

# ORGANIZATIONAL AND PEDAGOGICAL CONDITIONS FOR THE FORMATION OF PROFESSIONAL SIGNIFICANT QUALITIES

**Saydivaliyeva Barno Saidbahramovna**

*Lecturer, Department of Foreign Languages;  
Tashkent State Transport University*

## **Annotation**

The article is devoted to the formation of professionally important qualities of specialists in the field of information security. The concept of professional qualities that can contribute to the manifestation of the independence and thinking activity of future professionals in the field of information security, as well as the formation of professional qualities, opens up organizational and pedagogical conditions. are studied.

## **Keywords**

Qualities of professional significance, organizational and pedagogical conditions, the theory of solving inventive tasks, algorithm for solving inventive tasks.

## **Аннотации**

Статья посвящена формированию профессионально важных качеств специалистов в области информационной безопасности. Представление о профессиональных качествах, которые могут способствовать проявлению самостоятельности и мыслительной активности будущих специалистов в области информационной безопасности, а также формированию профессиональных качеств, открывает организационно-педагогические условия. изучаются.

## **Ключевые слова**

Качества профессионального значения, организационно-педагогические условия, теория решения изобретательских задач, алгоритм решения изобретательских задач.

In the process of searching for pedagogical conditions for the formation of professionally significant qualities in a higher educational institution, we considered it necessary to pay attention to the age of students. According to V.A. Romenza, senior adolescence and early adolescence is a period in a person's life when the structure of an act is fully developed for the first time, when it can be done for its own sake, and the act does not contribute to the achievement of another goal.

Human creativity - from adolescence to the masterpieces of a mature genius - is a manifestation of the spiritual capabilities of a person and a demonstration of boundless human qualities<sup>5</sup>.

Creativity and action are precisely the principles on which it is most expedient to investigate the nature of human creativity, as well as its advancement on the path to personal maturity. If a person perceives his own life as creativity, then it fills his every moment with behavioral content. In carrying out an act, a person builds a creative situation of self-development, in which the essential elements of the individual world of his "I" are constructed<sup>6</sup>.

Based on the foregoing, we can conclude that the effectiveness of the educational process depends on such pedagogical conditions that could maximally contribute to the manifestation of independence and activity of students' thinking, as well as advancement in their mental development. In other words, the question arises: what should be the educational process so that success can be achieved both in the development of students' mental activity and in the development of their actions?

Analysis of the literature on the problem of the formation of professionally significant qualities and our own experience made it possible to identify, first of all, pedagogical conditions that would contribute to the successful formation of professionally significant qualities of future information security specialists studying in higher technical educational institutions in the process of studying scientific and natural disciplines.

The first of them we identified the creation of a motivational attitude towards the creative activity of students due to persuasion, the development of interest, establishing a connection with life and future professional activities. We will justify our opinion in this way. It is known that motivation as a psychological phenomenon is interpreted in different ways. In one case, it is interpreted as a set of factors that support and direct, that is, determine behavior (J. Godefroy, K.B. Madsen); in the other - as a set of motives (K.K. Platonov); in the third - as an impulse that causes the activity of the organism, and the direction that determines it. In addition, motivation is viewed as a process of psychological regulation of a specific activity (M. Sh. Magomed-Evminov); as a process of action of a motive, as a mechanism that determines the emergence, direction and methods of implementation of specific forms of activity (I. A. Dzhidaryan); as an aggregate system of processes that are responsible for motivation and activity (V. K. Vilyunas). Researcher E. P. Ilyin considers motivation as a dynamic process of the formation of motive (as the basis of an action); according to A. B. Orlov, motivation is the process of forming an incentive to action or activity.

In addition, the studies of A.N. Pechnikov and G.A. Mukhina<sup>7</sup> carried out among students of the VTU on the issue of motivation, gave the following results. The leading motives were chosen "professional" and "personal prestige", less significant "pragmatic" (to get a diploma) and "cognitive". True, at different courses of study, the role of dominant motives changes. So, in the first year the leading is the "professional" motive, in the second - "personal prestige", in the third and fourth years - both of these motives, in the fourth - also "pragmatic". In most cases, academic performance is influenced by "professional" and "cognitive" motives. "Pragmatic" motives are mainly inherent in underperforming students<sup>8</sup>.

The importance of knowing the structure of motivation for educational activity is especially clearly manifested in the process of professional study. Thus, in the study of A.O. Reana did not find a difference in the chosen profession among excellent students and poorly performing students. Other dependencies were obtained when the emphasis was on performance in specialized subjects and industrial practice. Here, the difference in attitude to the profession became significant in the interests of the students of the

first group, that is, those who are doing well<sup>9</sup>. Similar data were obtained as a result of a study of the motivational sphere of study of university students (A.O. Rean, V.O. Yakunin, N.I. Meshkov)<sup>10</sup>. The reason for such results lies in the confidence of a significant part of students that general scientific and general education disciplines do not bring them closer, but distance them from mastering professionally important knowledge and skills (it is no coincidence that many students are expelled in the first years when these disciplines are taught).

Characteristically, the factor of motivation for academic performance turns out to be stronger than the factor of intelligence. Academic performance does not reveal a close and reliable relationship with the intelligence of students, while "strong" and "weak" students differed in the level of motivation for educational activity. The first ones have a weakness for mastering a profession at a high level, they are focused on obtaining strong professional knowledge and practical skills. The second - in the structure of the motive, they have, for the most part, external motivators: to avoid condemnation, punishment for poor studies, not to lose a scholarship, and the like.

Awareness of the high value of the motive for learning for academic performance in educational activities led to the formation of the principle of motivational support of the educational process (O.S. Grebenyuk)<sup>11</sup>.

We emphasize that a high level of intellectual activity, at which a creative solution to tasks is possible, is achieved by individuals with a certain motivation and moral attitudes. Self-affirmation orientation, rivalry, avoidance of failures become a barrier on the way to creativity even with significant intellectual potential<sup>12</sup>. Another such obstacle is intellectual passivity - as an underestimated level of intellectual activity, predetermined mainly by the peculiarities of upbringing, which manifests itself in an insufficient focus of intellectual skills, a negative attitude towards mental stress, the use of detours in the performance of intellectual tasks. An indicator of intellectual passivity is a negative attitude towards any activity associated with mental work; lack of initiative in intellectual activity (from open protest to submissive thoroughness); cessation of mental activity (work) in the absence of significant reinforcement, avoidance of intellectual stress, lack of "mental surprise" and low efficiency in this activity.

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Note that the help and support from the teacher is important for the student not only while searching for a solution in a difficult "emotional" situation, but also during the formation of methods of response in order to prevent and the emergence of negative situations. The solution of the noted tasks is facilitated by the emotional environment, being in which the person realizes himself, showing certain emotions and influencing the other (other) participants in these relations. Within a positive emotional environment, it becomes possible to solve the following tasks:

- disclosure of their own reserves of internal activity, the possibility of self-expression and self-knowledge;
- improvement of mood, awakening interest in learning activities, in the knowledge of the subject;
- removal or reduction of anxiety, physical and intellectual stress, renewal of internal forces and reserves;
- correction of relationships, overcoming difficulties in behavior, learning that have arisen or arise among students when communicating with peers, teachers.

Thus, referring to the impact of specific emotions on students' activities, we can conclude that positive emotions with skillful management of the teacher during the lesson have a constructive effect, respectively, negative emotions have a destructive effect on students during the lesson, which as a result affects their academic performance. Researcher I.M. Gapiychuk also emphasizes the leading role of the teacher in the achievement of success by students in various activities, since he, acting on the emotional sphere of students, causes the emotional activity of the latter, manages and corrects students' activities, creates conditions that provide the student with the status of the subject of interaction.

This is due to the fact that in the structure of independent activity, along with elements of reproduction, elements of creativity are constantly manifested, which are significant not only due to the novelty of the results, but also due to the non-standard nature of the process itself. Creative independent work is valuable in that, performing them, the student can find original ways of solving cognitive tasks that were not provided for by the teacher.

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