

Methodology for Developing Information-Analytic Competency of Future Primary Class Teachers

Furkat M. Zakirov^a, Khamrakul R. Sanakulov^b, Sobirjon Kh. Meyliev^c,
Roziurod B. Abiev^d and Ziyamuhammad B. Nematov^e
Tashkent State Pedagogical University, Tashkent, Uzbekistan

Keywords: Information - Analysis, Competence, Pedagogue, Methodology, Improvement, Development, Control.

Abstract: In today's era of the burgeoning global information society, the significance of information in shaping future professionals is paramount. There is a growing recognition that society's future strategic prowess lies not in energy resources, but in information and scientific knowledge. Information emerges as the primary resource driving scientific, technical, and socio-economic progress, profoundly impacting the rapid advancement of science, technology, and diverse industries. Moreover, it plays a pivotal role in modernizing education processes. As such, the increasing role of information in moulding future specialists underscores its pivotal importance in shaping the trajectory of societal development in the 21st century.

1 INTRODUCTION

The current landscape of education in Russia is shaped by global trends, notably the rapid advancement of modern computer technologies. These technologies are increasingly integrated into the educational process for both students and adults, with educational institutions equipped to handle digital information processing. Despite this, the higher pedagogical school lacks an effective system for leveraging computer technology, impacting teaching quality and teacher proficiency levels.

Efforts to address this gap include widespread training programmes for teachers in computer literacy. However, completion of such courses does not always translate into effective integration of technology into teaching practices. Possessing basic computer skills does not equate to pedagogical proficiency in utilising technology for professional purposes.

A key focus for vocational education development is nurturing future specialists with the requisite skills for innovative practice, emphasising

competent information management and active engagement in professional knowledge acquisition.

2 METHODOLOGY

Research conducted by scholars such as A.S. Belkin, B.S. Gershunsky, E.F. Zeer, A.B. Khutorskoy, T.I. Shamova, and N.M. Yakovleva, among others, has delved into theoretical aspects of cultivating specialist competence within the continuous education system. Simultaneously, studies on enhancing teacher professional competence, led by researchers like O.A. Akulova, J.I.H. Zakharova, N.V. Kuzmina, J.I.M. Mitina, S.A. Pisareva, V.V. Sokolova, and V.M. Sokolov, underscore the potential for teachers to acquire new professional and personal attributes through the development of information competence components.

The efficacy of a teacher's pedagogical endeavours in an increasingly digital education landscape hinges on their information competence development. This encompasses not only mastery of computer skills but

^a <https://orcid.org/0000-0001-6916-4394>

^b <https://orcid.org/0009-0002-8306-5821>

^c <https://orcid.org/0009-0002-4499-541X>

^d <https://orcid.org/0009-0008-7156-4205>

^e <https://orcid.org/0009-0007-2143-0017>

also adeptness in handling information broadly. Scholars like E.E. Vakhromov, B.S. Gershunsky, S.D. Karakozov, D.Sh. Sailor, E.S. Polat, J. Raven, I.V. Robert, and M.A. Kholodnaya have addressed this aspect in their works.

However, an analysis of existing literature indicates a dearth in the development of future teachers' information competence regarding its motivational, cognitive, operational, and reflexive dimensions. This gap prevents the attainment of desired competence levels amidst the ongoing informatization of education.

Thus, the significance of this study is underscored by several factors: the escalating demands for future teacher information competence driven by modern computer technology advancements; evolutionary shifts in higher pedagogical education systems necessitating enhanced teacher information competence; the unfulfilled potential of educational institutions in preparing highly competent teachers; and the inadequately addressed issue of information competence development in pedagogical theory and practice.

3 DISCUSSIONS

The research problem lies in the contradiction between the societal demand for future teachers' information competence and the inadequate theoretical and practical groundwork addressing this issue. Drawing from regulatory documents, educational experience, and scholarly literature, this study aims to bridge this gap and offer valuable insights into the development of information competence among future educators. The theoretical foundation of this study is robust, encompassing systems theory, activity theory, competency-based education, informatization theory, and more, providing a comprehensive framework for analysis and exploration.

Systems theory, advocated by scholars such as V.G. Afanasyev and L. von Bertalanffy, offers a holistic perspective on educational systems, considering the interplay between various components. Activity theory, as championed by B.G. Ananyev and P.Ya. Galperin, focuses on the dynamic relationship between individuals and their environments, providing valuable insights into the processes involved in learning and development. Competency-based education, supported by A.S. Belkin and E.F. Zeer, emphasises the importance of developing specific skills and abilities required for professional

practice, aligning closely with the goals of this research.

Moreover, informatization theory, as explored by D.S. Matros and E.S. Polat, sheds light on the integration of information and communication technologies into educational contexts, offering valuable perspectives on the challenges and opportunities presented by digitalisation. By drawing upon these theoretical frameworks, this study seeks to develop a nuanced understanding of the factors influencing the development of information competence among future teachers.

Empirical methods play a crucial role in this study, offering insights into effective teaching practices and assessing future teachers' information competence. Through the analysis of successful educational experiences, researchers gain valuable insights into the strategies and approaches that contribute to the development of information competence among future educators. Additionally, ascertaining experiments allow for the assessment of future teachers' information competence, providing valuable data on their proficiency levels and areas for improvement.

Furthermore, formative experiments enable researchers to test the effectiveness of a model for the development of information competence among future teachers and the accompanying implementation strategy. By observing, questioning, testing, and self-assessing, researchers gain valuable insights into the efficacy of the proposed model and its potential impact on future teachers' professional practice.

In contemporary society, the urgency of addressing future teachers' information competence arises from evolving scientific, technical, and socio-economic landscapes. Philosophical, psychological, pedagogical, and methodological inquiries have informed the study's goal: to develop and theoretically substantiate a model for future teachers' information competence and an effective implementation strategy.

By synthesising theoretical insights with empirical findings, this research aims to advance pedagogical theory and practice, ensuring future educators are equipped to meet the demands of a digitally driven educational landscape. Through a rigorous analysis of regulatory documents, educational experiences, and scholarly literature, this study offers valuable insights into the development of information competence among future teachers, addressing a crucial need in contemporary education.

4 CONCLUSION

In conclusion, our research has focused on the crucial process of nurturing the information competence of future educators. Our efforts have centred on developing and implementing a model that integrates structural and functional components, serving as a cornerstone in cultivating the competence under study. Additionally, we have strived to design a technology for effectively implementing this model, aiming to foster the requisite knowledge, skills, and personal qualities essential for addressing professional challenges amidst students' immersive engagement in information activities. This approach advocates for participatory management of students' information pursuits and the application of active learning methods facilitated by information and communication technologies. By emphasising the holistic development of future teachers' information competence, our research endeavours to contribute to the enhancement of educational practices and the preparation of educators equipped to navigate the complexities of modern educational environments.

REFERENCES

- Adolf, V.A., & Stepanova, I.Yu. (2006). Methodological approaches to the formation of a teacher's information culture. *Informatics and education*, (1).
- Afanasyev, V.G. (2001). Design of educational technologies. *Higher education in Russia*, (4).
- Gaponova, S.A., & Martynova, N.A. (2004). Dependence of the dynamics of mental states of adult students on the methods of presenting information. *Psychological journal*, (3).
- Elizarov, A.A. (2004). Basic competence as the basis for online teacher education [Abstract]. Proceedings of the RELARN-2004 conference. Retrieved from <http://www.relam.ru:8080/conf/conf2004/section3/311.html>
- Ivanova, L.F. (2003). Innovative conditions for the development of teacher professional competence. *Innovations in education*, (4).
- Klemeshova, N.V. (1999). Multimedia as a didactic tool for higher education [Doctoral dissertation, Kaliningrad].
- Markova, A.K. (1996). Psychology of professionalism. M.: International. Humanitarian Foundation "Knowledge".
- Belozertsev, E.P., Goneev, A.D., Pashkov, A.G., & Slastenin, V.A. (Eds.). (2004). Pedagogy of vocational education: Proc. allowance for students. higher ped. textbook establishments. M.: Publishing center "Academy".
- Safontsev, S.A. (2003). Educational qualimetry in the system of advanced training. Rostov n/d: Publishing house Rost. Univ.
- Jumayev, G.I. (2023). "Audiomanuscript" – a project on the study of oriental manuscript sources. *Journal of Social Research in Uzbekistan*, 50-52.
- Jumayev, G.I. (2023). Oq qo'yunli etnonimining etimologiyasi. *Scholar scientific journal*, 1(34), 85-90.
- Jumayev, G.I. (2023). Boyondurlar: tarixi va etimologiyasi. *Educational Research in Universal Sciences*, 2(17), 215-219.
- Collection of normative documents under the general editorship. (2004). Federal component of the state standard of general secondary education. Informatics and ICT. M.: Bustard.