

*Short Reports***THE VIRTUAL REALITY,  
PERSPECTIVES-ORIENTED  
TECHNIQUES AND INTERACTIVE  
EDUCATION TECHNOLOGIES**<sup>1</sup>Mkrttchian V.S., <sup>2</sup>Belyanina L.A.<sup>1</sup>*HHH University, Australia;*<sup>2</sup>*Astrakhan State University, Astrakhan,  
e-mail: hhhuniversity@gmail.com*

This article analyses the innovative ideas published authors for development of interactive educational technologies and person-oriented methods in virtual reality.

In terms of total virtualization of Russian society, when the images dominate reality or pretend reality, preserving centuries of accumulated tradition of education is one of the semantic elements of human consciousness and the axiological measure of activity. The problem of sup-actualization in contemporary culture should be considered as the emergence of a new kind of reality – real virtually, which was the consequence of the introduction of new flexible communication technologies in all spheres of social production for network-society. On the one hand, the process of formation of the network-society is the loss of autonomy of many elements of the traditional system of social relations. On the other hand, it opens the possibility of a critical review of traditions, historical assessment criteria values and the formation of a new world. Due to the loss of traditional benchmarks are under the pressure of new experiences in the communications environment to the fore the need for the construction of new social meanings and relationships. Thus, we can say the emergence of a new culture, a culture of real virtually. Real Virtually – a system in which reality itself is fully immersed in the virtual images, and the external world is not just displayed on the screen, but the experience becomes. The information society – a society of knowledge, produces intelligent products using the digital form submission sites. Due to the transformation of information into digital form, the nature of the virtual objects will inevitably come to replace the physical.

**Background**

The content of modern education requires significant changes in the training facilities. Today it is necessary to use person-oriented educational techniques that contribute to the development of the necessary in modern society values and activity-related and research competence in students. One of the main tasks of education is not simply the sum of the mastery of knowledge by students, and the development of creative, independent thinking students, formation of abilities and skills of independent research, analysis and evaluation of informa-

tion. As evidenced by our study of self-organizing technology can be viewed as a process and as a phenomenon. As a self-organization process technology consists in forming, maintaining or eliminating a set of actions leading to the creation of stable, productive and interpersonal relations on the basis of free choice of the adopted rules and procedures. As a phenomenon of self-organization technology is a set of elements that are used to implement the program or purpose. These elements include the management structure, the participants of the process, resources, etc. And the introduction in 2010 by Professor V.S. Mkrttchian [1, p. 9] in the educational process of the concept of intellectual agent – avatars trainee and the training it provided an opportunity to significantly improve the efficiency of the learning process and to achieve 100% absorption of each participant of the process regardless of their individual abilities. Intellectual Agents – an adaptive computer program simulating a particular process participant implementation of educational technology for learning – a learning process for the learner – this process of assimilation. A participant in implementing this educational technology has in addition to the teacher and the learners are their intelligent agents, virtual environments have a bunch of teacher, his avatar, a bunch of students with their avatars. At the same time build their own avatars network self-adapting to the specific conditions of the learning process. So there is a teacher network through your avatar associated with the avatars of each student.

**Issues, Controversies, Problems**

We have under the adaptability of the educational system is considered from three main perspectives:

– Adaptability of the educational system to the constantly changing level of student's knowledge.

– Adaptability of the educational system to the changing material within the individual training courses.

– Adaptability of the educational system to the changing requirements of employers and labor markets.

Offered in the works of V.S. Mkrttchian [2, p. 69] avatar technology allows to solve adaptive problems completely. In particular, the avatar, the intelligent agent being an end user, serves as an additional means of unification. Putting Course modules made by different standards, the avatar makes transparent to the end user of their structural and technical differences. Trained by itself configures the interface of the avatar, which will determine the appearance, which will be rendered material of the course. Similarly, the teacher's picture abstracts the technical details of certain standards and specifications. The teacher sets the

interface part of the avatar, in which it is convenient to make the material of the training course. The functional part of the avatar, hidden from the user, allows to adjust the injected material to the requirements of specific standards and specifications, with no longer exists common understanding of the concept of the life cycle of electronic modules, courses and educational systems. Based on the analysis of the current profile of the student, are select the optimal configuration of the avatar. After that, the student avatar configuration change occurs upload the following content sections and the interface sets its visualization. If the course is fully passed, it can pass on to the next course with the load in the student's picture of the new model variability. The convenience of the proposed approach is that the modular structure of the training courses has a typical hierarchical structure and allow insertion of special tags (system administrator or teacher), delimiting the course subject areas and levels of complexity. The presence of such tag allows further build models of variability for each course in automatic mode without the participation of the teacher. Building such an environment opens a new phase of e-learning (E-Learning 3.0), in which the leading role will be played by the distributed computer systems, cloud computing, mobile personal devices, systems, artificial intelligence and virtual reality tools. Technology E-Learning 3.0 is ideal for learning the academic discipline of "Project Management", which now has earned recognition as a self-management discipline, the use of which increases the reliability of achieving the goals as scheduled, with the required quality and within budget. Implementation of projects is an integral component of business processes present in any organization, and particularly in research and in education. While such projects may vary in type, scope, complexity, but from a management point of view, they are the same. Our research revealed the following statistics: participation in projects takes between 30 to 70% of the time. This is especially clear in the highly competitive industry, what are the education and isslednovaniya, where the effective implementation of development projects is becoming a key factor in the success of teaching and research for middle and senior managers (depending on the position and type of business). Administrative knowledge and job training system is conducted teacher (software technical administrations in this article are not considered). All issued assignments, the work of students and teacher trainees' activity recorded in the database.

### Solutions and Recommendations

In the works of V.S. Mkrttchian [3, p. 219] he is analysed all known digital objects of different management techniques. We propose a path for management purposes of teaching and research use control algorithm using a sliding mode and controls theory. Control method with intentional introduction into the sliding mode is characterized by simplicity and high reliability, as it involves forcing the management, causes the process to proceed in a certain trajectory specified by the developer. Such management methods allow you to build arbitrarily complex algorithms, tuning them specifically under the control object is of the process of learning and research in the virtual education system. The trajectory of learning in a virtual reality begins with the definition for the student a set of modules corresponding to the curriculum of the academic discipline of "Project Management for a particular specialty. For each discipline there is a set of modules (eg, each lecture consists of a set of themes, and the theme is divided into sections) that define the structure of the discipline. Next comes the study material according to the specified schedule in the environment and the implementation of monitoring in the form of passing the tests corresponding to this module. Test results allow, to a certain extent, to evaluate the student's level of knowledge and to invite him to continue their education or to repeat previously learned material. The analysis of student learning activities allows us to formulate recommendations, which it can use to improve their knowledge. This procedure is performed for each discipline. When learning the system state is determined by the level of quality and pace of acquired knowledge to students. In different situations, when training becomes necessary to adjust the learning process that occurs when a fast or slow digestion, increase or decrease the complexity of tasks and so on.

### References

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