

Financial Literacy at The Lower Secondary Schools in The Czech Republic

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Abstract

Importance of financial literacy among the population is permanently increasing. The number of financial products on the market is growing, and the age at which people start to use these products is decreasing. This is also related to the negative impacts of insufficient financial literacy in this area – rising household indebtedness, the high number of executions, or the inability to manage a balanced household budget. That is why government institutions, banks and other financial market actors have been actively engaged in increasing the level of financial literacy recently. Although financial education bears on all age groups, the Ministry of Finance focuses mainly on primary and secondary schools and the integration of financial literacy in the school curricula. For this purpose, financial literacy standards have been drawn up, where the Ministry of Finance sets the output level of financial education in different areas for each educational level. So far, no testing of compliance of these requirements with the real state of financial literacy of pupils has been conducted. The aim of this research is, therefore, to find out, on a selected sample of lower secondary schools, what is the level of financial literacy of pupils in a selected region of the Czech Republic and what factors influence this level. For this purpose, a questionnaire survey will be conducted among pupils aged 11-15. The questionnaire is based on financial literacy standards set by the Ministry of Finance. Mathematical-statistical methods will be used for the analysis of obtained data.

Keywords: financial literacy, Czech Republic, secondary school

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Introduction

Financial literacy is one of the basic competencies of a man in modern society of the 21st century, together with a computer or social competence. The average individual is expected to be able to understand the basic principles of the functioning of financial markets, to make decisions independently, and to understand the consequences of their actions. OECD (2012) understands Financial Literacy as a person's ability to understand financial products offered on the market, understand how they work, be able to identify and evaluate the risks associated with investment and use these products to make informed decisions and protect their finances and existence. The National Council for Education in the Czech Republic (2010) recognizes three components of financial literacy: monetary literacy, price literacy and budget literacy. Monetary literacy covers competencies related to the effective management of cash and non-cash money, i.e. ability to manage bank accounts, make payments in cash and cashless. Price literacy covers the knowledge of pricing, the impact of inflation, or influence of taxes on the resulting prices of goods. Budget literacy is the most complex component of financial literacy. It includes the necessary competences for individual/household budgeting, the art of setting short-, medium- and long-term goals and ways to achieve them. It deals with the decision-making process on investments or expenditures. One should be able to cope with unexpected situations (illness, loss of work), prepare for future larger expenses (house reconstruction, car purchase). The individual must be able to understand the obligations that arise from the individual financial instruments (loans, leasing, interest rates). It is therefore assumed that a person can compare individual products, evaluate them in terms of risk and financial cost, with an emphasis on their current and expected financial situation.

Many governmental, non-profit and private organizations, some even internationally, try to measure financial literacy (OECD 2011, Česká spořitelna, 2019). They use both standardized questionnaires and their methods of interviews and case studies. Objectives and methods of testing vary, but most of them are testing multiple competencies at the same time (OECD, 2013). One of the most widely used and well-known international testing paths is the Program for International Student Assessment (Pisa) conducted by an Organization for Economic Cooperation (OECD), involving 18 countries. This testing of the quality and effectiveness of school systems tests different areas of education and compares the results of pupils around the age of 15 in the countries involved. In the last two waves of testing (2012, 2015 - results published in 2014, 2017), money and financial literacy were also included in the questionnaire survey. The advantage of this type of study is the international comparability of results and a long time series that allows monitoring trends.

However, for our specific research, which was aimed rather at verifying the level of financial literacy outcomes in the ninth grade of elementary schools in relation to Czech financial literacy standards, it was not possible to simply adopt this standardized OECD questionnaire. Although the Czech Ministry of Finance was also influenced by OECD standards when developing its norms, the final version of Czech standards is not only Czech translations of already used foreign rules. When developing Czech financial literacy standards, experiences from Slovak colleagues, specifics of Czech education, educational goals of the Ministry of Education and Finance, higher maturity of current primary school pupils, new trends in financial markets, or previous experience in teaching financial literacy at Czech schools were taken into account. As a result, updated financial literacy standards for primary and secondary schools were introduced by the Ministry of Finance in 2017.

The Czech Financial Literacy Standards (Ministry of Finance, 2019) are divided into four categories: shopping and paying, household management, household budget surplus, household budget deficit. Each of these categories has several other subcategories that describe the knowledge and skills that pupils of a certain age should have. Since these standards were the main starting point for the development of the questionnaire, we will now introduce the particular topics in more detail, focusing on the competencies of the pupils of the primary schools concerned by this survey.

The area of shopping and payment deals with the ability to work with cash and cashless money. The pupil should be able to compare the offered goods in terms of price, to compare also different product packages. He can buy goods, check the refund and in case of later problems is able to make a complaint. He knows who he can turn to in case of unfair commercial practices, at least he generally understands the functioning of supply/demand in markets and pricing. He is not alien to the world of cashless payments; he understands the advantages and disadvantages of this method of payment, can control the number of his funds in the current account, knows the difference between credit and debit card.

The Household Economy Section deals with budgeting and the use of various financial instruments. The pupil should be able to evaluate his financial possibilities and wishes, expectations (purchase of a bike versus the amount of pocket money), he should be able to find out about his income and expenditures. Students should be able to draw up a balanced budget and understand the surplus/deficit budget. He can distinguish the necessary household expenses, regular and one-time incomes and expenses. He can calculate simple interests and at the same time, understands compound interest. He defines interest, understands its impact on the price of products and is aware of the existence of other fees associated with the use of the service. They can compare selected financial market products concerning their profitability, risks, time horizon and liquidity. He can plan short, medium, and long-term goals can decide how to achieve them and eliminate threats.

The household budget surplus is a less broad category that deals with the principles of savings, the reasons why a person should make savings, how to save money. The pupil can distinguish between consumption, savings and investments is aware of the existence of insurance of some products and knows the underlying mechanisms of its functioning.

The household budget deficit is the last defined category of standards. It deals with the understanding of the origin of debt, obligations related to their repayment. The student should understand the positives and risks of loans, understand the loans for investment/consumption, should be able to differentiate whether the loan is appropriate for the case and what are the risks of default. Students should be able to propose solutions to deficit budgets, be able to compare various types of loans in terms of their cost, credit conditions, repayment horizon. He understands what a debt is, how to avoid it ideally and, if it comes, how to deal with the situation.

Individual knowledge and skills for certain levels of school facilities are determined only by a general description, it depends on the specific educational plans of each school, how detailed the standards will be implemented in the teaching of pupils, they can integrate themes into existing curricula, a new subject will be created or school will use one-off training. This question had to be considered when compiling our questionnaire.

Methodology

This research is part of a larger unit that focuses on discovering the level of financial literacy at the lower secondary schools in the Czech Republic (9th grade) in regional capitals. The aim of the whole project is to test the output level of financial literacy at secondary schools and to find out the predictors of its level (age, gender, employment of parents, number of siblings, etc.). The second-largest city in the Czech Republic - Brno - has been selected for the pilot study of this article. Where all primary schools established by the local government were asked to participate, private schools were excluded. The orientation of schools to language, mathematics, informatics or sport was not a selection criterion, as the percentage of these schools in the whole sample is negligible. Of the more than 40 addressed schools, eight elementary schools showed their willingness to participate, which is a total of 40 classes, i.e. 824 pupils between 11-15 years of age. Some schools were interested in testing all classes; some preferred only ninth classes. Concerning the fact that the original intention was to test all the second-grade classes in the project, irrespective of the age of the pupils, the aim was to maximize the number of schools involved. However, for different reasons, headmasters did not want to test mainly younger pupils who did not have sufficient mathematical knowledge to calculate certain types of tasks. The questionnaire was structured identically for all classes, as the Ministry of Finance does not specify when the pupil should have the knowledge of financial literacy.

The questionnaire was compiled on the basis of financial literacy standards issued by the Ministry of the Finance and methodological guidelines for teachers, which were issued as educational material to schools, which should help with implement the knowledge into teaching through various types of tasks. Subsequently, a pilot questionnaire testing was carried out at pupils from the given age range (11-15) to verify the clarity of the questions, the number of questions in the questionnaire, the understanding of the terminology used, etc. Subsequently, the paper questionnaire was distributed to the participating schools. It was necessary to explain to the headmasters and individual teachers how to hand over the questionnaire to pupils, what aids are not allowed to be used, and what time limit is reserved for questioning. The completed questionnaires were then physically collected by the research team again.

The questionnaire consists of three parts - test, computing and characteristics of the respondent. Test part was created from various questions with multiple choice answers (1 point for each correct answer), students always knew if one or more answers are correct. Specific questions and tasks related to the presented standards of financial literacy, mainly based on methodological handbooks for teachers, so that tasks typically correspond to problems that pupils may encounter in their regular teaching classes.

The next, a computational section with open questions followed, the number of points for each item was dependent on its difficulty. Some questions have been subdivided into several sub-questions in order to verify that students understand at least the basic principles of compound interests but are unable to calculate it or are unable to define what it is.

Finally, the characteristics of individual pupils were examined: sex, interests, favourite subjects, number of siblings, the employment of parents, etc.

As the obtained data file was quite extensive, the results were divided into two parts. This article deals mainly with the methodology of compiling the questionnaire and the way of conducting the research. It seeks to answer the following research question.

RQ1: What is the level of financial literacy at lower secondary schools in the Czech Republic?

In a related article published at the international scientific conference, European Financial Systems (2019), attention was paid to the influence of selected characteristics on the level of financial literacy. Related research questions addressing the specific features of pupils were as follows:

1. How does the profession of pupil's parents influence the financial literacy level of the pupil?
2. Does gender play an important role when it comes to the financial literacy level of young pupils?
3. Does the presence of siblings have an influence on the pupils' financial literacy level?
4. Is there a relationship between financial literacy and pupils' preferences when it comes to favourite subjects?

However, these four research questions are not addressed in this article.

Results and discussion

In this case, basic statistical methods of descriptive statistics - maximum/minimum value, average, mean value were used for processing the results of the questionnaire survey. First for overall query results and then separately for computing part.

Table 1 Descriptive statistics – overall points

Descriptive statistics – overall points	
max. value	20
average value	9
min. value	6
middle value	8

Source: own computing

A total of 20 points could be earned. According to the results in table 1, we can see that although we managed to achieve even 100% success, the average score is only 9 points, which is not even half success. The mean value is even lower.

If we focus only on the computational part, the score is even more alarming. The maximum number of points earned was eight. On average, the students gained two points, which was also a mean value. But there was also zero scores.

Table 2 Descriptive statistics – computing part

Descriptive statistics - computing	
max. value	7
average value	2
min. value	0
middle value	2

Source: own computing

According to the scored points, the level of financial literacy does not seem to be very high, as the average score for the total point gains or the specific computing part did not reach even 50% of the points. However, it is necessary to take into account the fact that the computing part was placed after the test part, so the pupils could be in the time press when filling in. The difficulty with comparing between schools is also the fact that each primary school draws up its educational plans, so the ignorance of pupils may be due to the simple fact that they have not yet managed to discuss the substance (for example, counting with percentages). The lower score could also be because the students did not want to think about the answer because the task was too long, so they did not even try to answer (it is mainly computing part). We also faced this problem when filling in the characteristics of pupils, some of whom filled in nonsense.

Based on the results, computational questions, which proved too complicated in terms of terminology and time demands, were excluded for future research. About the length of the lesson, which is 45 minutes, it is necessary to adjust the time necessary for completing the questionnaire and getting to know the instructions for this interval. Furthermore, research will only focus on the output level of financial literacy in 9th class, as the different framework educational programs at individual schools do not allow comparing the results of each class between different schools. The result is then distorted due to a diverse knowledge base. Although paper testing was more convenient for schools, in terms of data processing, transcription and evaluation as well as greater dispersion of target subjects, an online questionnaire will be used for the next stages of testing. Although this is likely to result in lower interest from primary schools, it is not in the time or financial capacity of the research team to physically double visit all schools. In the next phase of the research all primary schools, established by local self-government, from regional capitals of the Czech Republic will be addressed, except for the already surveyed Brno. Private schools will again be excluded. Neither focus nor other specifics of schools will play a role in the selection.

Conclusion

This article dealt with the method of testing financial literacy at the lower secondary schools in the Czech Republic and finding out the level of financial literacy among the pupils involved. It turned out that the average score of testing is 9 out of 20, which is not even a 50% point gain. With a select view of the computing part, the average point gain is even lower, reaching 2 points out of eight, which is only 25%. However, different school curricula, time constraints per hour (45 minutes), and pupils' unwillingness to respond with anonymous testing might have influenced the results. Based on this pilot testing, some questions were

modified for further research, which will take place in regional capitals of the Czech Republic. Also, the classes represented were reduced to 9th classes, which will allow us to test only the pupils' output knowledge, which should be consistent across schools with different educational plans.

This research had its limitations that could influence the presented results. The number of schools involved was not too high. Schools are currently receiving many offers for various surveys from governmental, non-profit and private entities, so their willingness to participate in any examination is not too large. A problem for comparison was also the decision of schools to involve only some classes of pupils in testing, which further reduced the research sample. As this was a questionnaire made up of members of the project's scientific team, it is possible that some of the questions were too focused on a specific area of interest or some other areas were omitted. School comparisons from one city may be distorted because of the similarity of educational plans in a geographically close region. Therefore, in the next phase of the research, we will try to eliminate the restrictions at least partially.

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