Coworking As Innovative Educational Content in Modern Higher Education

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Abstract. The definition of "coworking" is just beginning to enter the orbit of Russian and foreign scientific research. Coworking spaces as innovative educational content in higher education are being created in Russian universities. The purpose of the study is the justification, development, and testing of a model of electronic coworking environment in the system of higher pedagogical education. At that, coworking environment is considered as an educational virtual cluster at which a basic platform for educational content is created with all educational products attached to it. The following methods of research were used to solve the tasks: design and modeling; the study of coworking environment products, chat conversations, questionnaires; and mathematical methods of result processing (quantitative and qualitative analysis of research results). The results of the study have revealed the advantages of coworking environment: successful socialization, minimization of time and economic resources, expansion of business partnerships, mutual assistance and a comfortable atmosphere. Analysis of studies on the criterion of coworking productivity revealed an increase in student mobility and an increase in the index satisfaction and communication effectiveness. Testing of the electronic coworking model proves its benefits and prospects of its introduction into the system of higher pedagogical education. The results can be used in social psychology, pedagogy, and practice.

1 Introduction

The theory and practice of improvement of educational technologies in higher education are in constant search and innovative development. Scientific research carried out in the last decade [1, 2, 3] convincingly prove that the modern university and the students who study there have changed in terms of mobility and requirements for educational content. Within modern realities, the vector of scientific research is shifting to remote technologies, and coworking space can be considered to be one of them. In this regard, the task of the development of electronic educational cooperation as a new format of interaction in the dyad "teacher-student" arises.

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The appearance of the first coworking zones in world practice is associated with the initiative of B. Newberg (2005), who proposed to combine the activities of freelancers and office work, giving the name "coworking" (joint office) [4]. Coworking venues quickly gained supporters around the world: starting with individual projects (first in the USA; then in Europe), coworking was formed as a new concept of work and is gaining new momentum. Asian countries successfully compete with global educational trends. K.-M. Cheng [5] notes the features of the education system in Asia, noting its importability from Germany and Great Britain. It can be assumed that in the field of educational technologies the countries of the Asian region will gain a leading position in the coworking industry.

The systematic analysis of scientific and methodological literature showed that in professional consciousness of the scientific community, the concept of "educational coworking" was only beginning to enter the orbit of scientific research in the areas of sociology, pedagogy, and psychology, and therefore required clarification of the basic definitions, specification of technologies, testing, and experimental verification.

After studying the etymology of the definition, the authors have identified:

- in a broad sense, "coworking" is a new form of organizing the activities of people with different professions in one space;

- in the narrow sense, it is a workspace that acts as a remote collective office [6].

In IT technology and the media industry era, coworking environment seems to be in high demand. However, the authors have faced the fact that the concept of "electronic educational coworking" in scientific and methodological literature is not represented at all, which allows the authors to theoretically substantiate the model of a new type of "teacher-student" interaction and consider coworking space as innovative educational content for modern higher education. The latest events related to the coronovirus pandemic and the long phase of self-isolation in the international context have moved the whole educational resource into the format of Internet technologies and video conferencing, which gives educational coworking not only theoretical novelty but also practical significance.

The technologies of design and planning of education systems in the world have been changing in the last decade. The problem of redistribution of class time is becoming one of the leading trends. The study by J. Hallack, M. Poisson [7] proposes new schemes of managing individual educational trajectory ("the right to study"), which gives the authors reason to predict sustainable development prospects for coworking spaces in higher education.

The purpose of the study is to justify, develop, and test the model of electronic coworking environment in higher education system. The authors position the model of such content as two parallels of participants of educational process: on the one hand, "teacher – student", and on the other hand, "student – bachelor – master" who use modern remote technologies on the Moodle platform. At the same time, one subject of the educational process – the university teacher – creates and complements the electronic educational content (its content, technology); the other subject – the student – is an active user of the environment of electronic coworking, which acts as a virtual educational cluster.

2 Materials and methods

The mechanism of creating electronic coworking is aimed at solving educational problems. The following research methods were used to solve the tasks: design and modeling; study of coworking environment products, chat conversations, questionnaires; and mathematical methods for processing results (quantitative and qualitative analysis of research results).

During modeling, a model of educational coworking has been theoretically grounded. It allows students on the Moodle platform to have access to a remote environment in a 24/7 format (around the clock). The logic of using modeling methods includes checking design

results. Criteria and levels of quality of education were determined using technology of distance education during designing. Performance criteria were reflected in educational levels: unsatisfactory; sufficient; competitive; and high.

Empirical methods (studying the results of questionnaires and conversations in coworking chats, monitoring the activity of coworking environment, as well as groups of mathematical methods) allowed to carry out quantitative and qualitative analysis of the research results and make adjustments to the model during testing of the educational coworking.

3 Results

The introduction of the distance technology model in teaching undergraduate and graduate students based on the Moodle system has proved that due to the acmeological nature of coworking, the effectiveness and the quality of the work of each participant are improved compared to the work in standard forms of organizing the educational process [8, 9]. Thus, during the study, an innovative model of electronic coworking environment in the distance education system was theoretically justified, developed and introduced. It provides an accessible, psychologically comfortable and professionally-oriented media environment.

The convenience of such educational content in terms of content and pedagogical expediency is undeniable, as evidenced by the marks of students and employers acting as experts.

Indicators of efficiency of electronic coworking environment (ECE) were the following: positive dynamics in students' motivation to various types of educational activities using models of panoramic lectures, "Educational periscope" virtual discussion clubs, "University-42"; positive dynamics in the number of resident students in ECE; and positive dynamics in the number of resident teachers in ECE. The electronic collaboration system experimentally proved that a virtual cluster had become an effective means not only for booktrailer and booktube but also for interviews, photo shoots, a source for events review, and a tool for the distribution of educational information [10].

Discussion of the theory of the issue and the creation of coworking spaces are setting their foot in wide public acceptance but their advantages are already obvious. It was experimentally proven that this content had both positive and negative sides. The advantages of coworking environment were revealed in the work of D. R. Khakimova and L. M. Kuleeva [11]: successful socialization, minimization of temporary and economic resources, expansion of business partnerships, mutual assistance, and a comfortable atmosphere. The analysis of studies on the criterion of coworking productivity revealed an increase in communication efficiency.

Developing and gradually introducing educational coworking, the authors emphasize that in this innovative environment students can both gain new knowledge and share their experience. Following A.D. Zakharov [12], the authors consider the coworking community as a platform for the constant exchange of ideas and experience, as the formation of new business contacts, the expansion of opportunities for the implementation of new projects, work reviewing, and receiving feedback in the form of expert opinions. Preferential conditions of coworking environments are the following: the possibility of a fast startup, flexible work hours, equality and democracy of all participants, comfort, and accessibility. Coworking media environment contributes to the development of new ideas, creation of new projects using innovative technologies with the participation of not only teachers from own university but also educational organizations of network partners, employers, external experts, trainers, etc.

At the development of an informative model of adult education, three stages were identified:

– design (definition of goals, objectives, assessment criteria, projected risks, etc.);

– functional (sequence of levels of model implementation); and

– managerial (interim results, their analysis, conclusions).

The study has found that the concepts of "innovation" and "novation" are not identical [13].

1. Significant differences have been found by the main criterion – novelty: innovation is associated with updating any areas limited to rationalization; novation opens up new directions and new technology, thus creating a new quality of results.

2. The scope of the goals and objectives of innovations is private; their methodological support is carried out within the framework of existing theories. Novation, on the other hand, is systemic and usually goes beyond the framework of existing theories.

3. These concepts differ in the nature of their actions: innovation is focused on continuous holistic search and the most complete aspiration to get a new result; novations are usually limited in volume and time.

The introduction of distance learning models in the education of students and undergraduates based on the Moodle system allowed the authors to model and implement electronic educational content in coworking format. The starting point in the creation of educational content was the formation of a human resource capable of creating electronic educational content in all its diversity (cluster of models: panoramic lecture, virtual discussion club, "educational periscope", "University-42", webinars, chats, coworking etc.). Electronic coworking environment was not only the main factor in the educational cluster but also the base platform to which all of the above models are attached.

The second stage in the implementation of the model was the placement of innovative educational content using distance education technologies in the Moodle system, which includes a set of hardware and software for the LMS server. Final stage was summarizing the project (monitoring, evaluation, review, chat-offset, etc.). Content and filling of educational content included thematic workshops, webinars, book trailers, bookings, training videos, step-by-step instructions for completion of tasks, etc. Thus, in order to implement coworking environment, electronic educational content, a kind of thematic educational resource with using distance educational technologies, was created.

Booktrailer and booktube technologies included in the ECE allowed their usage in the implementation of the system of course works in the distance education system for students of mixed-attendance form of study. Experience of testing electronic educational coworking in the system of continuing professional education allowed to conclude that the new educational technology had successfully passed the tests [14].

Indeed, during the electronic collaboration in the "teacher-student" system, a new type of relationships is formed. This type of educational communication distances itself into a system of electronic educational community, which by its main characteristic is a key and backbone community. During testing, the student working in an electronic coworking environment received the possibility of self-control, self-education and obtaining a qualitatively new result of educational activity and reflection [15].

All members of the remote group have the opportunity to discuss the results of each of the team members, which increases the efficiency of the implementation of one project divided into separate sections due to synergistic effect. Coworking participants are open not only to the professional but also to the personal communication, which ensures the formation of comfortable psychological climate. Managers of structural departments of educational organizations can actively participate in the consideration and defense of course works in electronic coworking environment, which significantly increases the practical focus and efficiency of study. Studies at the Moscow State Pedagogical University are aimed at finding new educational technologies in the undergraduate and Master's program [16, 17]. Our study has revealed the advantages of educational coworking environment: the possibility of minimization of time and economic resources, the expansion of business partnerships, and

creation of a comfortable educational atmosphere, which is directly related to the quality of education.

4 Conclusion

The study has allowed the authors to come to the following conclusion: the introduction of remote technology in teaching students and undergraduates based on the Moodle system in the form of coworking environment is a powerful innovative resource that allows to reach a new level of modernization in the system of training for teachers.

During the study the value of electronic coworking has been theoretically justified, concretized, tested, and experimentally proven. Creation of a virtual cluster can provide higher education with an innovative and high-quality product for the implementation of educational services in a new format. As a conclusion, the authors predict the expansion of the industry of coworking spaces and see the need to continue scientific research in this direction.

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