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PREPARATION OF FUTURE TECHNOLOGY TEACHERS FOR DEVELOPING FINANCIAL LITERACY AMONG STUDENTS IN GENERAL SECONDARY EDUCATION INSTITUTIONS

Abstract

The article substantiates the importance of preparing future technology teachers to develop financial literacy among students in general secondary education institutions in the context of contemporary socio-economic changes. In a rapidly changing economic environment characterized by the development of financial technologies, market globalization, and new challenges facing education, financial literacy has become increasingly important. Its integration into the

general secondary education system is particularly relevant, as it not only equips students with the ability to navigate financial issues but also prepares them for adult life, where an understanding of economic processes is essential for making informed financial decisions and ensuring long-term financial well-being.

Financial literacy is an integral component of economic education and encompasses not only knowledge of basic financial concepts but also the ability to analyze economic situations, make informed financial decisions, and manage personal finances effectively under conditions of uncertainty. Modern education requires these competencies to be developed during the school years, as this is the period when young people begin interacting with fundamental financial instruments such as savings accounts, credit services, budgeting, and other financial products.

In this context, the preparation of future technology teachers for developing students' financial literacy is of particular significance. Technology education is no longer limited to technical skills alone; therefore, teachers should possess the knowledge and competencies necessary to foster students' financial literacy, enabling them to apply financial principles effectively in project design, manufacturing processes, entrepreneurship, and resource management.

The article also examines how foreign countries implement financial education at different educational levels. A comparative analysis identifies best practices, educational strategies, and pedagogical models that can be adapted to the Ukrainian educational system. The application of interactive and practice-oriented teaching methods contributes to a deeper understanding of financial concepts and promotes the development of students' economic thinking.

Particular attention is paid to the importance of the professional preparation of teachers capable of integrating financial literacy into the educational process. Such preparation enables educators to develop students' financial competence, promote effective resource management, and support informed financial decision-

making, thereby preparing young people for successful participation in modern economic life.

Keywords: financial literacy, future technology teachers, integration of financial knowledge, economic thinking, students of general secondary education institutions.

Problem Statement. In the context of contemporary socio-economic transformations characterized by the rapid development of financial technologies, the globalization of markets, and new challenges facing education, financial literacy has become an increasingly important issue. The rapid expansion of digital platforms, cryptocurrencies, electronic payment systems, and innovative financial instruments requires society to educate a new generation capable of using these tools effectively in everyday life.

The importance of developing financial literacy within the general secondary education system continues to grow, as it not only enables students to navigate financial issues but also prepares them for adult life, where an understanding of economic processes is essential for making informed financial decisions and ensuring long-term financial stability [3].

Financial literacy is an important component of economic education that encompasses not only knowledge of fundamental financial concepts but also the ability to analyze economic situations, make economically sound decisions, and manage personal finances effectively under conditions of uncertainty. Contemporary educational approaches require these competencies to be developed during the school years, as this is the period when young people begin interacting with financial instruments such as savings accounts, credit services, budgeting, and other financial products.

In this context, the preparation of future technology teachers for developing students' financial literacy is of particular importance. Such preparation should

include not only the acquisition of professional knowledge and practical skills but also the development of the ability to integrate financial aspects into the educational process. Technology education is no longer limited to technical content alone; instead, it increasingly requires competencies that enable students to apply financial knowledge in project design, production processes, and resource management.

Technology education encompasses a wide range of practical and theoretical knowledge. Therefore, it is essential that technology teachers possess the competencies necessary not only to teach technical disciplines but also to foster students' financial competencies. This includes teaching the fundamentals of finance within the context of technological processes, project planning and management, project budgeting, the application of financial tools for analysis and decision-making, and the development of entrepreneurial skills. Consequently, future technology teachers should be prepared not only to teach traditional technological subjects but also to integrate financial literacy into the educational process, thereby equipping students to meet the real challenges of today's economic environment.

Analysis of Recent Research and Publications. The issue of developing financial literacy has become particularly relevant in the context of contemporary socio-economic transformations, which require individuals to make informed financial decisions. This issue has gained increasing importance due to the development of global economic processes, including the rapid growth of financial technologies, the expansion of investment instruments, and the evolution of financial markets. Consequently, the study of financial literacy has attracted considerable attention from researchers investigating both its theoretical foundations and practical applications.

Foreign scholars, including A. Lusardi, T. Lucey, and O. Mitchell, have made significant contributions to the study of financial literacy development in

economically developed countries. Their research emphasizes the importance of providing financial education at different levels of society, particularly among young people, as an effective means of improving economic stability and preventing financial crises. They consider financial literacy to be a key factor in promoting citizens' economic independence and enhancing the efficient management of financial resources in the context of globalization.

Ukrainian researchers have also actively investigated the relationship between financial literacy and economic activity. In particular, M. Kuznietsova, M. Ovchynnykov, L. Stakhovych, A. Stoliarova, and H. Shakhnazarian have examined the importance of developing financial planning skills and explored approaches to improving the level of financial literacy among the population. Their studies emphasize the necessity of integrating financial education into both general secondary and higher education systems in order to ensure long-term financial well-being for society.

O. Blyskavka, R. Bond, A. Zelentsova, O. Kutsenko, N. Lozytska, A. Klymchuk, and D. Radzishevska have investigated the current state of financial literacy in Ukraine, highlighting the need to implement educational programs and awareness campaigns aimed at improving financial competence among the Ukrainian population.

Equally important is the issue of developing financial literacy among different age groups. Researchers such as N. Baradiia, O. Blyskavka, T. Kizyma, H. Kucherova, T. Latkovska, I. Lomachynska, L. Pokas, N. Savchuk, T. Smovzhenko, and others have explored various aspects of financial literacy among children, adolescents, and young adults, considering these groups to be the foundation for building an economically independent, financially responsible, and socially sustainable society.

Presentation of the main material of the study. Considering the extensive body of research, it can be concluded that the development of financial literacy is

a multidimensional issue that requires a systematic approach. Despite significant achievements in this field, numerous challenges remain, and improving financial literacy at all levels of education continues to be one of the priorities of educational policy at both the national and international levels.

Within the framework of the theoretical analysis, a comprehensive review of the scientific literature was conducted to examine the essential characteristics of financial literacy as a fundamental component of an individual's life competence. The analysis clarified the conceptual and categorical foundations of this phenomenon, including its content, structure, and role within the contemporary education system. Financial literacy is defined as a combination of knowledge, skills, values, attitudes, and behavioral patterns that enable individuals to make informed financial decisions, manage personal financial resources effectively, and adapt to changes in the socio-economic environment. Previous studies emphasize that the development of financial literacy is an important factor in fostering responsible economic behavior and financial culture among citizens, which is of strategic importance for the sustainable development of society [6].

The study also highlights the necessity of developing financial competencies among school students, as the modern economic environment is characterized by increasingly complex financial processes, the widespread use of digital financial instruments, and rapid changes in financial markets. Consequently, the education system should provide students not only with basic knowledge of money, income, expenditure, and savings but also with practical skills in budgeting, financial risk assessment, responsible financial decision-making, and entrepreneurial thinking [2].

Particular attention has been paid in the scientific literature to contemporary approaches to financial education that have emerged in response to the digitalization of the economy, the globalization of financial markets, and the rapid advancement of financial technologies. Under these conditions, financial literacy

is no longer viewed solely as a theoretical concept but rather as an applied competence that includes the ability to use electronic payment systems, online banking services, investment instruments, and other modern financial technologies. Therefore, contemporary educational approaches emphasize the development of financial competence through practical learning activities, problem-based tasks, the simulation of economic situations, and project-based learning [1].

Scientific studies also emphasize that the effective development of financial literacy requires the application of interactive and practice-oriented teaching methods. In particular, educational games, economic simulations, role-playing activities, and case-study methods play an important role in modeling real-life financial situations and developing students' financial decision-making skills. These approaches actively engage students in the learning process, increase their motivation to study economic issues, and promote a deeper understanding of educational content [4].

A separate area of research focuses on preparing teachers to develop students' financial literacy. The literature emphasizes that the effectiveness of financial education largely depends on teachers' professional competence, their ability to integrate economic content into various school subjects, and their use of modern pedagogical approaches. For example, the study conducted by V. Andriichuk and M. Bratko substantiates the need for specialized preparation of future teachers for developing students' financial literacy through the integration of economic knowledge into teacher education programs and the application of an interdisciplinary approach to teaching [1].

An important focus of contemporary research is the integration of financial literacy into the curriculum of general secondary education institutions. In particular, the subject *Technology* possesses considerable potential for developing students' financial competencies, as it is directly related to practical activities,

project-based learning, resource planning, and the evaluation of the economic efficiency of work outcomes. Within this approach, students have the opportunity to combine technical and economic knowledge, contributing to a comprehensive understanding of production processes, economic feasibility, and the rational use of resources.

The practical implementation of financial education in general secondary education institutions is also addressed in studies devoted to the development of the key competence of entrepreneurship and financial literacy among upper secondary school students. Researchers emphasize that the development of this competence contributes to students' active civic engagement, the enhancement of economic thinking, and the ability to make independent financial decisions in real-life situations [5].

Therefore, the analysis of scientific literature indicates that financial literacy is regarded in contemporary education as an essential component of individuals' key competencies. Its development should be implemented systematically through competency-based, interdisciplinary, and practice-oriented approaches. The integration of financial content into the educational process, the application of innovative pedagogical technologies, and the proper preparation of teachers create the necessary conditions for developing students' responsible financial behavior and their ability to manage personal financial resources effectively within the modern economic environment.

An important component of the research methodology is the analysis of current educational programs and regulatory documents governing the preparation of future technology teachers in Ukraine. This approach makes it possible to determine the place and role of financial literacy components within the structure of teacher education and to identify opportunities for strengthening their integration into the educational process. The theoretical analysis includes educational standards, curricula, educational and professional programs,

methodological recommendations, and other regulatory documents that define expected learning outcomes, the content of professional teacher preparation, and the requirements for the development of graduates' key and professional competencies. Scientific studies emphasize that the contemporary system of teacher education should ensure that future teachers acquire the ability to integrate economic and financial knowledge into the educational process, as this constitutes an essential component of teachers' professional competence [1].

The analysis of educational programs and methodological materials also makes it possible to determine the extent to which financial literacy and entrepreneurship are systematically represented within their content and to assess the level of integration of economic knowledge into the professional preparation of future technology teachers. Research demonstrates that the development of financial competence is increasingly viewed as an integral element of the competency-based approach, which combines theoretical knowledge with practical skills in economic activity, financial planning, and informed economic decision-making [2].

The study also includes a comparison of approaches to developing financial literacy within the professional preparation of technology teachers with educational practices implemented in other countries. Such comparative analysis enables the identification of general trends in financial education, pedagogical strategies for its implementation, and integration models that may be adapted to the national education system. Previous research indicates that international experience highlights the importance of developing financial culture from an early age and ensuring the continuous formation of financial competencies throughout all levels of education [6]. Comparative analysis also involves identifying the key components of financial competence, examining differences in approaches to its development, investigating methods for assessing learning outcomes, and

determining the conditions under which educational innovations can be successfully implemented within the national educational context.

An important component of the theoretical study is the examination of the socio-pedagogical factors influencing the preparation of future technology teachers for developing financial literacy among students of general secondary education institutions. In particular, the study analyzes the demands of the contemporary labor market, employers' expectations regarding teachers' professional competencies, and societal expectations concerning teachers' ability to cultivate entrepreneurial thinking and responsible financial behavior among students. Scientific research emphasizes that a modern teacher should possess not only subject-specific knowledge but also the ability to develop students' competence in *entrepreneurship and financial literacy*, which includes the formation of economic thinking, initiative, and the capacity to make effective financial decisions [5]. At the same time, the literature identifies factors that may facilitate or hinder the integration of financial education into the educational process, including insufficient teacher preparation, limited methodological support, and inadequate attention to financial education within school curricula.

The theoretical study also places considerable emphasis on the analysis of pedagogical technologies and methodological approaches that can be employed to integrate financial knowledge into the professional preparation of future technology teachers. Previous studies indicate that the effectiveness of developing financial competence largely depends on the application of interactive, practice-oriented, and project-based teaching methods. In particular, integrated educational projects, economic case studies, role-playing activities, and simulations of financial situations create favorable conditions for developing students' practical skills in economic analysis and financial decision-making [5].

Based on a comprehensive analysis of scientific literature and the regulatory framework, scientific and methodological principles have been formulated to

determine the directions for further research on preparing future technology teachers to develop financial literacy among students of general secondary education institutions. These directions include clarifying the content of future teachers' professional competencies with due consideration of the financial component, developing models for integrating financial topics into professionally oriented disciplines, and substantiating pedagogical conditions that ensure the effective integration of technological and economic components within the educational process. Another important area is the development of criteria and assessment methods for evaluating the level of financial literacy, as well as identifying strategies for fostering financial thinking throughout different stages of future teachers' professional preparation.

Overall, the methodology of the theoretical study is based on the scientific interpretation, systematization, and synthesis of contemporary pedagogical and economic knowledge, enabling a deeper understanding of the nature of financial literacy development within the system of teacher education. This approach provides a comprehensive perspective on the phenomenon under investigation, outlines prospects for its further development, and establishes a scientific foundation for improving the professional preparation of future technology teachers in the context of financial literacy development.

Summarizing the findings of the theoretical study, it can be concluded that under contemporary social and economic conditions, financial literacy has become an essential component of individuals' personal and professional competence. Its development within the educational process is associated with the need to prepare younger generations for effective participation in economic life, the rational management of financial resources, and responsible financial decision-making. The analysis of scientific literature demonstrates that researchers consider financial literacy to be a complex integrative construct that combines knowledge

of financial processes, practical financial skills, economic thinking, and individuals' value orientations [2; 6].

The analysis of scientific and pedagogical literature also indicates that the issue of financial literacy development has become an active area of research in both Ukrainian and international educational science. Particular attention is devoted to the integration of financial education into general secondary and teacher education curricula, as well as to the development of effective methods and technologies for fostering students' financial competencies. Researchers emphasize the importance of applying interactive, practice-oriented, and project-based teaching methods that promote the development of economic thinking, financial situation analysis, and informed decision-making skills [3; 4].

The analysis of educational programs and regulatory documents governing the preparation of future technology teachers has shown that financial literacy components are gradually being incorporated into teacher education curricula. However, their representation requires further improvement through the expansion of interdisciplinary connections, the integration of economic knowledge into professionally oriented disciplines, and the implementation of modern methodological approaches to the development of financial competence [1].

A comparative analysis of scientific approaches to financial literacy development has identified the major trends in financial education, including the competency-based approach, the practical orientation of learning, the use of interactive educational technologies, and the implementation of integrated educational programs. The study also confirms that the subject area of *Technology* possesses significant potential for developing students' financial competencies because it is closely associated with project-based activities, resource planning, the evaluation of the economic efficiency of production processes, and the development of entrepreneurial thinking [5].

Conclusions. Therefore, the findings of the theoretical study confirm the necessity of systematically integrating financial literacy into the professional preparation of future technology teachers. The development of teachers' financial competencies will contribute to improving the quality of students' economic education, fostering their entrepreneurial competence, and preparing them for active participation in the contemporary economic environment.

Prospects for further research include the development of pedagogical models for integrating financial literacy into professionally oriented disciplines, the identification of effective pedagogical conditions for developing the financial competence of future technology teachers, and the design of assessment methods for evaluating the level of financial competence achieved during the process of professional teacher education.

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