

**Pavlyk N. P.**

## **LOGICAL AND STRUCTURAL ANALYSIS OF PROSPECTIVE SOCIAL PEDAGOGUES' QUALITY PROFESSIONAL TRAINING**

Modern system of professional training is defined by several factors, such as increased requirements to the quality of training, development of modern theories and technologies of working in the social sphere, increased awareness of the need for professionals trained to operate in information and technological society, realization of Bologna Process requirements, etc. The implementation of these prerequisites requires the development of the technological process of quality control over the preparation of prospective social pedagogues. One of such modern technological tools appears to be logical and structural approach to the analysis of the ways to increase the effectiveness of professional training in high school.

Methodological, theoretical, and methodical framework of employing logical and structural analysis as a part of logical and structural approach have been investigated by S. V. Hotina, V. P. Kalosha, V. V. Poznyakov. It is also reflected in the programmes of international and European Organizations, such as: Tempus (Project identification, formulation, and management), European Union (Logical and structural approach and its implementation in the analysis and planning of activity), International Development Institute "EcoPro", the UNO Development Programme, etc.

Application of logical and structural approach to the analysis and planning for addressing the urgent educational and scientific tasks can be found in the works by L. K. Bobrov, I. P. Medyankina, N. Sh. Nikitina et al.

However, the process of improving the quality of prospective social pedagogues' profession training has not been the subject of logical and structural analysis. Therefore, the objective of the article is to analyze the professional training

of prospective social pedagogues, to identify cause-effect relationships among the factors impeding the training of prospective social pedagogues in universities, to formulate the perspectives, objectives, and content of higher education quality improvement.

Theory and methods of the application of the logical and structural approach were developed relatively recently (in the 1960s), but have rapidly spread to include the practices of various international organizations – the EU, UNO, World Bank, UN Children's Fund UNICEF, United States Agency for International Development (USAID), EU programme TACIS, German Agency for International Cooperation (GTZ), Swedish International Development Cooperation Agency (SIDA), and others. Such wide appreciation is explained by the fact that this approach was instrumental in suggesting clear steps to the analysis of a problem, development of goals, planning of the process of introducing changes to improve an object, and a well-defined system of monitoring the effectiveness of the process. Logical and structural approach is also known as LFA (Logical Framework Approach), task planning, and project planning.

Logical and structural approach is a procedure of planning, implementation, and evaluation of programmes and projects; it includes analysis of problems, tasks, strategy, designing of logical and structural matrix, and development of the calendar of events and resources scheduling [5].

Logical and structural approach is a tool for planning and adoption of various innovative processes to define levels of relevance, feasibility, and stability of their introduction.

Main advantages of the logical and structural approach, as a technology of addressing social problems and managing projects, are the following:

- a clear identification of goals, tasks, and content of transformation (for goal development, SMART method is used; it stresses the importance of the goals to be specific, measurable, attainable, relevant, and timely);
- multi-faceted analysis of a social problem (terms of implementation, interests of stake-holders, resources, risks, hypothesis);

- determination and implementation of a system of qualitative and quantitative indicators of the transformation;
- clear distribution of duties and responsibilities of participants and performers of tasks;
- definition of the key elements of the activity and the relations between them; and
- when evaluating the outcomes, attention is shifted from the question "Who is to blame?" to the question "What is the most realistic direction of future activities?" [4].

Algorithm of applying logical and structural approach requires the implementation of nine interdependent steps: analysis of context / outside influences, analysis of the stake-holders, problem analysis, analysis of objectives, action plan, resources, indicators, risk analysis, assumptions [1; 2; 3].

Introduction of innovations into the educational processes requires that the investigator fulfill the following two phases: analysis phase (the first four steps of the algorithm) and planning phase (the subsequent five steps). The objectives of the analytical phase are the study and evaluation of the current situation that needs to be resolved, determination of the key issues and cause-effect relationships between them, and identification of the stake-holders and participants of the transformation, and formulation of objectives of innovation processes and ways of achieving them. The planning phase aims at structuring and technologization of the processes of transformation, determination of their content, sequence, and duration. It also targets at defining necessary resources, selecting indicators for monitoring and evaluation of the innovation, distribution of responsibilities of the subjects of the transformation.

The results of the analytical phase of the application of the logical and structural approach to the problem of quality of prospective social pedagogues' professional training at higher educational establishment (i.e., logical and structural analysis) are presented below.

Logical and structural analysis is a structured research into the negative factors of the current situation. It is conducted to determine cause-effect relationships

between them ("problem tree") and further develop goals, tasks, and activities (drawing "goal tree").

The algorithm of drawing "problem tree" is to consistently follow the steps below:

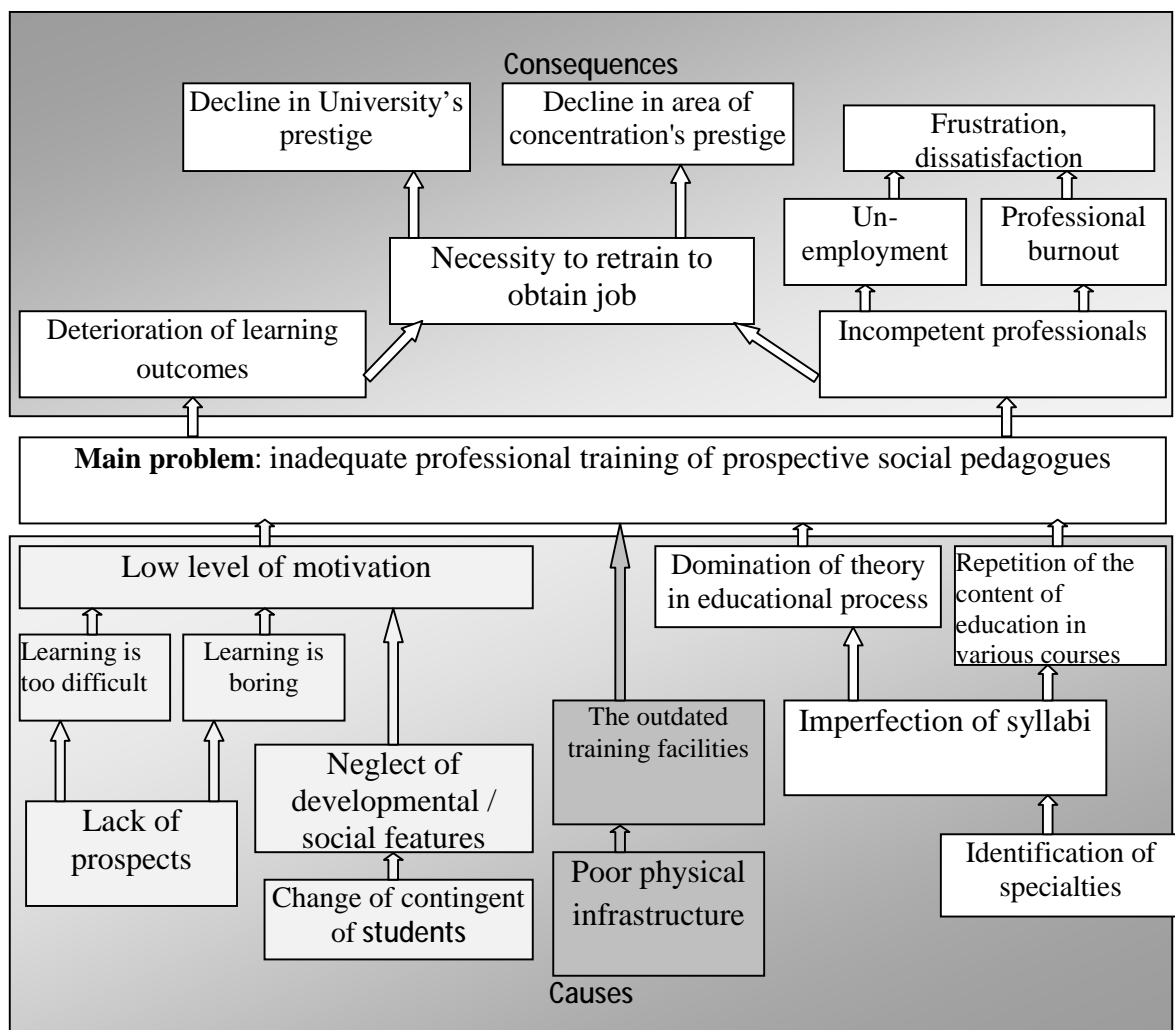
1. *Identification of the starting (central) problem that the transformation is directed to.* This is achieved by means of brainstorming, discussing key issues of the situation under examination; it is formulated as a negative statement; it includes the description of the negative situation and the target group (beneficiaries). In the context of our study, the central problem is "inadequate level of professional training of prospective social pedagogues" (see Fig. 1).

2. *Determination of the causes of the starting (central) problem* – it requires involving all project / activity stakeholders (decision-makers, project team, beneficiaries of the project, funds providers, agents of direct or indirect influence on the proposed activity). For example, when planning the activities aimed at improving the quality of prospective social pedagogues' professional training it is necessary to determine the root causes. To this end, a group of "experts" (15 people) should be formed: students whose area of concentration is Social Pedagogy, general education and discipline-specific subjects faculty, employers (school principals and departments of education's officers), social partners (representatives of social services departments and social security administration), as well as the administration of the Department / University. Involvement of different categories of "experts" to identify the causes of the problem will allow its multi-faceted study. Discussion of the reasons could be conducted in focus groups or by means of brainstorming; it is recommended to put causes on separate cards for their visualization.

3. *Sorting out the causes of the starting problem* by systematization, construction of the hierarchy and cause-effect relationships, and identification of the "clusters of reasons" – root problems connected with each other and united by common origins. For example, in Fig. 1, which features the cause-effect relationships between the factors of inadequate professional training of prospective specialists at universities, we identified three clusters of root causes of the problem: psychological

(inadequate learning motivation of students caused by neglecting the developmental / social features of modern youth, lack of career prospects), educational and methodological / pedagogical (domination of theory in educational process, repetition of the content of education in various courses), and resources-related (poor physical infrastructure, outdated teaching delivery models).

4. *Identification and sorting out of the consequences of the central problem* (similar to points 2 and 3 of the algorithm herein). In the situation under examination, we identified two clusters of consequences: *subjective* (i.e., consequences affecting the subjects of prospective social pedagogues' professional training; for example, incompetent professionals, unemployment, professional burnout, frustration, dissatisfaction) and *objective* (consequences of higher order, i.e., on the level of a higher educational establishment, area of concentration, such as fall in prestige of a university, of Social Pedagogy as an area of concentration).



*Fig. 1. Cause-effect relationships between factors of inadequate professional training at higher educational establishment ("the problem tree")*

5. *Constructing "problem tree"* – visualization of cause-effect relationships of the process / phenomenon under examination (Fig. 1 features an example of this), which allows defining the area of concern of the project / activity. All the causes and consequences are formulated as negative statements (problems). Depth of the analysis is determined by the competence of participants (the parties concerned).

In other words, the logical and structural analysis of the problem addresses the following questions: Whose problem is being resolved? What is the essence of the problem? What factors cause the problem? What can be the consequences if the problem remains unresolved?

The value of the developed "problem tree" comes from the fact that goals, objectives, and prospects of improving the efficiency of activity in the area under examination can be formulated on its base. It also helps to deepen the understanding of actions and resources necessary to resolve the central problem. That is, activity aimed at eliminating only the starting (central) problem can be ineffective due to the continued influence of a set of root causes-problems. Conversely, activity directed at the resolution of root causes will lead to resolving the central problem and will allow modifying the consequences of its existence. Metaphorically speaking, it's difficult to change the stem and limb of a tree without affecting its roots.

Thus, the need for logical and structural analysis done according to the algorithm herein is justified by the difficulties of resolving the problem in the future (i.e., the majority of the proposed in scientific literature solutions to improve the quality of professional training, including that of social pedagogues, are not universal and, therefore, cannot guarantee better outcomes). Conducting logical and structural analysis allows taking into account all the factors affecting the problem and formulating an adequate action plan to achieve the objective of the research.

The identification of the cause-effect relationships of the problem and construction of the "goal tree" (see Fig. 2.) leads to the clarification of the goals and

tasks of the further transformation, which will be effective, relevant, and long-ranging.

The correlation of the problem tree and the goal tree arises from the following dependence: investigated (starting or key) problem is re-directed at the main purpose of transformation (project); the consequences of the investigated problem – at the long-ranging purposes of the activity (those that will be indirectly achieved during quite a long period of time (5 – 10 years) and the results of which are defined as more durable and stable); causes of the investigated problem – at the actions with short-term results and the realization of which can be traced immediately. That is, the "goal tree" serves as a positive reflection of the constructed "problem tree".

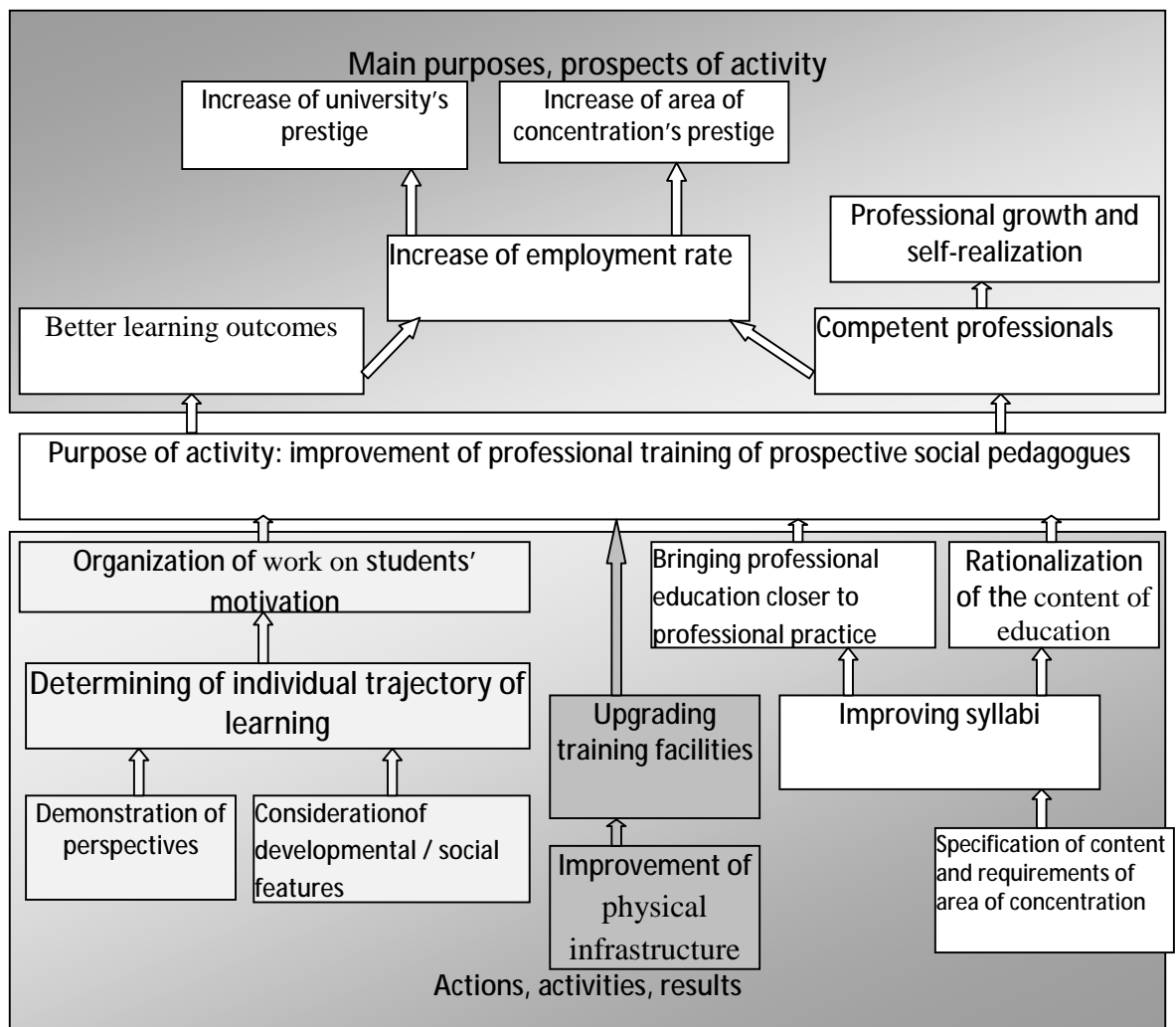


Fig.2. Analysis of the goals of the activity aimed at improving the professional training of prospective social pedagogues ("goal tree")

Development of an action plan is based on the results featured in Fig. 2 below the goal of transformation. For example, to achieve the result of "Rationalization of

the content of professional education of prospective social pedagogues" requires the implementation of the following measures: analysis of curricula and syllabi, analysis of the relevant educational standards, comparison of the syllabi with the requirements of professional training, detection of mismatches, development of the arrangements for their removal, monitoring of the quality of course materials and their delivery.

Thus, presented logical and structural analysis of the problem of inadequate professional training of prospective social pedagogues enables to define the key goal of the transformation, which is to increase the level of professional training of prospective social pedagogues (see Fig. 2). Achieving this goal will make it possible in the future to promote the graduates' professional self-realization, reduce unemployment, and increase the prestige of Social Pedagogy as the area of concentration and the university in general. Achieving the abovementioned goal can be realized by planning, organizing, and implementing activities in the three areas outlined above: psychological, educational (teaching materials and delivery models), and resources-related.

Thus, the described algorithm of logical and structural analysis of the problem enables to rationalize the process of the search for solutions of the investigated situation, developing a meaningful and effective technology / methodology to overcome the negative situation.

The conducted analysis of the problem of the inadequate professional training of prospective social pedagogues at universities enabled us to determine the cause-effect relationships between factors influencing the problem and develop the goal, long-ranging objectives, results, and measures to cope with the central problem.

The logical and structural process presented in this research is advantageous to the professional training of prospective social pedagogues in different ways: studying the course of Methodology of Social and Pedagogical Research, developing social projects and programmes, as well as disciplinary teaching materials and delivery models, when planning educational and administrative activities at the department and the university.



Among the prospective lines of further work is the experimental verification of the suggested tools to improve the quality of the professional training of social pedagogues in higher educational establishments, the design of logical and structural analysis methodology to achieve the goals of higher education, that are the formation of professional, social, and personal competencies of graduates; dissemination of the experience of the application of the targeted planning among community-based and state educational and social organizations.

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**Павлик Н. П. Логіко-структурний аналіз проблеми якісної професійної підготовки майбутніх соціальних педагогів**

У статті представлено результати теоретичного аналізу літератури з проблеми застосування логіко-структурного підходу для розв'язання соціально-

педагогічних проблем, розкрито алгоритм проведення логіко-структурного аналізу, побудовано «дерево проблем» і «дерево цілей» для підвищення рівня професійної підготовки майбутніх соціальних педагогів.

*Ключові слова:* логіко-структурний підхід, професійна підготовка, соціальний педагог, навчальний план і програма, державний стандарт.

### **Павлик Н. П. Логико-структурный анализ проблемы качественной профессиональной подготовки будущих социальных педагогов**

В статье представлены результаты теоретического анализа литературы по проблеме применения логико-структурного подхода для решения социально-педагогических проблем, раскрыт алгоритм проведения логико-структурного анализа, построено «дерево проблем» и «дерево целей» для повышения уровня профессиональной подготовки будущих социальных педагогов.

*Ключевые слова:* логико-структурный подход, профессиональная подготовка, социальный педагог, учебный план и программа, государственный стандарт.

### **Pavlyk N. P. Logical And Structural Analysis of Prospective Social Pedagogues' Quality Professional Training**

The article provides the results of the theoretical analysis of scientific literature on the problem of application of logical and structural approach to resolving social and pedagogical problems. The algorithm of conducting the logical and structural analysis is described. The problem tree and goal tree for improving professional training of prospective social pedagogues have been constructed.

*Key words:* logical and structural approach, professional training, social pedagogue, curriculum and syllabus, state standard.

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