

CHARACTERIZATION OF BARRIERS TO BE OVERCOME IN THE FORMATION OF INFORMATION AND COMMUNICATION COMPETENCE OF A FUTURE SPECIALIST

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Abstract

The paper describes the barriers that need to be overcome in the formation of information and communication competence of future specialists. This article examines the characteristics of the barriers that arise in the process of forming the information and communication competence of future specialists. The authors emphasize the difficulties that need to be overcome and are determined by specific situations when a specialist understands a pedagogical task but does not know how to solve it, or when the result does not meet his or her expectations. The article also considers anti-innovation barriers that arise when implementing information and communication technologies and highlights the role of psychological barriers in shaping the professional activities of future specialists. Approaches to overcoming these barriers and their impact on the process of learning and development of information and communication competence are analyzed. The peculiarities of teachers' behavior in the implementation of innovations, formation and development of information and communication competence are highlighted. Anti-innovation barriers are described. The article characterizes the classification of external and internal barriers, taking into account various aspects, such as social, organizational, methodological, material and technical, individual psychological, age characteristics, and personal qualities. A psychological barrier is an obstacle that a person experiences, showing emotional reactions that can stimulate activity or lead to a temporary decrease in activity. It is emphasized that the barrier includes reserves for stimulation and activation of activity. The teacher's professional activity is affected by this barrier at different stages, including the period of adaptation and the period of professional burnout after a long teaching career. It is noted that the main idea of any barrier is that it limits and hinders both external and internal activity of a person during his/her life. These restrictions can simultaneously block different aspects of life. The article describes the following barriers: social, organizational, methodological, material and technical, motivational, which are manifested in the lack of sustainable internal motivation to master information and communication competence. The motivational barrier depends on the nature of motivation, intensity of motivation, internal motives (needs, motives), which depend on the cognitive needs of the subject, satisfaction from the process of cognition and realization of one's own personal potential, and they underlie the behavior and professional activities of people, which in turn affects the intensity of emotional processes, the sharpness of reaction to situations and developments, as well as intellectual processes. Among the barriers are the following: unmet needs for cognition, loss of interest in work or study, divergence of desires, barriers of character, temperament, self-esteem, evaluation by others, emotional state, barriers of speech, guidance (often negative), as well as communication techniques and skills, barriers to self-knowledge and self-improvement. It is emphasized that intellectual barriers are related to the peculiarities of the professional mentality of the teacher. It is concluded that novice teachers lack orientation in a large amount of information and may experience fear of failure. This

can be manifested in the refusal of new skills, lack of teaching methods using information and communication competence. Sensory barriers arise due to the peculiarities of people's perception, such as visual and kinesthetic limitations and cognitive style. They are manifested in difficulties in quickly adapting to new conditions of receiving information, such as reading from a vertical plane, limiting the field of view to the size of the screen, and manipulating unrealistic objects.

Keywords: *barrier, information and communication competence, developmental potential, future specialists, teacher, novice teacher.*

Introduction

The uniqueness of each person's development is determined by a variety of factors that interact in many combinations. Among these factors are heredity and social environment, age and psychological makeup, gender and social status, the nature of the main activity and microenvironment, life history and quality of education, methods of education and the level of culture of society, material status and life events, etc. These factors often act as barriers that can limit the ability to achieve specific goals. Such barriers can lead to restrictions on the subject's freedom in conflict situations. Scientists note that these barriers often act as causes of conflicts [4]. Among the barriers, scientists identify the following: unmet needs for cognition, loss of interest in work or study, divergence of desires, barriers of character, temperament, self-esteem, evaluation by others, emotional state, barriers to speech, guidance (often negative), as well as communication techniques and skills, barriers to self-knowledge and self-improvement [3; 4]. The main idea of any barrier is that it limits and hinders both external and internal activity of a person during his or her life. These limitations can simultaneously block different aspects of life.

The problem of barriers always remains relevant for any sphere of human activity, including the process of training specialists in various fields and their professional growth. Overcoming a barrier involves recognizing the conditions that make it difficult to meet needs, as well as finding the means, methods and ways to achieve the goals. One of the key competencies of a modern teacher is information and communication competence, which requires overcoming numerous pedagogical and psychological barriers.

Work objective.

The purpose of the study is to determine the characteristics of the barriers that need to be overcome in the formation of information and communication competence of future specialists.

Results

An analysis of the works of domestic and foreign scholars shows that different types of barriers in the pedagogical process can be identified. Some of them are defined as cognitive, others as barriers to professional activity, in particular, teacher's, barriers to students' creative self-realization, barriers to self-education and self-education (according to the studies of I. Glazkova, S. Khatuntseva, L. Yaroshchuk). Scholars also focus on the study of the conditions for overcoming these barriers and the methods used for this purpose. Depending on the different approaches to understanding the essence of this phenomenon, scholars consider different aspects of barriers that are characteristic of the educational process. The term "barrier" is used to refer to an obstacle or an obstacle to achieving a certain result, and its specific nature is usually associated with resistance, inhibition, prohibition or blocking, which are limiting in nature (I. Glazkova). Scientists emphasize that difficulties in teaching arise in specific situations when a teacher understands a pedagogical task but does not know how to solve it, or when the result obtained does not satisfy him/her and the teacher is looking for a new way (O. Zhernovnykova, N. Kabus, M. Portian, O. Serbova, O. Frolova, I. Shymanovych). Teaching difficulties are considered as a subjective state of tension, difficulty and dissatisfaction that arises due to external factors and depends on the nature of these factors, educational, ethical and physical readiness of a person for activity and his/her attitude to it.

The peculiarities of teachers' behavior in the context of studying and implementing innovations, in particular information and communication technologies, are highlighted in the works of I. Dychkivska [2], L. Chernikova [1]. The researchers identify anti-innovation barriers, classifying them into external (social, organizational, methodological, and logistical) and internal

(individual psychological and age characteristics, personal qualities, norms, values, guidelines, etc.) This classification should also include a group of barriers that arise due to external causes and affect internal aspects (perception and understanding of pedagogical situations).

Discussion and recommendations

➤ It should be noted that a psychological barrier is an obstacle that a person subjectively experiences, manifesting emotional experiences, states and reactions that lead to a temporary inadequate decrease in activity. This barrier contains hidden reserves for stimulating and activating activity by overcoming it. The teacher's professional activity is influenced by this barrier at different stages, and there is a significant change in the intensity of the manifestation of tense mental states. The key moments in the development of these states are the tense conditions of professional activity during adaptation (during the first two years of work at school), when the personal meaning of the activity is revealed, as well as after 20 years of teaching, when the period of professional burnout begins.

According to I. Dychkivska [2, p. 255-257], external barriers include:

- social barriers that reveal the incompatibility of the new with the existing experience and values accepted in society (especially for experienced teachers) and stereotypes of thinking of the teaching community;

- organizational barriers, which are usually manifested in the opposition of educational authorities to the introduction of innovations at the initial stage and, as a result, lack of funding;

- methodological barriers related to the lack of methodological support and insufficient awareness of innovations, inability to methodically use information and communication competence in the educational process;

- material and technical barriers (availability of necessary hardware and software for teachers at school and at home, level of salary);

- motivational barriers, which are manifested in the lack of sustainable internal motivation to master information and communication competence, dogmatic professional stereotypes, refusal to innovate, preference for traditional teaching methods, even when realizing the benefits of using information and communication competence and in misunderstanding the need and possibility of further use of the acquired knowledge in future professional activities;

- motivational barrier depends on the nature of motivation, intensity of motivation, internal motives (needs, motives), which depend on the cognitive needs of the subject, satisfaction from the process of cognition and realization of one's own personal potential, and they underlie the behavior and professional activities of people, which in turn affects the intensity of emotional processes, the sharpness of reaction to situations and developments, as well as intellectual processes.

Overcoming the psychological barriers that teachers face is facilitated by building an educational process of teacher training in the field of information and communication competence based on psychological and pedagogical diagnostics and mandatory assistance to teachers in overcoming psychological barriers in the learning process [3; 8]. In our opinion, the development of teachers' motivation to learn based on the demonstration of didactic possibilities of information and communication competence, the use of business games, trainings (active forms of learning) also contribute to overcoming psychological barriers.

It should be noted that emotional and cognitive barriers are manifested in the fear of technical devices, malfunctions, equipment breakdowns and other aspects related to the use of computers and the Internet in educational activities [1; 3; 7]. These barriers arise due to inadequate emotional perception of information and communication competence opportunities, lack of clear ideas about their use in education, and increased negative emotions during mastery. This leads to an increase in teachers' anxiety and psychological stress and makes it difficult to achieve educational goals.

Intellectual barriers are related to the peculiarities of the professional mentality of the teacher. Beginning teachers often lack orientation in a large amount of information, and they may feel afraid of being found incompetent and unsuccessful. This can be manifested in refusing to learn new skills, pointing to age, computer shortcomings, or lack of teaching methods using information and communication competence.

Sensory barriers arise due to the peculiarities of people's perception, such as visual and kinesthetic limitations and cognitive style. They are manifested in difficulties in quickly adapting to new conditions of receiving information, such as reading from a vertical plane, limiting the field of view to the size of the screen, and manipulating unrealistic objects.

In addition, an increase in anxiety and psychological stress among teachers can become an obstacle to achieving educational goals, accompanying activities with negative consequences that "deter and deviate" from the tasks set. However, it is important to consider the importance of emotions of success, which "strengthen and support" the primary motivation to achieve goals. Such emotions can be not only constructive but also destructive, as they activate or deactivate, organize or disorganize behavior.

Intellectual barriers are related to the peculiarities of the teacher's professional mentality. Beginning teachers may find it difficult to navigate the volume of information and may be afraid of being found incompetent or unsuccessful. This can be manifested through a conditional rejection of new skills, pointing to age, imperfect computers, or lack of ICT teaching methods, which is the result of finding "objective" reasons for natural inexperience.

Sensory barriers arise from a person's perceptual characteristics, such as visual and kinesthetic limitations, and cognitive style. These barriers are manifested in difficulties in quickly adapting to changes in the conditions of receiving information, such as reading on a vertical plane, narrowing the field of view to the size of the screen, manipulating unrealistic objects, and fine motor skills.

The pedagogical barrier, which also needs to be overcome, can be viewed as a binary concept. On the one hand, it is a complex pedagogical phenomenon that hinders, limits and reduces the effectiveness and success of the pedagogical process (negative functions), and therefore needs to be prevented. On the other hand, it is a kind of stimulus for the development of potential capabilities of the individual. The pedagogical barrier is usually of a developmental nature. Firstly, activities that are accompanied by successful overcoming of pedagogical barriers are attractive to an individual because of positive emotions. Secondly, for a person, the perception of a barrier of misunderstanding or contradiction can be a signal for active thinking and independent work on the problematic phenomenon. Thirdly, effective overcoming of the pedagogical barrier contributes to the development of both cognitive and emotional processes, creating an internal state that determines the subject's sensitivity to certain objects and phenomena [5].

It is important to note that the developmental nature of the pedagogical barrier is of particular importance in activity theory, and the organization of the educational process based on the experience of professional activity contributes to productive learning activities and the creation of a health-preserving educational environment [6]. The pedagogical barrier has a number of positive functions. Its indicator function indicates the feedback of the quality of influence, which indicates that the use of information and communication competence by a teacher can improve the quality of the educational process. The stimulating function activates activity, and the mobilizing function prepares internal resources for actualization and direction of activity. The developmental function contributes to the development of personality and the formation of individuality through overcoming information and transformation barriers. The creative function is aimed at overcoming obstacles and stimulating creative activity. The protective function is aimed at stabilizing the personality, separating the consciousness from excessive experiences.

The pedagogical barrier also performs the function of regulation, adaptation, correction, and dosage, which contribute to the formation of skills to overcome obstacles and adapt to change. Among the negative functions are deterrent, destructive, blocking, inhibiting, and oppressive.

Conclusion

Thus, the pedagogical barrier acts as a kind of catalyst for the development of potential capabilities of the individual, showing its developmental nature. We consider it expedient to use the pedagogical barrier as a tool for activating the activities of both future teachers and practicing teachers, and, accordingly, as a means of developing their personal qualities. It is important to note that the realization of the developmental nature of the barrier is conditioned by the successful overcoming of this barrier. The relevance of studying barriers in the professional activities of

specialists stems from the need to increase the level of professional competence, in particular, information and communication competence. This is aimed at developing the ability to withstand the numerous obstacles faced by teachers when implementing innovations, identifying ways to resolve crisis situations, finding non-standard solutions, and constantly monitoring their own activities and behavior.

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