

THE INFLUENCE OF THE ADAPTATION PERIOD IN
HIGHER INSTITUTES OF LEARNING ON EDUCATIONAL
AND COGNITIVE ACTIVITIES OF THE FIRST YEAR
STUDENTS

Formulation of the problem. The complexity level of our automated hi-tech environment puts the following basic requirement to the specialists in all fields: the ability to adapt to the changes taking place due to the rapid development of science and technology. This ability is especially important for engineers because their professional activities embrace not only man-machine interaction but also dialectic interconnection between the previous scientific achievements and innovations as well as dynamic information field. All the changes in the life of the society, which are caused by scientific and technological progress, require from a university graduate the formation of such intellectual background that will provide the basis for further self-education and development necessary for their professional activities in the conditions of constant transformations in the hi-tech world. The main sources of the entrants' upbringing and education are family and school. The transition from one educational level to another is accompanied by their finding themselves in a new environment, so it is necessary for the young people to get used and adapt to it.

Overview of the latest research and publications. The adaptation phenomenon has long been the object of close attention of the pedagogical science (O.G. Moroz, L.G. Yegorova, V.I. Brudny and others). The problem of first-year students adaptation was investigated by P.A. Procetsky, I.V. Suhanov, V.I. Zhuravliov and others. All the researchers, who studied the adaption process, considered the difficulties faced by those undergoing adaptation [1]. I.V. Brudny believes that all of them are caused only by the gap between the complex requirements of higher school and insufficient first-year students' preparation for them. Since they find themselves in new life conditions performing a new social role

and previously received ideas about higher school remain dominating ones, they regard it as a means of preparation for future professional activities. B.G. Ananiev in his work made an attempt to systemize the existing approaches to the above-mentioned problem. He regards a person (the subject of work) as a fusion of characteristics of an individual and those of a personality. Hence professional adaptation is the unity of an individual's adaptation to physical conditions of professional environment (the first psycho-physiological aspect), adaptation to professional tasks and operations being performed, to professional information, etc. (the second, professional aspect) as well as adaptation of a personality to social components of the professional environment (the third, socio-psychological aspect) [3]. Very few such studies have been conducted in Ukraine so far.

The purpose of this paper is to discover and to give theoretical substantiation of the set of factors that influence the process of first-year students' adaptation to studying at a higher technical educational establishment.

Presentation of the main material. Although the notion of adaptation is a heterogeneous one, all the researchers agree that adaptation process takes place when an individual or a group of people find themselves in a new environment. Adaptation of a person to new conditions should not be confined only to his (her) biological adaptation, that is limited only to physiological processes. A human being, who is at the highest level of psychological development, has a very complex adaptation mechanism that depends on individual interests, orientation, needs and consciousness. So adaptation of a human being to life conditions is more complicated and profound with higher flexibility and inventiveness.

What does a first-year student feel at the beginning of his university studies? He feels relieved after tense preparation and successful passing of the entrance examinations and satisfied after solving a complex and vital problem. But these feelings are gradually changed for different ones. A number of new complicated disciplines appear; module – rating system of studies is different from that at school; life conditions differ from their home environment. Many first-year students feel

confused. At this stage it is reasonable to take some measures which will help students to adapt to new living and studying conditions, to become more self-confident, to have clear understanding of the aim that brought them to the university and to go along the road of continuous spiritual development. Such work is being carried out in VNTU according to the “Program of humanitarian policy and activities on the students’ upbringing”. Students’ work has professional orientation; it is a form of their cognitive and social activity, expression of the desire to self-determination and self-assertion in life. Its characteristic features are already clearly revealed during the first year of studies because of the changing conditions in transition from secondary school to university studies.

Further activities of a higher school student are specific as to their aims, conditions and motives being the main means for the formation of a future specialist’s personality. At this period such characteristics of a personality are formed as orientation, temperament, capabilities; cognitive and psychological processes; senses, perception, observation, imagination, memory, thinking, speech, attention, emotional-volitional processes and psychological states: self-confidence, self-discipline, readiness for active behavior and others. Relations which appear in the group united by communication activity stimulate also the development of self-esteem and self-regulation because they form in students the need not only to understand correctly the demands of those who surround them, but also to evaluate their capabilities, to implement them in specific actions and to define the result.

L.G. Yegorova [4] distinguishes a set of factors that, to her mind, influence the adaptation process: a) social and demographic; b) psychological; c) social maturity (activeness, independence and others); d) psychological and pedagogical (orientation, professional level etc.); e) pedagogical (logical connections between disciplines which are taught). According to N.I. Ivanov [5] factors that influence the success of didactical adaptation are the environment, where entrants came from, and the level of higher school requirements, which they are informed about. Besides he distinguishes such important factors as orientation to a certain system of values, social and

psychological climate in a group and social origin. The main difficulties of work on professional orientation are connected with typological characteristics of a personality.

A.V. Siomichev considers intellect, anxiety, friendliness and social maturity to be the main psychological factors of students' adaptability to a higher technical educational establishment. He distinguishes three ways of students' adaptation: 1) success in one of the dominant activities does not depend on the level of adaptation in other activities; 2) success or failure in cognition are accompanied by the success or failure in communication; 3) success in the dominant activity is accompanied by the failure in one of the secondary activities. The researcher arrives at a conclusion that adaptation in one sphere of activities (either cognition or communication) is most typical for students [6].

In Vinnitsa National Technical University there is the Institute of pre-university training that has been successfully functioning for a number of years. It includes: school of physics and mathematics for pupils of the 10th and 11th forms, preparatory department, evening and correspondence preparatory courses, the Center for the entrants' testing. While studying at the preparatory department, pupils receive comprehensive information about university specialities, get acquainted with the directors of the institutes who in their turn tell about the work of a definite institute. E.g. the students of the preparatory department are acquainted with the International Ukrainian-German educational complex – the Center of Mechatronics “VNTU-FESTO”, where innovative technologies are implemented for training students of the “Manufacturing engineering” speciality. Therefore the students are well-informed about the University studies and it is easier for them to choose their future professions.

The orientation side in the professional choice of a person involves defining the main criteria for decision making and the importance of professional activities in his (her) life. Pupils with high self-esteem want, as a rule, to enter higher educational establishments of III – IV accreditation level. They think high about their capabilities,

consider their choice to be the only right one and are sure that in their lives everything will be just as they want. These pupils cannot even imagine that their plans would not be realized.

The tutors of academic groups should carry out a great amount of individual work with such students of the preparatory department. Pupils with low self-esteem suffer from the lack of self-confidence and so their plans for the future are not clearly defined. They either keep silent about their capabilities or refer to the estimation of the adults. Pupils with adequate self-esteem realize their capabilities, their development level and see the sphere of their application. The understanding of their possibilities makes them purposeful and being able to make independent decisions about choosing profession and plan for the future.

It is worth considering the approach to the first-year students' adaptation at the Institute of Machine-building and Transport (InMT). The work on students' adaptation and further professional orientation at InMT faculties is based on the cooperation of faculties' administration, teachers, and tutors of groups with both first-year students and elder ones. The adaptation process comprises 3 main aspects: psychological adaptation to living in new conditions; adaptation to learning more complex subjects compared to those at school; adaptation to the chosen specialty – professional adaptation. With this purpose a number of events are being organized under the common motto “Getting acquainted with the specialty” oriented to first-year students of these faculties. Also thematic parties are organized where first-year students meet with the best elder students. At such meetings undergraduates demonstrate their course papers, scientific works, scientific popular films that are shot using informational computer technologies. Undergraduates' stories about their specialities sound convincing since they are not only brilliant students, but are also engaged in research work and combine their studies with part-time jobs.

At such parties first-year students see boys and girls just as themselves – cheerful and clever, sincere, sociable and friendly. And everybody feels relaxed, hopeful and optimistic. Students' life appears to be not so tense. In the continuous

routine of lectures and practical lessons they see real people, events. In such warm atmosphere of communication certain complicated aspects of curriculum become “transparent” for first-year students. The unknown and complex is transformed to quite understandable and interesting things. All this inspire students, relieves them from the “burden” of dissatisfaction and incapability to overcome all the difficulties in their studies. After such parties freshmen become more actively engaged in the educational process, ask the teachers to give them additional tasks for getting more profound knowledge and skills, particularly in the field of information technologies. They want to be high-level specialists, not only experts in their own fields, but also well-informed as to the demands of the society. They want to be specialists with a broad view of rapid changes and requirements of our time.

Besides, students reveal their creativity which is necessary both for an individual and to the society as a whole. They have a chance to make their daily routine interesting and versatile. It should be also noted that such parties are among the measures which act naturally and “unintentionally” in the work of students upbringing. Thanks the vivid example of purposefulness of elder students, they develop the feeling of dignity and self-respect. In the process of professional training a psychological preparedness to professional activities is formed. First-year students are just beginning to adapt to the conditions of studying at a higher school, they do not fully realize their intellectual potential. They lack self-confidence due to certain difficulties in their studies and communication. At this stage it is very important to inform them on the main psychological aspects of a personality and communication, to give psychological consultations on self-knowledge and understanding of other people. A very important component that promotes in first-year students thirst for knowledge and self-improvement is informing them about innovative technologies that are currently used at enterprises.

Therefore, all those measures and events promote students` adaptation to new conditions of life and studies, raise their cultural level and promote their cultural development, self-confidence and orient them to achieving success in their lives.

The comprehensive study of adaptation problem results in discovering the whole set of factors which determine a comparatively fast, complete and stable adaptation as well as the reasons for disadaptation. So in order to simplify and accelerate adaptation processes it is important to discover adaptation factors which are the set of conditions and circumstances influencing the adaptation rate, level, stability and results, i.e. factors which act as causes and sometimes as driving forces of the adaptation process development.

As a result of this problem investigation we have drawn the conclusion that the adaptation process in VNTU is influenced by a number of factors, the main groups of which were revealed while studying the problem of future engineers' adaptation in interviews, expert polls, observations and in conversations. The following factors have been singled out: a) individual development of a personality: education, physical development, health condition, learning capabilities, motivation, age peculiarities, habits, features of character; b) social and psychological: microclimate in the group, material well-being, living conditions, self-esteem, collective development level; c) national and demographic: nationality, social origin, social feeling and behavior, public activity.

The adaptation process character and progressing, studied by pedagogical science, are determined by a complex interconnection of objective and subjective factors. Each of the above-mentioned components is the necessary but insufficient condition for building personality-oriented pedagogic interaction. While choosing a future profession the entrant must: realize the role of general and special abilities and ways of their development; to realize the most essential motives of professional self-determination.

Conclusions. Important factors of successful adaptation, especially that of a higher technical school students, along with optimization of conditions under which this process is taking place include also availability of the necessary personal characteristics and skills, high level of their motivation, positive attitude to education and future profession, corresponding structure of orientation towards definite values.

For building a model of optimal adaptation process it is necessary to take into account the influence of all the factors and at the same time to create not only qualitative but also quantitative models which reflect objective properties and relationships of the phenomena in our reality through certain characteristics and relationships of quantities.

References:

1. Ащепков В. Т. Профессиональная адаптация преподавателей высшей школы / В.Т. Ащепков. – Научно-методическое пособие для преподавателей. – Армавир, 1989. – 157с.
2. Брудный В. И. Профессиональная и социально-психологическая адаптация студентов и молодых специалистов / В. И. Брудный. – М., 1976. – 56с.
3. Ананьев Б. Г. Психологическая структура человека как субъекта // Человек и общество/ Под ред. Б. Г. Ананьева. – Вып.2. – Л., 1967.
4. Егорова Л. Г. Факторы адаптации студентов к учебно-воспитательному процессу технического вуза: автореферат. дис.канд.пед.наук / Л. Г. Егорова. – Л., 1978. – 22с.
5. Иванов Н. И. О профессиональной адаптации студентов. Проблемы педагогики высшей школы / Н. И. Иванов. – М., 1973. – С. 171-176.
6. Сиомичев А.В. Психологические особенности адаптации студентов в сфере познания и общения в вузе: автореферат дис.канд.пед.наук / А.В. Сиомичев. – Л., 1985. – 23с.

***Анотація.** В статті розглянуті основні теоретичні аспекти адаптації студентів першого курсу до навчання у ВТНЗ. Визначені загальні фактори, які сприяють адаптації студентів та запропонований підхід до адаптації студентів першого курсу в Інституті машинобудування та транспорту ВНТУ.*

***Ключові слова:** адаптація, фактори адаптації, психологічна та професійна адаптації, майбутній інженер.*

***Аннотация.** В статье рассмотрены основные теоретические аспекты адаптации студентов первокурсников к обучению в техническом вузе. Определены общие факторы, способствующие адаптации студентов и предложен подход к адаптации студентов первого курса в Институте машиностроения и транспорта ВНТУ.*

***Ключевые слова:** адаптация, факторы адаптации, психологическая и профессиональная адаптации, будущий инженер.*

***Summary.** The article describes the main theoretical aspects of the adaptation of freshmen students to study at a technical college. Identified common factors that contribute to students' adaptation and an approach to adaptation of first-year students at the Institute of Mechanical Engineering and Transport VNTU.*

***Key words:** adaptation, adaptation factors, psychological and professional adaptation, future engineer.*