

Psychological and Pedagogical Expertise of Virtual Content of Games (VR-Games)

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Abstract

The necessity of conducting a psychological and pedagogical expertise of the virtual content of games, assessing its impact on the psychological safety of students on the basis of the positive psychology of virtuality is substantiated. A review of studies of psychological virtual reality in modern domestic psychology is provided, its functions are determined, positive and negative characteristics of the influence of virtual content of games on personality development are described. The revealed features of virtual reality technologies open prospects for the development of the concept of psychological and pedagogical expertise of virtual content of games in the system of lifelong education.

Keywords: Positive Psychology of Virtuality, Virtual Content, Play Activity, Virtual Play Situation, Imaginary Play Situation, Cyber-Communication, Virtual Identity, Psychological and Pedagogical Expertise

Introduction

The topicality of the research topic is connected with the fact that the personal and professional self-realization of the younger generation is increasingly influenced by the virtual interactive environment. As a result, the models and forms of interpersonal interaction and communication are transformed, new psychological constructs that reflect the virtual world and provide interaction with psychological virtual reality, are formed [1-3]. There emerged a necessity of a search for ways to use virtual reality in education and human development in a situation of transformational processes [4-6].

The virtual space offers a brighter, more interesting and "real" existence to younger generation, it forms a new cultural environment, projects new age, gender, social and other statuses. The massive nature of virtual games not only forms a new way and style of life, restructures value orientations, but also creates conditions for the formation of a new type of modern man - Homo Mobiludens, characterized by a new type of communication and new personal characteristics that allow him to successfully join the virtual space and real sociocultural situations [1, 7, 8]. The researchers note that the change in the form of presentation of game action in computer games has led to qualitative changes in perception, involvement in the game, and game behavior among users. There is a necessity for a theoretical understanding of not only a new phenomena, but also a criteria for assessing its safety

for the younger generation, with the aim of organizing psychological support for the positive development of personality [4, 9-11].

Research Overview

It should be noted that, there is not enough attention to the study of theoretical and practical problems, as well as the development of the conceptual construct associated with modern information technologies, in modern domestic psychology. Psychological virtual reality is considered by researchers as a complex of emotionally colored perceptions and representations perceived by social subjects as a relatively holistic picture of the content, interconnection and dynamics of virtual objects available to them, their interactions and relationships. Personal psychological virtual reality is understood as a set of virtual information arrays (fragments of computer virtual reality) perceived by a specific social subject and reflected in his psyche. As a result, the user acquires an interactive virtual experience, including a set of knowledge, skills and abilities to use a computer interactive environment, tested by a social subject and ensured the successful implementation of the assigned tasks [12, 13].

Psychological virtual reality serves the most important functions of orientation and optimization of reflection and perception of virtual "worlds" in which the user is a participant. In the process of virtual socialization as a person's entry into interactions and

relationships with virtual subjects (real people, fictional characters and images), such functions of psychological virtual reality as motivational, communicative, pragmatic, axiological, fulfillment of needs, focusing attention, stereotyping virtual interactions, psychological defense, prevention and neutralization of conflicts have an ambivalent effect on personality development [14]. Therefore, one of the tasks of our research is to formulate ideas of the possibility of optimal use of the potential of virtual reality in play and educational activities to ensure the psychological safety of the personality of students.

Virtual game activity as a type of digital activity is characterized by a borderline state between positive relaxation, developmental, training impact and digital game addiction [12, 15]. The multifarious virtual world of computer games has a positive effect on personal and group identification, and increases satisfaction from being included in the reference group. Participants are allowed to correct behavioral reactions in accordance with new situations and rules of the game, to get missing feelings and emotions, by game interaction. In order to do that, developers of computer games create gaming devices that affect such sensory organs as eyes, nose, ears, skin and vestibular apparatus, using virtual reality headset with a spherical view of the virtual environment and sound effects, gloves and suits with the ability to perceive tactile information, attachments that simulate smells in accordance with the broadcast image during the gameplay.

Initially in the process of playing activity in VR, the functional traits, functional knowledge, functional motivation, abilities, and other components of the personality initially change most significantly. Then the structure of basic personal properties, needs, components of the "I" image is transformed. During long-term work in gaming environments with the use of avatars, users experience the effects of presence, superpower (unconscious mixing of the qualities inherent in the avatar and the natural body), confabulation (increasing the realism of the virtual environment), which leads to the emergence of dependence on the gaming virtual environment [1, 16].

Virtual worlds are attractive because they provide an opportunity for self-realization, overcoming physical affliction and compensation for various complexes. As a result, virtual worlds can be far more attractive to many users than the real world. In this case, the center of localization of interests, goals, values and motivations is transferred from ordinary reality to virtual reality. Ordinary true reality is narrowed for virtuals to a physiological minimum, which leads to complete desocialization, loss of family, professional and friendship ties in ordinary true reality [14].

Russian researchers argue that excessive passion for computer games can lead a user at any age to changes in the structure of the self-construction, the emergence of additional forms of identification, in cases where the character of the game becomes an image that distorts the identification process and has a negative impact on the formation of personality [2, 8]. The anonymity of the virtual world leads to a decrease and even loss of a sense of responsibility, morality, devaluation of one's own self. A virtual game represents a simulacrum of activity, increases the instability of physical and psychological states, provokes the develop-

ment of gambling addiction, leading to personality deformation [1].

The problem of interaction of modern schoolchildren with gaming virtual reality is actively discussed by researchers. It has been established that among junior schoolchildren, active users of role-playing computer games, there are changes in the perception of the image of the I, expressed in identification with the individual psychological characteristics of computer characters. They are characterized by the vagueness of descriptions of the physical I, weak reflection of their own emotional experiences and bodily sensations, an overestimated level of aspirations, inadequate self-esteem, a sense of anxiety, a tendency to self-realization in the field of game virtual reality. Younger schoolchildren who are inactive users of computer games are distinguished by more positive self-acceptance, a lack of feelings of anxiety and abandonment, an optimal balance of personal and social identities, and the realization of relationships with the real, not the virtual world [2].

Researchers note the need to use virtual reality in the modern educational space at all levels of education. The developing effect of didactic programs in virtual reality is determined by a three-dimensional image of cognizable objects, a wide possibility of performing actions with objects (animation), the effect of presence, interactivity of the situation, the implementation of visual and audio patterns of abstract models, the creation of flexible curricula, interactive consolidation of the acquired knowledge, etc. Virtual reality, used in education, acts as a method, means and technology of teaching, increases the quality and efficiency of mastering knowledge in various fields of science and educational or professional activities [17, 18].

Didactic, short-term programs in VR do not have a significant impact on the motivation for achievement and approval as a personal component, but, importantly, they contribute to an increase in the level of reflexivity in cognitive activity and intellectual abilities. Work in VR training programs improves the indicators of figurative short-term memory, observation, stability, concentration of attention, develops the ability to generalize and classify, and increases field independence [16]. The use of virtual training programs in the process of teaching schoolchildren has a positive effect on the main parameters of conceptual thinking, an increase in theoretical reasoning, depending on the individual characteristics of students [18].

Among the possibilities of using virtual game technologies in the learning process researchers highlight the use of the entire spectrum of human receptor systems and the implementation of a coordinated process of transferring information through several channels at once, full immersion in the created environment, the creation of flexible curricular program, interactive consolidation of the acquired knowledge and digestion of skills. Education with the use of virtual reality provides a transition from illustrative-explanatory to instrumental-active and search methods of identifying and studying the characteristics and content of the investigated real object, phenomenon or process [19]. The use of a virtual gaming environment in teaching increases the effectiveness of the formation of learners' competencies, taking

into account the principles of a sequential increase in the level of complexity, modeling a problem situation, a critical study of the changing gaming environment, and making the right choice through experimentation.

Learning that simulates a real situation is based on the principles of organizing the game, which allows the formation of the necessary skills and abilities in a virtual situation, makes it possible to establish links between educational content and real life. Virtual games provide opportunities for enhancing user's learning, receiving instant feedback, independent self-decision and choice of actions, assimilation and memorizing material, increasing the pace of learning, taking into account the individual needs of each student, transferring skills acquired in a learning situation into real conditions. The main advantages of the technology are versatility, a low degree of physical risk and responsibility, increased motivation for learning while receiving positive emotions from achieving the correct result; receiving forehanded feedback, the ability to implement various game roles, experience of cooperation with participants and the development of their own behavior strategy [17, 20].

Special significance is attached to the requirements for a software product, which is to contain colorful three-dimensional objects, an appropriate background, animation with objects that simulate real processes, sound accompaniment, the ability to navigate in virtual space, and to provide the user with a state of "presence" to the extent that depends on the reproducing technical means (personal computer (PC), VR helmet, etc.). Improperly created virtual content is able to make a harm to mental health and personal development of users, therefore, it becomes necessary to develop and conduct a psychological and pedagogical examination of virtual content.

Difficulties in the development of psychological and pedagogical expertise of virtual content of games are associated with the fact that the Russian education system lacks a unified scientific approach to organizing psychological and pedagogical expertise [21, 22]. Psychological and pedagogical expertise as a type of complex humanitarian expertise allows researchers to create models, formulate their own definitions of the object of expertise, highlight criteria for expert assessment to determine its pedagogical value and compliance with psychological requirements, patterns of age and individual development, type and structure of activities (education, play, relaxation, leisure, etc.) [22-24]. The psychological pedagogical examination of the virtual content of games is a new direction in expert activity, it involves the development of a conceptual model, including methodological foundations, principles, goals, functions, content, subject matter, criteria and indicators, methods and diagnostic techniques, forms of presentation of results. Semantic assessment blocks (attractiveness, developing potential of a game and educational actions, operational capabilities), specific indicators of examination should be developed variably for each type of virtual content and determined by the developmental value of the activity for which they are intended.

This area of expertise is complex, in this regard, various specialists can be involved in expert activities - teachers, educational

psychologists, developers of virtual content. It should be noted that each specialist should have his own area of responsibility, but the leading role belongs to psychologists, due to the fact that the development of tools, interpretation and generalization of the obtained data presupposes the presence of special knowledge and formed competencies in various fields of psychological science (developmental psychology, psychology of the safety of the educational environment, psychological safety of the individual, cyberpsychology, etc.) [25].

Conclusion

In the modern digital world, VR technologies are actively penetrating all spheres of life and work. The conducted review of modern research reveals that the diverse virtual world presented in computer games has a positive effect on personal and group identification, increases security and satisfaction from being included in the relational tribe. Game interaction allows participants to adjust behavioral reactions in accordance with new situations and rules of the game, to receive missing feelings, emotions associated with learning, relaxation and entertainment. It can be concluded that the methods and technologies of virtual reality can be widely used in educational practice and for the organization of psychological support for subjects of educational relations. Psychological pedagogical expertise involves the analysis of the correspondence of the content, methods and forms of virtual content of games to the laws of positive development of the personality at different age stages.

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