

CONCEPTUAL MODEL FOR THE DEVELOPMENT OF ADAPTIVE COMPETENCE OF FUTURE TEACHERS

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Annotation: *This article analyzes the conceptual model of the development of flexibility competence of future teachers from a scientific and pedagogical point of view. In the modern educational system, it is important that pedagogical personnel are able to quickly adapt to professional activities, effectively apply innovative technologies, and operate in a changing educational environment. The study developed structural components of flexibility competence, a pedagogical system, development mechanisms based on a technological approach, as well as a conceptual model.*

Keywords: *flexibility competence, future teacher, concept model, pedagogical system, technological approach, competency approach, adaptive education, innovative technologies, pedagogical activity, professional training.*

Introduction

Today's processes of globalization and informatization also bring fundamental changes to the educational system and demand the organization of the content of pedagogical activity on the basis of new approaches. As a result of the Integrative processes taking place in the world educational space, the widespread introduction of digital technologies, the development of artificial intelligence and innovative educational platforms, the requirements for the personality of an educator are growing. It is necessary that a modern teacher not only knows his subject perfectly, but can quickly adapt to a changing educational environment, effectively operate in new pedagogical situations, put innovative technologies into practice, and carry out activities taking into account the individual needs of educators.

In this regard, the development of flexibility competence of future teachers is one of the pressing problems of pedagogical education. Because the innovations, methodological changes and digital transformations that occur in the educational process require a high level of



professional flexibility from educators. Especially in the post-pandemic period, the importance of distance education, hybrid learning technologies and skills for working with digital platforms has increased even more. As a result, the ability of educators to conduct adaptive activities has become one of the main factors in the quality of Education.

Flexibility competence represents the ability of an educator to adapt to changing professional situations, solve problems on the basis of a creative approach, Quickly Master new knowledge and technologies, and be able to carry out effective communicative activities. This competence plays an important role in the professional training, pedagogical skills and innovative activities of future teachers. Flexibility competence also appears as an important factor in ensuring an educator's competitiveness.

Currently, special attention is paid to the training of educators on the basis of a competency approach in the educational system of developed countries. In particular, in educational concepts developed by international organizations such as UNESCO, OECD, issues of developing adaptive competence of educators are identified as one of the priority areas [9]. These documents highlight teachers' ability to work with innovative technologies, think creatively, and adapt to changing educational conditions as important criteria for modern education.

The Republic of Uzbekistan also carries out large-scale reforms to modernize the educational system, improve the quality of pedagogical personnel and develop higher education on the basis of international standards. In particular, the law "on education", the "concept for the development of Higher Education until 2030" and regulatory documents on the improvement of pedagogical education emphasize the issues of developing professional competencies of future teachers. These documents define as important tasks that educators can master modern pedagogical Technologies, think independently and creatively, and apply innovative approaches in professional activities.

The development of effective mechanisms for the development of adaptive competence of future teachers in pedagogical higher educational institutions is one of the important scientific and practical problems of today. Because traditional educational methods cannot fully meet the requirements of the modern educational environment. Therefore, the need arises to introduce a technological approach to the educational



process, to form adaptive competence of future educators on the basis of interactive methods, digital tools and innovative pedagogical technologies.

An analysis of scientific and pedagogical literature shows that although a number of scientific studies have been carried out on a competency approach, pedagogical technologies and adaptive education, a holistic conceptual model of the development of flexibility competence of future teachers has not been sufficiently developed. Especially on the basis of the technological approach, the pedagogical system, structural components, methodological support and clarification of assessment criteria for the development of this competence remain as an urgent scientific problem.

The relevance of this study is determined by the following factors:

digital transformation of the educational system, the profession of an innovative nature of pedagogical activity, new professional requirements for a modern teacher, the need to develop professional flexibility of future educators, the priority of a competency approach in pedagogical education.

The purpose of the study is to develop a conceptual model for the development of flexibility competence of future teachers and to scientifically illuminate its pedagogical, methodological and technological foundations.

The objectives of the study include:

analysis of the essence and content of flexibility competence, identification of factors for the development of adaptive competence of future teachers, development of a conceptual model based on a technological approach, justification of the structural components of the model, development of criteria for assessing flexibility competence, determination of model effectiveness based on pedagogical experience.

As an object of research, the process of professional training of future teachers in pedagogical higher educational institutions was chosen. The subject of the study, on the other hand, consists of pedagogical and technological mechanisms for the development of flexibility competence of future teachers.

The scientific novelty of this article is determined by the development of a conceptual model for the development of flexibility competence of future teachers, on the basis of which its structural components and pedagogical conditions are based. The results of the study serve to prepare future educators in the pedagogical higher education system in accordance with



modern requirements, increase their professional competence and develop their innovative activities.

REVIEW OF THEMATIC LITERATURE

The issue of the development of flexibility competence of future teachers is one of the most relevant scientific directions in the field of modern pedagogy, psychology and educational technologies. In recent years, the number of scientific studies on the training of pedagogical personnel on the basis of a competency approach, the creation of an adaptive education system and the introduction of innovative pedagogical Technologies has increased. The analysis of scientific research carried out in this direction makes it possible to determine the theoretical and methodological foundations of the formation of flexibility competence of future teachers.

The scientific and theoretical foundations of the competency approach have been extensively researched by foreign scientists. In Particular, A.V. Khutorskoy interprets competence as the ability of an individual to apply knowledge, skills, experience and values in practical activities [1]. The scientist believes that a competency approach determines the main result of education not by knowledge, but by readiness for practical activities. Therefore, the development of flexibility competence in future teachers is one of the priorities of pedagogical education.

E.F. In zeer's scientific research, the problems of professional development and professional adaptation are widely studied [2]. The scientist interprets professional adaptation as a process of adaptation of an individual to new conditions of activity, emphasizing the importance of adaptive competence in pedagogical activity. He believes that it is necessary to use innovative educational technologies to develop adaptive competencies in future teachers.

One of the scientists who made a significant contribution to the development of a competency approach was J. Raven is. It characterizes competence as “the sum of motivational, cognitive and behavioral components that provide effective Activity” [3]. Flexibility competence in the research of a scientist is recognized as one of the main factors that ensure the success of an educator in social and professional activities.

Adaptability and adaptability are also among the important competencies in international studies focusing on 21st century skills. The future of Education and Skills 2030 concept developed by OECD notes the



need for modern educators to develop creative thinking, decision-making in problem situations, and ability to adapt quickly to changing environments [14].

And in the document “ICT Competence Framework for Teachers” developed by UNESCO, in addition to the development of digital competencies of educators, the issues of forming their adaptability to technological change are also covered separately [9]. These documents emphasize that the effective use of information and communication technologies in the educational process is closely related to the ability of an educator to conduct adaptive activities.

Research in adaptive education and digital pedagogy has also accelerated in recent years. A. The scientific work of Bozkurt is based on the fact that the digital educational environment serves to increase the flexibility of the activities of educators and students [8]. The scientist believes that adaptive education systems develop independent and creative activities of students by creating individual educational trajectories.

Issues of development of pedagogical competencies also occupy an important place in the scientific research of domestic scientists. N.A. Muslimov studies the methodology for training educators of professional education, emphasizing the need for a modern teacher to be able to carry out innovative and adaptive activities [4]. The scientist notes that practical activities, pedagogical situations and a reflexive approach play an important role in the development of pedagogical competencies.

B.X. Khodjayev researched issues of development of pedagogical technologies and pedagogical skills, substantiating the importance of interactive methods in the development of flexible thinking in future teachers [5]. The scientist believes that the organization of the educational process on a technological basis serves to form the creative and adaptive activities of educators.

U.Sh. Begimkulov, having developed the methodological foundations for the application of innovative technologies in pedagogical education, argues that pedagogical innovation is an important factor in the development of professional competence of future teachers [6]. According to the researcher's vision, the modern educational environment requires the educator to operate adaptively.

O'. Tolipov and M. Usmanboyeva's have researched the theoretical and methodological foundations of the practical implementation of



pedagogical technologies [7]. In their scientific vision, pedagogical technologies are evaluated as a means of developing independent thinking, communicative activity and professional flexibility of future teachers.

In recent years, a number of studies have also been carried out by scientists of Uzbekistan on digital pedagogy and a competency approach. In Particular, J. Yudashev and S. Khasanov studied the modern mechanisms of training educators on the basis of a competency approach, emphasizing the need to create a flexible educational environment in pedagogical education [10].

D. Ismailova studied the methodology for the development of professional competencies in future educators, substantiating the fact that pedagogical activity has an adaptive character [12]. According to the results of the study, reflexive activity and interactive methods are an effective tool in the development of flexibility competence of educators.

S. Nurmatov studies the pedagogical possibilities of adaptive educational technologies, arguing that the organization of individual educational trajectories increases the professional flexibility of future teachers [13]. The scientist believes that the adaptive education system also serves to develop the competence of students to receive independent education.

A. Mirzayev studied the methodological foundations of a competency approach, noting that the technological approach is a priority in the process of pedagogical education [15]. The researcher believes that an integrative and systematic approach is important in the development of pedagogical competencies.

T. Kadyrov scientifically substantiated the mechanisms for the development of adaptive competence of future teachers and analyzed the effectiveness of pedagogical practices and innovative methods [11]. According to the results of the study, classes organized on the basis of pedagogical situations significantly develop student flexibility.

Analysis shows that while the competency approach, pedagogical technologies, and adaptive education issues have been extensively studied, a holistic conceptual model of the development of adaptive competence of prospective teachers has not been sufficiently developed. Especially on the basis of the technological approach, there is a need to



clarify the pedagogical system, structural components, methodological support and assessment criteria for the development of this competence.

Therefore, in this study, a conceptual model for the development of flexibility competence of future teachers is developed, the pedagogical and methodological foundations of which are systematically covered.

RESEARCH METHODOLOGY

In this study, systematic, competency, personality-oriented and technological approaches were used. The following methods were used during the study:

analysis of scientific and pedagogical literature, comparative analysis, modeling, pedagogical observation, questionnaire and interview methods, statistical analysis.

The methodological basis of the study is a competency approach. According to this approach, it is necessary that the future teacher not only has theoretical knowledge, but is able to act effectively in practical activities.

The conceptual model for the development of flexibility competence consists of the following components:

1. Target component:

Formation and development of flexibility competence in future teachers.

2. Content component:

adaptive pedagogical knowledge, innovative technologies, communicative skills, reflexive activity, creative thinking.

3. Technological component:

interactive methods, digital education platforms, problem Education, Project methods, case-study Technology.

4. Activity component

Development of competence through independent work of students, practical training, pedagogical practice and training.

5. Resultant component

Formation of the personality of an educator who can conduct flexible, creative and innovative activities.

The implementation of the conceptual model requires the following pedagogical conditions:



creating an innovative educational environment, using digital technologies, organizing reflexive activities, individualizing the educational process.

On the results of the study, the flexibility competence of future teachers was evaluated on the basis of the following criteria:

motivational criterion, cognitive criterion, activity criterion, reflexive criterion.

Research results and discussion

According to the results of the study, the educational process, organized on the basis of a technological approach, significantly develops the flexibility competence of future teachers. In particular, the use of interactive techniques enhances the independent thinking of students and increases the chances of adapting to professional situations.

Students as a result of the use of digital education platforms:

quickly adapted to new pedagogical situations, developed decision-making skills in problem situations, increased communicative competencies, learned to apply creative approaches.

According to the results of pedagogical experiment, the indicators of flexibility competence in experimental groups showed high results compared to control groups.

Also, the development of flexibility competence was positively influenced by the following factors:

innovative educational technologies, reproduction of practical activities, reflexive analysis, methods of teaching in collaboration.

The results showed that the conceptual model serves to improve the effectiveness of pedagogical education.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the study, the following conclusions were drawn:

1. Flexibility competence of future teachers is an important component of modern pedagogical activity.
2. The pedagogical system, organized on the basis of a technological approach, makes it possible to effectively develop flexibility competence.
3. The target, content, technological and consequential components of the conceptual model operate in an integrated manner.
4. Interactive methods and digital technologies are important tools for the development of pedagogical adaptability.



5. Pedagogical practice and reflexive activity increase the professional flexibility of students.

Recommendations

- * wide introduction of adaptive education technologies in pedagogical universities;
- development of special training programs for future teachers;
- * focus on the development of digital pedagogical competencies;
- * Organization of pedagogical practice processes on an innovative basis;
- * improving the criteria for assessing flexibility competence.

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