Modeling Space – Creating a Community

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ABSTRACT

The authors describe the educational space of Tatarstan Institute of education development and opportunities of its modeling in the context of digitalization of education for the purpose of continuous teachers' pedagogical education as a part of professional development. The article focuses on the design and mechanisms of organizing the educational space for creating a community, i.e. a group of teachers united by common interests and problems, linked by a common goal – to improve the education quality and to make the Russian Federation one of the 10 leading countries in education.

The article reflects the results of the study of educational workers' requests and ideas about "ideal courses of professional development". The respondents reflected the essential components that have not yet been implemented in the system of additional professional education – the freedom to choose the institution, format and duration of training based on the cumulative system of professional development. The obtained results determined the design and engineering mechanisms of the educational space organization model that accompanies the implementation of educational programs of additional professional education of the Tatarstan Institute of education development.

The article shows the need to create a model of the organization of educational space that accompanies the implementation of educational programs of additional professional education and options for its implementation on the example of an electronic platform, which is represented by the following blocks: informational, diagnostic and methodological. The effects from platform creating and implementing are highlighted.

Keywords: educational space, modeling, project, continuous education, pedagogical workers, institute

> The time for contemplation is in the past.
> The time of waiting is in the past.
> The time of fruitless conversations is in the past.
> The time for action has come.
>
> Friedensreich Hundertwasser,
> Austrian architect and painter.

1. INTRODUCTION

The development of the design and mechanisms for organizing the educational space is not a new idea, since back in the 1970s. French sociologist Henri Lefebvre developed the idea that space is not only a physical dimension, but also a social one, it is created by people through their actions, ideas, and theories [1]. Since the end of the last century, domestic pedagogy has also been actively developing the theory and practice of the educational space. So, V.I. Slobodchikov believes that the educational space includes three components: educational environments, educational institutions, educational processes, all together they form interconnected subject projections [2]. IN AND. Ginetsinsky considered the educational space from the point of view of its structuring [3]. He believed that the educational space should be considered from the standpoint of a systematic approach and the basis for its structuring is to lay qualification characteristics for assessing the quality of national-state educational systems. V.A. Konev, on the contrary, viewed the educational space from the point of view of a cultural approach [4]. However, as modern conditions show, the digitalization of the educational space changes its architecture. The same thing happens with the educational environment.

In the concept of "educational environment", many scientists also include a set of conditions that affect the development of an individual through the interaction of a person and the world around him, in our case - institutions of continuing professional education. L.I. Novikova believes that the educational environment is a set of conditions that influence the development and formation of abilities, needs, interests, and consciousness of an individual [7]. The main thing that distinguishes the environment is the fact of the interaction of a part of the surrounding world with the subject [5]. Such interaction can occur both directly and indirectly. Today, powerful

intermediaries have appeared in the educational environment - these are digital tools, and when modeling the educational space, we should not proceed from where this space is located territorially and what it is filled with. First of all, we proceeded from the fact that the modern educational space forms an individual or a group of individuals, therefore it is necessary that the design of the educational space meets modern requirements.

Modeling the space for implementing continuing professional education programs aimed at continuous professional development, we create a community. A community is a certain group of people (in our case, these are teachers of the Republic of Tatarstan and other constituent entities of the Russian Federation, as well as leading specialists of the education system, experts), united by common interests and a problem (professional development), associated with a single goal (improving the quality of education and entering the Russian Federation in 10 countries - leaders in education).

The purpose of modeling the educational space of the Institute for the Development of Education of the Republic of Tatarstan is to consolidate efforts, to carry out active and purposeful work, contributing to the development of conditions for continuous and systematic advanced training of teaching staff, including through the use of modern digital technologies, the formation and participation in professional associations, experience exchange programs and best practices, attracting employers to the professional education of teachers, including in the form of internships, and thereby ensure the continuity and personification of professional development in accordance with the goals and objectives of the federal project "Teacher of the Future" of the national project "Education" [10].

2. METHODOLOGY

The solution of research problems was carried out by analyzing psychological, pedagogical, sociological, scientific and methodological literature, and the experience of the Institute for the Development of Education of the Republic of Tatarstan in the field of advanced training of pedagogical and executive workers was used. During the research, the authors relied on the environmental approach. The environmental approach in education as a theory was developed by L.I. Novikova - the head of the laboratory of environment and environmental research in education of the Nizhny Novgorod Institute of Education Development, Doctor of Pedagogical Sciences Manuilov Yu.S. [5].

The environmental approach is a theory of the process of the student's personality development carried out through a specially formed environment. The theory of the environmental approach in many studies is considered as the methodology of pedagogical activity and the methodology of scientific and pedagogical research. The environment approach has the following basic procedures: environment formation, filling niches, inversion of the environment (it is aimed at restoring the understanding of the environment by students), averaging, typification [6].

The environmental approach for our research has a significant advantage - a system of complementary activities, the accumulation of didactic, methodological, and expert resources aimed at achieving the target guidelines that evolve at each stage. This approach ensures the sustainable unity and integrity of all components of the educational space.

3. RESULTS

Modeling the design of the educational space will be carried out by us in several stages: preparatory, main, and final. Since the project has just begun to be implemented, we have completed the preparatory stage and moved on to the implementation of the main stage. At the preparatory stage of the creation of the community, the Institute for the Development of Education of the Republic of Tatarstan conducted a study of the requests and perceptions of educators about "ideal refresher courses".

When conducting the focus group, we adhered to the basic rules:

– The optimal number of participants. Each group consisted of 8 people. In one full study, we conducted six such groups (in our case, the focus group method is leading). The first and second groups are students of advanced training courses, subject teachers of urban and rural schools. The third and fourth are primary school teachers in urban and rural schools. Fifth and sixth - heads of educational organizations of urban and rural schools;

– Sufficiency criterion - theoretical saturation of the field;

– Group homogeneity. All group members are women aged 45 to 55 with higher pedagogical education; participants within the same group had a similar place of residence - a city or a region (rural area);

– The respondents (focus group participants) should be selected using the "snowball" method (through friends and acquaintances).

For focus groups, only one topic was chosen "Ideal refresher courses", 7 questions were revealed in the topic for clarification:

1. Should the courses take place on-the-job or on-the-job?
2. Duration of courses.
3. Forms of course activities.
4. Should courses be tailored to the individual needs of trainees?
5. What should prevail in course activities: expert opinion or practice?
6. Is there a need to organize post-course support?
7. Is a diagnostic procedure necessary before and after the courses?

In each of the six groups, the discussion lasted from 1 to 1.5 hours.

4. DISCUSSION OF RESULTS

The project of design and mechanisms for organizing the educational space accompanying the implementation of educational programs of continuing professional education of the State Educational Institution of Continuing Professional Education "Institute for the Development of Education of the Republic of Tatarstan" is based on the idea of the group members about the ideal refresher courses.

Based on the results of the study, an image of "ideal refresher courses" was created and the key features of this image were identified. The result is shown in Table 1.

Table 1 Key features of ideal continuing education courses

Seq No.	Sign	Generalized description of the attribute of "ideal PDA" by focus group participants
	Duration of training	Listeners prefer: - micromodules (short tracks, special courses, and other short-term events); - duration from 1 to 2 days; - a cumulative system of professional development (advanced training) of teachers.
	Targeting of events	Listeners give preference if: - professional deficits are eliminated and personal professional needs are met both within the course, and in the pre-course and post-course periods.
	Interactive formats	Listeners prefer: - classes in small groups in the format of trainings, master classes, workshops, etc.
	More practice	Listeners prefer: - practical training, preferring to reduce theory to a minimum and to withdraw to self-study. - course teachers represented by practicing teachers.
	Openness	Listeners prefer: - live broadcasting of course activities online (this will make it possible to be an active participant in course activities without leaving your place of residence); - posting all materials accompanying course activities in the public domain (this will lead to an increase in the responsibility of course developers and an independent assessment by the consumer of the service).
	Post-course support of course students	Listeners prefer: - continuous professional development (no time, thematic and other restrictions); - available informational, scientific and methodological, expert and other types of support in the inter-course period.
	Diagnostics of competencies	Listeners prefer: - do not go through the diagnostic procedure, as they regard it as control and assessment of the level of professional competencies. * in our case, diagnostics is a form of formative control and informative feedback for the implementation of targeted support.

The participants named the components that currently have no possibility of implementation: the freedom to choose an organization, the format and duration of training. For the organizers of the survey and the Ministry of Education and Science of the Republic of Tatarstan, this will be a subject for discussion and a development zone for the existing system of continuing professional education for teachers and management personnel.

The results obtained in the course of the study determined the design and design mechanisms of the model of the organization of the educational space accompanying the implementation of educational programs of continuing professional education of the SAEI of CPE IED of RT (Figure 1).
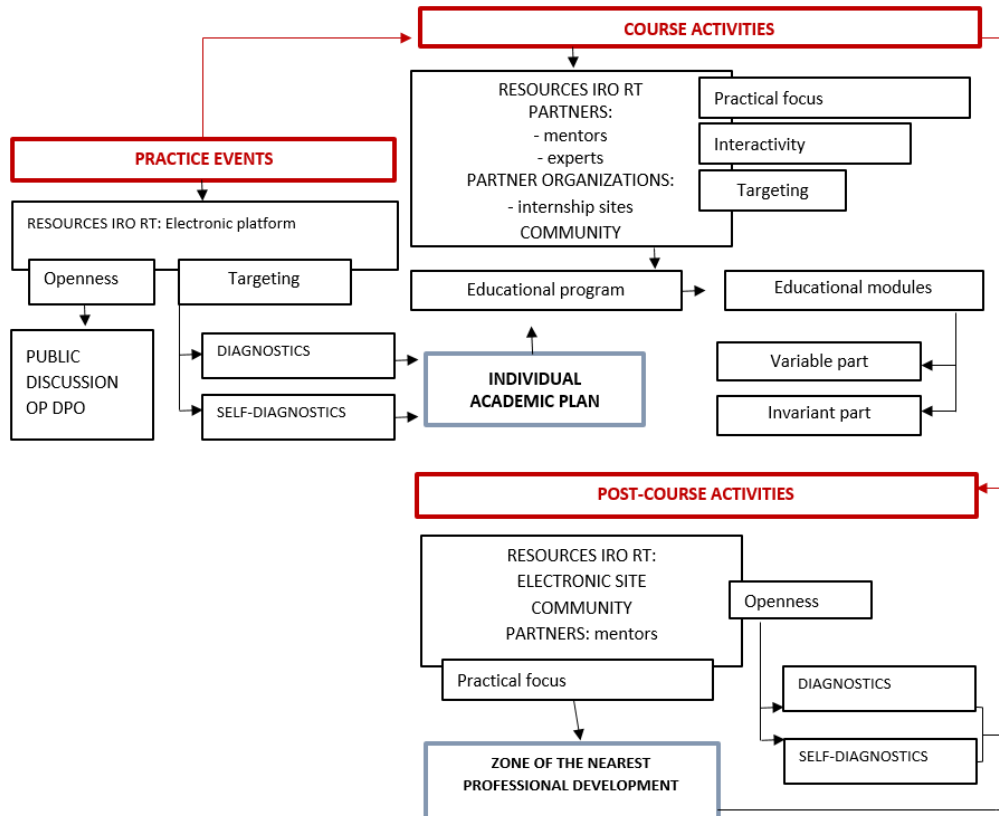
Figure 1 Model of the organization of the educational space accompanying the implementation of educational programs of continuing professional education of SAEI of CPE IED of RT

Diversification of project activities is provided by the electronic platform created within the framework of the project (access mode: https://teachers-skills.ru/).

The structural components of the electronic platform are represented by the following blocks: informational, diagnostic, and methodological.

5. INFORMATION BLOCK

The news page informs the pedagogical community of the Republic of Tatarstan and other constituent entities of the Russian Federation about the implementation of the activities of the project "Improving the level of professional skills in the formats of continuous education of teachers in the system of general, continuing and vocational education".

6. DIAGNOSTIC UNIT

The selection of students for training is carried out on the basis of diagnostic procedures implemented on the electronic platform of the institute (access mode: https://teachers-skills.ru/). Diagnostics of project participants is carried out in three directions: filling in

personal profile information, testing directly (input and output), self-assessment (input and output).

To gain access to diagnostic procedures, the project participant must register at the first stage and fill out the personal profile of the project participant. Filling out a personal profile will allow the organizers to determine not only the geography of the project participants, their education and age, but also subsequently unite the participants into groups by organization (in this case, a corporate training program will be implemented) or by subjects taught.

At the second stage, the participant goes through a series of diagnostic procedures to identify the level of forcing of a number of competencies: self-organization, cooperation, focus on results, flexibility and readiness for changes, information and communication competence, critical thinking, etc. So, for example, if at the first, pre-course stage, the target is the construction of an individual curriculum based on diagnostic procedures and self-assessment results aimed at identifying professional deficiencies and personal educational requests, then at the second stage it is the implementation of an individual curriculum with the accumulation of resources of the SAEI of CPE IRD of RT, partner organizations of the Republic of Tatarstan and the Russian Federation, practitioners and experts. The goal of the third stage is to determine the zone of proximal development based on the correction of the

trajectory of the individual curriculum in the post-course period according to the results of the output diagnostics and self-assessment.

At the third stage, the project participant is asked to independently assess the level of diagnosed competencies.

The diagnostic electronic system developed by the Institute for the Development of Education of the Republic of Tatarstan allows the participant to get acquainted with the results obtained in the form of diagrams for each studied parameter both at the input and at the output (Figure 2).

		ELEMENTARY	BASIC	MODERATE	HIGH
cooperation	self-assessment				
	test				
self-organization	self-assessment				
	test				
focus on results	self-assessment				
	test				
critical thinking	self-assessment				
	test				
flexibility and readiness for change	self-assessment				
	test				
ICT competencies	self-assessment				
	test				

Figure 2 Individual report

The results are presented in the personal account, are not available to other participants, and are the basis for building an individual student's plan as part of the ongoing educational program of continuing professional education. An individual plan is represented by an optimal set of micromodules, each of which is aimed at developing and improving competencies. This approach makes it possible to organize targeted work on the development and improvement of "falling" competencies, control the effectiveness of the implementation of an individual program, organize post-course support, consisting of interrelated events (seminars, conferences, forums, competitions, etc.).

The sections of the electronic platform "Bank of Effective Practices", "Community of Professionals", "Exchange of Experience", "Online Tests", etc. are an optional addition to the educational program of continuing professional education aimed at meeting the individual professional needs of teachers, but they can also be used for post-course accompaniment [8].

The content of the thematic pages of the electronic platform is filled by:

– by attracting leading experts in the field of education, practicing teachers, winners of professional competitions and grants;

– based on the results of competitive events providing an independent expert assessment of the participants' materials [9].

The content of all sections is characterized by openness and accessibility, discreteness and complementarity, the possibility of mobile expansion; all this makes it possible to provide a targeted approach in the implementation of continuing professional education programs. Filling with materials within the framework of the project will be carried out until 2022 inclusive.

7. CONCLUSIONS

From the above, it follows that the electronic format of the scientific, methodological and informational support of the project participants makes it possible to broadcast the experience of the best educational practices, discuss problems with colleagues, get a mentor, choose an internship, etc.

A comparative analysis of the procedures carried out before the start of the implementation of the educational program of continuing professional education and upon completion, allows judging the effectiveness of the designed design of the educational space and the set of educational activities accompanying its implementation.

Thus, the modeling of the educational space, its design and implementation tools will be carried out within three years, but its basic architecture has already been designed, and the implementation of advanced training courses has begun, which will give us the opportunity to correct it and make it as effective as possible.

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system of professional growth of teachers in the Russian Federation, including the national system of teacher growth".

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