

EEIA-2017
2017 International conference
"Education Environment for the Information Age"

**DEVELOPMENT OF FINANCIAL LITERACY OF
SCHOOLCHILDREN LIVING IN INFORMATION SOCIETY**

Olga A. Frantsuzova (a)*, Marina Yu. Romanova (b), Sergey N. Volodin (c)

*Corresponding author

- (a) PhD (History), Senior Researcher, Centre for Social and Humanitarian Education, Institute for Strategy of Education Development of the Russian Academy of Education, Moscow, Russia, frantsuzovao@mail.ru*
- (b) PhD (Education), Senior Researcher, Russia, Moscow, Institute for Strategy of Education Development of the Russian Academy of Education, Moscow, Russia
- (c) Associate Professor of the Financial Department, Economics Science Faculty, National Research University Higher School of Economics, Moscow, Russia

Abstract

This article deals with the important issues of adults and schoolchildren financial literacy development. The authors explore possible ways for development of financial literacy of schoolchildren as well as potential development tendency of financial education in the context of dynamically developing information environment. The introduction describes the importance of developing the financial literacy of people (starting from school age), immediacy of the problem in connection with education modernization in the face of intensively changing information environment. Importance of this topic is associated with the need for students to acquire knowledge and practical skills in financial markets functioning and regulation, financial methods, and economy instruments aimed at ensuring effective interaction of citizens with the economic institutions of society. Some of author's tasks are presented for monitoring the achievements of students and determining their skills to navigate in the economic space, making optimal decisions in life situations to avoid financial risks. The study results allow us to draw conclusions about the effectiveness of methods and tools for implementing special programs to increase financial literacy and financial sustainability of the population. The study may be of interest for graduate students, methodologists, teachers of secondary schools, secondary specialized institutions, and universities in the relevant areas.

© 2017 Published by Future Academy www.FutureAcademy.org.UK

Keywords: Financial literacy of schoolchildren, financial behavior, financial competence, international comparative study of financial literacy, development strategies of financial education of schoolchildren, information resources of financial literacy.



This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 Unported License, permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

1. Introduction

The challenge of creating financial literacy of adults and schoolchildren being one of the strategic areas of modern education is in the focus of the world community. Within this framework, the study of financial literacy is one of the priority educational tasks of economically developed and emerging countries.

The importance of the financial literacy of the population starting from school age is associated with the development and implementation of strategies for modernizing education in the context of intensively changeable information environment. The consequences and risks of low financial literacy of the population can be expressed in ineffective management of personal finances, accumulation of excessive accounts payable, growth of financial abuses associated with the use of new information technologies in the banking sector, which in turn restrains the development of financial markets and ways of interacting with financial state and commercial institutions. Schoolchildren's awareness of the functioning and regulation of financial markets, financial methods, and economy instruments is aimed at ensuring effective interaction of citizens with the economic institutions of society.

2. Problem Statement

The global best practices determine the *financial literacy* as the ability of individuals to manage their finances and make effective short-term and long-term financial decisions.

The International Study of PISA (Programme for International Student Assessment) defines the notion of financial literacy as knowledge and understanding of financial concepts and financial risks, as well as the skills, motivation and confidence necessary to make effective decisions in a variety of financial situations that improve the financial well-being of individuals and society, as well as the opportunity to participate in economic life (PISA-2012, Zelentsova, Blyskafka, Demidov, 2015).

An important component of financial literacy is knowledge and practical skills in operating finance in a wide variety of financial areas. The most popular of them is the management of personal finances including knowledge and practical skills in relevant areas: the ability to deal effectively with financial issues, making decisions about personal and family finances when paying for goods and services, drawing up a family budget, investing free cash, property and life insurance, purchase of real estate, pension and tax planning.

Financial literacy also includes knowledge of financial principles and concepts: financial planning, compound interests (interests on mortgages or credit for durable goods), credit debt management, methods of saving and determining the value of money taking into account a time factor. The main steps to achieve financial literacy include training in budget process, tracking income and expenditure, studying methods for repaying credit debt and effective planning of pension savings, consulting experts in financial matters.

Financial literacy involves understanding of how money works by creating opportunities for achieving financial goals and managing internal and external factors. Literacy in the field of finance contributes to the economic independence and self-determination and financial stability of citizens. A citizen being a subject of economic legal relations learns to assess opportunities for purchase, distinguish

between current necessary purchases and optional purchases, determine whether he will be able to meet financial obligations for large purchases in the future, for example, obligations when purchasing an apartment or a car.

Financial competence demonstrates the behavior of a person and his attitude to money in everyday life when making financial decisions, affects the area of citizens' interests acting as producers or consumers of goods and services, creates the opportunity to avoid the risk of becoming a victim of financial fraud. Basic skills allow us to control our bank account, pay taxes in time, pay off our debt and control our expenses.

3. Research Questions

One of the main ways of creating financial literacy of people is **financial education** defined by the international **Organization for Economic Cooperation and Development (OECD)** as a process of improving knowledge of individuals about financial products and instruments, development of skills to understand financial risks, getting the opportunity to make an economically feasible choice, formation of the ability to act effectively to improve the financial well-being and ensure the protection of vested interests (Zelentsova, Blyskafka, Demidov, 2015).

National strategies, financial education and financial literacy programs are currently operating in the UK, Italy, Austria, Germany, USA, Argentina, Belgium, Brazil, Australia, Canada, the Republic of Korea, Malaysia, New Zealand, Poland, Czech Republic, Estonia, Romania, Slovakia, Hungary, Iceland, Indonesia, South Africa, Japan, Finland, Spain and Russia (Assistance in improving the level of financial literacy of people and development of financial education in the Russian Federation, 2016).

The following characteristics of actions are the basis for definition of financially competent behaviour of the consumer: monthly accounting of family expenses and incomes, correlation of incomes and expenses (to live within means - without excessive debts), short-term and long-term financial planning (to be ready for extraordinary expenses and retirement), acquisition of financial products and services by choice, orientation in financial matters (designation based on the definition of the **British Financial Conduct Authority (FCA)** (Financial Conduct Authority)).

Secondary schools (Schools and education authorities) in the UK implement three main ways to provide educational materials on financial literacy:

- implementing relevant topics in various aspects of the core curriculum;
- organizing independent lessons relating to “personal finance” topic;
- involving external qualified specialists, experts and facilitators to provide financial education within the framework of the planned topics, for example, during lessons on citizenship or PSHE (personal, social and health education). The most popular topic of such lessons is “Incomes and Expenses”. Their interrelation, the definition of the prospects for the development of this area indicates the need for the implementation of appropriate programs in schools from the primary stage of education (Financial Conduct Authority).

Another area of British organizations activity is the provision of financial advisory services to people, including schoolchildren. For example, in 2010 the government created the independent British organization “**Money Advice Service**”.

The priority areas of this service are providing information, supporting young people and adults in the field of finance:

- working in schools and other educational institutions (for example lessons organized by the Personal Finance Education Group, PFEG);
- development of online products to increase financial literacy (information support over the telephone and online in the Internet);
- advice on using money in web chat (Shybayev, & Shadrina, 2015).

4. Purpose of the Study

Within the strategy for modernization of education in **the Russian Federation** that is an officially recognized system of strategic directions and priorities in education the financial literacy is understood as **knowledge, skills, motivation, attitudes and behaviours, as well as the ability to navigate and act rapidly in developing situation**. With this regard we consider theoretical and action-oriented tasks associated with the formation of knowledge and understanding of financial concepts and financial risks, behavioural skills, motivation and confidence necessary to make effective decisions in a variety of financial situations that contribute to improving the financial well-being of the individual and society.

5. Research Methods

One of the first studies of financial literacy in Russia was the PISA-2012 program conducted within the framework of the Organization for Economic Cooperation and Development (OECD) International Program. The subject of the study was the willingness of 15-year-old students to “make effective decisions in a variety of financial situations, adapt, and use of new financial system” (PISA-2012).

Study of educational achievements was conducted in four areas: “Money and their handling”; “Financial planning and management”; “Risks and rewards”; “Financial environment”. 6,701 schoolchildren from 46 regions of Russia have passed the test for mastering such types of cognitive activity as the identification of financial information in an explicit and implicit form; analysis of information in the financial context, in situations related to education and work, home and family, personal expenditures, free time and leisure, society and a citizen; assessment of financial problems; understanding and application of financial knowledge.

The average index of Russian students in 2012 was 486 grades, the average score for OECD countries was 500 grades (the results were checked according to the international scale of 1 to 1000); 83% of Russian schoolchildren demonstrated their readiness to use properly their knowledge and skills in the field of financial literacy. The greatest difficulty was caused by the inadequate knowledge of students about the credit mechanisms, operations with bank deposits, financial security when buying goods online,

investment and taxation issues. The tasks with solutions related to real life familiar situations were completed most successfully (Kovaleva, 2014; Zelentsova, Blyskafka, Demidov, 2016).

6. Findings

In 2015-2016 the Study was conducted within the framework of the project “Assistance in improving the level of financial literacy of people and development of financial education in the Russian Federation” at the initiative of the Ministry of Finance of the Russian Federation and with the assistance of the World Bank under the program “Methodological and consulting and expert support for approbation of modular academic programs and other materials aimed at improving the financial literacy of schoolchildren and students of secondary vocational education institutions”.

In five regions of the Russian Federation (Kaliningrad Region, Arkhangelsk and Volgograd Regions, Krasnodar Krai and Altai Krai) the additional educational programs and educational materials on development of financial literacy of students in general educational institutions were tried out (2,333 participants). In all tested Academic and Methodological complexes (AMC) developed by the authors’ team under the leadership of I.V. Lipsits there is a positive dynamics in students' self-estimation at a level above the average (6-8 grades) and a high level (9-10 grades). Amount of junior schoolchildren (7-10 year-old schoolchildren) to be above the average level increased by 7%, at high level – by 13%. Among the pupils of the main school (11-15-year-old schoolchildren) – by 13% and 15%, respectively, among the older teenagers – by 18% and 3%, among high school students (16-18-year-old schoolchildren) – by 12% and 10% (Podbolotova, 2015; Frantsuzova, 2016).

7. Discussion

The results of the studies conducted in Russia in 2012-2017 confirm the findings of international studies of financial literacy on the existing correlation with reading and mathematical literacy. However, the data obtained can serve as a basis for the need to study the relationship between informational and financial literacy. To support the implementation of this aspect of financial literacy it is possible to develop scientific and methodological recommendations for teachers of social science, economics, computer science and mathematics in giving classes related to information security in the field of finance; control and measuring materials for inclusion in class and extracurricular activities.

The variants of the authors’ tasks developed within the framework of the project “*Financial Literacy*” in order to check the choice of financial literate models and strategies of schoolchildren's behavior in the modern information environment, the understanding of financial terminology, the ability to analyze financial products and the consequences of financial decisions are presented below. The skills to be checked: to analyze information in financial context, in explicit and implicit form (1), to evaluate financial problems and solutions (2); to analyze information and to be critical about sources of financial information (3).

Table 01. Assignment sample.

Task 1.
<p>Your family decided to invest the accumulated money in a profitable project in order to gain income. The family considers several opportunities for investment. The analysis of the business proposals posted on the sites was made. Which of the following options is an obvious fraud (financial pyramid) and requires special care? Explain why.</p> <p>A) CB “Invest” offers to make a deposit at 2.05% per annum while paying for the issue of the embossed Gold card.</p> <p>B) Company “Bogtstvo” investing its funds in housing construction offers to buy shares and offers a profit of 15% per annum. Financial statements and constituent documents are available in the company's office and on website.</p> <p>C) Well-known financial company LML offers 40% per annum. The company places advertising on billboards, in subway, underpasses, at bus stops, on TV. Access to the company's constituent documents and information about the organization's funds allocation is limited. Employees of the company declare that the company invests money in oil production to generate income.</p> <p>D) Apollon Company declares a guaranteed high income of 20% per month and minimum risks of financial losses. One of the main conditions is to bring friends or acquaintances. The company gets profit exclusively through attracting new investors.</p>

Table 02. Assignment sample.

Task 2.
<p>Your friend decided not to keep the savings at home and invest them by providing money to an Internet company offering very high income. A month later, it turned out that this company is a financial pyramid and it refused to pay interest and return the deposit. What should you do in this situation? Explain why.</p> <p>A) Inform as soon as possible the law enforcement agencies at the place of residence.</p> <p>B) Contact the insurance company.</p> <p>C) Wait until the situation in the company settles down.</p> <p>D) Write a statement about repayment of money recorded by a notary and send it via e-mail to the main office of the company.</p>

The proposed tasks (No. 1, 2) put the students in a familiar situation of buying goods and services in the Internet. It is assessed whether they can interpret and use financial information, be critical about information, recognize and avoid potentially dangerous sources of information.

Table 03. Assignment sample.

Task 3.
<p>You decided to download a rare paid application to your phone and make payment by debiting money from your account, via SMS. To find favorable offers on sites offering such services you decided to use a search engine, for example, Google. Before entering personal data determine which of the proposed options is not a phishing link and will not redirect you to the fraud site. Explain why.</p> <p>A) http://www.google.com</p> <p>B) http://www.gooogle.com</p> <p>C) http://www.googlle.com</p> <p>D) http://www.gogle.com</p>

The proposed task (No. 3) related to shopping in the Internet puts the students in a familiar situation of buying goods and services. It is assessed whether they can interpret and use financial information, be critical about information, recognize and avoid potentially dangerous sources of information (Romanova, 2016; Sergeeva, 2016).

8. Conclusion

The application of such practice-oriented tasks is possible within the framework of the Social Studies, Economics, and Law.

The results of international and Russian studies conducted in 2015-2016 in the Russian Federation showed a high level of financial literacy development by Russian schoolchildren and an average level of application of this knowledge. In this regard, since the problem of financial literacy is realized within the course of Social Studies in general education schools, promising direction of development for the Russian school education is the promotion of active and interactive teaching methods using information resources on financial literacy. For example, improvement of practical orientation, creation of training e-programs such as “Journey through the Bank”, introductory electronic tours “Taxes”, “Expenses and Incomes”, “Pensions” and others.

There is an objective need to increase the methodological support of the academic and methodological complex in Social Studies classes, to involve the methodological development of business games in education, including computer games, practical situations, exploratory and project activities, guidelines for working with information resources of financial literacy, to create AMC for extracurricular activities.

The work has been done within the framework of the State Assignment of the Institute for the Strategy of Education Development of the Russian Academy of Education (No. 27.7948.2017 / BCH).

References

- Assistance in improving the level of financial literacy of people and development of financial education in the Russian Federation*. Ministry of Finance of the Russian Federation. Retrieved from [http://old.minfin.ru/ru/om/fingram/Improving financial literacy: international experience and Russian practice](http://old.minfin.ru/ru/om/fingram/Improving_financial_literacy:_international_experience_and_Russian_practice). Retrieved from <http://ur-consul.ru/Bibli/Povysheniye-finansovoyi-gramotnosti-nasyeleniya-myezhdunarodnyyi-opyt-i-rossiyiskaya-praktika.html#Q-3344-Lityeratura>
- Decree of the Government of Russia dated November 17, 2008 No. 1662-R “Concept of long-term social and economic development of the Russian Federation for the period until 2020”*. Retrieved from <http://xn--80abucjiihbv9a.xn--p1ai/%D0%B4%D0%BE%D0%BA%D1%83%D0%BC%D0%B5%D0%BD%D1%82%D1%8B/4717>
- Financial Conduct Authority (FCA)*. Retrieved from <https://www.fca.org.uk/>
- Financial Services Authority Evidence of impact: An overview of financial education evaluations Prepared for the Financial Services Authority by the Personal Finance Research Centre University of Bristol*. Retrieved from <https://www.fca.org.uk/publication/research/fsa-crpr68.pdf>
- Frantsuzova, O. A. (2016). *Acmeological aspect of socialization of children's homes pupils through the development of financial literacy*. Acmeological resources of social-psychological health of young people. Astana.
- Improvement of financial education national strategies. Joint publication of the Russian Federation presidency in the Group of Twenty and OECD*. Ministry of Finance of the Russian Federation Date of publication: 20.02.2015. Retrieved from http://ippk.arkh-edu.ru/web_community/financial/1.%20G20_OECD_final%20RU.pd
- Kovaleva, G. S. (2014). *The first results of the international program PISA-2012*. Teaching history and social studies in schools, 4.

- The National Program concept for improving the level of financial literacy of the Russian Federation people.* Source: Federal Service for Finances and Markets Retrieved from http://www.cbr.ru/sbrfr/archive/fsfr/old_ffms/catalog.asp%40ob_no=204417.html
- PISA-2012 Results: Students and Money.* Retrieved from <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-vi.htm>
- Podbolotova, M. I. (2015). International practice of implementation of strategies and programs for informational support in the field of financial literacy of children and young people. *Bulletin of the Russian University of Peoples' Friendship. Series: Informational support of Education, 4.*
- Romanova, M. Yu. (2016). *Realization of the ideas of sustainable development in the continuous school economic education. Teacher education: formation, structuring, optimization, modernization and development forecast.* Materials of the international research and practical conference. Moscow.
- Sergeeva, M. G. (2016). *Criteria indicators of the formation of economic competencies of students in the context of individual socialization.* Education and socialization of the individual in modern society. Materials of the international scientific conference. Krasnoyarsk.
- Shybayev, S. R., Shadrina, Yu. A. Foreign experience of increasing the financial literacy of people. *Banking and Finance, 24.*
- World Bank/Russia Financial Literacy and Education Trust Fund Financial Capability Survey & 2015 Main Reference (s).* Retrieved from <http://www.worldbank.org/en/webarchives/archive?url=http%3A%2F%2Fwww.worldbank.org>
- Zelentsova, A. V., Blyskafka, E. A., Demidov D. N. *Improving financial literacy: international experience and Russian practice.* Retrieved from <http://ur-consul.ru/Bibli/Povyshyeniye-finansovoyi-gramotnosti-nasyelyeniya-myezhdunarodnyyi-opyt-i-rossiyiskaya-praktika.html#Bukva-Povyshyeniye-finansovoyi-gramotnosti-nasyelyeniya-myezhdunarodnyyi-opyt-i-rossiyiskaya-praktika>