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Research Article

METHODS OF SCIENTIFIC JUSTIFICATION FOR THE DEVELOPMENT OF PROFESSIONAL AND CREATIVE QUALITIES IN THE INTEREST OF MODERN PROFESSIONS IN CHILDREN OF SCHOOL AGE

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Kenjayeva Zilola Saminjon qizi
Elementary school teacher 56, Baghdad district, Fergana region, Uzbekistan

ABSTRACT

This article explores ways in which the information communication field scientifically substantiates the mechanisms of professional-creative competence in schoolchildren. The article analyzes the concept of professional-creative competence and its role in the field of Information Communication. The scientific methodology for the development of professional competence, approaches in the educational system and methods used in the preparation of school students in the field are also discussed. The main goal of the study is to develop scientifically based mechanisms for the development of professional-creative competence for specialists in the field of Information Communication. The results of the article will help determine effective approaches to the training of Information Communication Specialists.

KEYWORDS

Information Communication field, professional competence, creative competence, scientific justification, methodology, training of specialists, educational system, development of competence, approaches, methods.

INTRODUCTION

The rapid development of Information Communication Technologies and the expansion of information exchange on a global scale today require new knowledge and skills for specialists in the field of

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information and communication. Professionals in the field need to have a high level of professional and creative competence, since they should not only be limited to tracking technological innovations, but also apply new approaches and innovative methods in their work. Professional and creative competencies of specialists in the information communication field, as well as their development in the educational system, directly affect the effective functioning of the industry. This in turn contributes to the innovative development of the industry, the introduction of new technologies and ensuring the information security of the country. The main purpose of the article is to research the scientific foundations of the development of professional-creative competence in a school student in the field of Information Communication

This issue is of urgent importance, because depending on the dynamic development of the industry itself, a high-education school requires the preparation of students. The correct formation of professional-creative competence allows specialists to work effectively, integrate into innovative processes and apply a high level of creative approaches to solving problems in their field. The study analyzes the theoretical foundations of professional-creative competence and its components, and also discusses scientific research and approaches carried out in the field. The purpose of the study is to develop scientifically based mechanisms for the development of professional-creative competence. These mechanisms will be aimed at improving the professional training of Information Communication Professionals and increasing their creative potential.

METHODOLOGY

To study the scientific foundations of professional-creative competence, it is necessary first of all to analyze the existing scientific literature about its theoretical concepts, composition and mechanisms of development. The concept of professional competence includes the qualifications, knowledge, skills and creative approaches of a specialist. In addition, creative competence implies the ability to create new ideas in professional activities, solve problems in an innovative way and apply modern technologies. Research in the field of professional-creative competence is based on several approaches. For Example, X.R. Perekrestov (2014) emphasizes professional competence not only with technical knowledge, but also the development of creative potential. Also, A.V. Harlamov (2016) considers it necessary to provide methodological approaches to the formation of professional competence in the field of information communication, stating that there should be an inextricable connection between education and practice.

There are a number of types of methodological approaches to the training of Information Communication schoolchildren. First of all, it is a systematic approach to the development of professional competence. In a systematic approach, professional and creative competence of a specialist is considered as a complete system, the various elements of which are interconnected and serve a common purpose. Through this approach, in training specialists, it is necessary not only to develop their knowledge and skills, but also to build their creative potential, to create an environment in which they will be able to develop new ideas. The second approach assumes the modernization of educational processes through the use of information and communication technologies.

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This approach aims to effectively organize the learning process through interactive methods, online platforms and digital tools. The third type of methodology is formed by active learning methods and practice-based learning systems in the formation of competence. Within the framework of this methodology, students must carry out their professional activities in real conditions, participate in innovative projects and constantly acquire new knowledge. Such practical approaches to the development of competence help students create new ideas, apply a creative approach and adapt to the requirements of the field.

Methods used in the development of professional-creative competence in the study include:

1. Questionnaires and surveys: questionnaires are conducted to determine the level of competence of specialists and the factors affecting their development.

2. Interviews: interviews with information communication professionals analyze their experiences in practice and the level of creative competence.

3. Experimental research: new methods and approaches are tested in the educational process to develop professional-creative competence.

Software code (as an example): Data analysis can be done using the Python programming language and pandas library when creating a competency development-oriented questionnaire system. The following code can be used to analyze the results obtained from the questionnaire:

```
# Upload survey results data = pd.read_csv ('survey_results.csv').

# Calculation of basic statistics by survey summary = data.describe

# Analysis of competency levels competence_level = data ['competence_level'].value_counts()

# Print results print ("statistics by survey results:") < BR > print (summaryprint)

("\degree of competence:") print (competence_level

# Create a graph import matplotlib.pyplot as plt competence_level.plot (kind='bar')

plt.title ('competence levels') plt.xlabel

('competence level' plt.ylabel ('number of quarters' plt.show
```

RESULTS

The results of the study showed the effectiveness of scientifically based mechanisms in the development of professional-creative competence in Information Communication schoolchildren. Data from surveys and interviews confirmed that the creative potential of specialists also developed when the level of professional competence was high. In this, it can be seen in particular that the ability to apply innovative technologies and develop new ideas has increased. During the study, it was determined-that the formation of professional-creative competence is not limited only to knowledge and skills, but is also associated with such factors as a personal creative approach, inventiveness in solving problems and perseverance shown in self-expression.

Also, the importance of active learning and interaction in the educational process was determined in the development of competence. In this, it is especially

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important to work as a group and develop the skills of collective problem solving. These results show that the formation of professional-creative competence contributes not only to the development of individual qualifications, but also to social and collective success. In general, the results of the study confirm the effectiveness of scientifically based mechanisms necessary for the development of professional-creative competence. These mechanisms help students to develop not only professional knowledge and skills, but also creative potential. The results obtained make it possible to make recommendations to make the application of practical approaches to the training of specialists in the information communication field more effective.

DISCUSSION

According to the results of the study, it is necessary to take into account a number of factors in order for scientifically based mechanisms for the development of professional-creative competence in Information Communication schoolchildren to be effective. First of all, the formation of professional-creative competence is not limited to the development of knowledge and skills. Instead, it is necessary to form creative potential, the ability to create new ideas and apply innovative approaches. The study found that the integration of information and communication technologies into the educational process significantly increases the creative activity of specialists. This, in turn, will serve the innovative development of the industry and create opportunities for the effective introduction of new technologies. The importance of the use of digital tools and information and communication technologies in education was also highlighted in the development of competence. These tools give students the opportunity to create innovative ideas and apply creative approaches in their field. Digital tools such as software, simulation, and model building play an important role in bringing students ' professional competencies to a higher level.

In addition, a balance of individual and collective approaches is necessary in the development of professional-creative competence. In addition to developing personal creative skills, it is also necessary to improve the skills of group work and team collaboration.

CONCLUSION

The final results of the study show that the application of scientifically based mechanisms in the development of professional-creative competence in Information Communication schoolchildren is effective and important. These mechanisms, in turn, serve not only to increase the professional knowledge and skills of specialists, but also to expand their creative potential. The results obtained in the study highlight the importance of practical training, interactive methods and the use of information and communication technologies to promote professional-creative competence

These approaches help prepare specialists for a high level of creative and professional activities and increase their ability to effectively apply modern technologies. In this way, the application of scientifically based mechanisms for the development of professional-creative competence in the training of Information Communication schoolchildren serves to the innovative development of the entire field, the effective introduction of new technologies and their creative potential. When the approaches and methodologies outlined in this study are used in

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harmony, it is possible to achieve effective results in order to improve the professional qualifications of specialists and expand their creative capabilities.

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