

Projecting and Implementation of Professional-Personal Environment for Future Teachers

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ABSTRACT

The development of modern education determines the vector of teacher professional and personal development capable of effective carrying out professional and pedagogical activities in favors of students, society and the state. Great opportunities to attain this goal are fold in teacher professional and personal environment, able of creating favorable conditions for this goal, organically combining the fundamentality of the teachers' professional knowledge, the search for new practice-oriented forms and methods of their activity and professional and personal development. The basis for projecting the future teacher's professional-personal educational environment is the project - target approach, determining the consideration of goals, content, technologies of education as a project of innovation activity. The authors developed a scheme for the projecting of the future teacher professional and personal environment and proposed a technological algorithm for its projecting, involving the stages of organization and functioning. A diagnostic toolkit providing the main criterion parameters' assessment of a professional-personal environment is proposed.

Keywords: higher education, teacher professional training, educational environment, professional and personal environment, project - target approach, projecting

INTRODUCTION

The educational environment is becoming increasingly important in the learner development, forming the basis for multiple interactions and the formation subjective experience [1, 2, 3, 4, 5, 6]. The multiplicity of studies on the educational environment gives rise to different views on the components that make up it: the personal model (spatial-object, social, psycho-didactical components) [7, 8, 9]; communicative-oriented model, as a form of community between learners and teachers, and between the students themselves (psychological climate, collective socio-psychological structure, knowledge transfer psychological organization, student psychological characteristics) [10]; dynamic model, as a system product of interaction between educational space, education management, educational organization and the learner [11]. In the most general sense, the theory of pedagogy states that the educational environment includes everything that influences the person education, upbringing and development within the educational level [12, 13, 14, 15, 16, 17].

Focusing on the possibilities of the educational environment for human development, the problem on the formation of the future teacher personality and the professional qualities formation in professional training period at the university is considered, which subsequently determines the professional activity effectiveness. This aspect

has not been sufficiently studied in the context of future teachers' professional training, although it has been examined in detail in the aspect of professional development in the educational organization (school) [18, 19]. Combining the future teacher's educational environment and the professional environment potential is considered to contribute the increase in future teacher professional motivation, professional competence, self-knowledge, and self-development.

In this connection, the educational environment manifests itself as a format of educational and professional interactions, contributing to future teacher's creative self-realization. We presuppose that the admission is possible here, since the pedagogical university's educational environment can be considered as a professional environment (preserving the existing format of pedagogical interactions images). The professional and personal environment carrier, in our opinion, is the university, educational organization (schools) space which is used for educational and pedagogical practice, the future teachers themselves, with their personal characteristics.

The future teacher professional and personal environment projecting is the educational communications models development and the educational activities optimal organization of education entities to manifest activity in their professional and personal qualities development and self-development [20]. The professional-personal environment's projecting result is a set of opportunities system for education entities related to the needs satisfaction and these needs transformation into life values, which actualizes the personal self-development process.

An important factor in designing the future teacher professional and personal environment is the possible risks consideration (destructive processes) that fully depend on the teaching staff professionalism, the scientific and methodical support quality, the educational process entities personal characteristics, the goals and values on the basis of which the environment is formed [21, 22, 23]. The need to design the future teacher professionally-personal environment as a condition for improving the pedagogical activity quality and its humanization is one more important justification [24, 25, 26]. It is associated with the need to harmonize the individual intellectual and emotional spheres, socialization, the formation of moral orientations and image-ideals.

MATERIALS AND METHODS

Despite the existing differences in the understanding the pedagogical technology, most experts identify the following as its main features: the target orientation; scientific ideas, on which they are based; actions system; criteria for evaluating the result; procedural bilateral nature of the teachers' and students' activities; techniques' and methods' set; projecting and organization the educational process; availability for comfortable conditions for implementation; effectiveness [24, 27]. Relying on these essential signs, when developing the technology for designing the future teacher professional and personal environment, we proceeded from a principled position, the essence of which is as follows:

- any pedagogical influence, realizing the social task on forming a future teachers' qualities which are necessary for society, must solve it through the adequate task on actualizing their individual activities;
- the pedagogical influence content should be subjectively significant for the future teacher and be built taking into account the ways and peculiarities on building one's own professional activity;
- future teacher self-determination in professional activity, its dynamics should become a specific object of pedagogical management and self-government.

The process on forming the future teacher professional and personal environment is based initially on the external organizing pedagogical influence and should:

- become for the future teacher an event with emotional impact;
- stimulate the future teacher to continuous independent mastering the necessary knowledge, development personally significant pedagogical skills;
- form ways on the future teacher's activity in the problem pedagogical situation;
- create conditions for development the professionally significant pedagogical skills;
- be built taking into account the correlation of purpose and activity result.

These requirements were the basis for designing of the future teacher professional and personal environment components.

Technologically, this is represented as a process and mechanism for the formation, functioning and development the environment by the inclusion the essential structural components of the environment in the entities' interaction process on the basis of goal-setting development, the functions realization and the corresponding stages. Such environment's realization in the context of the future teacher's training presupposes the educators' and students' (future teachers) joint targeted efforts through the common goal's recognition and value adoption and action program, the respective functions and stages realization of their achievement. This involves all the components of the environment - values, resource, and management.

As the basis for the future teacher professional-personal environment projecting from the methodological standpoint, a project-targeted approach is defined that involves the consideration of education goals, content, and technologies as innovative activity project on an integrative basis [28]. Its basis is: designing the content of education; construction of training project-target technology; project management method [29].

In the context of professional-personal environment projecting, this approach's implementation is to organize a variety of educational and professional projects aimed at the creative self-realization of the student's personality through the development of intellectual and physical abilities, strong-willed qualities and creative abilities in the process of forming professional competence. The project-targeted approach implementation is conditioned by a universal design-target mechanisms' set: actualization, goal-setting, conceptualization, socialization, implementation, systemic communication, examination and reflection.

The goal-setting, as a component of the project-targeted approach, is conditioned by the needs of the individual and educational organizations (tactical goals); labor market and society as a whole (strategic goals). In the projecting process the goals fulfill the system-forming, modeling and criterion functions that ensure the correspondence between the developing needs of the individual, the educational services and the labor markets.

The project-target approach's regularities are manifested in the following principles' implementation of the learning process's organization within the professional-personal environment: personal significance, creativity, cumulative impact, positive perspective.

The project-targeted approach's application to projecting is conditioned by the need to design the learning process, based on educational concepts, goals and content of instruction, taking into account the humanitarian orientation, as a cultural form of educational innovation [30, 31, 32, 33], in which the educational process is interpreted as the student's projecting of a professional-personal development trajectory.

The structural elements of the project-targeted approach to the professional-personal environment's projecting are: the training objectives and content; pedagogical interaction means, including motivation and teaching means; educational process organization; the learning process entities; the activities result, including the personal and professional training level, determined by general and professional competencies.

In a simplified form, the structure of educational and professional activities within the professional-personal environment is built on the following training cycle:

- the professionally-oriented problem's definition that forms the project activities basis. The problem is not offered to students in ready-made form, but with the help of various methods and visual means they independently formulate and define hypotheses for its solution through a problem situation;
- problem situation → problem formulation → problematic tasks for its consideration - this is the procedural essence of the project-target approach technology. At the same time, the problematic situation should reflect the real situation of future pedagogical activity;
- the problem can be presented in this situation in a rather explicit or completely implicit form. It depends on students' readiness to identify and form the problem.

The first level is correlated with the problematic presentation the teaching material by the teacher. The second level means that the teacher creates a problem situation and, together with the students, solves it. The third level assumes that the teacher creates a problem situation, and the student independently solves it.

It should be noted that the potential of the projected environment lies not only in its formation and application in the study process at the university (bachelor's, master's), but also in its further dissemination to the teacher's professional and pedagogical activity in the school, where the educational organization potential will already determine the direction of teacher's activity for development and self-development.

Proceeding from this, we distinguish the following *main functions* of the technology on forming the future teacher professional-personal environment:

- creative (which is manifested in the creation conditions for the creative potential development);
- reflection (which allows one to rethink one's previous experience, correct deficiencies);
- stimulating (which assumes the creation conditions for professional and personal abilities' manifesting and development and new professional experience's formation).

The implementation of the listed functions is presented procedurally as a process for implementing the diagnosis by the future teacher of:

- one's knowledge, skills, professional difficulties and problems;
- self-movement in solving a problem educational and professional problem;
- self-analysis and analysis of the problem situation causes, its criterion support;
- the entire educational process and oneself in this process;
- self-determination for the subsequent period of activity.

Target:	Actualization of the future teacher individual activity		
Approach:	Project-target approach, which determines the pedagogical system functioning on the basis of design-target mechanisms for its achievement.		
Principles	Personal significance, creativity, cumulative impact, positive perspective, actualization		
Conditions for the approach implementation	Integrative modular structuring	Technological and didactic-methodical provision	System diagnostics of professional competences formation
Functions of professional-personal environment	Creative	Reflexive	Stimulating
Pedagogical components of professional-personal environment	<i>Axiological</i>	<i>Resource</i>	<i>Organizational and managerial</i>
	-value orientations; -incentives for personal activity	-psychological and pedagogical; -functional-objective; -information and communication	-pedagogical management; -self management
Stages of professionally-personal environment organization	Value orientations development	Psychological and pedagogical support	Scientific and methodical support
Stages of the functioning of the professional-personal environment	Educational and professional activities organization	Environmental monitoring	Environmental correction

Figure 1. The structural and functional scheme for projecting the future teacher professional and personal environment

The result on the implementation of such an environment, in the context of the future teacher professional training, will be the evaluation and self-assessment of their academic achievements and difficulties, the subjective position formation in the educational process, an individual trajectory for professional growth and productive educational and professional activities.

RESULTS

The future teacher individual activity actualization in the course of professional training can be provided by organizing a professional-personal environment, the structure of which is shown in **Figure 1**. The idea on realizing the future teacher professional and personal environment is not only to be built on the students' knowledge of the motives, interests, needs, to maximize their abilities' realization at a particular moment, but also creating a "situation of success" to give them opportunity to determine their "route of achievement", self-actualize.

The conditions for the project-target approach implementation, which determines project-target mechanisms' implementation when projecting a professional-personal environment:

- *integrative modular structuring*, which presupposes the structuring pedagogical process as a components' system (integral modules and modular programs) aimed at achieving educational and upbringing goals;
- *technological and didactic-methodical provision* of the pedagogical process, which determines the educational goals and objectives definition in accordance with the project-target approach concept; competencies' selection formed by the discipline (module); technological procedures' selection for training modules' implementation;
- *system diagnostics of professional competencies formation*, which consists in criterion and diagnostic tools' development for assessing the achievement of educational goals and verifying the educational technologies' effectiveness used.

We have defined the functions of the future teacher's projected professional and personal environment:

- creative, providing for the development of students' creative abilities, reality creative transformation by solving various educational and professional problems, searching for atypical methods and techniques, mastering innovative ways of future pedagogical activity;
- reflexive, including an appropriately selected pedagogical conditions' set in the educational process, which help the students learn themselves in the educational and professional pedagogical activity, transform their own pedagogical experience to build a new activity;

Table 1. The educational purposes' and educational technologies' conformity for their assimilation

The training purpose	Recommended educational technology
Theoretical material assimilation	reproductive educational technology: lecture material, work with a textbook, studied objects observation, phenomena; practical instructions implementation
Activity basic algorithms assimilation	reproductive algorithmic technology: educational and cognitive activity, including the abstracting of educational material, presentation a report (speech), the solution typical problems, participation in didactic games
Forming the experience of search, heuristic activities	heuristic educational technologies, in which didactic techniques prevail with the use of problem training, business games, real projecting, atypical professional situations' analysis
Creative thinking formation	interactive technologies, which are based on methods on mastering the experience of creative activity: difficult conditions' situation; creative tasks' group solution; collective stimulation of creative search (brainstorming, synectics, method of morphological analysis and technological solutions synthesis)
Forming the students' information culture	Information technologies: automated training systems; interactive programs; multimedia technologies; hypertext technologies; telecommunication projects, etc.

- stimulating, providing increased interest and motivation for certain types professional activity; programming individual experience of future teachers' successful work; encouraging students to continuous self-education and self-development.

These functions realization is possible through a holistic "through" mechanism that ensures the constant reproduction the pedagogical components of the environment: axiological (value orientations, incentives of personality activity); resource (psycho-pedagogical, functionally-objective, information-communicative); organizational and managerial (pedagogical management, self-management). These components, as the future teacher acquires experience within the framework of pedagogical learning practice, acquire a personal character and are fixed as the basis for professional activity.

The organization stages of the future teacher professional and personal environment are:

a) the common value orientations development reflecting the needs awareness by future teachers for professional-personal development and self-development, and its acceptance as a priority terminal value - the goal of educational and professional activity. The process on launching and developing the environment is determined by systemic personal determination based on the evaluation / self-assessment of the future teacher professional and personal achievements.

b) psychological and pedagogical support of the future teacher professional and personal environment, providing the stimulation of diverse educational and scientific communities, forms of social projects and dialogue interaction creation; future teachers' curatorship and tutoring; diagnostics and self-diagnosis of professional difficulties, achievements and the level of professional competences; designing the individual educational routes;

c) scientific and methodical support of future teachers educational and professional activities, including methodical developments' set for future teachers' educational and independent activities, curricula, programs, methodical guidelines and recommendations for the implementation educational project activities.

Stages on functioning the professional-personal environment include:

a) directly the practical organization the educational and professional activities. In the context of the learned module (discipline), the technology choice for updating the future teacher individual achievements is recommended to carry out, according to the module section or topic goals (**Table 1**).

b) monitoring the status and effectiveness of the professional and personal environment. Its basis is the author's specially developed criterion and diagnostic apparatus, by which methods for measuring the basic parameters (characteristics) of the environment is understood.

As a key parametric criterion for a professional-personal environment, its *modality* is emphasized, which reflects the use degree in developing capabilities (resources) of the environment in the framework of educational activities. This criterion assumes two co-dependent scales: the presence of environment developing capabilities (potential ↔ risks) and the future teacher qualities' presence (activity ↔ passivity).

Positive value of the indicators allows one to mark one point on the corresponding scale, the overall summary value shows the state of the professional-personal environment (see **Figure 2**).

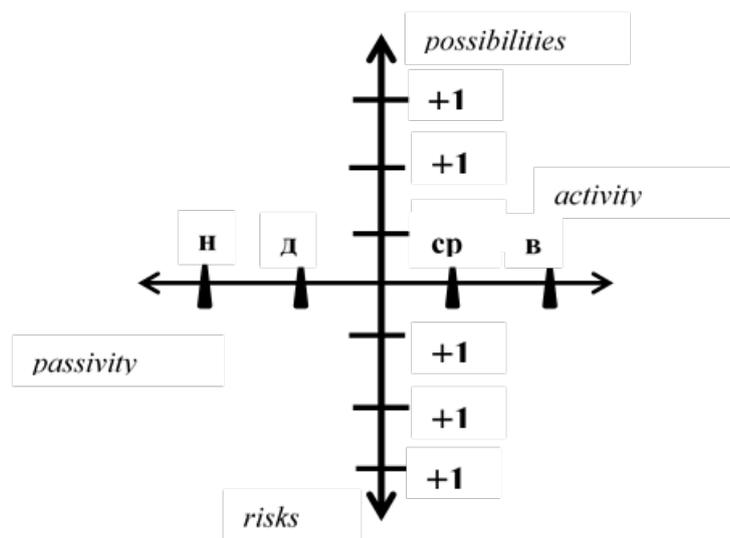


Figure 2. The coordinate system for the modal assessment of the future teacher's developing professional-personal environment

To the developing abilities of the future teacher's professional-personal environment we refer: subject-subject relationship (+1); active / interactive teaching methods (+1); system of creative assignments, tasks, projects (+1); psychological and pedagogical counseling (+1); methodological support (+1) and information support (+1). To future teacher's evaluating qualities, we refer one's activity or passivity as an attitude toward educational and professional activities (low, sufficient, medium, and high).

c) correction the professional and personal environment is carried out on the basis of its monitoring results, or from its organization positions (developing opportunities on the basis of strengthening its resource capabilities and filling), or from the standpoint of pedagogical influences on the student personality.

Ultimately, the process of the future teacher's learning and self-education must be designed so that the learning teacher finds joy from the results on development and through self-evaluation, self-analysis could outline the trajectory of own development. The professional and personal environment of the future teacher needs to form, develop, and sharpen this necessity through the creation its developmental learning potential and the formation the future teacher's personal readiness for professional activities. At the same time, the conditions for educational activity must be coordinated with the future teacher's opportunities, professional needs and personal interests.

DISCUSSION

Undoubtedly, the task of future teachers' professional and personal environment is not only the teachers' education and their qualification's improvement, but also the need formation for training, and readiness forming for self-education and self-development. These qualities should be based on the skills of self-control and self-assessment, self-diagnosis of their educational activities and their development, which implies a special technological nature of the process [34, 35, 36, 37].

Acting as a carrier the environment in some way, the teacher, in the future professional activity, will be the organizer of this environment within the educational organization. This will ensure optimal organizational and psychological-pedagogical conditions for interaction, communication, and pedagogical cooperation, comfortable conditions for the realization professional and personal development. Taking into account the individual characteristics of teachers, adaptability of technologies leads to education high productivity and quality.

The process on forming the future teacher's professional and personal environment is a rather complicated process, having certain time duration. It should be noted that its implementation may be accompanied by a number of barriers and crises. The deployment of an environment focused on future teacher's professional and personal development is associated with the personal qualities development, and therefore a kind of blocking in this development is possible. Cognitive dissonance (arising in response to a contradiction between available and proposed knowledge and ideas), defensive mechanisms (saving the person from incorrect interference, imposing positions), situational factors, the lack of a value basis for the personality, inadequate definition of professional orientations, the isolation of personal positions, the overestimation of one's capabilities, etc.

Our experience in the formation the professional and personal environment has shown that its success was due to a number of objective and subjective factors, including: the participants' motives for realizing their own self-development; creation a special interaction space in which the participant feels personally involved in the situation, realizes the importance of the acquired experience - a necessary condition for the process of learning and self-learning; the concentration in this activity the personal experience, feeling, comprehending this; implementation the step-by-step reflection of activity in the educational and cognitive professional space, which leads to the development in the teachers the need for an instrumental (criterion) acquisition a new professional-personal experience; diagnostics the effectiveness of the teaching and cognitive professional activity for the teacher as a "dynamics of changes" instead of "assessing the state".

Thus, depending on the specific goal setting and the conditions of the educational organization, the motivationally actualizing and resource-forming components of the professional and personal environment can be variable in nature, if the invariant core is observed [20, 38, 39, 40, 41, 42, 43, 44, 45].

CONCLUSION

Technologically, the presented structure of the future teacher professional-personal environment sets only the general outline and the stages on the environment formation. Specificity of technology implementation, the features in its construction and content will largely depend on the specific conditions in the context of goals and means on achievement. It should be specially noted that the technology oriented to the specific professional and personal sphere of the future teacher presupposes a special kind of goals reflecting the individual integral development, and not only its knowledge component, a qualitatively new construction the content of activities, reflecting the personal experience's specific nature, its activity on searching for sense, analytically-evaluation orientation.

The carried out research allows formulating initial ways for realization the technology for formation the future teacher's professional-personal environment:

1. Determination the real place of the future teacher's professional and personal environment formation process in the system of professional priorities, values and plans. The developing effect of the environment formed depends on the extent to which the objective teaching material is included in the teaching and professional activities of the teacher and is the basis and incentive for further professional self-development and self-education.

2. Knowledge (information, experience) acquired by the future teacher in the process of educational and professional activities, initially is oriented to the actualization personal senses, and not to surface reproduction; development the "self" is based on dialogue; the activity way and its content is assimilated, which creates conditions for successful professional and personal development.

3. The participants' (actors) interaction in the environment loses its formality and functionalism and acquires features of interpersonal, inter-subject communication of a prolonged nature. Various organizationally-activity and organizationally-thinking forms of training (discussions, seminars, practical exercises, trainings) are leading ones, but they are aimed not so much at increasing the amount of knowledge and skills, but at forming a new qualitative professional state of the future teacher, intellectual culture and culture of professionally-personal development.

In order for a professional-personal environment to become a person's property, one must repeatedly rethink the essence and meaning of its content, constantly and variably realize own position in activity and behavior. This moment is unique in that the future teacher, having passed through a new qualitative process in disclosing potential opportunities, acquires the property of potential incentive. For example, the teachers' return to certain value orientations in various life and professional situations makes it possible to stimulate their ability to become actual one in the prevailing socio-cultural conditions. The ratio of external and internal factors-conditions for the future teacher's professional self-development changes at each subsequent stage in the implementation of the teacher's professional activity under the influence of life activity, new conditions and goals and the process of professional development comes to a new level.

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