

## The Pedagogical Model of the Formation of Soft Skills

*El modelo pedagógico de formación de habilidades blandas*

### Authors

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### **Abstract**

The article discusses soft skills that increase work efficiency and the ability to interact with other people. The authors identified four groups of soft skills, developed a theoretical model for the formation of soft skills of students of a technical university. The presented model consists of target, substantive, procedural and evaluative-effective blocks. The characteristics of each of them are given. Criteria and levels of soft skills development have been developed.

**Keywords:** Soft Skills; Self-Management Skills; Cognitive Skills; Communication Skills; Collaboration Skills.

### **Resumen**

El artículo analiza las habilidades sociales que aumentan la eficiencia del trabajo y la capacidad de interactuar con otras personas. Los autores identificaron cuatro grupos de habilidades blandas, desarrollaron un modelo teórico para la formación de habilidades blandas de estudiantes de una universidad técnica. El modelo presentado consta de bloques objetivo, sustantivo, procedimental y evaluativo-efectivo. Se dan las características de cada uno de ellos. Se han desarrollado criterios y niveles de desarrollo de habilidades blandas.

**Palabras clave:** Habilidades blandas; Habilidades de autogestión; Habilidades cognitivas; Habilidades de comunicación; Habilidades de colaboración.



## Introduction

Recently, in connection with the demands of the industry, interest in studying the issue of the formation of "soft" competencies among university graduates has increased. The formation of competencies can be of two types. Solid competencies are skills and abilities associated with a specific profession, skill. Soft competencies characterize the personal qualities. These include learning ability, flexibility, mobility, the ability to work with information, the ability to motivate yourself and the team. [Petrov, & Makharoblidze, 2017].

Based on the content analysis conducted by researchers [Berkovich, Kofanova, & Tikhonova, 2018, c.63-64] the term «soft skills» was considered. Translated from English, this concept means "soft skills", which means skills that do not belong to the professional group. They are also personal qualities that allow you to effectively and harmoniously interact with individuals. In other sources they are explained like unified skills and personal qualities that increase the efficiency of work and interaction with others.

Based on the study and analysis of a number of publications on this topic, the authors identified four groups of soft skills:

- **self-management skills:** the ability to take responsibility, work independently, define your personal and professional position, mission in life, formulate goals, motivate yourself, control stress, manage your own time;
- **cognitive skills:** reflexive thinking, search, critical analysis and synthesis of information, the ability to apply a systematic approach to solving tasks;
- **communication skills:** the ability to actively listen, give feedback and respond to criticism, persuade and argue; make presentations; design your own image and profitably represent yourself in the labor market;
- **collaboration skills:** teamwork skills, setting tasks for employees, coordinating group interactions for a common result; maintaining a comfortable moral and psychological climate in the team.

At Harvard University, based on a study, it was found that the contribution of hard skills to an employee's professional success is only 15%, while soft skills determine the remaining 85% [Rakesh Naga Chinta. My Overview of Harvard's, Stanford's Study For Top Skills Needed To Be In Demand In the Job Market]. In this regard, the authors of the article have developed a theoretical model for the formation of soft skills of students of a technical university. This model includes the interconnection of the following blocks: target, content, procedural, evaluative and effective.

Let's take a closer look at the blocks that make up the model.

**The target block** determines the main directions of the formation of soft competencies through the educational process, and, in particular, through the complex organization of interactive forms of education.

Our proposed model of soft skills formation is based on competence-based, personality-oriented and activity-based **approaches**.

The implementation of the *competence-based* approach is manifested in the focus of the training system on the formation of universal competencies of bachelors within the framework of the implementation of the federal state educational standard of higher education (FSSES HE 3).

This approach shifts the emphasis from the acquisition of knowledge, abilities and skills to the formation and development of future bachelors' ability to creatively apply the gained knowledge in a specific situation.

A *student-centered* approach to learning presupposes the creation of such an educational environment that will contribute to the full manifestation of the students' abilities, the actualization of their strengths for self-development.

A prerequisite for the formation of all soft competencies is the inclusion of students in practice-oriented activities - this is the task of the *activity* approach. Active types of educational work specially organized by the teacher are aimed at implementing changes and transformations of the very subject of activity - the student.

Educational activities for the implementation of students' soft skills are implemented on the basis of the following **principles**:

- *the principle of dialogical teaching* - a priority for interactive teaching methods, where each student takes an active position;
- *the principle of social interaction* is such a state of the educational environment in which the subjects of the educational process are united in joint activities to exchange information, skills, experience and build mutual relations;
- *the principle of reflection* - ensures the focus of students and the teacher on analyzing the course and results of educational activities, on identifying difficulties and their timely elimination, fixing by students the degree of their development;
- *the principle of the implementation of the facilitating (supporting) role of the teacher* - initiation, stimulation and encouragement of self-development of students at all stages of the pedagogical process.

**The content** block of the model determines the content of the educational process, in which the soft skills of students of a technical university are formed. The curricula of the undergraduate courses include such disciplines as "Team Building", "Personal Development", "Career Management", "Time Management".



All of these disciplines are aimed at the formation and development of "soft" skills. In the classroom, the integration of traditional and innovative forms of education takes place, there is a breakdown of the personal qualities of each student. In the lessons of the discipline "Team Building" students reveal the basic principles of creating and rallying teams, find effective ways to implement interaction in a group and teamwork. In the classroom of the discipline "Personal development", students study the techniques of mental self-regulation in the process of activity and communication; learn to plan and draw up a perspective of their future; successfully realize their capabilities and adapt to the professional environment. "Career management" contributes to the development of professional mobility, flexibility, purposefulness in matters of professional development, the formation of ideas about the theory and practice of building a career. The discipline "Time Management" reveals the essence and types of time management, students study the principles and methods of time resource management for the successful implementation of their professional activities.

As you can see, all these disciplines together build a good platform for the formation and development of soft competencies that prepare a specialist for professional activity.

The third block of the model - **procedural** - is represented by methodological support, a set of variable educational technologies.

The complex of various types of activities for the formation of soft skills includes seminars, as well as participation of students in research activities. Within the framework of research activities, students prepare reports for the conference, participate in olympiads, competitions. They acquire skills that will be in demand in their future professional activities: work with scientific literature, independence in theoretical and practical judgments; critical thinking, registration of scientific research results; presentation of your report.

To create a new developing educational environment, the teacher uses such *pedagogical technologies* as the project method, role-playing and business games, solving problem situational tasks, a partial search method, which, in our opinion, allows to effectively form students' soft skills when studying the disciplines "Team Building", "Personal development", "Career management", "Time management" [Kozlova, & Stolbchenko, 2018; Kryucheva, & Tolstoukhova, 2015; Mezentseva, 2018].

It is difficult to overestimate the pedagogical potential of *gaming technologies*. Game modeling allows you to unite all team members, to establish emotional contact between them. The teacher sets a

task for the students, substantiates the relevance of the situation, if necessary, assigns roles, introduces the rules and rules of the game. Then the group thinks over the task, draws up a plan for its implementation, makes and formalizes a decision. At the final stage, the results of the participants' work are summed up with a detailed analysis of their actions, the most active of them are encouraged [Richter, 2016].

The knowledge obtained as a result of the game is much stronger and more reliable for the student than the information obtained in the reproductive way.

You can learn to plan, develop, execute and produce increasingly complex tasks in *project activities*. Students select the necessary information, work in groups to search for facts that confirm or refute the hypothesis, generalize, draw conclusions, formalize the results of their activities.

The project method contributes to the development of students' awareness of the importance of teamwork for obtaining a result, the role of effective social interaction. The project develops a "team spirit" in children, initiative, dialogical communication, helps to increase the personal confidence of each participant. The project method allows the formation of skills and qualities, the development of which will further allow the implementation of important professional functions: research, planning, predictive, target-oriented, transformative, creative, evaluative [Golovanova, et al. 2017,c.99].

*Solving situational tasks* as a special form of organizing cognitive and communicative activities involves identifying problems, the ability to find ways to solve them in non-standard conditions, and present their ideas.

*The partial search method* introduces students to independent work on a task, develops the ability to critically approach the analysis of information, overcome intellectual difficulties and understand the relationship and subordination of individual parts of the general whole.

The presented pedagogical technologies are valuable for the response of each student, for their inclusion in a single space of communication.

In the course of mastering the disciplines, students develop **skills**:

- 1) effective verbal and non-verbal communication;
- 2) managing emotions;
- 3) time management;
- 4) solving non-standard tasks in conditions of a shortage of resources;
- 5) speed up decision making;
- 6) creating a project, visualizing project ideas and results of project activities;



- 7) realizing your leadership potential and team building;
- 8) recognizing social influence and building their behavior in a conflict situation.

The fourth block of the presented model is *evaluatively effective*. It includes a description of the structural components of soft skills of students of a technical university that we have identified: cognitive, operational, axiological (Table 1), as well as criteria and levels of soft skills formation.

*The cognitive component* is determined by knowledge in the field of the studied disciplines. *Students study*: principles and methods of effective use of time; types, forms and methods of communication to improve the quality of relations with people; concept, essence, main stages of a professional career; the basics of small group management, the psychology of critical thinking. For an objective assessment of the cognitive component, we have developed assessment tools in the form of a set of test items, control questions for a practical lesson and credit. There are evaluation criteria: "unsatisfactory", "satisfactory", "good", "excellent".

The soft skills groups	Components and indicators of formation soft skills		
	cognitive	operation	axiological
self-management skills	know the principles and methods of effective use of time	be able to effectively plan your own time; use methods of self-organization and self-education	increased interest in studying a cycle of disciplines; active position of the student as a subject of the educational process; willingness to take responsibility for their actions
cognitive skills	know the psychology of critical thinking	be able to search, critically analyze and synthesize information	
communication skills	know the forms and methods of communication to improve the quality of relations with people	be able to apply modern communication technologies	
collaboration skills	know the concepts, principles and methods of building effective teamwork	be able to interact with the team to ensure successful work; realize yourself within the team	

**Table 1:** The characteristics of the main components of soft skills

The presented indicators serve as the basis for identifying the levels of soft skills sophistication: low (unacceptable), below average and average (minimum required), above average (sufficient), high (high).

*A low (unacceptable)* level is manifested in the absence of a system of knowledge of the basic concepts of the presented disciplines. The student is not ready to correctly set goals and go step by step towards them.

*Below average and average (minimum necessary)* - assumes the presence of interest only under the control of the teacher, superficial knowledge, skills are manifested situationally.

*Above average (sufficient)* - is determined by the emergence of awareness and purposefulness of actions, the stability of cognitive interest. The student demonstrates sufficient knowledge of the

*The operational component* is expressed in the practical significance of the knowledge gained and is characterized by the presence of skills and abilities necessary for the formation of soft skills.

*The student should be able to*: search, critically analyze and synthesize information; effectively plan your own time; use methods of self-organization and self-education; interact with the team to ensure successful work; apply modern communication technologies. To assess this component, we have also developed sets of situational tasks and creative tasks with the corresponding assessment criteria.

*The axiological component* is manifested in the students' conscious attitude to the development of soft skills, in the readiness to take responsibility for their actions, in the manifestation of the student's active position as a subject of the educational process, increased interest in studying the block of the above disciplines. Diagnostics of the axiological component is carried out using questionnaires, psychological test methods and questionnaires.

basic concepts of disciplines, monitors the correctness, accuracy of his actions.

*High (high)* - characterized by a high awareness and focus of planning the educational trajectory, a creative approach when performing educational tasks; originality and creativity of ideas, demonstrates comprehensive knowledge in the field of assigned tasks, perfectly applies skills and has skills.

Thus, the designed theoretical model, aimed at the formation of soft competencies in the educational process in the study of certain disciplines, implemented in interactive forms of education, will meet the requirements for the employment of graduates.

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