

МЕТОДИЧНІ ОСОБЛИВОСТІ ВИВЧЕННЯ ОСНОВ ФІНАНСОВОЇ ГРАМОТНОСТІ В КУРСІ МАТЕМАТИКИ 8 КЛАСУ НУШ

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METHODOLOGICAL FEATURES OF STUDYING THE BASICS OF FINANCIAL LITERACY IN THE 8TH GRADE MATHEMATICS COURSE OF NUS

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АНОТАЦІЯ

Формулювання проблеми. У сучасних умовах важливим аспектом розвитку особистості учнів є їх обізнаність у сфері фінансових розрахунків. Крім того, підприємливість та фінансова грамотність є однією з 11 ключових компетентностей, формування якої передбачено чинними державними державні документами, що регулюють освітню діяльність в Україні, зокрема, концепції реалізації реформи Нова українська школа (НУШ). Аналіз джерел щодо впровадження основ фінансової грамотності в навчальний процес показав, що наразі воно знаходиться лише на початковому етапі і має суттєві національні особливості, порівняно з аналогами в інших країнах світу.

Метою статті є детальний виклад методичних особливостей вивчення основ фінансової грамотності учнів 8 класів НУШ на уроках математики з метою належного формування відповідної ключової компетентності, передбаченої Державним стандартом базової середньої освіти, за авторськими навчальними матеріалами.

Матеріали і методи. Було використано теоретичний аналіз методичної літератури, порівняльний аналіз, систематизацію та узагальнення наявних теоретичних досліджень з тематики статті, а також педагогічне спостереження та узагальнення власного педагогічного досвіду щодо навчання математики у 8 класі НУШ.

Результати. Згідно з модельною програмою та підручниками, одним із авторів яких є автор цієї статті, розділ "Основи фінансової грамотності", який поєднує матеріал двох параграфів "Формули простих та складних відсотків і дисконтів та їх застосування" і "Датовані суми. Еквівалентні суми при заданій відсотковій ставці" вводиться в курс математики 8 класу НУШ. Цей матеріал є переважно новим для українських учителів математики, а отже, як сам теоретичний матеріал, так і його методичні особливості його слід ретельно пояснювати. Таке пояснення реалізоване в самому підручнику, у книзі для вчителя, а також у додаткових інтерактивних матеріалах (навчальних відео), створених авторським колективом програми і підручника. У статті наводяться методичні коментарі до найбільш складного для розуміння учнями теоретичного матеріалу та методичні поради щодо організації вивчення цього матеріалу.

Висновки. Як показує опитування учнів під час апробації підручника та опитування вчителів математики, які проводили цю апробацію, наведені підходи до навчання учнів основам фінансової грамотності добре сприймаються підлітками. Результати контрольних заходів також показують, що цей матеріал є доступним і зрозумілим для більшості учнів, які його вивчали. Також усі опитані вчителі самі добре розібралися у відповідному теоретичному матеріалі, причому внаслідок належної співпраці з

ABSTRACT

Formulation of the problem. In modern conditions, an important aspect of the development of students' personality is their awareness in the field of financial calculations. In addition, "entrepreneurship and financial literacy" is one of the 11 key competencies, the formation of which is provided for by current state documents regulating educational activities in Ukraine, in particular, the concept of implementing the New Ukrainian School (NUS) reform. Analysis of sources on the introduction of the basics of financial literacy into the educational process showed that it is currently only at the initial stage and has significant national characteristics, compared with analogues in other countries of the world.

The purpose of the article is a detailed presentation of the methodological features of studying the basics of financial literacy of 8th grade NUS students in mathematics lessons in order to properly form the corresponding key competency provided for by the State Standard of Basic Secondary Education, using the author's educational materials.

Materials and methods. Theoretical analysis of methodological literature, comparative analysis, systematization, and generalization of existing theoretical research on the topic of the article were employed, as well as pedagogical observation and generalization of one's own pedagogical experience in teaching mathematics to 8th-grade students at the National Secondary School.

Results. According to the model educational program and textbooks, one of the authors of which is the author of this article, the section "Fundamentals of Financial Literacy", which combines the material of the two paragraphs "Formulas of Simple and Compound Interest and Their Application" and "Dated Amounts. Equivalent Amounts at a Given Interest Rate" is introduced into the mathematics course for the 8th grade of the National Secondary School. This material is largely new to Ukrainian mathematics teachers; therefore, both the theoretical content itself and its methodological features should be carefully explained. Such an explanation is implemented in the textbook itself, in the teacher's book, as well as in additional interactive materials (educational videos) created by the author team of the educational program and the textbook. The article offers methodological comments on the most challenging theoretical material for students to understand, as well as methodological advice on organizing the study of this material.

Conclusions. As shown by the survey of students during the probation of the textbook and the survey of mathematics teachers who conducted this probation, the presented approaches to teaching students the basics of financial literacy are well received by adolescents. The results of control measures also show that this material is accessible and understandable for the majority of students who studied it. Also, all the surveyed teachers themselves understood the relevant theoretical material

авторським колективом підручника та за допомогою книги для вчителя, цей процес не викликав у них значних труднощів. Ми вважаємо, що проведена апробація авторських навчальних матеріалів показує, що описані в статті методичні підходи до вивчення основ фінансової грамотності є корисними і забезпечать належне формування відповідної ключової компетентності учнів, передбаченої Державним стандартом базової середньої освіти.

КЛЮЧОВІ СЛОВА: Нова українська школа; Державний стандарт базової середньої освіти; модельна навчальна програма з математики; підручник з математики; ключові компетентності; підприємливість і фінансова грамотність.

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well, and as a result of proper cooperation with the author's team of the textbook and with the help of a book for teachers, this process did not cause them significant difficulties. We believe that the author's educational materials demonstrate the effectiveness of the methodological approaches to studying the basics of financial literacy described in the article, which will ensure the proper development of the relevant key competence in students, as stipulated in the State Standard of Basic Secondary Education.

KEYWORDS: New Ukrainian School; State Standard of Basic Secondary Education; model mathematics program; mathematics textbook; key competencies; entrepreneurship and financial literacy.

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INTRODUCTION

Problem statement. Analysis of current research. In modern conditions, an important aspect of the development of students' personality is their awareness in the field of financial calculations. In addition, entrepreneurship and financial literacy are one of the 11 key competencies, the formation of which is provided for by current state documents regulating educational activities in Ukraine (MES of Ukraine 2016, Cabinet 2018, Cabinet 2020, Cabinet 2024). Therefore, in the model educational program for the integrated course "Mathematics" for grades 7-9 (Vasylyshyn et al. 2023), in order to implement this requirement, it is proposed to study the basics of financial literacy, in particular, simple and compound interest and discounts, dated amounts, equivalent amounts and their series, as well as simple cumulative payments. The methodological features of this program are described in detail in the article (Shkolnyi 2023). We would just like to note here that this model program is the only one that proposes introducing financial literacy into the school mathematics course as a separate content line.

According to the mentioned model program, the author team consisting of Oleksandr Shkolnyi, Yevhen Nelin, Andriy Mylianyk and Yuliia Prostakova is creating a line of textbooks for grades 7-9 (Shkolnyi et al. 2024a, Shkolnyi et al. 2025a), as well as a methodological kit for them, which includes a teacher's manual, a collection of materials for current formative and summative assessment, a collection of tasks, as well as interactive materials (see, Shkolnyi et al. 2024b, Shkolnyi et al. 2025b, Shkolnyi et al. 2024c). Currently, materials for grades 7 and 8 of the New Ukrainian School (NUS) have been tested, published and are used in the educational process in schools in Ukraine, and materials for grade 9 are being prepared for publication.

It should be noted that not many publications in scientific journals are devoted to the problem of forming the key competence "entrepreneurship and financial literacy" for Ukrainian schoolchildren in basic secondary schools, in particular, on mathematics lessons, and we did not find any systematic methodological studies on this subject at all. The available publications (for example, Kizima et al. 2017, Smovzhenko et al. 2020, Pysmennyi 2023) mainly concern the teaching of financial literacy in high school or in specialized educational institutions with in-depth study of the basics of economics and entrepreneurship. There are also separate online courses for teenagers who want to independently improve their level of financial literacy (for example, <https://studbiz.in.ua/>, <https://talan.bank.gov.ua/> and others).

It is also clear that foreign publications on this topic, of which there are many (see, for example, Amagir et al. 2020, Cameron et al. 2014, OECD 2024, Sohn et al. 2012, etc.), are mostly of little application to Ukrainian realities, since they do not take into account the peculiarities of the educational process in our country, especially during the implementation of the New Ukrainian School reform. In addition, currently, Ukrainian adolescents, due to martial law, are in special conditions and require a different approach to learning from the traditional ones (more details about teaching mathematics under martial law in Ukraine are described in the article Matias & Shkolnyi 2025).

In the context of developing entrepreneurship and financial literacy at the level of basic secondary education, a separate model curriculum for the course "Entrepreneurship and Financial Literacy" for students in grades 8-9 of general secondary education institutions (Bespalko et al., 2023), recommended by the Ministry of Education and Science of Ukraine for use in the educational process, deserves attention. Its introductory part, in particular, states the low level of financial education of Ukrainian youth aged 18-19 (data are based on the 2021 USAID project "Financial Sector Transformation" - see Vitka 2021).

The Entrepreneurship and Financial Literacy program provides for the study of the following topics: "Formation of financial culture" and "Fundamentals of human financial literacy" - grade 8; "Money and its purpose", "Banking and non-banking financial institutions", "Basic financial services", "Protection of the rights of consumers of financial services", "Fundamentals of entrepreneurship" - grade 9. Analysis of the program content shows that it performs a predominantly ideological function, expanding the horizons of students in the field of financial literacy without much detailing the method of making financial calculations. In our opinion, this course alone is not enough for the proper formation of the "entrepreneurship and financial literacy" competence; systematic efforts of representatives of other educational fields, in particular, mathematics, are required.

Therefore, *the purpose of our work* is to provide a detailed description of the methodological features of studying the basics of financial literacy of 8th-grade students of the New Ukrainian School in mathematics lessons in order to properly form the corresponding key competence provided for by the State Standard of Basic Secondary Education, using the author's educational materials.

METHODS OF THE RESEARCH

To achieve the study's goal, we employ a theoretical analysis of methodological literature related to the chosen topic. Also, as an empirical method, we use surveys of teachers and students, as well as observation of the educational process in secondary schools during the testing of teaching materials in mathematics for grades 7-8 of the New Ukrainian School. In this article, we also operate with various methods of scientific knowledge: comparative analysis to clarify different points of view on the problem; systematization and generalization to formulate conclusions and recommendations on the formation of financial literacy of students in grades 7-9 in mathematics lessons; we also summarize our own pedagogical experience and observations of the authors on the process of teaching mathematics in Ukrainian schools.

RESULTS OF RESEARCH

According to the model educational program (Vasylyshyn et al., 2023), the study of the basics of financial literacy in the integrated course "Mathematics" for grades 7-9 begins in grade 8. The corresponding section of the textbook (Shkolnyi et al., 2025a) is entitled "Basics of Financial Literacy", which combines two paragraphs: "Formulas of Simple and Compound Interest and Discounts and Their Application" and "Dated Amounts. Equivalent Amounts at a Given Interest Rate".

The first paragraph ("Formulas for simple and compound interest and discounts and their applications") studies the formulas for simple interest and discounts and their practical applications. A feature of this and partly the following second paragraph of the section of the paragraph is that they contain a large amount of terminology that is new to students. The motivation to study simple and compound interest is natural, since they are constantly used in financial calculations. Let us cite in full volume the dialogue between Petryk and Tetianka at the beginning of the paragraph, which serves as a motivation for studying the educational material (Shkolnyi et al., 2025a).

Petryk. Listen, Tetianka, yesterday I saw a strange advertisement on the street: "Hurry up and open a deposit in our bank! We guarantee 24% per annum monthly in hryvnia and 8% per annum semi-annually in dollars and euros!" You may not know what this means.

Tetianka. Honestly, I also find it strange how annual interest can be monthly or semi-annual. I also don't always understand these financial advertisements. For example, I recently heard from my parents that one of the Internet providers offers a profitable discount for regular customers - 18% per annum for 4 months. I am extremely curious what this means!

Petryk. I know that in translation from English, "znyzhka" means a discount. And I once read about a deposit on the Internet. This is money that the bank has accepted from the depositor for a certain period of storage at interest. Therefore, it seems to me that when making deposits, the amount of money in the client's account increases over time in a certain way, and when making a discount, the cost of services decreases for some time in a certain way.

Tetianka. Everything is logical, but it's better to ask the teachers, because knowing for sure is always better than guessing.

Next, teachers provide all the definitions of concepts necessary for understanding (interest funds, initial and final amounts, interest rate, simple interest, annual interest rate, loan period, bank discount, repayment amount, revenue, interest rate, annual discount rate, discount period). All introduced definitions are illustrated with examples that allow students to better understand the essence of the introduced concepts and learn to recognize, in particular, initial and final amounts, interest funds, revenue, repayment amount, as well as calculate the interest and discount rate for a simple and complex scheme of interest and discount accrual.

It is worth noting that most mathematics teachers in Ukrainian schools encounter the above concepts for the first time, and therefore, mastering them may cause some difficulties. For example, in financial mathematics, interest is not the number of hundredths of a whole, but the funds that an individual receives as a result of certain financial transactions. It is also important in problems to distinguish the rate of interest or discount from the equal interest or discount rate. A certain feature of financial calculations when solving problems on simple interest or discounts is that, for the convenience of calculations, it is assumed that the length of the year is not 365, but 360 days.

The most difficult material to understand in the paragraph "Formulas for Simple and Compound Interest and Discounts and Their Applications" is the relationship between the formulas for simple interest and simple discounts. We will provide the corresponding explanation from the textbook (Shkolnyi et al. 2025a) in full.

The simple interest and discount formulas are related, and it is no coincidence that the initial and final sums in the simple interest formula coincide with the proceeds and repayment amounts in the simple discount formula. Consider the following example.

Example. Let Mr. Dmytro pay the bank UAH 10,000. If 5 months before maturity, the bank sells this obligation to Ms. Oksana for UAH 9,500, then the repayment amount $S = \text{UAH } 10,000$, bank revenue $P = \text{UAH } 9,500$, and discount $D = S - P = \text{UAH } 500$. The discount rate in this case $j = \frac{500}{10000} \cdot 100\% = 5\% = 0,05$.

However, when Ms. Oksana buys Mr. Dmytro's bond before its maturity date, she is effectively borrowing money from the bank and owning the bond as a security. On the maturity date, Ms. Oksana will receive UAH 10,000 from Mr. Dmytro and will receive UAH 500 in profit on her UAH 9,500 investment. For Ms. Oksana, UAH 9,500 can be considered the initial deposit amount, the bank's discount of UAH 500 as her own interest funds, and the repayment amount of UAH 10,000 as the final amount. It is clear that the interest rate Ms. Oksana will receive on her investment will not align with the bank's discount rate. Indeed, the bank discount rate in this case is 5%. If we consider UAH 500 as interest funds on Ms. Oksana's UAH 9,500 investment, then the interest rate $i = \frac{500}{9500} \cdot 100\% = \frac{100}{19}\% \approx 5,26\%$.

The annual interest rate for this case will also be different from the annual discount rate. Indeed, the discount rate $d = 5\%: \frac{5}{12} = 12\%$, and the annual interest rate $r = \frac{100}{19}\%: \frac{5}{12} = \frac{240}{19}\% \approx 12,63\%$. The relationship between annual interest and discount rates is derived from the equality $I = D$ that is, $Prt = Sdt$ or $Pr = Sd$. In their financial activities, banks may use both of these rates for discounting. Therefore, one should be careful not to confuse them.

This example makes it clear why the letters in the simple interest formula ($S = P(1 + rt)$) and the simple discount formula ($P = S(1 - dt)$) are coincide, and how exactly the simple interest rate and the simple discount rate are related to each other. A sufficient number of examples given in the “gym” of the textbook for this section (this is what the authors call the system of problems for each of the textbook paragraphs divided into four levels of complexity) should be considered so that students can well understand this difference. The understanding of simple interest and simple discounts and the connection between them will also be facilitated by two specific examples given in the textbook with a full solution and comments to it immediately after the theoretical material cited above.

The second part of the paragraph "Formulas for simple and compound interest and discounts and their application" contains information about compound interest and discounts. Here the definitions of the following concepts are introduced: compound sum, compound interest, conversion period, effective annual interest rate, present value of the contribution, compound discount. Then the formulas for compound interest are proved ($S = P(1 + i)^n$, where P – first initial amount, i – interest rate for the conversion period, n – number of conversion periods) and the compound discount formula ($P = S(1 + i)^{-n}$). It should be noted that although the letter designations in the compound discount formula are the same as those in the compound interest formula, they have a different economic meaning: amount P is considered the present value of the contribution S , and the difference $S - P$ is called a compound discount.

It is also important that the theoretical material of the paragraph answers the questions of children from the motivational block at the beginning. Indeed, the concept of annual interest rate is first introduced: “Similar to simple interest, when calculating a compound sum, the annual interest rate is used, indicating the number of conversion periods per year. If the number of conversion periods per year is m , then the annual interest rate is denoted by r_m . It is obvious that the interest rate for the conversion period $i = \frac{r_m}{m}$.” (Shkolnyi et al. 2025a) After this definition, it becomes clear that in the motivational block, 24% per annum per month means the interest rate $i = \frac{r_{12}}{12} = 2\%$ per month.

It is clear that solving problems on simple and complex interest and discounts requires performing many routine calculations, for which it is convenient to use computing equipment - a calculator or spreadsheets. The corresponding educational videos on this topic, provided in the electronic appendix to the textbook, will be useful to 8th grade students. These educational videos are available to students using QR codes provided in the textbook. We should also emphasize that in the textbook (Shkolnyi et al. 2025a) the use of educational videos is systematic, not fragmentary. These videos are the same part of the textbook as the printed text; they are mandatory for students to study, and are not auxiliary in nature.

The development of the ability to use computing tools to solve financial problems deserves due attention and sufficient time. Therefore, given the small size of the financial literacy section, teachers should allocate sufficient teaching time to it during their lesson planning. This time, in particular, will be spent on mastering computer programs such as Excel, which facilitate calculations when solving financial problems.

The second paragraph of the section devoted to financial literacy (“Dated amounts. Equivalent amounts at a given interest rate”) concerns the study of dated amounts and equivalent payments at a given interest rate. The motivational block of the paragraph provides examples of situations that confirm that comparing amounts of money without specifying the date is incorrect. Let us cite the corresponding dialogue between Petryk and Tetianka from the textbook (Shkolnyi et al. 2025a).

Tetianka. Listen, Petryk, I recently heard a strange phrase on the bus, which a lady said on the phone: “It’s better to take 1000 UAH now than 1500 UAH in a year, because money is not worth as much now as it used to be.” How can money be worth anything? In my opinion, it’s products or things that are worth something, and they are mostly bought for money.

Petryk. The phrase is really a bit strange, but I agree that comparing amounts of money without knowing the date when they were received will not work. Because money depreciates over time, even in the most developed countries. For example, in O’Henry’s stories, you can read that you could rent an apartment for 8 dollars a week, and now in the USA, it’s difficult to even have lunch in a cafe for that kind of money!

Tetianka. That’s true. My dad says that money should work. That is, there is no point in simply accumulating cash for a long time; it is better to put it in a bank or invest it in a project at a certain percentage. Then the interest will at least compensate for the depreciation, and maybe even give some profit.

Petryk. Logically. And the bank, in turn, will also invest the funds received from depositors somewhere at a certain percentage and receive profit, from which it pays interest to depositors. Listen, it turns out that the bank also pays money for the use of funds! That is, for the bank, your contribution to the deposit account will cost a certain amount of money for using it, and therefore, your money may cost other money. Very, very interesting, I want to learn more about this!

It is precisely because of the incorrectness of comparing amounts without a date that the concept of a dated amount is introduced: “The amount of a payment together with the date of its payment is called a dated amount. For example, if the borrower is to pay 3,000 UAH on February 3, 2030, then this is a dated amount.” (Shkolnyi et al., 2025a) Dated amounts can be compared by introducing the concept of equivalence of two dated amounts: “Two dated amounts are called equivalent if, at a given interest rate, their present values are the same.” From this definition, the rule of equivalence of two dated amounts is derived: “Let, at an interest rate i , the amounts A and B must be paid, respectively, after a and b conversion periods from the present time. Then the amounts A and B will be equivalent if $B = A(1 + i)^{b-a}$.” (Shkolnyi et al. 2025a) The last equality is called *the basic equation of equivalence* of dated amounts. The following are examples of finding equivalent amounts for given numbers of conversion periods from the present time with a complete solution and appropriate detailed comments. It is worth considering a sufficient number of such examples for a better understanding of students. They are given in the “gym” of the textbook to this paragraph.

A generalization of the rule of equivalence of two dated amounts is the rule for calculating the equivalent amount of a series of payments: “Let, at interest rates i , the amounts A , B , and C be paid respectively after a , b , and c conversion periods from the present time. Then the amount C will be equivalent to the series of payments A and B if $C = A(1 + i)^{c-a} + B(1 + i)^{c-b}$.” (Shkolnyi et al. 2025a) This rule is simply derived using the basic equation of equivalence of dated amounts. Usually, the amount

equivalent to a series of payments in practice needs to be found if it is planned to replace several payments (for example, on a loan) with a single payment. A specific example of such an application of the rule for calculating the equivalent amount of a series of payments is given in the textbook: "A bank provides loans at an annual interest rate of $r_4 = 12\%$. Mr. Mykhailo was supposed to return 5,000 UAH to this bank in a year, another 5,000 UAH in 2 years, and another 5,000 UAH in 3 years, but decided to repay the loan in one payment in 2.5 years. Let's find the amount Mr. Mykhailo has to pay according to his decision." (Shkolnyi et al. 2025a) A full solution with comments is given for this problem. Also, in the "gym" for this paragraph, a sufficient number of similar problems of different levels of complexity are given.

Equivalence can also be established between two series of payments. The textbook gives the following definition of equivalent series of payments: "Two series of payments are called equivalent if the amounts equivalent to each of these series of payments on the same date coincide." (Shkolnyi et al. 2025a) The equivalence equation for two series of payments is then derived: "Let for the interest rates i amounts $A_1, A_2, \dots, A_n, B_1, B_2, \dots, B_m$ must be paid accordingly through $a_1, a_2, \dots, a_n, b_1, b_2, \dots, b_m$ conversion periods from now, and u – arbitrary moment in time. Then the series of payments A_1, A_2, \dots, A_n and B_1, B_2, \dots, B_m will be equivalent if $A_1(1+i)^{u-a_1} + \dots + A_n(1+i)^{u-a_n} = B_1(1+i)^{u-b_1} + \dots + B_m(1+i)^{u-b_m}$ " (Shkolnyi et al. 2025a) An example of using the last equation for a specific situation of replacing one series of payments with another is given in the educational video, which is presented in the textbook immediately after the formulated definitions. Also, several similar problems are given in the system of problems to this paragraph.

We believe that all 8th grade students should be able to apply the basic equivalence equation for two dated amounts. Problems using equivalence equations for series of payments are technically more complex. Therefore, all students should be able to understand the essence and write down the equation of equivalence of a series of payments to one payment and the equation of equivalence of a series of two series of payments, but the ability to solve the corresponding equations to find unknown amounts should be required only from students who are studying at a sufficient and high level of educational achievements. This ideology is reflected in the system of problems to this paragraph: at the initial level, you need to find the number of conversion periods, the interest rate at the annual interest rate, and also write down the equivalence equation for two dated amounts; at the intermediate level, you need to find a dated amount equivalent to another dated amount, and also write down the equivalence equation for one dated amount of a series of two dated amounts; at a sufficient level - find a dated sum equivalent to a series of two dated sums and write an equivalence equation between two series of dated sums; at a high level - find a series of dated sums equivalent to another series of dated sums. We also draw your attention to the fact that in the curiosities from Grandpa Taras to this paragraph, inquisitive students can find information about the equivalence relation and its application not only in financial mathematics, but also in the mathematics course material known to 8th-grade students - vectors on the plane, similar triangles, etc.

The theoretical material of the paragraph "Dated amounts. Equivalent amounts at a given interest rate" is also mostly new for mathematics teachers. Therefore, the book for teachers (Shkolnyi et al., 2025b) provides solutions to all problems for work in the "gym" class of sufficient and high level, as well as individual problems of intermediate and elementary levels. This facilitates the work of teachers and contributes to their better understanding of the given material, making it possible to convey this material to students adequately and without distortion.

CONCLUSIONS AND PROSPECTS FOR FURTHER RESEARCH

As shown by the survey of students during the textbook probation (Shkolnyi et al., 2025a), and the survey of mathematics teachers who conducted this probation, the above-mentioned approaches to teaching students the basics of financial literacy are well received by adolescents. According to this survey, the vast majority of students (87%) understood the relevance of studying the material of the section "Fundamentals of Financial Literacy" in grade 8. All the surveyed teachers themselves understood the relevant theoretical material well, and as a result of proper cooperation with the textbook's author team and with the help of the teacher's book, this process did not cause them significant difficulties. According to the control measures after the topic, 12% of all students mastered the material of the section "Fundamentals of Financial Literacy" at a high level, 26% at a sufficient level, 44% at an average level, and only 18% at an initial level. In our opinion, for a fundamentally new educational material, this is a notable achievement, which demonstrates that the material is accessible and understandable to the majority of students who have studied it.

Of course, the number of teachers and students who conducted the testing during only one academic year (18 teachers and about 600 students) does not yet provide statistically sound grounds to unequivocally state that the educational material on financial literacy in mathematics lessons in the 8th grade of the National Secondary School has been successfully mastered by students, and the corresponding key competence has been formed. This requires longer-term studies, particularly on the level of residual knowledge on financial literacy among the same students in the 9th grade, which will be conducted in the next academic year. Also, in our opinion, the study of the material of the section "Basics of Financial Literacy" by eighth-graders will contribute to their better understanding of the topic "Accumulated Payments (Annuities)", which is planned for study in the 9th grade according to the model educational program (Vasylyshyn et al., 2023). However, we believe that the probation of the author's educational materials conducted in the 2024-2025 academic year in a case study mode gives significant grounds to hope that the methodological approaches described in the article to studying the basics of financial literacy in the 8th grade of the National Secondary School are useful and will ensure the proper formation of the relevant key competence of students, as provided for by the New Ukrainian School Concept and the State Standard of Basic Secondary Education.

CONFLICT OF INTEREST

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DATA AVAILABILITY

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USE OF ARTIFICIAL INTELLIGENCE (AI) TOOLS

AI tools were not used in the writing of this work.

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