use of game approach and game elements [4].

Dissemination and integrated application of ICT in education (E-learning) has created a favourable environment for the implementation of gamification both in content (game as an element of the educational process) and in the organizational (educational game becomes more accessible to students; processing, accounting tasks, generating reports are simplified) measurements [25].

The integration of game elements into the education system seems quite a logical step, because in the case of traditional play and learning, participants realize that achieving the goal involves consistent implementation of a successful strategy, and in this way, the quality of each step based on quality at the achieved level of knowledge and skills of "players". Also, gamification, used in group forms of learning, promotes the development of such "soft skills" as the ability to command procedural activities, basic mediation skills, personal and group time management, etc.

The specifics of gamification in media technologies of social work have important semantic differences. To establish them, a certain familiarization stage is necessary, on the results of which a social worker can rely in his activity. Methods of empirical sociology (surveys, questionnaires, interviews), and in the case of a social worker – the usual conversation with elements of psychological test, then monitoring the client's attitude to the elements of gamification in education, leisure, creativity, it is necessary to clarify the general client's attitude to this form of interaction. In those areas of social activity where age groups, whose mental maturity coincides with one or another form of play, the

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recommendations for the introduction of these technologies are clearly positive. The main issue is the problem of selection and diversification (with different educational, adaptive, educational goals) of the repertoire, and hence the creation of the amplitude of gaming technologies with a moderate (in terms of mental, cognitive, physical capabilities) balance of media games. It is important to note in this context that the variability of gamification in media communication can be directed towards the "translation" into the score of modern media samples of intellectual game, whose ideas are related to the famous examples of Hermann Hesse "The Glass Bead Game" or Lewis Carroll "Through the Looking-Glass, and What Alice Found There", etc. In these works, the game is not a form, a genre, but acts as a semantic motivation for the development of the plot, the direction of communication. In our opinion, such guidelines for gamification of media practices will be especially valuable in cases of a social work with clients, for whom such an arsenal of cultural experience is a need for creative development, personal spiritual enrichment. It is a completely different matter when it is necessary to solve the problem of working with those social categories whose life context excludes the assumption of playfulness of their problems, as the client of social assistance can interpret it as bullying, moral humiliation by a social service agent. Therefore, a phase of preparation is needed, leveling the line between the game and the life situation with the use of highly qualified psychological support. Psychological, psychoanalytic training is the foundation of a positive communicative climate: building trust between the representative of the social service and the person being assisted, establishing its individual characteristics and more. These include the causes and consequences of life trauma, as well as creative inclinations, aesthetic preferences, strong artistic impressions, images of heroes and more. The reference points of the typology of social models of media game are the philosophical and cultural concepts of F. Nietzsche about combination of Apollonian and Dionysian principles of culture [4]; R. Caillois's theory on rational and irrational in the social structure of the game [1]; J. Huizinga's theory on sacralization and desacralization of game [6] and other studies of the specifics of modern virtual game practices, including Ukrainian author O. Kochubeinyk [8].

The semantic core of the game, as form and method in social work technologies is the realization of creativity of the subjects of the game, passing through virtual labyrinths, encountering and experiencing the absurdity of the situation, etc. without evaluating (except in terms of the rules of the game). "Only by denying the opposition "real – pseudo", "existing – imaginary", "reality – fiction" we can understand the game of conventions in which a person plays to assemble his possible world from the many options offered for choice in the social constructor" [8]. That is, the result is a deeply psychological, therapeutic effect of immersion in the reality of the game. Defining a favorable, individually selected context and joint, team interaction in the inclusion of elements of media practice to their gradual diversification by game models provides significant advantages in advancing the subjects (employee and client) of social work towards solving the problem, its reassessment as a life situation. The advantages of media games as a method in the complex of social work technologies are as follows: aestheticization (visual, semantic intensity) and virtualization of this form of communication removes barriers of intolerance, immerses in another socio-cultural context and motivates creative activity of participants. The dangers are associated with the risks of over-indulgence in such practices and reverse transfer – playfulness [16], virtualization of real reality. Thus, game methods in the use of media technologies are an important modern and requiring high professional training (primarily in terms of risk control), tools in competence, thesaurus of the professional case of a social worker.

9. Virtual practices in the disclosure of creative, cultural and socially adaptive resource of media technologies in social work

The role of virtual practices in the educational segment of media technologies is multi-vector: in the elements of the organization of educational space; in terms of inclusion as a collective interaction in the situation of online and distance education (these aspects were discussed above); as a simulated reality – a way to gain professional experience (e.g., surgeons, pilots, representatives of other specialties), etc. This fact of the multifaceted role of virtuality is further enhanced by the heterogeneity of understanding the term "virtual reality". Even in the context of modern discourse on the problems of information space,

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this phenomenon is interpreted as an improved, artificial and imitative media reality of the possibilities of constructing information and semiotic worlds [23].

In this article, the application of the connotation of "virtuality" was narrowed down to the instrumental implementation of the principles of functioning of "new media". In fact, the professional resource of virtual practices in social work is associated with life-synchronizing, adaptive opportunities in working with social assistance clients. Focusing on the modality of "new media", virtual practices provide opportunities to search for the plurality of the subject's self-identification, variability of life scenarios, reveal "...the possibility of the existence of man-made worlds either through sensations or through use information and other technologies" [15] – thus destroying the constants of negative previous experience as doomed and fatal. For example, this applies to victims of domestic violence, terror, people who have experienced deep shocks from military conflict, forced migration, etc. Virtual practices with a change in the perception of reality, with new sensory experience focused on the mental structures of the human psyche, tectonic shifts in behavior and the search for new guidelines for constructing their own worldview.

An important aspect of media literacy in the use of virtual practices in social work is the dangers associated with possible psychopathologies of the ward. Those conditions that have a medical diagnosis of schizophrenia, psychosis, hysteria, etc. are prohibited from implementing any techniques and tools of virtual reality. Thus, this is a matter of a different professional qualification, so the practice itself with elements of virtual technology can take place under the auspices of a team of specialists with the obligatory consultation of a psychologist. In the absence of a prohibition, virtual practices as a tool of media technology are an effective mechanism for awakening and realization of creative activity of the individual.

Of particular interest in terms of creative approaches in social work and the multiplicity of experimental explorations in the space of virtual reality are practices in which subjects of media activity are co-creators (based on a favourite literary/film plot) of modern audiovisual texts with complex semantics of "new media" and "new semantics" and experiencing their own presence in cyberspace and time (with the "physical" characteristics that they endow this reality). Modern children's animated films can be an inspiring experience in implementing developmental virtual practices for social work with children's audiences. For example, the film "Sonic the Hedgehog", where the main character – a blue hedgehog – enters different worlds through the ring that opens the space. The peculiarity is that moral, social and cultural factors are unchanged for each of the "worlds", but these constants hold expanded ideas about reality: the impossible is possible, the imaginary – real. For other age groups, modern cinema also has many examples of high-quality content that adapts the viewer to the meanings of virtual reality. Virtual practices focused on such a development strategy combine elements of spectacular aestheticization of cinema and animation in the form of virtual art practices. So, a person acts as a cocreator (through virtual communication) of a certain artistic reality and at the same time gains experience of new sensory and cathartic identification with the experiences and shocks of his/her own characters.

10. Conclusions

Thus, considered current opportunities, new technologies for training and further professional activity of a social worker in the context of the dynamically growing importance of media education provide grounds for further generalizations. Media education as an existing segment of the socio-cultural space is present in various forms and stages of information technology implementation in many regions of the world. Together with its participatory, auxiliary embedding in the traditional education system, the educational function of media technologies, which present the principles of "new media", is actualized. Among these principles of professional demand in the activities of a social worker are platforms of interactivity, gamification and virtualization of reality. Under the conditions of appropriate qualification and media literacy of the subject of communication, media technologies in social work provide professional tools for a specialist in this field. Identification of socially harmonizing, value-oriented prospects for the development of creativity of subjects of media activity in the field of social work is made by extrapolating the experience of gamification in educational communication and virtualization

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and aestheticization of media practices in the forms of social interaction. Thus, the case of a social worker is considered in terms of acquiring creative tools. Their activities are aimed at interactive interaction as a professional discursiveness and synergy of problem solving.

A separate conclusion is needed for transgressive experience, which is related to the specifics of the use of virtual practices in social work with certain categories of the population. Regarding this set of media technologies, we emphasize the dangers and risks that are related to the mental status of the client of social assistance, so the essential basis for their implementation is teamwork with a psychologist. For those groups - clients of social work, whose state of health allows the involvement of virtual practices, experimental explorations in the field of virtuality can become a reliable basis for the formation of new positive experiences, expanding horizons of self-identification and motivation of social and creative activity. The universality and at the same time the exclusivity of the targeted application of gamification in education acquires specificity as an element of media technologies. The main feature of the game practice, which directly reflects the task of social assistance is the lack of goal-setting outside the rules of the game itself.

Thus, the projectiveness of intentions is not extrapolated beyond the game virtual space, which distances the subject of communication from the trauma of life situations and immerses in a maze of creative search, understanding of the proposed rules and game circumstances. This mechanism, combined with an individual approach, the potential benefit to the client who is provided with social assistance, his further social adaptation are important factors in this area. While researching the principles of designing virtual and art practices, we found out that the basis for involving the client in the communicative process is the existing cultural, literary and cinematic experience. On its basis, in the process of live communication, the social worker forms creative guidelines for further social interaction with the person being assisted. Thus, media technologies today reveal new perspectives in the activities of a social worker, form the conditions of social activity and demand of each person.

References

- [1] Caillois R 2001 Man, play and Games (Urbana-Chicago: University of Illinois Press)
- [2] Castells M 1996 *The rise of the network society* (Oxford: Blackwell Publishing)
- [3] Demirbilek M and Koç D 2019 Using Computer Simulations and Games in Engineering Education: Views from the Field CEUR Workshop Proceedings 2393 944–51
- [4] Giang V 2013 "Gamification" techniques increase your employees' ability to learn by 40% Business Insider URL https://www.businessinsider.com/gamification-techniques-increase-your-employees-ability-to-learn-by-40-2013-9
- [5] Hobbs R 2020 Propaganda in an Age of Algorithmic Personalization: Expanding Literacy Research and Practice *Reading Research Quarterly* **55**(3) 521–33
- [6] Huizinga J 2016 Homo ludens: a study of the play-element in culture (New York: Angeliko Press)
- [7] Kapp K M 2012 The gamification of learning and instruction: game-based methods and strategies for training and education (New York: John Wiley & Sons)
- [8] Kochubeinyk O 2012 Dyversyfikatsiia realnosti i stratehii hry v zhyttiekonstruiuvanni osobystosti Naukovi studii iz sotsialnoi ta politychnoi psykholohii **31** 20–8
- [9] Lavrentieva O O, Arkhypov I O, Kuchma O I and Uchitel A D 2020 Use of simulators together with virtual and augmented reality in the system of welders' vocational training: past, present, and future CEUR Workshop Proceedings 2547 201–16
- [10] Manovich L 2001 The language of new media (Cambridge, London: The MIT Press)
- [11] McLuhan M 2015 Mito y medios de masas *Palabra Clave* **18**(4) 1009–22
- [12] Nietzsche F 2017 The birth of tragedy or hellenism and pessimism (New Delhi: Kalpaz Publications)
- [13] Papadakis S and Kalogiannakis M 2017 Using gamification for supporting an introductory programming course, the case of classcraft in a secondary education classroom *Interactivity, game creation, design, learning, and innovation* pp 366–75
- [14] Papadakis S, Trampas A-M, Barianos A-K, Kalogiannakis M and Vidakis N 2020 Evaluating the

1840 (2021) 012055 doi:10.1

doi:10.1088/1742-6596/1840/1/012055

- Learning Process: The "ThimelEdu" Educational Game Case Study *Proc. of the 12th Int. Conf. on Computer Supported Education* vol 2 ed H Lane S Zvacek and J Uhomoibhi pp 290–8
- [15] Ridchenko L 2015 Virtualni praktyky u systemi postneklasychnykh praktyk *Visnyk Natsionalnoi akademii kerivnykh kadriv kultury i mystetstv* **2** 16-19
- [16] Ritzer G 1996 The McDonaldization of society: an investigation into the changing character of contemporary social life (Thousand Oaks: Pine Forge Press)
- [17] Scheibe C L 2004 A deeper sense of literacy: Curriculum-driven approaches to media literacy in the K-12 classroom *American Behavioral Scientist* **48**(1) 60–8
- [18] Schmitt K 2014 Top 5 Reasons Why Industry 4.0 Is Real And Important *Digitalist Magazine* URL https://www.147infinity.co.za/wp-content/uploads/2018/11/Top-5-Reasons-Why-Industry-4.0-Is-Real-And-Important Final .pdf
- [19] Schwab K 2017 The Fourth Industrial Revolution (Cologna: World Economic Forum)
- [20] Semerikov S, Chukharev S, Sakhno S, Striuk A, Osadchyi V, Solovieva V, Vakaliuk T, Nechypurenko P, Bondarenko O and Danylchuk H 2020 Our sustainable coronavirus future E3S Web of Conferences 166 00001
- [21] Semerikov S, Striuk A, Striuk L, Striuk M and Shalatska H 2020 Sustainability in Software Engineering Education: a case of general professional competencies *E3S Web of Conferences* **166** 10036
- [22] Shokaliuk S V, Bohunenko Ye Yu, Lovianova I V and Shyshkina M P 2020 Technologies of distance learning for programming basics lessons on the principles of integrated development of key competences CEUR Workshop Proceedings 2643 548–62
- [23] Syrovatskyi O V, Semerikov S O, Modlo Ye O, Yechkalo Yu V and Zelinska S O 2018 Augmented reality software design for educational purposes *CEUR Workshop Proceedings* 2292 193–225
- [24] Tokarieva A V, Volkova N P, Harkusha I V and Soloviev V N 2019 Educational digital games: models and implementation *CEUR Workshop Proceedings* **2433** 74–89
- [25] Vakaliuk T A, Kontsedailo V V, Antoniuk D S, Korotun O V, Mintii I S and Pikilnyak A V 2020 Using game simulator Software Inc in the Software Engineering education *CEUR Workshop Proceedings* **2547**, 66–80
- [26] Vidakis N, Barianos A K, Trampas A M, Papadakis S, Kalogiannakis M and Vassilakis K 2019 Generating Education in-Game Data: The Case of an Ancient Theatre Serious Game *Proc. of the 11th Int. Conf. on Computer Supported Education* vol 1 (Heraclion: Springer) pp 36–43