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WHERE DOES FINANCIAL LITERACY STAND TODAY?

1

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e-mail: gp@apkf.eu
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TOPICAL ISSUES OF IMPROVING FINANCIAL CULTURE IN HUNGARY

Levente Kovács– Ernő Nagy[1]

ABSTRACT

The topicality of this study is supported by changes in the environment because of the new type of Corona virus pandemic and this years's programme of the Pan-European Money Week. The programme series Money Week has become public in Hungary since PÉNZ7 was launched in 2015 as it has reached most schools and students. The exceptional success of the banking sector over the past seven years as a result of the collaboration of government agencies and NGOs has proved that a successful development and education of financial culture is possible on a community basis at European level. The new environment necessitates an upgrade of financial education, new focus points must be identified including learning about the technological background of finance as key in supporting the effectiveness of the financial digitisation process.

JEL codes: A20, D10, G53

Keywords: financial culture, financial education, financial literacy, household savings, Hungary

1 INTRODUCTION

Studying financial culture has grown into an essential area of economics over the past years (OECD, 2020; *Kovács–Terták*, 2019). This has been partially the result of realising a disruptive controversy, namely the belief that actors in financial market models are in possession of all information, they act perfectly consciously, and their behaviour leads up to approximately perfect market operations. However, empirical studies of financial culture have pointed out that no perfectly informed consumer exists. On the contrary, improving financial culture contributes to consumers' and families' having a better, faster, and more complete

1 *Levente Kovács*, Secretary General of the Hungarian Banking Association, Professor of the University of Miskolc. E-mail: kovacs.levente@bankszovetseg.hu.
Ernő Nagy, Director Corporate Governance of the Fundamenta-Lakáskassza Zrt, PhD Student of the University of Miskolc. E-mail: nagy.erno@fundamenta.hu.

recognition of their financial situation and material options, including potential future expenses. It supports more efficient market operations because of more conscious behaviour by its players. Both the standard of financial culture and the presence and quality of financial education have a joint impact on individuals' better decisions leading to higher living standards and more efficient running of community economy. Standard and Poor's analised the financial culture for the whole world, based on 150 factors (Kovács–*Pásztor*, 2022). The Hungarian government adopted a comprehensive national strategy in 2017 aimed at developing the financial awareness of the population in an altered financial and regulatory environment following the 2007/2009 financial and real economy crisis but before the 2020/2021 new type Corona virus pandemic (Hungarian Government 2017). The strategy covered seven years from 2017 to 2023, it was based on previous achievements and programmes, and identified the following strategic goals:

1. Create, strengthen, and standardise the framework of true financial education as part of public education.
2. Strengthen the bases of conscious financial awareness and households' stress resilience.
3. Generate financial awareness for making prudent financial decisions, set up and spread knowledge of institutions/infrastructure supporting financially aware consumer behaviour.
4. Strengthen the idea of self-care among the population.
5. Increase the rate of access to finance products, basic financial services and financial inclusion.
6. Promote the use of modern payment methods of cash replacement.
7. Support prudent borrowing.

As seen in the strategic goals, strengthening the part played by public education is key. The government strategy was designed based on the earlier International Network on Financial Education (INFE) of the OECD considering the best international practices as well as Hungarian needs (Hungarian Government 2017:5). The analysis of measurable consequences of the changes caused by the new type of Corona virus pandemic, which have turned our everyday life upside down, provides good opportunity to recall the developments of the past years and to identify our current tasks accordingly. In Hungary the number of the participants of financial literacy courses increased between 2016 and 2020 from 461,681 to 1,310,352 (*Németh*, 2022). According to the findings of the latest survey by OECD/INFE, it is unfortunately still true that 'the standard of financial culture is low in the countries studied' (OECD, 2020:7). In the presentation of the general results of the OECD study, our country was ranked fourteen out of twenty-six countries surveyed (OECD, 2020:16). We selected Austria in our comparison of countries due to its proximity and our common historical experience and the Czech Republic because of its close level of development and similar history/culture after the fall of Communism. The following table contains key indicators *(Table 1):*

Table 1
Scores given to financial literacy (normalised to 100)

Country	Scores given to financial literacy	Financial knowledge	Financial behaviour	Financial attitude
Austria	68.5	76.0	66.3	61.9
Czech Republic	62.0	64.9	59.1	62.9
Hungary	58.8	65.5	49.9	65.1
OECD average	62.0	65.8	59.2	61.6

Source: Own design based on Table 2 of OECD 2020 (OECD 2020:17).

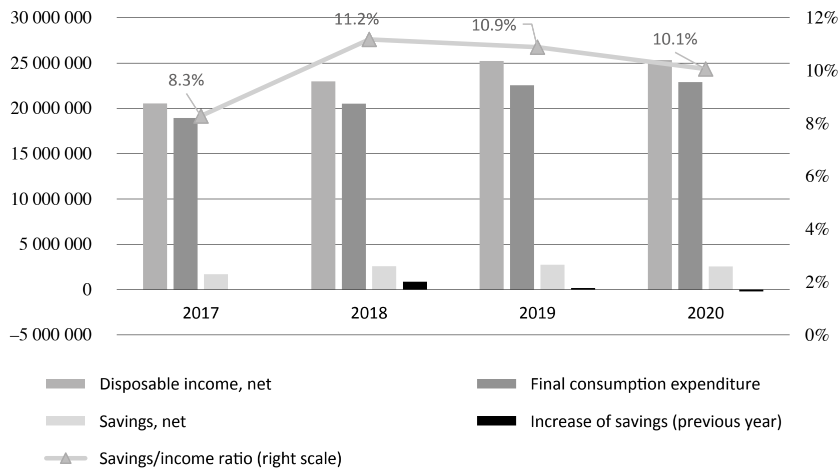
In OECD methodology the three components of financial culture are financial knowledge, behaviour and attitude. As you can see, although our score in the category of financial knowledge was much lower than that of, for instance, Austria, we were still close to the OECD average. Hungary's results are similarly good for attitudes, while actual financial behaviour is quite low in contrast. In the category of financial behaviour our score (49.9) was much lower than the OECD average (59.2), or of the Czech Republic (59.1) and Austria (66.3). We are lagging behind the OECD average by almost 10-percentage point. Italy was the only other country with a score worse than that (46.3), while neighbouring Romania reached 55.7. We are going to focus on four areas deemed significant from the complex impact mechanism of financial culture using them to analyse the part played by and importance of financial education.

2 HIGH STANDARDS OF FINANCIAL CULTURE HAVE A POSITIVE IMPACT ON FINANCIAL STABILITY

We are convinced that the development of financial culture is not only in the interest of those involved (government, banks, consumers) but the resilience of the national economy can also significantly improve if its actors understand how money works in everyday life (*Csaba*, 2019; Kovács–*Sütő*, 2020). The development of long-term resilience both at the level of the family and the national economy must be in the focus of developing households' skills in sustainable economics.

The economic boom of the past years has left its mark on households' financial assets as published by the Central Statistical Office (KSH) (2021b). It is clear that households' net financial assets significantly increased by 42.8 percent from 2016 to 2020, which is a favourable phenomenon. On the other hand, the stock of cash increased at an even higher rate, which is an unfavourable process. All that, of course, can be useful to avoid short term household shocks. However, the increase of cash balances is unambiguously harmful both because of the relevant cost increase at society level and from the perspective of achieving long term household and national economy goals (*Figure 1*):

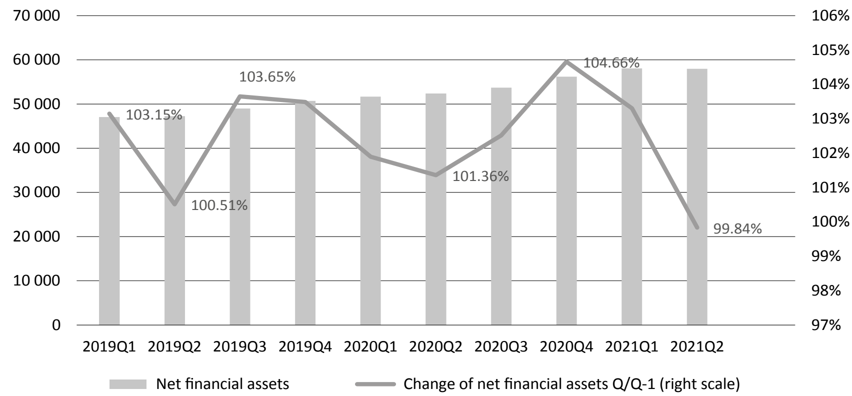
Figure 1
Income and capital accounts of the household sector (current value, HUF million)



Source: Own design based on Table 21.1.1.32 by the Central Statistical Office (KSH)

The above figure demonstrates how the new type of Corona virus pandemic had statistically measurable impact on household savings (KSH, 2021b). The trends indicate that the growth of household savings, which was fast from 2017 to 2018, halted already in 2019. It could have been caused by a higher consumption level induced by ongoing economic growth. The total income of households did not decline by the effect of the first and second waves of the pandemic (partly due to income support measures introduced). Although households' savings slightly declined in 2020, their ratio to income was still happily high and still exceeded 2017 figures. So, households must have responded to restrictions with savings, which is a clear sign of prudence and pursuit of security.

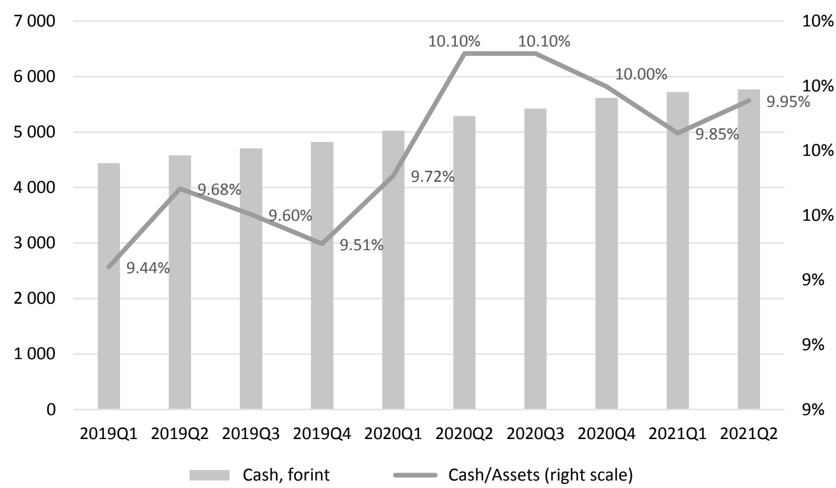
Figure 2
Households' net financial assets (HUF billion)



Source: Own design based on figures by the National Bank of Hungary (MNB) (MNB, 2021b)

A detailed analysis of households' quarterly financial balances provides an in-depth view. You can see the financial assets of households continued to increase during the different waves of the new type of Corona virus pandemic. The only exception was Q2 of 2021, when a moderate decline can be seen compared to the previous quarter, while it still surpassed Q4 2020.

Figure 3
Cash balances of households, and its ratio of net financial assets (HUF billion)



Source: Own design based on figures by the National Bank of Hungary (MNB) (MNB, 2021b)

Nevertheless, while net financial assets increased and stabilised, the ratio of cash balance to household assets significantly increased during the first wave of the pandemic. First, the indicator started to decline then it increased again. One of the reasons for the behaviour of households' savings may be that the role of cash as security reserve strengthened, and the ratio of cash also increased because of the black economy. However, keeping cash contradicts to the increase of electronic payments (merchant terminals) and the effect of e-commerce, which was spreading fast. You can say in general that the prudent behaviour of households triggered by the pandemic took an unfavourable turn in the direction of increasing cash stocks.

The evolution of incomes, savings, investments, and the decisive features of the currently dominant economic cycle must be monitored from the perspective of the stability of the national economy. It is obvious their changes are partly the result of external causes (such as the decline caused by the pandemic) on the one hand, and on the other hand can be the outcome of internal economic policy decisions (for instance, the uncontrolled introduction of Swiss Franc- or Euro-based lending earlier). Planned adaptation to macroeconomic changes is required by financial customers, while adaptation requires the presence of retail products of different nature, maturity, and yield.

At the end of their schooling in public education every student should have acquired knowledge of finance products and their key features. Being aware of the wisdom of "seven fat years and seven lean years" is important even for youth with little experience. It is obvious that, as a rule, economic cycles have an impact on people's possibilities. Because of this, it is necessary that young adults should be aware of the characteristic features of long-term individual, or family enterprise, or income cycles. Households/families rather than individuals run business operations. However, the development cycles of families are general in nature. After completing their education, young people leave their parents, become independent, choose partners, have children, bring up their children, then the children leave the nest, and they reach old age – in a cycle going on forever.

This so termed 'life-cycle approach' and the accompanying planning must be part of the education of youth. On the one hand, people's income first starts to increase in their life, then it stagnates and declines in the end (Kovács–Nagy, 2020). On the other hand, it is well known that housing is a primary issue, so obtaining some form of housing is a challenging task to be solved, while bringing up children is a major 'investment' next to property in the life of every family. Its management requires a high degree of awareness and foresight. Even school-age youth can recognise the necessity of saving up for retirement. The example of economies that are more developed than ours proves that a traditional state pension system is less and less able to maintain well-being for the elderly, so people should have foresight, for which you need better financial knowledge.

In this respect, the ability to foresee and manage economic cycles is paramount. The fluctuations of economic activities are a natural feature of modern economies, but the importance of awareness of them is not obvious. This can be a point where knowledge can turn into behaviour. A teenager's ability to plan their life means the appropriate planning and thinking over their income and expenditure expected in the next 30 to 50 years. Living from month to month is, unfortunately, typical. Many people spend everything right after receiving their salaries/ benefits, which does not contribute to a prudent handling of money by preparing a budget.

The long-term effect of interests is an interesting area to consider for long term prudent behaviour. You may have some knowledge of how interests operate, as it is basic maths, but you should be aware that the exponential effect of compound interest is extremely sensitive to changes in maturity and interest rates in the dimension of 15 to 30 to 40 years. There are good examples for that, since the so-called consumer-friendly loans launched on the initiative of MNB call attention to the importance of fixed interest rates, while the loan moratorium prolonged for the third time illustrates the impact of the prolonging effect of unpaid interests on maturity. Savings for housing or retirement purposes, or other self-care products should be started 1-2 years earlier, as the impact of prolonged maturity can be perceived in the amount saved.

The improvement of financial culture is in the joint interest of all. Households of high financial culture are more likely to avoid detrimental financial decisions. If the financial culture of a society is higher, available domestic savings are higher too. Thus, the higher financial culture of the population contributes to the stability of the financial system as well. The development of financial culture is a basic interest of financial mediators, as it contributes to consciously increasing the savings of the retail sector, to prudent borrowing leading to the improved creditworthiness of individual consumers and, in general, to lower the risk environment for the whole banking system (*Mihályi*, 1997; *Halmai*, 2010; *Poletaeva* et al., 2019). The development of financial culture is also in the interest of the state. If financial culture is high, society's or certain social strata's need for redistribution and stabilisation by the state will not increase much even in critical times/situations, which has a beneficial effect on all economic actors, on recovery and on the competitiveness of the country.

3 PROMOTING HOUSEHOLDS' SOUND MONETARY MANAGEMENT IS A TOPICAL ISSUE

Eliminating financial illiteracy is a huge task. Teaching basic finances can contribute to more sound monetary management by young people. Increasing financial knowledge reshapes individuals' and households' economic management.

With respect to resilience, one should note that there is a close link between poverty and financial illiteracy. Reducing the financial skills gap is key if you want to reduce the backlog of backward social groups, which can mitigate the wealth gap. On the other hand, it can also increase access to developed financial markets.

Monitoring your own finances received a much lower score in this country (46.6) than the OECD average (64.5), while the scores of the Czech Republic (64.1) and Austria (83.2!) were much higher than ours (OECD, 2020:37). This indicates we deal with our finances less than what would be necessary. The situation may improve thanks to applications (apps for short) that are already available from most banks allowing us to monitor and understand our daily spendings. Clearly, this is not the lack of objective knowledge, information to be obtained at high cost, but a behavioural deficiency. One should underline in the OECD survey that cushion if income is lost is much lower than in the neighbouring countries (OECD, 2020:43).

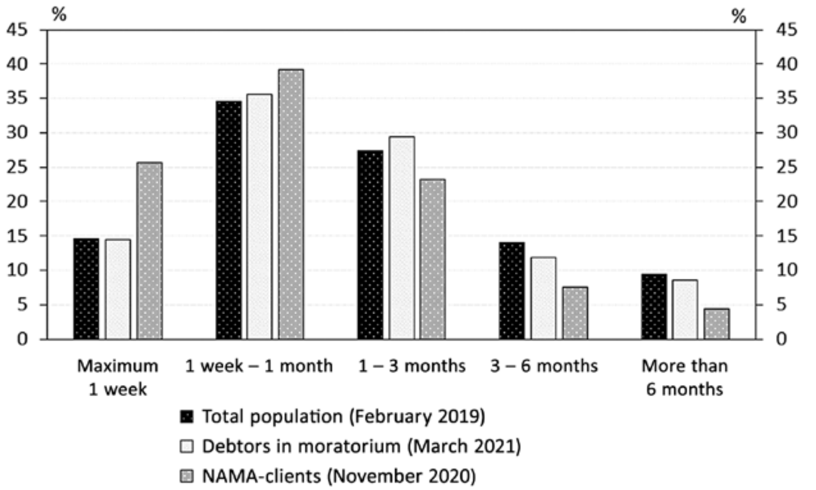
Table 2
Measure of cushion if income is lost (%)

Country	About one week	About one month	About three months	Six months or longer	Do not know
Austria	12.2	22.9	21.4	33.8	9.7
Czech Republic	16.0	22.2	23.0	26.8	12.0
Hungary	34.8	27.8	15.5	11.5	10.4
OECD average	20.0	24.6	18.0	23.2	14.2

Source: Own design based on OECD figures (OECD, 2020:43)

If you add up the scores reaching at least three months, you will see that only about a quarter (27 percent) of the respondents have sufficient financial security for three months, while about half of the households could survive without relying on external sources for up to three months at most. This reflects too high volatility at the level of households, which is not only the result of (the lack of) financial knowledge but also of attitude and behaviour. The MNB report, unfortunately, presents a similar picture: 60% of the total population could maintain its current standard of living from their savings for more than a week but less than three months if their income was lost (MNB, 2021a:F. 43).

Figure 4
Household savings



Note: If all earners in the household lost their jobs, how long would they be able to maintain their current standard of living? Source: EU SILC, MNB National Asset Management Agency Survey 2020 November, MNB Moratorium Survey 2021 March.
Source: MNB (2021a).

Based on the review of further indicators, the ratio of people with long term financial goals is quite low in this country (35.2%), while the OECD and Austrian averages are much higher at 44.9% and 53.1%, respectively. On the other hand, the scores in the Czech Republic are even lower than ours (32.8%). (OECD, 2020:46-47). The importance of life cycle-based planning has already been mentioned. The evaluation of Hungary by the OECD suggests important tasks for Hungarian decision makers. The ratio of people actively saving is also low in our country (51.3%), while the OECD average is 68.9%. Austria (87.8%) and the Czech Republic (88.8%) indicate quite different standards and categories. The above figures are certainly related to the division of incomes within the economically active population. In total, savings by the Hungarian population have significantly increased as seen in *Figure 2*, which indicates wealth has been accumulated in the higher income categories, i.e., wealth and income concentration has further increased. It should be noted the respondents of the Czech Republic do save even without having long term goals. That is the reason why financial security is achieved for much longer as seen in *Table 3* (in the Czech Republic and Austria about half of the population marked 3-6 months of financial protection even their income was lost).

Using a statistical analysis of the types of financial characters over a 3-thousand-strong sample in Hungary, Németh and co-workers have proved, 'The dimension "order creates value" and the dimension "planners" clearly involve positive characteristics. Based on them, people will probably develop positive or good financial character. Planning, a long-term attitude, the evaluation of money through the work done to achieve it are all positive features from the perspective of financial characters.' (Németh et al., 2016:169–170):

A clearly positive feature of money is you can use it easily to accumulate savings. However, you can find the mentality of 'a bird in hand is worth two in the bush' in this country, which indicates the presence of quite high discount rates in people's attitudes. In other words, many spend all they have (or even more) immediately and fail to consider future expenses. Promoting awareness of future needs could help avoid short term financial troubles. It is obvious that unplanned short-term expenses are typically settled from the most expensive foreign sources, which may lead to fast indebtedness, which is difficult to control.

Adjusting the part played by cash is part of a more conscious monetary management, as cash in the modern economy is not a reasonable means of savings or accumulation, what is more, it is needed less and less in financial transactions. Prudent investments of the cash stock in circulation offer lucrative opportunities for the market and the state. The reliability of electronic forms of payment and the possibilities offered by the Immediate Payment System launched in 2020 (MNB, 2020) must be widely communicated to increase confidence in the use of up-to-date electronic payment forms. The ratio of electronic commerce has grown because of the new type of Corona virus pandemic, which underlines the need to reduce households' cash stocks. In the OECD survey financial well-being is based on the following dimensions: financial control, financial protection if income is lost and the presence of financial objectives. We have a long way to go in those areas yet.

4 FINANCIAL EDUCATION AT SCHOOLS MUST BE IMPROVED

Many children believe money grows on trees, and their parents have an unlimited amount of it. They do not know, so they fail to recognise the limitations of their families' budgets. An astonishing finding of the OECD survey mentioned was that 'the financial knowledge and financial attitude scores of young people (18-29 age group) were significantly and consistently lower compared to other age groups' (OECD, 2020:64). That is the reason why we propose that such skills or a major part of them should be made available to students in public education, or the ability for openness and searching for viable solutions should be created at least. Lacking the relevant knowledge, teachers often neglect the development of financial literacy in education. We believe we should not only focus on knowledge transfer in its narrowest sense, but actual behaviour should be developed, and traditional responses transformed as well. In fact, OECD relied on capturing the following indicators when assessing financial knowledge:

i) time value of money,

ii) interest paid on loans,

iii) simple interest calculation,

iv) calculation of simple and compound interest,

v) connections of risk and return,

vi) definition of inflation, and

vii) diversification of risk (OECD, 2020:20).

Hungarian results were around the OECD average with minor differences (deviation of 1.5 to 3.5 on a 100-grade scale), which can be regarded to be good. However, there was one outstanding difference. The OECD average for understanding the calculation of simple and compound interest was 28.8, while it was 18.3 for Hungary, 21.0 in the Czech Republic and 49.0 (!) in Austria. It is such a disruptive deficiency which indicates the inability to understand long term planning as mentioned above. Long term objectives are in contrast to short term consumption considerations, while it is not realised that long term goals can only be achieved with the appropriate long-term attitude. Unfortunately, we all know of cases when the value of vehicles, electronical devices and welfare spending significantly surpasses the quality of housing of a given person or family.

'Younger people are facing a much more complicated financial situation than their parents had' as *Financial Times* quoted *Annamaria Lusardi*. 'I was struck by how much the young people were interested in crypto. During the pandemic is a time when people will have to put more savings aside, and at the same time we are worried that people will chase higher returns without realising they are taking on a lot of risk.' (*FT*, 2021a) There is much hype about cryptocurrencies, which is in direct contrast to hoarding cash, which is typical, as described above. Financial education should include the analysis of the declining role of cash.

The history, and real form of financial education in the world shows diversion (Terták, 2022). Financial literacy can be taught in several ways. A known way is to incorporate the elements of financial education into the curricula of classical subjects using everyday examples. For instance, the calculation of compound interest in maths can be an occasion to speak about long-term savings and loan products. The axes of exponential curves will immediately come to life and become tangible examples. Teaching about inflation, economic crises involving financial risks can be linked to events in the history of economics. The discussion of bankruptcy and personal insolvency can be the topic of ethics classes. In IT classes you can describe the operation of electronic payments (e.g., POS terminals, cards, mobile applications) including the formidable financial infrastructure supporting them.

In another approach, direct financial, economic education can be a specific subject in the curriculum. If you talk to high school teachers, the question will soon arise whether the reproduction of protozoons, trigonometric functions, the correct spelling of foreign names, mythological stories, poetic metres, or the criteria of opening your bank account will be more important in the life of a high school student today. The question is, of course, not raised to argue against sciences or the humanities, while the students' curiosity and openness towards practical problems and perspectives including finances is obvious. Since teaching everyday finances does not have a tradition in this country, the operation of PÉNZ7 must be maintained as it is based on collaboration and voluntary contributions but looking into the issue of expanding/transforming public education along those lines is also necessary.

Lusardi (*FT*, 2021a) also launched a school educational project in Italy, where business ideas were discussed, and budgets developed with the students. Older students produced vegetables for the local market to understand how a business enterprise works. Others worked in pairs explaining the characteristic features and operation of finance products to and testing each other. As a result, Lusardi is convinced that teaching financial literacy to young people is of critical importance. 'Not all parents will be talking to their kids about these topics. And many parents are not financially literate themselves' (*FT*, 2021a).

One should note and emphasise that smoothly operating national economies do not only need educated engineers, doctors, teachers, and other traders, but also well-informed consumers of finance products. This is particularly true today when, because of the new type of Corona virus pandemic, the accelerated digitisation of financial institutions and the economy and the penetration of Fintech and Bigtech companies into the finance sector facilitate financial operations (here, we want to emphasise again that this contrasts with the growth of cash stocks). Financially more experienced adults or IT literate youth alike find it difficult to understand what is happening to their money. Complex finance products and modern applications hide actual contents and risks.

Teaching financial literacy is something that will be much more useful to students in real life than writing their homework or memorizing facts and figures they are not interested in. Understanding finances is and will be necessary all through their lives. You should target them with such information at school age because different age groups of the society are much more difficult to reach after they leave school.

So, our argument is that understanding the context/connections of finance products as well as their conscious everyday use rather than their detailed knowledge can help develop young people's prudent financial behaviour. According to the OECD survey, knowledge in this country is relatively strong but behaviour in everyday practice should be improved. All that is of key importance as financial digitisation processes can be hindered or slowed down if users do not understand, at least to a certain extent, the supporting technology and its operation. Possessing minimal, marginal knowledge, they will be sceptical and wary. They will be unwilling to make use of the achievements of digitisation.

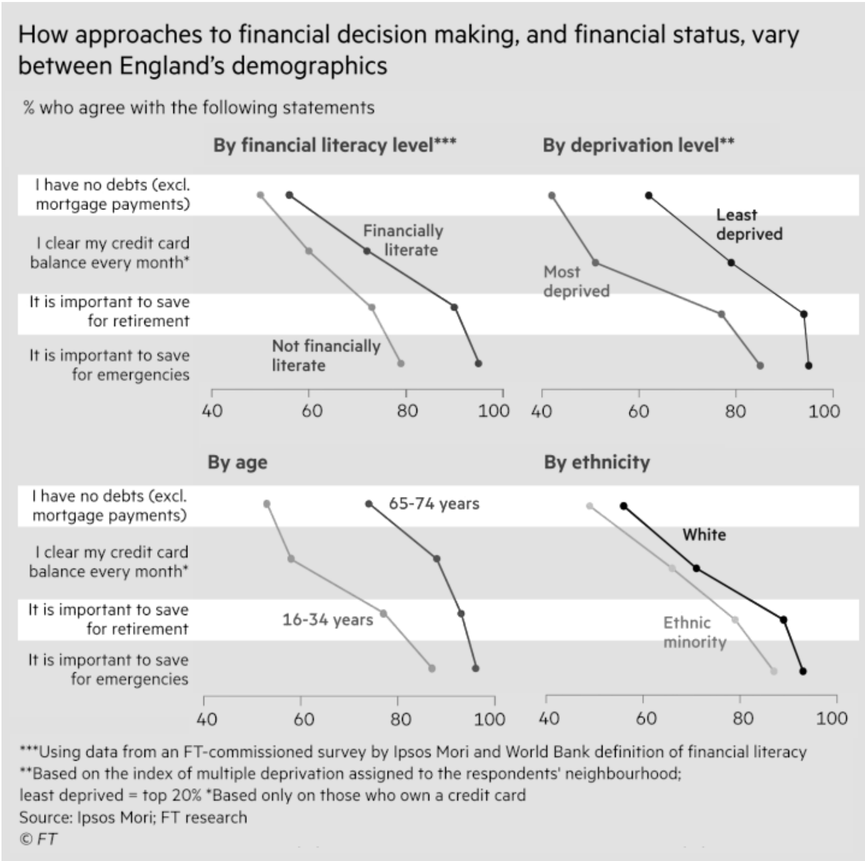
5 SUMMARY AND CONCLUSIONS: FINANCIAL LITERACY IS A PREREQUISITE OF FINANCIAL FREEDOM

You can have "financial freedom" if you are aware of what exactly you want to achieve in your life with respect to finances, you know the means and tools available and you act consciously to reach your goals applying those tools. Financial literacy is not a goal in itself. On the contrary, it is the means to reach your desires. Having basic financial skills makes you assertive when you must solve money-related problems.

One can easily point out the social groups that are particularly vulnerable regarding financial awareness: the volatility of youth has already been discussed (OECD 2021), but women's vulnerability can also be identified, according to an OECD study (OECD 2020). 'On average across the entire sample, as well as the OECD member countries, men appear to have statistically greater financial knowledge and financial well-being scores. Respondents who used digital devices or services have consistently and significantly higher financial literacy, knowledge, behaviour and well-being scores.' (OECD, 2020: 57–58). Further studies are needed on the difference by gender made in the report, since other studies, interestingly, have found no difference between men and women. A survey by the *Financial Times* and Ipsos Mori (*FT*, 2021b) has led to similar findings: financial awareness, age and deprivation have significantly influenced the answers given to four questions linked to financial behaviour. Lower educated people, disadvantaged women and younger people had lower scores regarding the following statements:

1. 'I have no debts (excl. mortgage payments)
2. I clear my credit card balance every month.
3. It is important to save for retirement.
4. It is important to save for emergencies.'

Figure 5
Difference of financial behaviour in British society



Source: Financial Times (2021b)

Family patterns and watching parents', grandparents', and relatives' behaviour is essential. We believe it can provide young ones with a solid foundation to shape their own awareness. In a large family there are different patterns to observe in the context of learning, the resulting income, how income is spent including consumption and savings for different purposes or accumulating own funds for consumption or for business investment. Another effective way of learning is if young people can recognise and interiorise the patterns of behaviour seen and experienced. Beside parents, schools can play an active part by presenting good and bad examples, and how they can be recognised. The related knowledge can also be transferred in that way.

The role of financial knowledge has already been underlined: not the details but the recognition of key connections is important. Important topics students will have to face in life include profit and risk, security, short and long-term products, the criteria, and consequences of borrowing. It can start with consciously spending or saving your pocket money or income from a summer job, which is then followed by the selection of a bank account, the complicated issue of digital payment forms (with typically long-term effects) right through to the dilemma of drawing your first student loan.

Other topics here include the considerations of setting up an enterprise (business plan, establishing a company, opening a business account, basics of taxation, etc.). Following the selection of your mate you will face the complex issue of obtaining your first flat including learning about the criteria of available government transfers (current forms include baby loans, and family housing allowance, etc.). For financial education the above-mentioned knowledge of mathematics, history or ethics can be useful as well as the experience of being a parent and having a family you gain later in life. You can rely on your experience about the income earned by student jobs while potential economic constraints of future higher education (independence from parents, renting a place, tuition fees, etc.) are acute issues. It should be noted that a minor part of the young generation can be reached in higher education only, so the middle of high school years is the best time when students are open and receptive, but already have sufficient experience to gain such knowledge.

Supporting financial education is also a means of creating equal opportunities. Many children do not inherit wealth or receive parental help in finances. On the other hand, high level financial education can be a lasting gift for all. A state creating equal opportunities will help its young ones to appear on the market as independent, mindful citizens behaving consciously and supporting their life goals, which also adds to the more efficient operation of the national economy. Young people who act consciously in their finances will make fewer mistakes; they will need less state aid. By making sound daily decisions they will trigger competition driving financial service providers to offer better services. It is a win-win situation for all including young people as consumers of financial products, financial service providers and the state.

Financial freedom also involves responsibility for young people. That freedom helps them achieve their dreams while the national economy can also benefit. Both market players and the state are responsible for supporting the generation of financial awareness as a prerequisite of financial freedom. Based on the above, we believe that teaching practical financial knowledge and financial behaviour should become part of high school education as an independent subject next to social and natural sciences.

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A GLOBAL VIEW ON FINANCIAL EDUCATION

Elemér Terták[1]

ABSTRACT

Financial education has increasingly gained momentum globally over the past two decades as the means of financial inclusion, i.e., to strengthen access to financial services, to increase equal opportunities, and to improve consumers' wellbeing and the stability of financial systems. Financial education was first perceived by big politics in the 1990s, while it has been receiving wide political support since the 2007-2008 global fiscal crisis. First, the study gives an overview of the history of financial education describing the main steps of its development. Then, it reviews its different forms, its effective implementation and the interactions of education and regulations. It presents the major debates related to financial education, such as the relationship of education and advisory activity, or education and regulations as well as the impact of financial education on personal autonomy.

JEL codes: A20, D14, D19, D83, D91, G41, G53, N20, N7

Keywords: financial education, financial literacy, effectiveness, and costs of financial education

1 INTRODUCTION

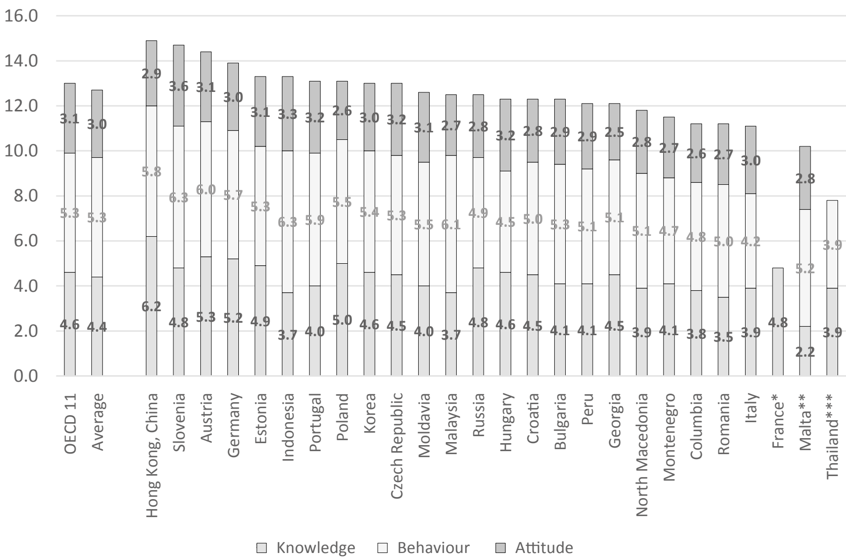
Financial education has increasingly gained momentum globally over the past two decades as the means of financial inclusion, i.e., to strengthen access to financial services, to increase equal opportunities, and to improve consumers' wellbeing and the stability of financial systems. Financial education was first perceived by big politics in the 1990s, while it has been receiving wide political support since the 2007-2008 global fiscal crisis.

Why such interest? In 2020 the Organisation of Economic Co-operation and Development (OECD) surveyed financial knowledge in twenty-six countries on three continents – Asia, Europe, and Latin America – including 12 OECD countries (OECD-INFE, 2020). Basic financial skills, behaviour and attitudes were surveyed using the uniform scoring methodology of OECD/INFE. Based on

1 *Elemér Tertták*, Board Member of the Hungarian Economic Association, Chairman of the Supervisory Board of K&H Bank Zrt. E-mail: elemertertak@gmail.com.

the answers processed, the standard of financial literacy was fairly low in all 26 countries. Individuals in the total sample reached 12.7 points on average, which is slightly less than 61% of the maximum score for financial literacy. The average of the OECD countries in the survey was only a little higher at 13.0 points (62% of the maximum). Hong Kong (China) reached the highest scores – 14.8 points or 71% of the maximum, while Italy fared the worst with 11.1 points or 53% of the maximum. The rest of the countries reached 12 to 14 points. (See *Figure 1*).

Figure 1
Financial literacy scores



Note: The content of the survey was narrower in the countries marked with* – as indicated on the Figure.
Source: OECD, 2020

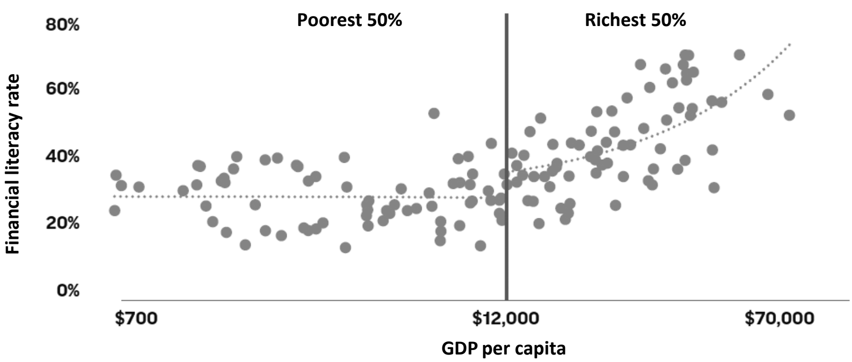
Categorising the responses by age groups, young people (aged 18-29) appear to have lower financial literacy and financial attitude scores and their financial behaviour was less prudent in all the countries. The category of the middle-aged (aged 30-59) reached much higher scores in financial culture and its components. Disregarding a few exceptions, the elderly (aged 60+) had a lower standard of financial knowledge, and their financial behaviour was also less prudent.

Respondents who used digital devices or services had consistently and significantly, higher financial literacy, knowledge, behaviour and well-being scores. This indicates that the intensive use of digital financial services suggests the presence of a higher standard of financial knowledge and a more prudent pattern of financial behaviour, which is implicit proof of the importance of financial education.

Finally, the survey showed that individuals with savings equal to at least three months of income reached, without exception, significantly higher scores in all areas than those who did not have such savings. This observation supports the importance of financial awareness financial education has a key part in development.

One remarkable lesson of the survey is that the standard of financial literacy is, above a threshold value, interrelated to the level of economic development. On the other hand, the standard of financial literacy proved to be lower than desirable in all countries without exception, so there is (would be) room for financial education everywhere (see *Figure 2*).

Figure 2
GDP Per Capita and Financial Literacy
High economic development tied to high financial literacy



Source: S&P Global FinLit Survey and Global Findex database

Notwithstanding the above, the social usefulness of financial education is a controversial issue. An article in *The Economist* (*The Economist*, 2008b) drew attention that there are views according to which the promotion of financial literacy does more harm than good. Representatives of such views, argue that there is no empirical proof to support that intensive financial education could prevent any poor financial decisions, financial panic, or that it could protect people from financial fraud. They advise, based on cost-benefit analysis, that stricter financial regulations and measures of consumer protection or free personal financial advisory services in some cases would provide more social benefits than mandatory teaching of financial knowledge or efforts in adult education.

Objective analysts in the subject generally acknowledge that research to date has indeed not demonstrated a strong causal link between financial education and higher financial literacy, as well as more appropriate financial behaviour and more favourable financial situation of households. However, in their opinion, this does not justify the redundancy of financial education, as the reason for the moderate effectiveness rather is that not only the knowledge acquired in the framework of education plays a role in making financial decisions, but also several individual factors, e.g. psychological cause, emotional motive, or impressions, as well as other factors that are difficult to quantify, such as social customs, norms and traditions. These factors are dealt with in a relatively young field of study, behavioural finance.

Despite the doubts, there is an intensive drive all over the world to expand financial education and to make it more effective. At present many governments and social organisations are engaged in developing financial education, as you can see on the OECD International Network for Financial Education (INFE) website.[2] A large group of experts have come to be convinced that most people will make better financial decisions, focus more on self-care and accumulate higher safety reserves in a crisis whether or not they have received proper financial education. In addition, the advocates of financial education underline previous studies on effectiveness have mostly focused on cost-benefit analyses but have failed to consider the findings of behavioural finance or to include the impact mechanism of social media knowingly influencing their followers, which act side by side with financial education. The latter is particularly interesting. According to the latest studies on the effectiveness of financial education, financial training by popular influencers on social media targeting certain groups has resulted in measurable improvement in the financial position of participating households. In addition, it has helped the transition to digital banking spreading fast since 2010 as it gained importance due to the corona virus outbreak in 2020.

Next, the paper provides an overview of the history of financial education, then it goes into detail to discuss certain issues of the effectiveness of financial education and its different international aspects. This thematic issue of *Economy and Finance* carries three more papers on the position of financial education in the European Union,[3] which together with this study, supplement each other to provide an insight into the topical tasks of this important issue and advise further to-dos.

2 https://www.oecd.org/financial/education/. The Hungarian government strategy {12} was elaborated in 2017 (NGM, 2017).

3 See articles in this special issue Kovács–Nagy (2022), Kovács–Pásztor (2022), Németh (2022).

2 THE HISTORY OF FINANCIAL EDUCATION

A review of the development of financial culture shows no changes had occurred in teaching financial knowledge from the Middle Ages to early in the 19th century.

Although different societies had known and used money even before AD, the history of teaching financial skills and financial inclusion is only slightly longer than two hundred years. That, naturally, does not mean people had had no knowledge about money earlier, but their knowledge had been limited to money as a means of trade, since most people had been using coins mostly for that purpose in everyday life.

By the beginning of the fifth century, the economy of Western Europe had slowed down in terms of economy and money characterised by limited volumes of barter and little money circulation. Although people did use coins in that period too, practically no money was circulated. Settlements among people usually took the form of payment in kind, even if coins were handed over as part of the settlement. The thinkers of the Middle Ages including Saint Thomas Aquinas had reservations about the process of products turning into traded goods. They were in particular opposed to the sale and purchase of money as a commodity, while the lending of money for usury (interest) was outright a crime.[4] Because of the subordinated role of money during feudalism, no area of economic life required mathematical skills since the primitive industry or trade associated with the primitive agriculture of the period could often do even without the four basic operations. In this era, some computational knowledge was needed only to perform the simplest basic measurement and calculation tasks; scales and spreadsheets were used as aids.[5]

The transition from a feudal farming society to industrial capitalism was characterised by migration from the countryside and the dissolution of large families of three to five generations living together and working in family cooperation. The industrial revolution, the fast growth of the number of city dwellers, the appearance of wageworkers and pauperisation, etc., had triggered changes in the use of money that required more than simple basic skills. For instance, the barter of goods and services was replaced by a settlement in money. Settling expenses because of daily needs got separated from weekly or monthly wages payments, so short-term loans appeared. Because of such changes, money started to have its

4 See for example Kovács Levente (2018): Gazdaságetika és jövőkép [Economic ethics and vision]. *Credo*, 24(1–2), 9–99.

5 Sain Márton (1986): Nincs királyi út! Matematikatörténet [There is no royal road! History of mathematics]. Budapest, Gondolat, 433–467.

own life as a means of payment. Time was also a crucial factor, so interest calculations became necessary. In addition, as the traditional multi-generation family structure dissolved, self-care had to be arranged both for illness and old age.

Philanthropes were the first to suggest that poor city dwellers, whose number was growing fast, should be educated to save, and encouraged for self-care so that their material position could improve, and they should accumulate some safety reserves for unexpected events. Such ideas of social policy gave birth to savings banks. The first saving banks were established at the end of the 18th century in Germany (Hamburg, 1778), Switzerland (Bern, 1787) and England by philanthropes and charity associations engaged in philanthropy.[6] They were followed by saving banks set up by cities and towns. These were complemented slightly later by savings cooperates in the villages and cities, and soon they did not only collect deposits among their clients and members but also granted loans occasionally. In addition, they also considered educating workers to be thrifty as their important mission. By the end of the 19th century, even school children had been encouraged to save even tiny amounts regularly, educating them in this way that thriftiness is a virtue.

The economic weight and importance of the population saving and prudently managing money continually increased in the 19th century, so more organisations and institutions embraced the issue of educating people to save. World War I and the economic crisis in the post-war years, however, led to major breaks in that development. Hyper-inflation mainly in the defeated countries devalued earlier savings and reduced people's ability to save too. However, recovery starting in the mid-1920s allowed individual savings again. To promote it, the First International Thrift Congress suggested in 1924 that World Thrift Day should be held each year in the last week of October. At the beginning, the event served to popularise the idea of savings. World Thrift Day has lost its significance by now in some of the initiating countries, but it continues to play a part in most emerging countries in strengthening self-care and reflecting the importance of financial education.

After World War II, in addition to the growing importance of self-care, the issue of financial literacy gained more attention, because global financial markets and the products traded there have become increasingly sophisticated. A technical revolution took place in the field of financial services leading to the need of broadening financial inclusion. At that time satisfying housing needs and supplying households with durable consumer goods increasingly depended on households'

6 Heller Farkas (1947): Közgazdaságtan [Economics], Volume 2, p. 61. The first savings bank named Erste Österreichische Spar-Casse was established in the form of an association in Austria in 1819. Initiated by *András Fáy*, the first Hungarian savings bank named Pesti Hazai Első Takarékpénztár was established in 1839 in the form of an association.

borrowing. Because of this, more and more government agencies had recognised by the '90s that youth needed to receive serious financial education so that they could make prudent decisions as adults on issues such as obtaining their own flats or selecting a pension scheme. At the same time, most students completed their education with almost no insight into finances or the operation of a financial system. Whether they continued their studies or took a job, they had to make important financial decisions that would define their financial circumstances eventually.

Having recognised this paradox, over 150 corporate, academic, public and government organisations in the United States established the Jump$tart Coalition in 1997. Members made a joint motion to have the importance of financial education recognised and introduced. They also decided to develop the necessary curricula and to provide sources for operation.[7] Ever since its establishment, Jump$tart has been commissioning surveys regarding the literacy level of high school senior students. According to the first comprehensive survey made in 2005, the average score of respondents was only 52% on the US grading scale. A mere 16% of the students took part in at least one full course on personal finances.

In October 2002 the US Treasury published a White Paper on incorporating financial education into school curricula.[8] In it, it emphasised the importance of building financial knowledge into the curricula of maths and reading/civics. The Fair and Accurate Credit Transactions Act (FACTA) adopted in December 2003 also played an important part. Although its primary goal was the protection of consumers in credit information systems, chapter five of the Act, "Financial Literacy and Education Improvement" included important provisions on improving financial literacy and education.[9] By the Act, the Secretary of the Treasury has been appointed to chair the Financial Literacy and Education Commission. It also tasked the Treasury to promote financial literacy in a joint effort with nineteen federal departments and supervisory authorities built on the cooperation of the government and private sectors.

7 https://www.jumpstart.org/who-we-are/about/history/

8 United States Department of the Treasury (2002): Integrating Financial Education into School Curricula: Giving America's Youth the Educational Foundation for Making Effective Financial Decisions throughout Their Lives by Teaching Financial Concepts as Part of Math and Reading Curricula in Elementary, Middle, and High Schools. A White Paper, Office of Financial Education, Washington, DC., October 2002.

9 https://www.govinfo.gov/content/pkg/PLAW-108publ159/html/PLAW-108publ159.htm.

Next, President *George W. Bush* established the President's Advisory Council on Financial Literacy on 22 January 2008.[10] The Council advised the president on how financial knowledge and skills of youth at school and of adults at workplace or residence can be improved and how consumer protection can be strengthened. Members of the Council included representatives of universities, foundations and corporates that are engaged in some form of regular financial education. In 2013 President *Barack Obama* modified the tasks and composition of the advisory council focusing on the issues of youth education. After submitting their recommendations, the mandate of the Advisory Council ended in June 2015.

As it can be seen from the summary above, the issues of financial education have been given attention for quite a long time in the United States. This is explained by the emergence of a capital market-dominated financial system in the United States (and several other English-speaking countries), where the prevailing model for regulating lending, insurance and investment products is based on strict public information obligations for service providers and free choice for consumers. This regulatory model is based on the assumption of "homo economicus"[11], according to which a person has a rational, clear system of preferences, based on which he can sort out his choices, from which he chooses what is "most advantageous", i.e., brings the greatest benefit, through profit maximisation. However, as different financial products have become highly sophisticated, it has also become clear that common consumers are unable to understand them in all detail, which may lead to grave social and economic consequences in time. Because of this, political decision-makers declared the education of financial skills to be a key component in the regulatory model based on issuers' disclosure obligation. According to the intentions of political decision makers, education will make consumers 'responsible' and 'decisive' actors on the market, who are not only motivated but are also able to make responsible financial decisions affecting their wellbeing. The objective is to educate consumers so that they could manage their loans, insurance and pension planning affairs having the confidence to find their way among the rich variety of offers by competing service providers.

It is an attractive vision, as competition on the side of suppliers and free choice on the side of demand is – in theory – a promise of consumer wellbeing. However, real life has confirmed the belief in the usefulness of financial education has limitations. It is partly because fast changes occur on the finance market,

10 White House (2008): President Bush Announces President's Advisory Council on Financial Literacy, January 22, https://georgewbush-whitehouse.archives.gov/news/releases/2008/01/images/20080122-7_p012208sc-0321-515h.html.

11 Cf. James Chen (2021): What Is Homo Economicus?, Investopedia, https://www.investopedia.com/terms/h/homoeconomicus.asp

which continuously widens the gap between consumers' knowledge and the skills needed to grasp complex, non-standardised financial products. The gap is further increased by service providers' ability to influence consumers; the asymmetry of information and knowledge between the teachers of financial skills and the experts of service providers and finally the cognitive dissonance experienced during financial decision making.

In addition to emphasising the importance of financial skills, response measures to the 2008 global financial crisis expanded the scope of regulations in the financial sector and increased its dimension and detailed content. Although there is general consent regarding the necessity of regulation, there are major differences in opinion whether the increase of the complexity of regulatory activity over the past years has been really necessary. As banking and capital market regulations become more complex, their transparency suffers, the danger of regulatory arbitrage increases, while it burdens regulatory resources and financial institutions alike, which results in the noticeable increase of operational expenses. Further, extremely complex regulations contribute, paradoxically, to the increase of systemic risk. Firstly, the dense web of regulations gives the illusion of a highly controlled overall system, while its Byzantine nature facilitates and makes regulatory bodies' thwarting them pay off. Secondly, because "over-sophisticated" regulatory systems are in most cases incapable of managing the "unknown unknown".[12] And thirdly, because in case risks occur, the wide range and combinations of regulatory tools may result in complex measures difficult to understand, which will hamper the accountability of regulators and supervisory bodies. Finally, the complexity of regulations may trigger the transfer of risks to entities outside the scope of regulators, such as the national budget, while it will at the same time "relieve" consumers from knowing and comprehending the rules or take responsibility for their bad personal decisions.[13]

As it can be seen later in the paper, a major dilemma has appeared in the United States (and other English-speaking countries), i.e., how the security of the financial system and consumers' responsibility can be balanced in a socially effective way. Who should accept responsibility and to what extent for system security and consumer decisions? Do people want to live in a society where average consumers must find their way in the continually changing world of financial products

12 The term "the unknown unknown" is a famous quote from an address given by former US Secretary of Defense *Donald H. Rumsfeld* (1932–2021): "As we know there are known knowns. There are things we know we know. We also know there are known unknowns. That is to say, we know there are some things we do not know. But there are also unknown unknowns – the ones we don't know we don't know." February 12, 2002, https://en.wikipedia.org/wiki/There_are_known_knowns.

13 See for example Gai et al., 2019.

armed only with their knowledge gained through education? Is financial education able to dispose of the non-rational factors of financial decision making? And whether consumers want to live in a society where law and authorised institutions "collectivise" the detrimental consequences of their decisions based on decisions they have no say in. Will it eventually not mean a grave intrusion into people's private life and the reduction of personal autonomy? So many questions you cannot offer easy answers to.

In other countries of the world, where the financial system is banking-based, the protection of people as consumers – unlike in English-speaking countries – is implemented through regulations, while their pensions are secured mainly by government entities. Thus, the part played by financial education does not seem to be as important as in the United States. On the other hand, the individual right to and responsibility for decision making cannot be restricted in those countries either. So, despite legal, institutional, and cultural differences, teaching financial skills has become increasingly important and urgent also there. It is all the truer as surveys made on the standard of people's financial skills in those countries have produced similar findings as in the United States. The survey referred to in the first footnote is proof for this.

Considering the deficiencies of financial knowledge and the similarity of the tasks aimed to eliminate them, the **Organisation for Economic Co-operation and Development (OECD)** launched a comprehensive international project never seen before to promote the education of financial knowledge. Under it, the OECD recommended that the Member States should start teaching financial skills at schools as early as possible. Children can acquire the knowledge and skills necessary for responsible financial behaviour from an early age if those are integrated into the curriculum. It is important for two reasons: on the one hand, many parents all over the world are not properly prepared to instruct their children about the smart use of money, as their standard of financial knowledge is quite low as well. On the other hand, children do meet issues of money management beginning from their school years, since they receive pocket money, sometimes even a co-card from their parents regularly, while most young people at high school have money from their earnings.

In March 2008, the OECD established its **International Network on Financial Education (INFE)** to support the Member States and other countries joining the network in developing and implementing national strategies of financial education programmes as well as in creating innovative methodologies to improve the financial literacy of the population.[14]

INFE currently has 270 public institutions among its members from the 34 OECD Member States and 96 other countries. An advisory body oversees the work of the network. Working groups within the network are currently addressing four key policy areas related to financial education:

1. Standard setting, implementation and evaluation
2. Financial education and the impact of digitisation
3. Financial education in the workplace
4. The impact of ageing populations and the needs of older consumers.

The OECD/INFE also continues to develop and promote outputs from previous working groups, including core competencies for financial literacy; financial education for micro, small and medium-sized enterprises; financial education for financial inclusion; national strategies for financial education; financial education for youth and in school and for women; financial education for long-term savings and investments; and financial literacy measurement.

The **European Commission** published a White Paper on Financial Services Policy (2005-2010) at the end of 2005. Among others, it laid down that the transparency and comparability of financial products must be enhanced, and consumers must be assisted to have a better understanding of such products. The standard of financial skills is important for the EU for three reasons:

1) Because the population is ageing fast, the burden on traditional pension schemes can only be eased if self-care gains momentum, which can only be reached if financial knowledge is higher.
2) Mortgage loans make up most of the total loan portfolio of households in the Eurozone. Understanding the consequences of indebtedness is particularly important for young households, first homeowners and low-income groups, which requires proper financial skills.
3) The lack of financial literacy has proved to hinder the fight against poverty, inequality, social exclusion, and upward mobility.

The policy recommendations and programmes of the European Commission promote the improvement of financial culture beginning from school-age via programmes matching the specific needs of youth, women, and low-income social groups. Further, they intend to provide specialised financial education to people

14 https://www.oecd.org/financial/education/oecd-international-network-on-financial-education.htm.

facing high impact financial decisions, such as a first home loan or a student loan, or the selection of a retirement savings scheme.

In a joint effort with the OECD, the Commission launched its online adult education programme DOLCETA („**D**eveloping **O**n-**L**ine **C**onsumer **E**ducation and **T**raining for **A**dults") in December 2003. Under the programme, experts from the Member States have developed eight modules covering areas such as financial knowledge, consumer rights, sustainable consumption, and product safety. The main objective of the project was to call the attention of European citizens to their rights and how to exercise them. The project did not only target the public at large but also teachers and NGOs providing financial education by offering information and teaching materials. Over the years, the website has grown into a several thousand-page-long encyclopaedias with well-known experts of the topic among its authors. Considering the prohibitive costs of upgrading and maintaining the project, the Commission decided in 2013 to end DOLCETA and to replace it with "ConsumerClassroom.eu". The new project focuses to improve the professional skills of high school teachers engaged in financial education for the 12-18 age group and promotes the exchange of teaching materials rather than providing consumers with direct information.

In September 2020, the Commission (more exactly, the Directorate~~s~~-General for Financial Stability, Financial Services and Capital Markets Union) marked the improvement of financial literacy as a key task in the action plan of the EU Capital Markets Union (CMU).[15] The Commission is to prepare and develop the relevant project jointly with INFE. The new framework for reference is based on the framework of INFE basic competencies on youth financial knowledge and the G20/OECD adult financial literacy and covers all issues related to sustainable finance. The new EU Framework of Reference aims to create a common terminology and framework for the EU to develop policies and programmes related to financial knowledge, to identify the shortcomings of supply and to apply uniform assessment, measuring and evaluation methodology.

To complement and promote the European Commission's efforts for improving financial literacy, a group of nine European interest representations and educational organisations established the **European Platform for Financial Education** in February 2017 as an associate member of FINE. The objective of the initiative is to drive the demand for financial education in Europe particularly among youth and entrepreneurs. The founding partners of the Platform include Better Finance representing investors and savers, CFA Institute training investment specialists,

15 https://ec.europa.eu/info/business-economy-euro/banking-and-finance/consumer-finance-and-payments/financial-literacy_hu.

the association EUROCHAMBRES of European Chambers of Commerce and Industry, the European Banking Federation (EBF) representing private banks, the European Banking Training Network (EBTN), the European Fund and Asset Management Association (EFAMA), the European Microfinancing Network (EMN), Insurance Europe of private insurance companies and JA Europe, provider of education programmes for entrepreneurs. The founders agreed to join forces to promote the improvement of financial literacy in Europe. The platform is a venue for exchanging ideas, information and experience and arranges conferences on how the European Union can play a leading part in the improvement of financial culture. The platform will support its members in coordinating their participation in European initiatives to make use of potential synergies and to avoid duplication.

The **United Nations Organisation** also recognised financial education and financial inclusion as important tasks in 2009. Her Majesty Queen *Máxima* has served as the United Nations Secretary-General' Special Advocate for Inclusive Finance for Development (UNSGSA) since 2009. In this capacity, she advises the Secretary-General and is a leading global voice on advancing universal access to affordable, effective, and safe financial services including low-income groups and the SME sector.[16] According to the World Bank database Findex,[17] in 2017 about 1.7 billion adults, i.e., half of the total adult global population had no access to financial services by regulated financial institutions such as bank accounts, insurance, or loans. While 94 per cent of adults hold accounts with some financial institution in developed economies, only 54 per cent of adults hold accounts in developing countries. According to the UNSGSA, access to financial services and obtaining the knowledge necessary for their use is vital to create sustainable economic growth, to create jobs and to promote people's personal and social development.

At their Pittsburgh meeting in September 2009, the Heads of State and Government of **G20 countries** decided to establish the G-20 financial inclusion expert group in collaboration with the Consultative Group to Assist the Poor (CGAP)[18], the International Finance Company (IFC) and other international organisations. Promoting the spread of financial literacy is one of the key tasks of the group. At their Seoul Summit in 2010, they marked financial integration as a key pillar of the global development agenda and endorsed the Financial Inclusion Action (FIAP) of G-20. A few months later the **Global Partnership for Financial**

16 https://www.unsgsa.org/

17 https://globalfindex.worldbank.org/

18 CGAP is a global partnership of more than 30 of the world's leading development banks, agencies and foundations based in Washington.

Inclusion (GPFI) started operation for the global promotion of financial integration. The GPFI is an inclusive platform for G20 member states, non-G20 countries and other stakeholders to implement the agenda of financial inclusion. The activities of GPFI are divided by priorities, action fields and performances; the organisation relies on support from its implementing partners to reach its goals. Its main action fields include helping draft the provisions promoting financial inclusion for individuals as well as micro-, small, and medium-sized enterprises, and monitoring the results achieved in the reduction of international transfer costs to the level internationally targeted. In addition, GPFI is a promoter for the development of financial education policies, it recommends measures and principles for spreading financial skills related to financial services particularly digital services and to strengthen the protection of consumers of such services. Her Majesty Queen Máxima of the Netherlands as the United Nations Secretary-General' Special Advocate for Inclusive Finance has been the honorary patron of GPFI since June 2011. Two co-chairpersons appointed by the G-20 member states are responsible for leading and coordinating the work programme and activities of GPFI, who collaborate with the board of G20, the GPFI 'troika" (previous, current, and future co-chairpersons) and all GPFI members.[19]

The restrictions due to the coronavirus pandemic in early 2020 and the accelerated progress of digitisation of the financial markets since the pandemic pose new challenges in financial education. Several governments have transferred the messages and programmes of financial education to online channels or other digital devices. Because of the restrictions due to the pandemic, digital transmission has been the only way for national authorities to forward messages of financial information and education to their citizens, particularly to people facing financial difficulties. A survey made by OECD/INFE in September 2020 has proved most countries and authorities have been making successful efforts to transfer financial education to the internet at the time of the coronavirus pandemic, which channel may continue to be used after the end of the pandemic.

As much as it was welcome that cash-free payments, which proliferated because of the boom of e-commerce, could be undisturbed despite the inevitable restrictions due to the Corona Virus pandemic, it was noticed with regret that the numbers of financial fraud attempted and conducted on the Internet also surged. The challenge was to make consumers including the most vulnerable ones understand the risks of using digital financial services side by side with their advantages, and to teach them to manage online transactions safely by recognising the signs of fi-

19 https://www.bancaditalia.it/focus/g20-2021/temi-gruppi/gpfi/index.html?com.dotmarketing.htmlpage.language=1.

nancial fraud and abuse. For instance, European countries made use of the entire range of communication channels (websites, social media, web and TV information campaigns, online financial literacy days/weeks, etc) to speak about topical financial issues consumers could face in their everyday life, to call their attention to legal changes directly affecting household finances and to protection from cybercrime. Such initiatives mostly targeted people who were not regular actors on money markets or were too young to have experience or the elderly who had recently switched to the use of digital devices due to the pandemic. In addition to providing information, the channels also served consumer protection by offering easy-to-understand comparisons of available financial products.

During the epidemic, trading in cryptocurrencies also received a lot of attention in financial education and consumer protection. When the price of Bitcoin rose to a historic high of more than $ 60,000 shortly after the outbreak of the coronavirus in April 2021, many began to take a keen interest in investing in this cryptocurrency, perhaps thinking that if they did not enter now, there would be a great opportunity they may miss. By November 2021, more than 79 million people had created custom Bitcoin wallets on Blockchain.com, allowing them to purchase Bitcoin. This is about 31% more than a year earlier.[20] Interest has been heightened by the fact that analysts have predicted that cryptocurrencies will become a permanent feature of the digital financial environment, while many online brokers and exchange platforms have tried to advertise and promote clients. to win to invest in cryptocurrencies. But no matter how witty the innovation behind Bitcoin, the blockchain is, no matter how much cryptocurrency is attractive, and no matter how much promoters and investors have spent promoting cryptocurrency trading, cryptocurrencies and instability remain inseparable.[21] Analysts' views are divided: there are those who envision a complete collapse of the Bitcoin market, but some envision an exchange rate above $ 100,000. In the midst of such a

20 Josh Howarth (2022): How Many People Own Bitcoin? 95 Blockchain Statistics, https://explodingtopics.com/blog/blockchain-stats.

21 Because there is no economic background behind bitcoin in the classical sense, money does not have many important functions. The value of bitcoin always depends on the value that crypto money believers attach to it, i.e. the whole is based on completely subjective judgments. However, according to a study, there are 5 million of the 19 million coins already in circulation on 10,000 Bitcoin accounts, meaning that the market for this cryptocurrency is highly concentrated, and therefore the direction of exchange rate movements is determined by the mood of a fraction of the owners. As a result, a common feature of bitcoin exchange rate fluctuations is that they show extreme stock market fluctuations: the value of a bitcoin can rise or fall tremendously in weeks, months, or even days. The roller coaster of the Bitcoin exchange rate raced steeply up again from a low of $ 30,000 in the summer after the spring peak in 2021, reaching a record high of over $ 67,000 in early November. This was followed by the fall of January 2022, which was largely triggered by the political unrest in Kazakhstan and the accompanying internet shutdown.

contradictory outlook, the average retail investor should not be advised to invest other than with due diligence, that is, to invest no more than the loss that they can still tolerate.

As can be seen from the historical review, the government-level engagement in financial education looks back on a short history of just over three decades. The number of governmental and inter-governmental international efforts to promote financial education have increased following the 2008 global fiscal crisis. At present, almost all international organisations dealing with issues of the economy as well different countries regard the promotion of financial inclusion and financial education as their task in some form. *Viewed from a historical perspective, government-level efforts are still in an initial stage. That and the little practical experience are the reasons why the opinions on the effectiveness and usefulness of financial education often contradict each other. No consensus has been reached yet by opposite views.*

3 EXPENSES OF EFFECTIVE FINANCIAL EDUCATION

The effectiveness of an educational system is usually measured by comparing the material and human resources used and their rate of utilisation. It is the same for financial education. Although knowledge transfer is usually made by supplementing existing curricula and teaching materials using the available teaching staff and educational infrastructure, additional resources are needed (e.g., extension teacher training, additional teaching material and teaching aids, etc). The extent of expenditure and their international comparison is no problem since there is a uniform approach on accounting at par value and the content of the categories used. On the other hand, there is no tried and proven methodology to measure how effective financial education is. [22] It is easy to realise even for people who are not experts in educational economics that it is difficult to identify what you can deem the "benefit" of financial education and how you can measure it or express it in terms of money.

According to international experience, the effectiveness of education is based on measuring students' performance. The changes occurring during the study period are to be found, i.e., the initial level of knowledge is surveyed and then compared to the same at the end of the same period. Follow-up tests of previous educational programmes have shown that a term in high school education or training courses

22 See for example Balázs Éva (1996): Az oktatás hatékonysága [Efficiency of education]. *Iskolakultúra*, 6(6-7), 3–10. http://www.iskolakultura.hu/index.php/iskolakultura/article/view/31339/31056.

of a few months used in adult education have not resulted in appreciable, lasting increase in knowledge. More time is needed to acquire the necessary knowledge and "digest" it in practice. (Students achieved better results at international competitions, but their success was based on longer and methodological preparation.) On the other hand, as already mentioned, a part of the knowledge transferred gets inevitably obsolete in time, its value is lost.

One should also keep in mind what the latest studies have shown, i.e., students' performance is strongly affected by what is happening in the classroom and the culture of school leadership in addition to individual talent and the impact of family and friends. There are major differences among schools in that regard partly because of the talent and knowledge of the teachers and guest speakers who address the audience and partly because of the commitment of school leadership to teaching financial skills.

Effective financial education can be quite costly.

1) One of the potential reasons is that the "initial" knowledge level of the audience (students or adults) can be quite diverse. If the initial knowledge level is low, effective financial education must be longer in time and wider in content. Sometimes participants must be taught a wide range of skills beginning from basic financial maths exercises to the evaluation of the reliability of various sources of information.
2) On the other hand, the expenditure of effective financial education is increased by the complexity of financial decisions, and the diversity of consumers' financial situation and personal preferences. A simple rule of thumb, such as the one stipulated in the debt-brake order, i.e., if monthly income is lower than HUF 500,000, acceptable monthly instalment cannot go beyond 50% of net income can only be applied with reservations to floating interest rates if they change often and/or significantly, as it could be seen in the recent order on interest rate stop for housing loans. What is more, because of different preferential loan terms, tax reliefs and subsidies it can easily happen that something is an optimal combination for one consumer while it is unavailable or is not the best choice for another one. Besides, if somebody has taken out several loans and their financial situation gets worse, you need to conduct a detailed analysis to decide the most reasonable restructuring or rescheduling of their debt. Such a complicated course requiring multiple knowledge can hardly be organised effectively, and it is also unnecessary for people who are not in a tight squeeze. In such cases "tailored" advisory services are more effective than training.
3) The third difficulty of the effectiveness of financial education is the speed at which product ranges and industrial habits change. The appearance of new fi-

nancial instruments, changes in fashion or external forces – such as the coronavirus – can change consumer needs and preferences. But making a major long-term personal financial decision, such as taking out a house loan, selecting a pension supplementary scheme or opening a start-up account for your child are one-time actions you can optimise for the date of the commitment only. Concluded transactions are long-term obligations for consumers even if some terms and conditions might be changed later. Most consumers living their daily lives cannot monitor regularly occurring changes, which also make their knowledge obtained through financial education at school obsolete. A few decades ago, the rule of thumb was to put aside one-tenth of your annual income for your pensioner years so as not to have to give up much of your usual living standards. However, as the increase of life expectancy and predictions on the trends in medical and care costs for the elderly indicate, 10% savings will not be sufficient in future. So, depending on your preferences, you will have to reconsider from time to time how much you want to save for your old days. The effectiveness of financial education would require regular updates of content, which is difficult to organise and involves major costs, particularly because school education is not possible for adults.

4) Fourth: lack of interest to learn new skills or reluctance to participate in further financial training are further obstacles difficult and expensive to overcome. Although financial education for volunteer participants is available today everywhere and is often free of charge, thanks to digital technologies, most people use it rarely or not at all. According to a survey, when credit card issuers warned thousands of cardholders they were at risk of fraud and abuse and offered them a free online training course to prevent it, only 0.4% of the clients contacted logged onto the relevant website and only one-tenth of those completed the course. It is highly ironic though that the majority of those completing the course already had higher financial knowledge, better budgeting, and planning skills than the ones for whom participation would have been more useful but who failed to use the opportunity offered. In this and similar cases the effectiveness of education could have been ensured by making participation mandatory, which is practically impossible,
5) Fifth: financial service providers have significant sources to influence their clients via intensive marketing and PR activity. If supervisory authorities or consumer protection agencies launch information campaigns to warn customers about certain misleading business terms and practices, almost all service providers affected quickly change their marketing emphasising their reliability and honest business practices. Considering the high impact of marketing and PR tools, financial education would be effective if it happened at the place and

time of decision making. It is, however, difficult to arrange, it would involve prohibitive costs that could hardly be financed from public funds.

6) Sixth: another major challenge concerning the effectiveness of financial education is that even financially well-informed degree holders make wrong financial decisions surprisingly often. Logical decision making can be affected by different prejudices, sudden ideas, or impulsively, which is[23]well documented by the observations of behavioural economics in the field of personal finances. Human decision making is also characterised by cognitive distortion, i.e., errors in reasoning leading to decisions that defy logics or contradict the accepted rules of behaviour. A frequent reason for it, in the field of finances, is the riches of the range of products, the large quantity of information necessary to fully assess decision making options, because they lead some consumers to apply an over-simplified decision-making strategy while others may become chronically indecisive. In addition, the high stake of some decisions triggers stress in people tying up mental resources, which often leads to decision-makers neglecting several important aspects. Making important financial decisions requires the careful consideration of the probability, expected time of occurrence or costs of several risks or threats ranging from loss of a job up to health problems. Unfortunately, some consumers either completely neglect such risk factors or assess them with extreme optimism. In addition, potentially adverse consequences of a financial decision to be made often become visible or noticeable years later, while people are reluctant to pay attention to long-term or uncertain consequences. Therefore, many complex or high-value finance products are sold based on assuming a single future outcome estimated by the distributor, and part of consumers easily rely on that single outcome.

7) Finally, some consumers are characterised by over-confidence in their capabilities while others suffer from unreasonable defeatism. According to a survey, over 16% of respondents evaluated their financial knowledge to be high although their performance was in the lowest quartile by the test, on the other hand, over 8% whose performance was in the upper quartile evaluated their knowledge to be extremely low. It may seem surprising, but surveys suggest that over-confidence mainly characterises people with limited financial knowledge while a higher level of knowledge is often accompanied with underestimation of own abilities. Using certain psychological tricks, the effects of cognitive distortion can be mitigated, but they cannot be used for the entire

23 https://evk.hu/blog/2021/01/02/a-viselkedesi-kozgazdasagtan-eredete-fogalma-es-alkalmazasa-napjainkban/.

population partly due to the costs involved. Also, you should be careful if you want to reduce over-confidence. Experience has shown if you ask somebody to name an uncertain future event that could be disadvantageous for them, for instance, the loss of their job or unexpected health-related expenses, they will become uncertain than make a reliable risk estimation.

The above logically suggest that effective financial education must be widespread, regular, or even mandatory; it should be focused on the place and time of decision making and its content should be tailor-made. However, meeting all requirements at the same time would probably be much higher in terms of time and costs than the usual public educational campaigns, in addition, a highly qualified, well-paid and independent team of financial educators and advisors would be set up and maintained for implementation. Its full expenditure requirement seems highly doubtful to be lower than the societal usefulness of education. What is more, most practices mitigating the effects of cognitive distortion might be deemed unreasonable intervention into people's private lives. *Keeping a sound mind, you should then settle for accepting that, even in an optimal case, financial education can transfer such and as much knowledge as will allow participants to be able to realise in a specific instance what and where they should investigate to make a prudent decision. Also, you should be aware that knowledge transferred during education will not stick in all participants' minds and even part of what does stick will become obsolete with time. On the other hand, it is clear the rate of utilisation of sources invested in financial education in schools is not worse than that spent on teaching other subjects, e.g., biology or literature.*

In terms of the costs of financial education, one should also consider its funding. The public educational system is responsible for the lion's share of financial education and bears its costs too. Adult financial training is also regarded as a service in the public interest, but it is executed outside the school system for practical reasons. Municipalities or trade unions finance it from public funds or employers arrange and finance it as a welfare benefit. On the other hand, there is a global trend among financial service providers and their trade associations to devote major material and intellectual resources to financial education although, according to international literature, one of the main goals of financial education is to equip consumers for the critical evaluation of the offers by financial service providers. Actual examples of the financial service provider sector promoting financial education include the European Platform for Financial Education, the US Jump$tart Coalition, as well as several national trade associations such as the Hungarian Banking Association or the Association of Hungarian Insurance

Companies and some financial enterprises that arrange or support financial education programmes.[24]

Support by private companies and organisations is naturally not entirely altruistic. They often support school programmes of financial education because they create good marketing opportunities to win young clients. Still, many companies subsidise financial education programmes even if they have no direct influence on their content, make no direct profit out of them or will not directly increase their prestige. What can motivate profit-oriented enterprises to engage in such selfless activities? Well, part of them is afraid they will have to face other, invasive, and costly forms of regulations unless they can present financial education as a possible and effective way to manage consumers' financial problems. Other enterprises believe they can launch and spread some new products or new digital devices on the market quickly and successfully if, instead of advertising, they present them in a way that seems neutral and unbiased in educational programmes teaching their clients their safe use. Informing and educating clients about cyber security is particularly effective in a joint effort with supervisory authorities or the police, because such joint appearance has more credibility and impact on clients. It can also help prevent or mitigate threatening damages due to cybercrime; otherwise, the financial service providers should bear a part of such damages.

4 SOME THOUGHTS ABOUT THE RELATIONSHIP BETWEEN FINANCIAL EDUCATION AND FINANCIAL REGULATION

Many believe financial education strengthens consumers' autonomy, which renders too much regulatory interference superfluous or at least mitigates its use. Their main argument is that too much detail in the regulations restricts consumers' potential for free choice, which eventually underestimates them. On the other hand, education empowers consumers to rely on their own decisions in finance matters.

However, effective financial education may represent major interference in the autonomy of individuals. From a social aspect, mandatory financial education covering all can be regarded as effective, so people would be forced to participate even if they do not want to for some reason.

Secondly, eliminating cognitive distortion is only possible if people's thinking processes, feelings, motivations and, eventually, values are influenced and

24 For more details on community and national initiatives in the EU, go to the European Economic and Social Committee publication (EESC, 2016).

changed. For instance, overconfident people should be made to become more prudent and circumspect in making decisions. Impatient people should be taught to attach less importance to the time factor, i.e., speed should only be one of the factors in making their decisions.

Managing payment issues is one of the areas of financial awareness and education gaining significance.

1) It is partly because households' debts in the EU countries amount from 35 up to 206% of their annual income[25], and high indebtedness means high volatility.
2) On the other hand, it is partly because many people can find themselves in a financial situation through no fault of their own when they cannot meet earlier obligations on time or in full, but overdue payment usually entails severe sanctions. People in such situations need external advice. Not only because inexperienced people cannot assess the situation and devise the legal and financial solution of its optimal management, but also because anxiety and fear of the consequences may result in crippling stress, which aggravates their situation even more. So, in such a situation the people affected need joint advice and help by financial and mental hygiene experts to be able to give their creditors complete and accurate information about their financial situation as well as to produce a settlement proposal that is credible and can be undertaken responsibly. Concluding a settlement agreement and, most of all, its fulfilment is not a one-off act; it usually requires the debtor to change their earlier concept of money management. Traditional "nudge" set out by behavioural sciences[26]makes changes in behaviour by helping to modify habits and attitudes to certain issues. Such nudge is necessary, because complex processes or deficiencies of consideration often prevent people from making decisions that would have a long-term beneficial effect on their lives. Changing the behaviour of people in trouble will have a positive effect on them, while it means they must take part in targeted financial training that will curtail their independence.
3) Next, as educational programmes are devised, a decision must be made on what should be taught while there is no accord on what is deemed prudent financial behaviour. For instance, predictions should be made regarding the expected return of different investment options to offer individual strategies

25 Eurostat (2021): Gross debt-to-income ratio of households (in 2020), https://ec.europa.eu/eurostat/databrowser/view/tec00104/default/table?lang=en.

26 https://viselkedestudomany.hu/nudge/ and Országgyűlés Hivatala (2020) Infojegyzet 2020/4, Viselkedési közgazdaságtan, https://parlament.hu/infoszolg.

for supplementary pension savings, but even experts' views are highly diverse in this regard. Similarly, selecting the best investment requires a compromise between risk and return, which raises the issue of how much financial risk may or should an individual or household take. Financial education cannot be said to be effective if it fails to address such practical issues. A consumer following the "recommendations" of pension planning aids, which advise them to select a rate of return for each investment vehicle depending on how much they trust the growth outlook of the vehicle involved, has not received any substantive help for their decision making. A similarly useless piece of advice describes the rules of debt brake, but it gives no clue as to which part of the given provisions should be considered if you intend to take out a housing loan.

Most educators are aware of the above. They try as far as they can to guide their students in practical matters, for instance, which investment product they should invest their savings in, or what proportion of their regular income they should encumber for a housing loan. Although those pieces of advice must be sound technically and in terms of ethics, they inevitably reflect the teacher's opinion and preferences. Thus, students blindly accepting and following the advice received at school will unintentionally give up the autonomy of decision while they will have to suffer the consequences of their decisions as if they have made them independently.

5 POSSIBLE ALTERNATIVES OF FINANCIAL EDUCATION

Apostles of financial education believe personal autonomy and individual responsibility are ensured if rules and circumstances force an individual to make all their financial decisions on their own according to their knowledge. However, many think learning about the features of a sophisticated financial product or even recording and managing their household spending is a bother, it requires major intellectual effort or takes up too much time. You should also not forget people's attitude to bearing any kind of monetary loss is highly varied.[27] For instance, over 25% of investors feel any material loss is unbearable, they dread feeling regret, so if they are insecure about the adverse consequence of a decision, they fail to make any. And if they must decide, they try to get out of the psychic toll by turning to a financial advisor or asking their family, friends, or mates for advice. So paradoxically, many feel freer if mandatory rules, provisions relating to the given transaction "save" them from considering and deciding about their finances.

27 See *Prospect Theory* developed in 1979 by Daniel Kahneman and Amos Tversky, https://doi.org/10.2307/1914185.

Advocates of financial education emphasise they do not intend to create a world in which financial education renders regulations completely superfluous. They only wish to provide consumers with assistance in making responsible choices and prudent decisions. Still, if the only objective is that a given individual should spend more and invest better to supplement their pension, why financial education is the cheapest solution to achieve it? Building strong safety nets and guarantees and proper provisions are likely to reach the same result, which may be cheaper and more certain in some cases. If the goal to be reached is that consumers should only take out mortgage loans of amounts and terms they can afford in their current and expected future income position, would proper regulations not be a cheaper alternative at the societal level? One, for instance, obliges lenders to provide customers with loans of an amount and under terms they will certainly be able to repay given their asset position. One may find alternative solutions for most goals. You should consider in every case how the costs of financial education incurred are related to the costs of alternative solutions, for instance, to the application of provisions relating to financial service providers, or to the costs of personal advisory services offered to consumers free of charge. The latter should be considered since as no one can expect people to become financial advisors, similarly as it cannot be expected from them to become their own physicians, lawyers, or car mechanics.

Table 1 illustrates the instruments of financial culture and consumer protection as they mutually supplement and support each other. All international and domestic experience shows regulation and education are two actions supplementing each other that must be coordinated depending on the specific situation.

Table 1
Financial culture and consumer protection – set of instruments mutually supporting each other

Financial culture	Customer protection
Education	legal and regulatory instruments
Awareness of information required for decision making	transfer of information required for decision making
Well-informed consumers drive competition among financial mediators	prevents service providers from abusing their dominance (level playing field)
Offers options to use the advantages of a broader but riskier playing field	protects in return for reduced freedom of choice and room for manoeuvre

Source: Materials of MNB conference: *A pénzügyi kultúra helye, szerepe és jelentősége az oktatásban, a fiatalok nevelésében* [The place, role and importance of financial literacy in education and the education of young people], 03.10.2006.

6 CONCLUSIONS

Both international and Hungarian experience support financial education side by side with regulation is necessary to promote consumers' financial security and to improve their financial position. On the other hand, unrealistic expectations about financial education are not justified either from a professional or financial aspect. Partly because, similarly, to teaching any other subject, teaching finances will generate different individual knowledge. Although everybody will need financial skills in their lives more often than, e.g., what they have learnt in biology, you should be aware knowledge obtained through education will be used to a different degree by each person, and that is also true for financial knowledge. Because of such differences, regulatory tools must be used to prevent service providers from gaining an unfair advantage over their clients based on their superior financial skills.

Further, the range of financial services changes all the time; new constructions are born every day. The current digital revolution in finances also extends the range of available services, while it requires more knowledge for their proper and secure use. Changes in products and technologies necessitate the ongoing modernisation and update of regulations on the one hand, and on the other hand renders part of the knowledge obtained through financial education obsolete. All the above suggest two things:

1. Rather than transferring lexical knowledge through financial education, skills must be developed so that people could recognise what and where they could look up if they want to make a prudent decision.
2. Opportunities must be provided for those interested to update their knowledge if and when it becomes obsolete.

Considering that crucial financial decisions requiring diverse, special professional knowledge occur in the life of a person fairly infrequently, such specific knowledge need not be "stuffed" into teaching, it should be made available as advisory services instead. This is all the more true as advice cannot be replaced by regulations; since regulations have by their nature a normative character, therefore individual, case-specific problems can only be solved with provision of customized advice. It is quite easy to find many independent professional advisors on the market today, although using their services is costly. Therefore, discount rates or free advisory services should be made available to low-income people who cannot afford a professional advisor, to those for whom making financial decisions is mentally exhausting, or to all people who have got into financial difficulties through no fault of their own.

Because of its use presented and despite its limitations mentioned, financial education is an activity for the communal good that can contribute to increasing the prosperity both of individuals and society. Thus, organising and financing the teaching of financial skills is a public task. However, the involvement of financial service providers and their trade associations is justified and should be encouraged, because it can result in direct benefits for society and indirect ones for the organisations involved.

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FINANCIAL CULTURE IN EUROPEAN EDUCATION

Levente Kovács – Szabolcs Pásztor[1]

ABSTRACT

In this study the authors investigate the state of European financial culture compared to other regions of the world and the programmes launched / to be launched by different European countries to improve it. They discuss the relationship between general indicators of development and financial culture pointing out that a step-by-step development of financial literacy leads to further growth potential as well as the implementation of best practices learnt from different European countries. All that is highly topical, because the Covid-19 pandemic and ongoing digitisation are new challenges to be faced by the experts dealing with the development of financial literacy. Despite the new challenges, they must call attention to the importance of financial culture. By comparing five European countries it has become clear that complex programmes involving many actors are the most effective; in addition, school subjects involving financial culture should be made mandatory.

JEL codes: A20, G53

Keywords: financial education, European countries, programmes, initiatives

1 INTRODUCTION

The necessity arose at the beginning of the third millennia of calling people's attention to the basic issues of financial awareness including the different forms of savings. The 2007–2008 financial and economic crisis gave it a real boost, since at that time attention was focused on economists' modern views on financial culture. Governments all over the world as well as in Europe launched and solidified programmes of financial culture; they made efforts to make their relevant educational and training materials available for the public at large. They did that to mitigate the vulnerability of different social groups. On the other hand, a clear

1 *Levente Kovács*, Secretary General of the Hungarian Banking Association, Professor at Miskolc University. E-mail: kovacs.levente@bankszovetseg.hu.
Szabolcs Pásztor, Associate Professor at the National University of Public Service. E-mail: pasztor.szabolcs@uni-nke.hu.

and close relationship between the standard of financial culture and economic growth had become apparent by then. In fact, suggestive changes occurred in financial education at the beginning of the third millennia, so they need to be reviewed and assessed from time to time.

The primary goal of this paper is to briefly present the performance of some regions in the world related to financial culture so that one could have a better understanding of the characteristic features in Europe and European countries. In addition, we want to give an overview of the programmes improving financial awareness run in the five countries studied (Finland, Germany, France, the Netherlands, and Switzerland), and how much they can contribute to the improvement of financial literacy. The relevant literature has significantly increased in number since the Organisation for Economic Cooperation and Development (OECD) launched its Financial Literacy Programme, which is an immense help for comparison and assessment of the standard of financial literacy in different European countries. Furthermore, one can take account of programmes and initiatives aimed to raise the general level of financial awareness and information that have been launched in those countries.

Thus, the paper discusses additional features of the current situation in the countries mentioned and their efforts to improve financial culture. The example and results of different countries can be telling for Hungarian decision makers. However, we must say in advance there often are shortcomings of financial literacy in highly industrialised countries too. In general, financial literacy is asymmetric both among social groups and regions not to mention the differences of countries. The problem may be mitigated by making financial education mandatory.

The logical sequence of the paper is as follows: first, financial culture in the European countries is presented underlining the current position of different regions and countries. Later, the relationship between financial literacy and economic growth is discussed, then, the practices in different countries are presented. The consequences allow us to consider and potentially implement good practices.

2 FINANCIAL CULTURE IN THE WORLD AND IN EUROPE

The global survey on financial literacy conducted and often repeated by Standard & Poor's covers 140 countries where typically 150 thousand adults are contacted asking them to answer four standard questions related to compound interest, inflation, risk diversification and simple interest calculation (*Klapper* et al., 2015). People can be deemed financially literate if they give correct answers at least to three of the four questions. You can see from historical surveys that Standard & Poor's deem every third adult person financially literate on average globally.

The European Union, the USA, and industrialised countries outside Europe reach higher scores on average than other countries, but there are outstanding and poor performers in every region too. Every second person has some financial knowledge in Botswana, Bhutan, Turkmenistan, or Uruguay while the ratio of financial literacy is below 20 percent in Haiti, Nepal, Tajikistan, or Somalia. So, the system is highly heterogenic.

Table 1
Financial awareness in the world

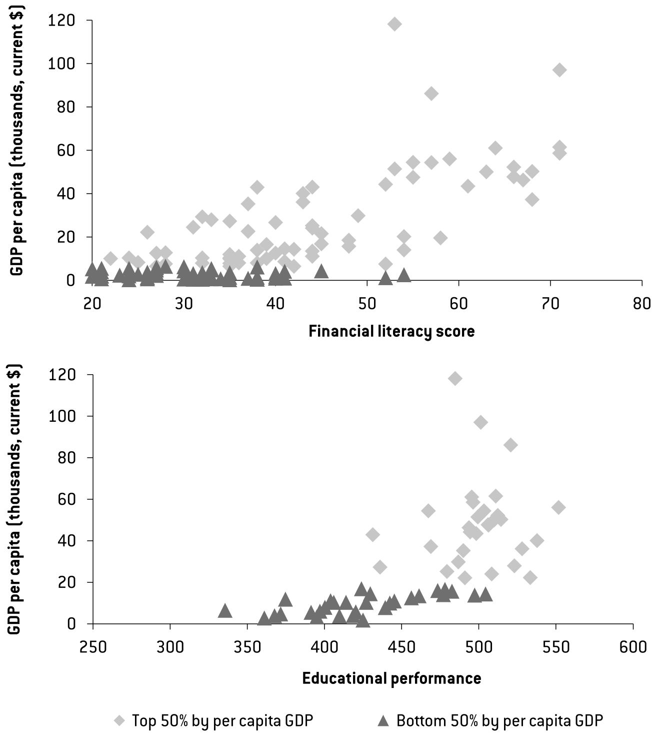
Country / region	Number of countries	Scores achieved
EU	28	50
Industrialised countries other than EU (excluding USA)	8	58
USA	1	57
China	1	28
Asia (excluding China)	12	32
Africa	35	33
CIS region	12	30
Latin America and the Caribbean region	19	29

Source: Batsaikhan–Demertzis (2018)

The findings of the surveys reveal important relationships and factors. One of them worth mentioning is there is a clear relationship between economic development expressed in GDP per capita and financial culture, but the relationship is more characteristic in the industrialised countries than in the developing and emerging countries. The surveys by Standard & Poor's also make it clear that financial skills, unlike mathematical knowledge, is the requisite of "rich" countries. (While mathematical skills are often outstanding in developing and emerging countries such as India or China, there is room for improvement in the field of their financial literacy.) GDP per capita is strongly related to the scores of financial skills in the industrialised countries, while co-movement with economic growth is less obvious for the lower 50 percent (Batsaikhan–Demertzis, 2018).

It is obvious financial skills become increasingly important as the economy develops. All that contrasts with general-level education reflecting a relevant and clearly positive relationship with GDP at all levels of development (*Figure 1*).

Figure 1
The relationship between general and financial education with GDP per capita



Source: Batsaikhan–Demertzis (2018)

The main message, naturally, is not that financial awareness should not be raised in less developed countries, but that the rate of return is moderate there. Several studies have proved that raising the general standard of education is the anteroom for effective financial education later. The lesson from the above is that less developed regions outside Europe need to prepare the improvement of financial culture following a consistent scenario, which is typically a lengthy process, while financial culture should be promoted through targeted programmes in Europe.

Research findings on financial awareness in the European Union are of a comparable magnitude to the similar indicators in the USA. It should be noted, however, there are similarities behind the total indicator as people in low-income groups, women and lower-qualified respondents reach lower scores than other parts of the population. The indicator measuring financial awareness has a hump-shaped spread among different age groups. Youth below 25 and the elderly above 70 have the lowest scores while people aged 55-65 gave the highest number of correct answer (*Lusardi–Mitchell*, 2011). In general women reach lower scores than men in every country and every age group and they more often answer *I don't know* than men. In contrast, there is no difference between the genders of school-agers' of financial awareness, which confirms the necessity of financial education at an early age (OECD, 2012). We must raise the question at this point why financial culture is so important from the aspect of inclusive growth. Kovács–*Nagy* (2022) are of the opinion that support to obtain financial skills is a means of creating equal chances. In the following part, we are reviewing the significant elements of the European environment.

3 THE RELATIONSHIP BETWEEN FINANCIAL CULTURE AND INCLUSIVE GROWTH IN THE EUROPEAN CONTEXT

Reading the relevant literature makes it clear that a prerequisite of achieving inclusive growth is to let people develop abilities making it easier for them to find their way in a complex financial world. Improved financial awareness is clearly a means for poor social groups at a disadvantage to gain access to the benefits of economic growth easier (Batsaikhan–Demertzis, 2018).

As demonstrated earlier, less qualified, or low-income people reach lower scores than other groups of the population in different surveys measuring financial literacy. Gender and regional differences can also be identified. As for the latter, country people regularly reach lower scores then city dwellers. In the US, there is a certain racial segregation as well since Caucasians and citizens of Asian descent frequently perform better than Afro-Americans or Latinos. In Europe, schoolchildren from immigrant families commonly underperform their native classmates. Poverty, social exclusion, inequality, and social mobility are the key call words of inclusive growth, so we must keep that in mind when discussing financial culture and economic growth in a European context.

The indicators of inequality and financial awareness in EU countries reflect a clear, statistically measurable connection. The relationship is obvious: the rate of asset or income concentration is typically lower in the countries with better indicators measuring financial awareness (Batsaikhan–Demertzis, 2018). The relevant countries are Sweden, Denmark, the Netherlands, and France. Lower indicators accompany higher inequality: Romania, Portugal, Bulgaria, and Cyprus. So, the relationship of the two factors is inverse. Lusardi et al. (2017) proved in their study that financial literacy can explain 30-40% of inequalities of income. *Phelps (2017)* underlined that higher level of financial literacy clearly generates growth. Bearing in mind the above, European countries recognised the opportunities offered by spreading financial culture and implement different programmes and initiatives to use their growth-generating effects.

4 HOW IS FINANCIAL CULTURE DISSEMINATED IN EUROPE?

The European Banking Federation found in their November 2020 Report that 35 European countries took part in the European financial literacy movement, and about 125 different initiatives existed to popularise financial education and improve financial awareness in Europe. Participating countries were making efforts to connect the public and private sectors to underline the importance of the topic (EBF, 2020).

Spectacular initiatives have been born. Among others, national banking associations endeavour to launch European programmes on their own or in collaboration. Targeting teachers, schoolchildren, or pensioners online and with leaflets is most frequent, but other additional awareness-raising initiatives are also routinely used. Online solutions and applications are offered, which are used to target those most open to learning. Next, we present the example of five countries.

4.1 Finland

Financial education is mandatory in Finland, but financial knowledge transfer is integrated into other school subjects. The Finnish central bank has developed a national strategy of financial education, but it has not been implemented yet. However, the cooperation of private and government actors is spectacular and has perspective. As a result, programmes have evolved such as *Economic Guru (Talousguru)* or *Zaldo* (EBF, 2020).

According to the initiative *Finance Finland* (Finanssiala, FFI), an effective management of personal finances is of key importance for all Finns. The FFI strive to be an umbrella organisation for the finance sector including banks, insurance companies, brokers, and asset management funds. Approximately twenty-five thousand Finns receive financial education linked to the FFI every year. Obtaining financial literacy is mandatory, as personal finances are taught at elementary schools integrated into social studies, home economics and mathematics. The state provides teaching materials and training programmes for students up to the age of 18. The objective is clear: individuals must be prepared for managing their finances and the related risks on their own.

As pointed out earlier, Economic Guru and Zaldo are the two key programmes launched by the organisation. Zaldo offers an innovative, playful environment targeting students of 10-16 years of age. The game also provides options for tests, and the winners can represent Finland in the finals of the European Money Quiz. Economic Guru is an annual competition for the higher classes of high schools launched in 1997. It is unique because high performers will be accepted for economic programmes at Finnish universities without entrance examinations. Approximately one thousand students take part in the competition every year. It should be noted that the series of competitions were launched because of the experience of recession at the beginning of the 1990s and the widespread anxiety about the general standard of financial literacy in the country.

Getting to know the economy is a series of seminars for teachers of social sciences engaged in teaching financial skills. Three hundred teachers participate in the programme.

In addition, the FFI held one hundred insurance-related events in 2019 and 50 in 2020 that reached about 2,200 Finnish youth. The objective of the programmes was to present private and government insurance schemes. Side by side with the institutions mentioned, Finnish banks have their own initiatives linked to other players (*Junior Achievement Finland and Economy and Youth*). Some banks have created major programme series and increased the available sources. The Bank of Finland has been the national entity responsible for financial education since 2020. In addition, it supervises the evolution of the national strategy. The Ministry of Education and the Finnish National Agency for Education are responsible for financial education in schools (EBF, 2020).

4.2 Germany

Financial education is mandatory in three out of the sixteen federal states in Germany and the Association of German Banks has also listed successful projects. There is no national-level strategy and financial education is decentralised. There is general concern in the country because of the lack of proper financial education at school. In addition, the standard is not satisfactory, so different initiatives are important. In Germany, the Association of German Bankers (AGB) has been responsible for the improvement of financial literacy for about 25 years. Two school competitions, *School banker and Youth and Economy* are its most important programmes. The first was introduced in 1999; it is a sophisticated business game for high school students. Small teams of participants must manage their virtual banks on different markets. They must decide on loan interest rates, issue bonds, open or close down branch offices and set marketing expenditure. Each team (eight hundred teams in every round) plays in 20 markets for three months. The best twenty teams compete against each other in Berlin in March every year.

The winners receive prizes for themselves and for their schools. The competition offers students an insight into how enterprises and banks operate while evaluating their teamwork, initiative, analytic thinking, and communication skills *(EBF, 2020).*

The Association of German Banks and the *Frankfurter Allgemeine Zeitung* coordinate Youth and Economy launched in 2000. Approximately one thousand high school students receive the paper every day to learn how to read and interpret economy-related articles. Then students will write about the companies often appearing in the paper. Next, students' articles are published in the printed version of the paper every month and every quarter. Every September, the three best students and their schools are awarded valuable prizes by the Chairman of the Association of German Banks and the editor-in-chief of *Frankfurter Allgemeine Zeitung* as well as one of the federal ministers or the Chancellor (EBF, 2020). Thanks to committed teachers, all competitions have been successful over the past 20 years. Over 105 thousand students participated from Germany, Austria, and Switzerland. The Association of German Banks has also developed other initiatives that can be integrated into other school subjects (social and political studies, German literature and grammar) beginning from elementary school through to high school. Thus, students who do not receive financial education or have no economics subjects in their curricula can learn how to manage their money in a smart way.

The Association of German Banks coordinates the country's participation in the programme European Money Quiz. *This is Money* is a programme targeting teachers with teaching materials (presentations). The similar *Money at School* also assists teachers with explanatory videos, podcasts, and smart interactive solutions. The related application was downloaded thirty thousand times in 2019 and it received the award Comenius Edu Media. *All around money* is a role play, in which students must find out what their own financial personality is while they get to know about the most important financial issues in a playful way. *Get Ready* is a programme helping students to realise what they want to deal with in the future in terms of finances.

The German Federal Bank as the national regulatory authority is one of the most important partners of the Association of German Banks. The GFD has recently established a money-related museum in Frankfurt. There are different initiatives all over the country directed at financial education and the launch of enterprises, but most of them are of low profile operating regionally. That is why the Federal Ministry of Economics has established the network *Spirit of Entrepreneurship* to coordinate initiatives. The Association of German Banks also supports the initiative *Germany – Land and Ideas,* which launches and implements programmes of financial awareness. The Association closely collaborates with the 170 banks it represents. Of large banks, the Deutsche Bank, Commerzbank and Hypo-Vereinsbank also manage their own programmes of financial education. It is strange that in Germany consumer protection groups strongly object to the banks' campaigns affecting financial awareness. However, the banking sector enjoys widespread support via its educational projects.

4.3 France

Overall, the French are interested in the economy and economic issues, but they do not know much about them. Their financial awareness is quite like that in other European countries (*Arrondel*, 2018). Many respondents had difficulty with basic financial concepts, such as, risk diversification, inflation, or compound interest. Approximately 48% of the respondents gave correct answers about interests and 61% understood the impact of inflation on purchasing power parity. Sixty-seven percent of the respondents could categorise investment risks correctly. Less than a third of the respondents gave correct answers to the three questions used to measure financial awareness. Certain social groups are more vulnerable than others including women, young adults, the elderly, and people with lower qualifications.

There are about twenty-nine million French households possessing significant savings (16% of the gross disposable income). However, most savings are not directed to the most effective channels, as real estate is a key part of savings vehicles. French households' financial savings amount to almost 6% of gross disposable income, which is higher than the Eurozone average (Arrondel et al., 2020).

The welfare state played a central part in the French pension system after WWII. But weak economic growth and unfavourable changes in the age structure burdened the French pay-as-you-go pension system. The number of pensioner households is expected to increase by 60% by 2050 while the increase of the working-age population will only be 10% higher. In addition, debt related to the pension system was EUR 4.2 billion in 2019, which is surprising as several major reforms were implemented lately. Savings rates are historically high in the country, so the most important question is how the components of family portfolios evolve and how much momentum the accumulation of wealth gains. Therefore, financial education must play an important part in planning financial portfolios in terms of risks (Arrondel, 2018).

In France, education to save started in primary schools decades ago, and savings cooperatives distributed picture books encouraging savings to schoolchildren already in the 1960s to help savings at school. Like in other countries, the comprehensive development of financial education started in France as the OECD

Financial Literacy Programme was launched. First, the Public Financial Literacy Institute (IEFP) was set up in 2006, then the Cité de l'Économie et de la Monnaie in 2011 followed by the programme *My money matters* in 2017 operated by the Banque de France. According to the Banque de France (2019), measuring the economic knowledge of the French has been given emphasis for over twenty years, which is confirmed by the surveys often repeated.

In terms of financial education, a national strategy has been defined in France with the financial regulatory authority playing an important part. On the other hand, financial education is not mandatory in schools. The French Banking Federation (FBF) has set its goal of financial education to transfer knowledge linked to the French system. The FBF has drafted an educational programme, *Keys of the Banks,* covering volunteers and welfare workers. Citizens have access to information and tools to understand everyday banking free of charge. This free programme uses simple language and explanations to offer better understanding of banking operations. The initiative was launched in 2015 and helps over four million people every year.

The Banking Federation also launched the initiative *I invite a Banker to my Classroom* in 2015. The programme offers students aged 8-11 opportunities to do primary budgeting through games based on school educational projects and training workshops. As soon as they start earning money, students can immediately use their skills to save and manage their income well. The initiative *I invite a Banker to my Classroom* helped twenty thousand students in 2019. The number of participants is expected to rise in the following years since the Ministry of Education embraced the programme in 2020. The FBF also works on a new initiative of financial education linked to a universal national service also connected to the French National Bank and other stakeholders. The core idea is to offer volunteers aged 16-18 funny employment options in the field of budgeting, salaries, loans, and savings. The modules are organised with active participation by bankers and the events are held every June and July.

The FBF plays an active part in defining the national strategy of financial education launched by the French National Bank, in which the Ministry of Economy and Finance, the Ministry of National Education and Youth, the Ministry of Agriculture and the Ministry of Social Affairs also participate. The part played by the banking sector is important, consumer groups must also cooperate in shaping the initiatives. In France, schools and community bodies welcome the assistance of the banking sector in the field of financial education. Decision makers also support the efforts made by the banking sector.

4.4 The Netherlands

The Netherlands belongs to the group of countries with the highest standard of development in the European Union, which is illustrated with its comprehensive social security and pension system. Although the country could maintain a spectacular growth rate over the past decades and is a poster example of welfare states, about three million of its population belong to financially vulnerable groups (Money Wise, 2019). What is more, as the statistical office of the country confirmed, over 13 percent of Dutch households will/would be unprepared for financial storms (Statistics Netherlands [CBS], 2019). In addition, it is surprising that the number of households struggling with debts that are difficult to manage has sharply increased over the past years. It is particularly characteristic of young families. According to the 2020 report of the Dutch Debt Registration Center (BKR), one in every seven individual has financial problems and those individuals are typically below 24 years of age. Due to digitisation and other trends, financial markets have become much more sophisticated while individuals have broad discretion of managing their financial affairs. An example is the measure of the Dutch government raising retirement age to 67 years in 2015 with effect from 2021 and fixing its changes to life expectancy. It implies individuals must decide themselves how much to put aside if they want to retire earlier. In addition, other measures were also introduced, which clearly suggests Dutch people must monitor their finances closely.

In the field of financial awareness, one can point out the Household Survey by the Dutch National Bank in 2010, where almost 45 percent of respondents gave correct answers to the three big questions of financial awareness. Lusardi and Mitchell (2014), however, pointed out that German (53.2%) and Swiss (50.1%) scores were even higher. The survey was repeated in 2015. Then, 47.2% of the respondents replied correctly, which reflects some improvement. According to the OECD 2016 survey, the Netherlands reached 13.4 out of 21 scores, which was higher than the average for the thirty countries surveyed at that time, but lower than the OECD average. The Standard & Poor's Global Financial Literacy Survey covers more than 140 countries. Five questions are asked related to risk diversification, basic computational skills, inflation, and compound interest. The Netherlands is among the countries with the highest financial literacy in the survey, as 66% of respondents could be deemed financially literate (Klapper et al, 2015). The surveys suggest the Dutch perform quite well in terms of financial literacy. As for young people, their financial literacy is the same as that of the total population, however, one out of five students do not have the basic skills to make everyday financial decisions. In addition, socially or economically underprivileged young respondents were twice as likely to reach lower indicators of financial literacy than their peers in a better situation (OECD, 2017).

The first national strategy targeting the improvement of financial culture was launched in the Netherlands in 2008 and further developed in 2014 and 2019. Its official name is the *National Strategy for Financial Education*. So, there is a national strategy of financial education in the Netherlands characterised by the smooth collaboration of private and public actors. Dealing with finances is key for teenagers, as many high school students take part-time jobs and start earning money. Still, teaching finance-related subjects is not mandatory yet. The Dutch Banking Association (DBA) pays special attention to financial education. Its key components are programmes of financial literacy targeting children and youth. The objective of DBA is to endow young people with financial skills. The DBA is a major participant in public and private initiatives of financial education programmes targeting all age groups as well as the vulnerable groups (Arrondel et al., 2020).

The Dutch Banking Association has been arranging the programme *Bank in the Classroom,* which is an educational programme for primary school students. There is an exciting Cash Quiz followed by a money-related game every year. Bank staff volunteer as quizmasters. The Dutch *Money Week* and *Bank in the Classroom* have been arranged online since 2021 because of the Covid-19 epidemic. The DBA has also launched other educational programmes. *Money Type Test, Me and my Money* are available for high schools. *How to earn money* targets technical schools. One should note in addition that the DBA also takes part in the European Money Quiz programme and approximately two hundred thousand young people participated in educational projects launched by the banking association in 2019.

The initiative *Money Wise* is the best example of the collaboration of public agents and industries in the Netherlands. Her Royal Highness Queen *Máxima* takes a lion's share in the development of financial skills, as she is the honorary president of the Money Wise platform. Commercial banks take part in financial education programmes, in addition, they also launch their projects of financial education. They support programmes for youth, they assist in budgeting and provide financial information for the public at large.

The Netherlands have clearly set a good example of collaboration between public and private actors which is coordinated by the Dutch Ministry of Finance. Like in Hungary, several organisations participate in improving financial awareness. The first of them was the *National Institute for Family Finance Information* (NIBUD), an independent fund, striving to offer households financial information and advice. In addition, it aids experts dealing with consumers' financial issues (banks, financial service providers and teachers). The NIBUD helps through research, advice, reference data, calculation tools, education, and teaching aids. The Dutch Ministry of Finance launched the Money Wise Platform in 2006 aiming to improve citizens' financial fitness. At present a key component of financial education is to prepare households particularly the most vulnerable groups how to manage unforeseen situations (loss of job, illness) to mitigate their financial vulnerability. Another emphasis in the initiative Money Wise is that the development of financial skills started in childhood should be continued and those skills should become an organic part of school programmes at every level of education. Financial institutions such as banks, insurance companies or pension funds educate their clients to promote they can make prudent financial decisions. For instance, one of the largest Dutch banks ING launched the initiative *Think Forward* to understand the mechanisms behind financial decisions and to use that knowledge to develop tools assisting people in their financial decisions. There is no doubt many initiatives were introduced in the Netherlands to increase financial awareness, but there is still room for development.

It should be noted however, that finance is an optional school subject taught linked to economics, mathematics, or social sciences. Learning financial skills is expected to become mandatory beginning from the 2023/2024 academic year.

4.5 Switzerland

In his paper Lusardi (2019) points out the standard of financial literacy is quite high in Switzerland of a population of eight million just as in Germany and Austria. However, it can only be regarded a front-runner in a lower class, as only about half of the respondents could give a correct answer to the famous three questions of financial literacy. In addition, Switzerland matches the global pattern, i.e., the degree of financial literacy is heterogenous regarding the different social groups. The indicators are low in the case of low-income and less qualified households and families of an immigrant background who do not speak German or French as their first language. Women also reach lower scores as a rule. With respect to the indebtedness of young adults and schoolchildren, one can see the country fails to perform better than the average compared to other age groups or other countries (Arrondel et al., 2020).

As seen earlier, many countries have drawn up national strategies for financial education to ensure its harmonisation and coordination. In contrast to international processes, those in Switzerland are different as they are fully decentralised. Although there is a growing number of private and public actors offering educational programmes on finance for schools or for the public at large, there is no national strategy or any delegated authority to manage basic financial education in Switzerland. Except for *The franc in your pocket,* few widescale surveys, school pilots or campaigns exist. Switzerland is not a participant in the volunteer supplementary part of the PISA survey which was launched in 2012 to measure financial literacy.

In a federal, multi-lingual democratic country such as Switzerland, a nationwide top-down strategy can be the right way, in which proper political autonomy is present at regional and local level. In Switzerland, just as in other countries, financial education should play an important part, since funding pension schemes is a growing challenge given the prevalent unfavourable demographic processes. The long-term effect of negative or low interest rates and the consequent threat of the high rate of indebtedness are also cause for concern. The impact of modern technologies on financial markets, financial products, and services as well as consumers' behaviour is another major issue. Like in other countries, the Covid-19 pandemic drew attention to the high importance of financial awareness in times of financial crises particularly in the case of part-time employees and low-income groups (Arrondel et al., 2020).

Although there is no nationwide financial education strategy in Switzerland, the relevant school programmes cover financial education quite well. Issues of personal finances are not necessarily in focus, but they are part of a widely accepted project of economic education. Financial issues are discussed as part of economics, home economics and the labour market. They are mandatory in regional school curricula (Lehrplan 21 in German-speaking cantons, D'études roman in French areas and Piano di studio in canton Ticino.) Lehrplan 21 is in the core of economics, home economics and labour market subjects as mentioned above.

The Swiss National Bank (SNB) has been the only national authority to date that provides systematic support to financial education in the country. It is managed under the educational programme Iconomix targeting teachers of economics and social sciences, but the subject, which is optional, can also be used by other teachers or linked to other subjects. Its goal is to improve the economic and financial skills of young people and teenagers. Financial education has been in focus ever since the initiative was launched in 2007. Half of the approximately one hundred teaching modules available currently are directly linked to financial culture. Side by side with the initiative of the National Bank, many public and private financial players offer programmes and services promoting financial literacy. They include local and regional debt management and budgeting advisory centres with their umbrella organisations. The city of Zurich has an indebtedness prevention centre and non-profit organisation such as Caritas, Pro Juventute and Verein Jugendlohn are also active. The profit-oriented organisations of the financial sector also offer financial literacy. Of them, the state-owned Postfinance and Cantonal Banks are currently the most active. The above initiatives illustrate that Switzerland would need closer national coordination and cooperation following the example of other European countries. There have been efforts made recently to launch Swiss Money Week (SWW) aligned with Global Money Week. The goal expressed by the players is to spread and disseminate financial literacy among the Swiss population (Arrondel et al., 2020).

5 SUMMARY AND OPPORTUNITIES; PROPOSALS TO FURTHER IMPROVE FINANCIAL AWARENESS

First, the paper intended to call attention to the achievements of financial education globally and in different regions, which was put into focus at the beginning of the third Millenia. The comparison has proved that Europe is among the leading global regions in terms of financial awareness. It justifies summarising the initiatives and best practices of some countries. As we have briefly presented, there is a close connection between the degree of financial literacy and economic growth. There is no nationwide educational strategy in Finland, Germany, France, the Netherlands, and Switzerland, but one can see the promotion of financial knowledge is not the responsibility of a sole player.

The European examples illustrate the improvement of financial literacy is a clear goal everywhere; market and government actors collaborate in most cases to achieve it. A paper by *Terták* (2022) confirms all this, as he reiterates financial education is unavoidable to improve consumers' financial security, while raising excessive expectations of financial education might be unnecessary. He argues one should consider that education generates individually different knowledge levels. It is also clear that most countries do not have mandatory financial education. Instead, financial subjects are integrated into different relevant subjects. Considering that and to achieve higher effectiveness, one can propose that teaching subjects related to the promotion of financial literacy should become mandatory, which would improve general financial literacy. In addition, one can see that teaching financial skills often starts in the lower grades of primary schools and continues in high school too. Thus, getting to know about finances starts in the most responsive age group and is continued under a deliberate strategy.

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TRAININGS IN FINANCIAL CULTURE

A comparative analysis (2016–2020)

Erzsébet Németh[1]

ABSTRACT

The aim of the research is to assess whether any progress has been made in developing financial awareness in Hungary since 2016. The study presents the changes in the state's role in the development of financial culture, in the framework of a questionnaire survey, it examines what kind of organisations provide trainings in the form of non-public education, to whom such programmes are provided and what syllabus they are based on, as well as it evaluates the quality assurance of the programmes. Between 2016 and 2020, there was an increasing focus on developing financial culture, while most courses are still aimed at the most accessible group of school-aged children. The National Core Curriculum identified economic and financial education as a goal for schools. However, apart from secondary vocational schools, other schools do not teach such subjects as compulsory subjects. In 2017, the Government adopted a strategy to improve the financial awareness of the population, and the first accredited financial literacy textbooks were published. The results of the non-public educational organisations show that the number of training programmes and participants has tripled. The average duration of trainings has become longer. In particular, multi-day courses provided mainly to adults have appeared. The focus of knowledge transfer continues to be on individual savings and financial awareness, financial self-knowledge, attitude and behaviour. Four-fifths of the courses have a curriculum and a syllabus, but most of them are not accredited and are not publicly available. About 40% of the courses measure effectiveness.

JEL codes: A13, D03, D12, I22

Keywords: financial literacy, trainings, comparative analysis

1 *Erzsébet Németh*, University Professor, Budapest Metropolitan University, Director, State Audit Office of Hungary. E-mail: enemeth@metropolitan.hu.

1 INTRODUCTION: AIM, RELEVANCE AND KEY QUESTIONS OF THE RESEARCH

Following the outbreak of the financial crisis in 2008, most countries realised that the development and financing of financial literacy must be achieved through the coordinated, transparent, quality-assured activities of the government, the national bank and the public sector organizations (*Jakovác*, 2016). The development of a financial literacy is in the common interest of economic actors, the implementation of which requires the cooperation of the state, credit institutions and enterprises.

In 2016, the State Audit Office of Hungary (ÁSZ) assessed the situation of initiatives related to financial literacy in Hungary for the first time. According to the results of the aforementioned survey, a significant proportion of students in public education received training aimed at developing financial literacy, typically provided by non-profit organizations, but these courses were very short, lasted only for a few hours. Their effectiveness was not backtested - and, failing this, the trainings were not properly adapted. There was also a risk that the syllabuses and curricula of the trainings were typically not available or not publicly available (*Németh*, 2017).

Since the research conducted in 2016, the infrastructure of financial literacy in Hungary has advanced in many respects. A number of state initiatives have been launched and implemented. In 2017, the Government adopted a strategy to improve the financial awareness of the population. The first accredited financial literacy textbook was published, followed by several new textbooks, workbooks and electronic materials. By 2020, a report presenting the results of the action plan for the first two years (2018–2019) of the seven-year strategy was also completed.

Based on the above, it is reasonable for the ÁSZ to re-assess the current situation of financial literacy development. The aim of our research is to provide a comprehensive picture of the training infrastructures supporting the situation of public finances in Hungary. We intend to assess whether any progress has been made in the development of financial awareness, in the teaching of financial and economic skills, and in the related training in Hungary since 2016. Our research also focuses on the involvement of financially vulnerable groups, as well as the inclusion of entrepreneurial skills and a retirement strategy in the individual courses.

2 STATE INVOLVEMENT IN THE DEVELOPMENT OF FINANCIAL LITERACY

2.1 Setting up the strategic foundations

Since 2017, Hungary has had a national strategy to improve the financial awareness of the population. The government decided to create the strategy in the fall of 2016, then a document entitled *"Be smart with money!"* was adopted in December 2017[2].

The target group of the strategy is the general population; however, in the first period (based on the action plan for 2018–2019) the school-age group is given emphasis. The successive action programmes, which cover a period of 7 years, from 2017 to 2023, are broken down into specific tasks, sub-tasks, deadlines, target groups and those responsible for their implementation. Relevant indicators suitable for back-testing the achieved results at regular intervals have been assigned to each target. The implementation of the strategy was expected to improve the level of financial awareness of the population and increase their responsibility in the field of managing their finances. In-depth financial knowledge can help the public make more informed and confident financial decisions. Raising the level of the financial awareness of the population will ensure long-term economic and social stability (Strategy, 2017).

The first action plan contains the seven main goals set out in the strategy, in particular, the foundation of financial awareness, the steps and tasks related to the creation, strengthening and dissemination of real financial education within the public education system. The measures were determined on the basis of the research results of a questionnaire-based OECD survey conducted in 2015. According to the action plan, the development of financial knowledge and behaviour, i.e. awareness, is based on school education as part of the national core curriculum. An important step towards achieving the goals was that in the autumn of 2017, the teaching of financial and entrepreneurial skills began in secondary vocational schools.

2.1.1 Establishment of the legal framework

Prior to 2016, the state already established a legal framework to ensure the organization and transparency of financial literacy and financial awareness development.

2 Government Decree No. 1919/2017. (XII. 8.) on the adoption of a strategy aimed at the development of the financial awareness of the population.

- Pursuant to the provisions of the Consumer Protection Act, a commissioner for financial rights has been active since 2012 in order to promote the enforcement of consumer rights related to financial services and to develop financial literacy[3].
- Pursuant to the act defining its operation and activities[4], the National Bank of Hungary has been participating in the strengthening and dissemination of financial literacy since 2013. Furthermore, the National Bank of Hungary shall spend a part of its revenue arising from fines on the strengthening and dissemination of financial literacy, the development of financial awareness and the promotion of the aforementioned goals, in particular those related to the development of education and research infrastructure.
- A key area of the social responsibility of the State Audit Office of Hungary is the development of financial literacy, which was recognized and supported by a resolution of the National Assembly in 2013.[5]

Since 2017, the Secretary of State for Finance of the Ministry of Finance has been in charge of the development of government policy related to the strengthening of financial literacy.[6]

The government decree[7] introducing the National Core Curriculum has already prescribed as of 2013 that *"The growing generation shall have usable knowledge about the economic and financial institutions, as well as the processes that determine the life of the world economy, the national economy, businesses and households"*.

The legislation specified economic and financial education among the key competencies and areas to be developed, and among the educational goals. The decree set out to "make students aware of their own responsibility in the field of value-creating work, rational management of goods, as well as in the world of money and consumption." However, in addition to emphasizing the importance of teaching the subject, it did not deal comprehensively with economic and financial

3 In accordance with Section 41 of Act CLV of 1997 on Consumer Protection.

4 The provision is specified in Subsection (3) of Section 44 and in Point c) of Subsection (3) of Section 170 of Act CXXXIX of 2013 on the National Bank of Hungary.

5 Based on Resolution No. 41/2014. (XI. 13.) of the National Assembly on the adoption of the Summary Report on the Professional Activity and Operation of the State Audit Office of Hungary in 2013.

6 The task is specified in Point s) of Subsection (1) of Section 23 of the Government Regulation 1/2015 (I. 21.) of the Minister of the National Economy on rules and operation of the Ministry of the National Economy, effective as of 12 January 2017.

7 Government Decree No. 110/2010. (VI. 4.) on the issue, introduction and application of the National Core Curriculum

education in terms of the individual fields of education or among the compulsory framework curricula (Németh, 2017).

The government decision to adopt the Strategy in December 2017[8] called on the Minister of Human Resources to take into account the objectives of the strategy when developing a unified, scientifically based professional proposal for the reform of the National Core Curriculum, and to enforce them in a coherent and modern curriculum system, realising and introducing education that provides usable economic and financial knowledge appropriate to the pupils' prior knowledge. However, the amendments[9] to the government decree did not address the issue of economic and financial education until February 2020.

In the framework of the February 2020 amendments[10], among other things, the compulsory number of basic hours and the freely planned number of hours for both primary and secondary education were determined for each field of study and education. According to the regulation, subjects which have a framework curriculum published by the minister for education, such as finances and entrepreneurship, may be part of the freely planned classes. Two classes per week shall be freely planned in grades 1–8 of primary education and in grades 9–10 of secondary education, while four classes per week for grade 11, and five classes per week for grade 12. However, this freely designable lesson frame shall be used for several subjects by educational institutions: e.g. for defence studies, or, in grades 5–8, for teaching the compulsory subject called "our homeland and its people" one hour a week, as well as for increasing the teaching of the subjects included in the basic timetable according to the local curriculum. Although the action plan states that a general financial literacy should be established at school age and that, in principle, school-based financial education can guarantee that the next generation acquires practical financial knowledge and skills, financial education is not compulsory in public education institutions other than in secondary vocational schools. No data are available on the actual number of children studying financial and economic subjects as electives in public education.

In the course of the amendment of the legislation, the elements of economic and financial education were defined within certain fields of education as a comprehensive goal and as a result of development and learning, which serve to further develop financial awareness and to understand economic and financial sustain-

8 The call is laid down in Point 2 of Government Decree No. 1919/2017. (XII. 8.) on the adoption of a strategy aimed at the development of the financial awareness of the population.

9 The government decree was amended four times before 2020, most recently with effect from 1 January 2018.

10 Government Decree No. 5/2020 (I. 31.) on the amendment of Government Decree No. 110/2012. (VI. 4.) on the issue, introduction and application of the National Core Curriculum

ability. Such fields of education include mathematics, history and civics, geography, technics and design.

Under the amendment, schools had to review their pedagogical programme by the end of April 2020. The revised pedagogical programme can be applied in teaching in a linear upward system as of the school year 2020/2021 (firstly in the first, fifth and ninth grades).

2.1.2 Accredited curricula

There has been significant progress in public education in terms of accredited curricula and their availability. As a result of a development of the Money Compass Foundation, students can meet the Foundation's materials (textbooks, workbooks, examples library, etc.)[11] supporting the development of financial awareness in all grades, from grade 3 of the primary school to graduation. In 2019, the Money Compass Foundation, with the support of the National Bank of Hungary, sent a total of 385,000 copies of the *History and Finances* Workbook, which covers the economic and financial topics of the school leaving examination in history, and the example collection entitled *Calculate with Investments*, which can be part of the financial education integrated in mathematics classes. In 2020, all students starting the 9th grade are to receive the math example collection free of charge, while twelfth graders and their teachers preparing for graduation are to receive the history workbook. In addition, in 2020 the schools ordered 50,000 copies of the Foundation's free, accredited books, the textbook and workbook *Missions in the World of Money* for primary school students, as well as *A Compass for Finances*, a financial education textbook for secondary school students. From September 2020, the environment and math workbooks used in grades 3 and 4 have also included financial knowledge that is understandable to pupils. The primary schools ordered a total of 220,000 copies of math and environment workbooks for grades 3-8 for the school year of 2020/2021.

2.2 A professional literature review

2.2.1 The concept of financial literacy

The articles and publications on the subject, as well as the Strategy, are based on the definition of the Organization for Economic Co-operation and Development (OECD), according to which *"financial awareness is the ability to increase, monitor and use financial resources efficiently in order to contribute to the well-being*

11 https://penziranytu.hu/ingyenes-tankonyvvel-segiti-penzugyi-nevelest-az-iskolakban-penziranytu-alapitvany-0.

and economic security of individuals, their families and their businesses" (Strategy, 2017; *Kovács–Tertàk,* 2019).

According to the State Audit Office of Hungary and its partners, financial literacy is *"a level of financial knowledge and skills that enables individuals to identify the basic financial information needed to make informed and prudent decisions, interpret the acquired information and make decisions based on it, considering future financial and other consequences."*

Amagir et al. (2020) identified three components of financial literacy:

1. Knowledge and discretion. Being able to identify, which financial behaviour is needed, based on the appropriate information.
2. Abilities and behaviour. Possessing appropriate operational skills and abilities to change behaviour.
3. Attitude and self-confidence. Applying the acquired knowledge outside familiar situations, motivation and self-efficacy.

Béres and *Huzdik* (2012) define financial literacy not as a term but primarily as a concept that includes financial know-how, knowledge, proficiency and experience in finances, financial skills and awareness which influence making financial decisions.

2.2.2 Assessment and evaluation of knowledge transfer

Pieces of research on the purpose, participants, quality and effectiveness of financial education courses are of primary importance regarding our topic. Among international surveys, the 2013 research on financial literacy initiatives, which supported the Australian government's strategy-making, is outstanding. The methodology and questions of this survey were also utilized by the research conducted by the State Audit Office of Hungary[12].

Czeglédi et al. (2016) examined the means of knowledge transfer related to entrepreneurship in Hungarian higher education. In the study of sample curricula, a total of 101 subjects which were in some way related to entrepreneurial knowledge were identified.

12 Australian Securities and Investments Commission (2013): National Financial Literacy Stocktake Survey 2013, http://www.financialliteracy.gov.au/media/528627/report-375_nfls-stocktake-survey-2013.pdf.

2.2.3 The impact of the courses on financial literacy

One of the basic questions of research examining trainings that develop financial literacy is whether the training programmes are effective and have a demonstrable effect on the financial literacy and behaviour of individuals and groups. Maybe formal education is much less decisive than we think and the influence of demographic conditions and social situation is more decisive? In view of the above, is it worth investing significant social resources in courses which shape financial literacy?

The results of international and national research show an extremely diverse picture.

Several studies establish a strong relationship between the level of financial literacy, participation in prior financial education, and financial behaviour. Those who received financial training during their studies are more likely to save, plan for retirement, and ask for less money to borrow (*Bernheim*, *Garrett* and *Maki*, 2001; Bernheim and Garrett, 2003; *Lusardi* and *Mitchell*, 2006; 2007a; *Hilgert*, *Hogarth* and *Beverly*, 2003; *Stango* and *Zinman*, 2007; *Van Rooij* et al., 2011).

The results of the ÁSZ's research on financial literacy of students in higher education (Béres et al., 2013; Luksander et al. 2014) show that the financial literacy of those who have received financial and economic education in secondary school is not more developed than that of those who have not received such education. At the same time, a number of socio-demographic factors (age, sex, level and field of education, and the students' life situation) are significantly related to the level of financial literacy. This highlights the low effectiveness of high school education. All of this is in line with the American experience (Willis, 2009).

A study by Amagir et al. (2018) synthesized research findings on the relationship between financial education and financial behaviour. According to the authors, the research data show that school-based financial education has the potential to improve the financial knowledge and attitude of children and adolescents. Research on the financial intentions of young people based on self-monitoring and self-reporting of financial behaviour shows the positive effects of training. However, research examining the relationship between actual financial behaviour and education is less common, and research using such methods shows little of the positive impact of financial education.

Carlson (2020) examined the relationship between actual financial knowledge and financial training provided by public education among Americans aged 18–24 years. According to his results, demographic background factors (ethnicity, sex) were more important in terms of financial literacy than whether they received financial education in high school. The study concludes that out-of-classroom demographic factors need to be considered for the provision of effective financial education.

Similar conclusions were drawn by Van Rooij et al. (2011). With regard to the relationship between financial literacy and social background variables, the study pointed out that since most research suggests that the level of financial literacy is highly dependent on sex, age and education, those financial literacy courses which target certain groups of the population individually and take into account their special needs may be effective.

The aforementioned pieces of research highlight that financial education is not always effective, so examining effectiveness or the determinants thereof is of paramount importance.

3 METHODS

3.1 Creating the questionnaire

The questionnaire consists of two thematic units (parts *A* and *B*) and 27 questions. Part *A* asks about the data of the organization or individual that provides the training and the number of the training programme (4 questions). Part *B* examines factors related to the training, such as e.g. the purpose, target group, funding, duration, topics, methods, syllabus, curriculum, teachers, the evaluation of the effectiveness of the training and the organization of the competition (23 questions). The respondents completed the questionnaire for each training programme. They had the opportunity to present a maximum of 5 training programmes. Programmes with a separate syllabus had to be considered as different courses. The questionnaire was completed in the summer of 2020.

3.2 Processing of questionnaires, examination of research questions

Processing and analysis were performed using the programmes IBM SPSS Statistics and MS Excel. Descriptive and inferential statistical methods were used in the analysis, e.g. distribution, correlation calculation. A significance level of 5% was chosen for the evaluation of the questionnaires in each case.

3.3 Respondents, sample

When defining the database, our goal was to fully cover those involved in the development of financial literacy. To this end, we created a 110-item database, on the one hand, from the organizations included in the database compiled for the previous financial literacy development research in 2016, the institutions on the National Bank of Hungary's list of financial institutions, the organizations supported by the National Bank of Hungary and the Ministry of Finance through tenders for the development of financial literacy, on the other hand, based on publicly available information on the Internet and information received from the ÁSZ's partners taking part in financial literacy cooperation. The developed database of respondents included 47 organizations which were not in the scope of the 2016 research.

Out of the 110 organizations surveyed, 63 completed the questionnaire. Out of the 63 respondents, 52 answered that they had an activity aimed at developing financial literacy. Such activities could be training programmes, surveys, competitions or other initiatives. Thus, based on the responses received, we processed a total of 122 training programmes.

4 RESULTS

4.1 The volume of training

In the 2016 survey, 35 organizations providing training programmes completed the questionnaire, and, in the 2020 survey, 52 respondents providing training programmes participated, which is an increase of nearly 40%. Four aggregated categories were developed from the respondents. Accordingly, out of the 52 respondents providing a training programme, 10 were identified as organizations with a significant reach, 5 as financial institutions, 29 as non-profit organizations and 8 as other businesses.

- The examination of the sample also outlined a category of respondents in the case of the 2020 survey, which included the most important actors in the development of financial literacy.
- The group of "THOSE WITH A SIGNIFICANT REACH"[13] included respondents, regardless of their organizational form, who reached more than 10,000 people with their programmes.

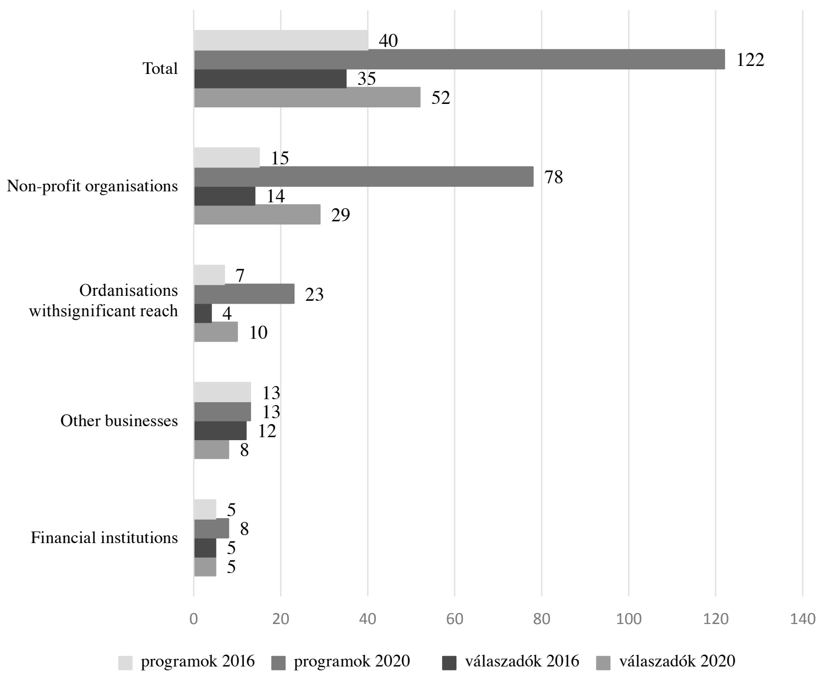
Those reaching less than 10,000 individuals were divided into the following groups.

13 The OTP Fáy Foundation, one of the largest players in the development of the Hungarian financial culture, did not return the questionnaire. As without our data on the activities of the organization, our survey would have been incomplete, we supplemented our data on the training programmes of the OTP Fáy Foundation, on the basis of publicly available information.

- Credit institutions, financial undertakings, payment institutions and their branch offices were included in the category of FINANCIAL INSTITUTIONS.
- NON-PROFIT ORGANIZATIONS consisted of civil and non-profit organizations, budgetary bodies, and church-run institutions.
- Companies and higher education institution(s) were included in the OTHER category.

In nominal terms, the most significant change (increase) occurred in the category of foundations, associations and non-profit organizations, whereas, there was a two-and-a-half-fold increase in the number of the responding organizations with a significant reach, as well. In the case of these organizations, growth is also of particular importance because the number of people reached by them through training also increased significantly (*Figure 1*).

Figure 1
The number of respondents providing training programmes and the sample size per respondent category (2016; 2020)



Source: own editing based on the data of own questionnaire survey

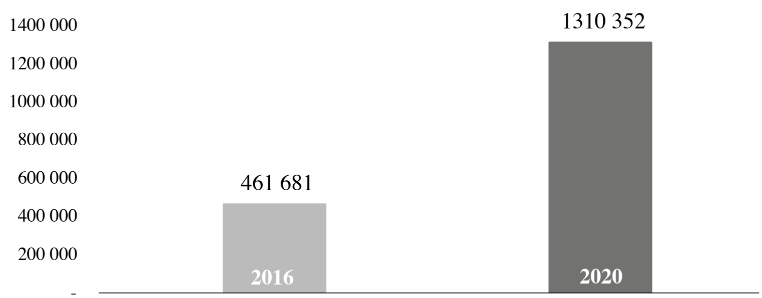
4.1.1 How has the number of training programs changed?

The number of training programmes has also increased significantly. The number of training programmes provided by non-profit organizations was more than five times higher than in the 2016 research, while the number of programmes provided by organisations with a significant reach was more than three times higher than in 2016 (see *Figure 1*).

4.1.2 How did the number of participants in the training change?

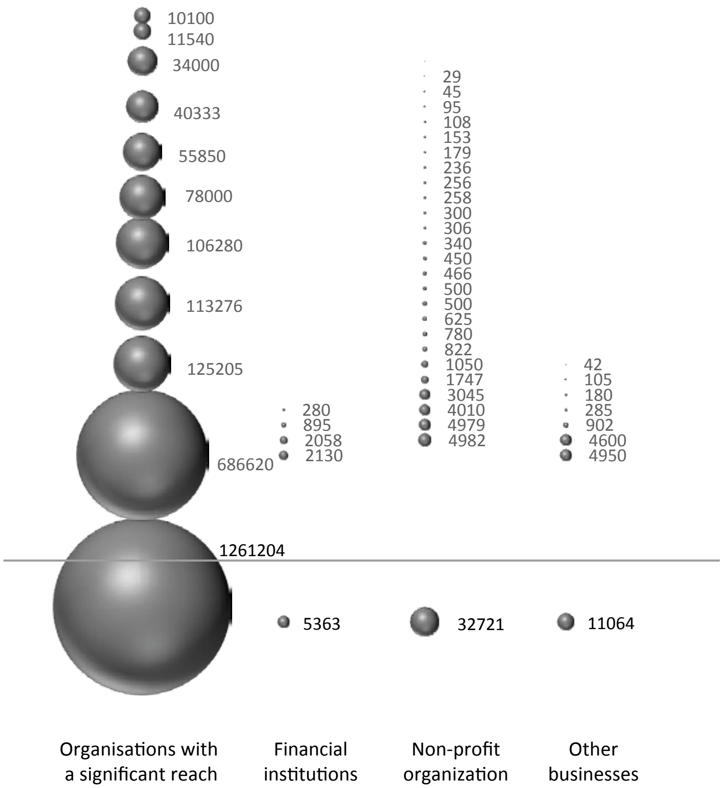
In the questionnaire, the respondents indicated which target groups and how many people they reached with each training. According to the 2020 survey, the training organizations reached about three times more people with their training programmes than the respective respondents in 2016. While according to the 2020 survey, trainings developing financial literacy were held for 1,310,352 people between 2016 and 2019, based on the 2016 survey, 461,681 people were reached by the programmes provided by the respondents between 2012 and 2015 (*Figure 2*).

Figure 2
The number of people reached by the trainings (2016; 2020) (people)



Source: own editing based on the data of own questionnaire survey

Figure 3
The number of people reached by the organisations, organisation types and their trainings (people)



Source: own editing based on the data of own questionnaire survey

The number of people reached by the trainings is significantly higher in the case of organisations with a significant reach than in the case of other training organizations. The 43 financial institutions, non-profit organizations and other enterprises together reached only 59,248 people, which is only 9% of the reach of the 9 organisations with the most significant reaches. The 6 organisations with the most significant reaches were the following:

1. Hungarian Banking Association (686,620 people)[14],
2. PontVelem Nonprofit Kft. (125,205 people);
3. Econventio Roundtable Non-Profit Association (113,276 people);
4. Junior Achievement Hungary Education and Business Organisation Foundation (106,280 people);
5. OTP Fáy András Foundation (78,000 people)
6. National Bank of Hungary (55,850 people)

4.2 Funding of the trainings

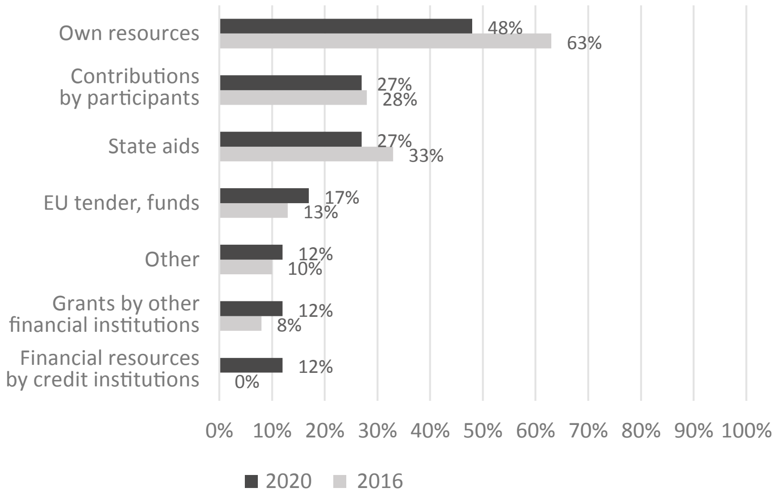
The questionnaire also asked about the sources of funding for the training programmes (own resources, participants' contributions, funds provided by the state or the EU). The respondents could indicate several types of sources in the case of each training. The questionnaire did not examine the proportion and value of sources.

In 2020, 44% of the courses used public money (27% state funding and 17% EU funding). Among the funding sources of the training programmes, own resource was mentioned by the respondents most frequently (48%). In 2016 the order of the sources was similar. Participant contributions appear in barely a third of the trainings, while other sources[15] and funding from other financial institutions were mentioned by almost 20% (*Figure 4*).

14 A programme, which reached a large number of participants, was an event called Money7, which was implemented in cooperation with the institutional and professional partners of the Hungarian Banking Association.

15 In the course of the analysis, some respondents included the aids provided by the National Bank of Hungary through tenders in the category of other sources.

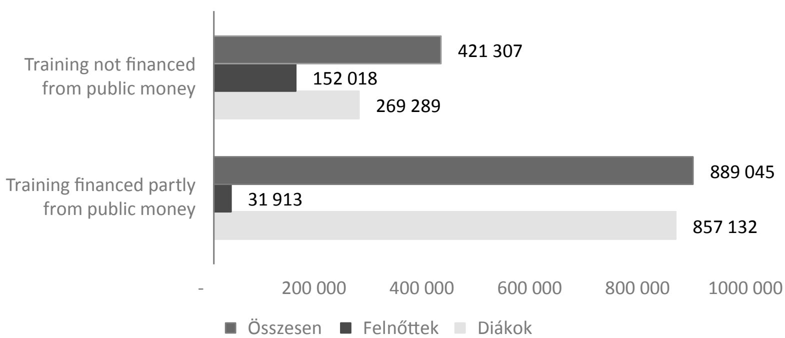
Figure 4
What funding sources were used for the training programmes?



Source: own editing based on the data of own questionnaire survey

We also examined how many participants were reached through the trainings financed from public funds and through those not financed from public funds (participants' contributions, own resources, other sources) (*Figure 5*).

Figure 5
Participants in publicly and non-publicly funded training courses (people)



Source: own editing based on the data of own questionnaire survey

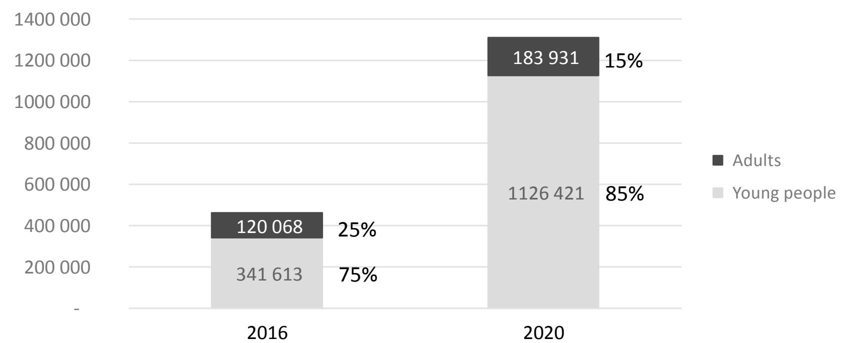
A significant part of the trainings is financed from budgetary, state and EU funds The majority of the participants (mainly young people, school-age children) took part in trainings that were implemented from public funds to some extent. Both the Pearson's chi-squared test and the Fisher's exact test performed confirmed the correlation at a significance level of 5%.[16]

4.3 Who's the target audience of trainings aiming at the development of financial literacy?

4.3.1 Age composition of those qualified

The results of the 2016 survey showed that the majority of the groups targeted by the trainings are young. Respondents indicated whether the participants in the courses studied in the junior or senior section of primary school, secondary school or higher education. Students in public and higher education (most often 6–25 years old) and adults over 25 years of age were considered young age groups.

Figure 6
Number of students in the age groups and percentage of the age groups reached by the trainings (2016, 2020)



Source: own editing based on the data of own questionnaire survey

The percentage of those reached by the trainings was similar to that based on the 2016 data, and the percentage of young people has increased further since then (*Figure 8*). On average, trainings aimed at students in public education reached more than 40,000 people, while trainings aimed exclusively at other groups

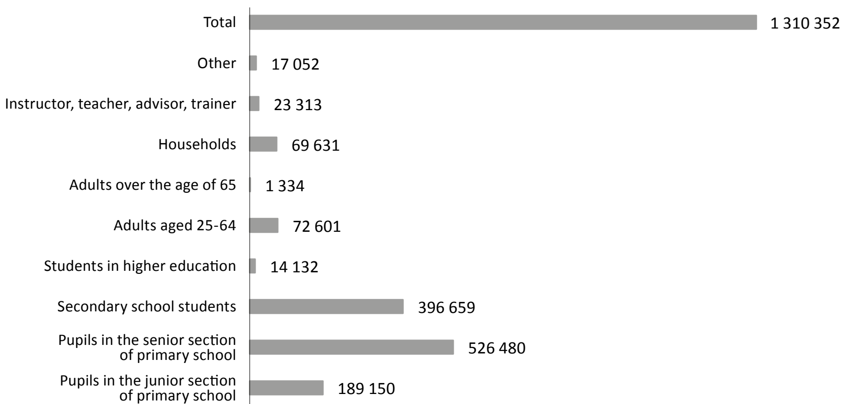
16 The p-value of Pearson's chi-squared test was 0 and the p-value of Fisher's exact test was 0.00000018.

reached an average of 8,600 people.[17] This difference is considered significant when performing analysis of variance (the significance of the test is 0.013), the category means are not the same.

4.3.2 Social representation of the reached groups

To determine the distribution of each target group within the population, we used the data of the Hungarian Central Statistical Office.[18]

Figure 7
Distribution of target groups within the population (people)



	Pupils in the junior section of primary school	Pupils in the senior section of primary school	Secondary school students	Students in higher education	Adults aged 25-64	Adults over the age of 65	Households	Instructor, teacher, advisor, trainer	Other	Total
People reached	14.44%	40.18%	30.27%	1.08%	5.54%	0.10%	5.31%	1.78%	1.30%	100.00%

Source: own editing based on the data of KSH.

Regarding the total population, according to the Hungarian Central Statistical Office's data, young people (6–25 years old) make up less than a quarter of the population aged over 5 years old, and adults (over 25 years old) make up almost 75% of the population. The proportion of students (aged 6–25) among those reached by the training programmes is more than 4 times higher than their proportion in the population, while the proportion of adults in their training programmes is about one-fifth of their proportion in the population (Figure 7). Based on the above, it

17 In this case, we counted a total of 114 trainings, 39 of which had students as a target group. In 8 cases, no data are available. As missing data, they will not be included in the statistics).

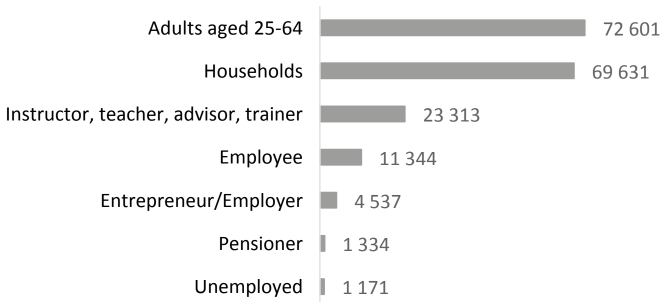
18 https://www.ksh.hu/interaktiv/korfak/terulet.html

can be stated that, similarly to the results of 2016, in addition to the numerical ratio of young people in the population, adults were significantly underrepresented among the participants of the trainings.

4.3.3 Target groups of trainings aimed at adults

The questionnaire also examined the backgrounds, life situations, occupational groups and labour market situations of the adults participating in the trainings. Accordingly, we distinguished: employers, the unemployed, entrepreneurs, pensioners, educators and trainers, as well as households. The participants of the trainings could belong to several groups at the same time, in addition, the respondents could indicate several target groups per training (*Figure 8*).

Figure 8
Individual groups of adults taking part in training (people)



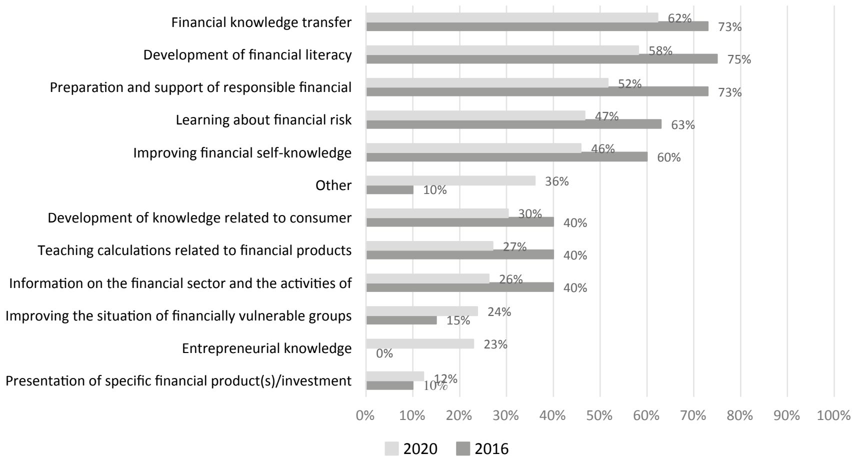
Source: own editing based on the data of own questionnaire survey

Among the target groups of adult education, the adult groups with special educational needs, that is entrepreneurs, pensioners and the unemployed are underrepresented. Compared to this, social groups who are wage and salary earners participate in a higher number and proportion. As in 2016, the target group of educators and trainers is still significant.

4.4 The main objectives and the focus of the trainings

Respondents were given the choice of 12 training objectives, with more than one objective for each training course, and a total of 13 possible training topics were included in the questionnaire.

Figure 9
Objectives of the training programmes (2016, 2020)



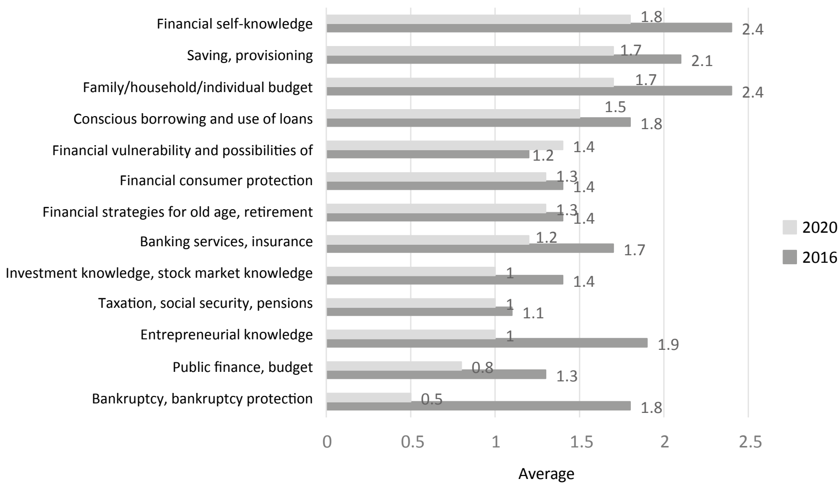
Source: own editing based on the data of own questionnaire survey

Similarly to the 2016 research results, the order of the most typical goals of the training programmes is essentially unchanged. "Financial knowledge transfer", "Development of financial literacy of target groups", "Support of responsible financial decisions", "Learning about financial risks" and "Improving financial self-knowledge" remain the most common training goals. At the same time, the share of these most popular training goals in training decreased[19] slightly compared to 2016, while the proportion of training aimed at "improving the situation of financially vulnerable groups" increased (*Figure 9*).

We also assessed the topics covered by the training programmes and their weight in training. The questionnaire included 13 training topics, and the respondents were able to give four answers ("the topic was not included", "the topic was touched on", "the topic was dealt with moderately" and "the topic was dealt with significantly") regarding the weight of the topics within the training. In order to evaluate the responses, numerical values were assigned to them („the topic was not included" = 0, „the topic was touched on" = 1, „the topic was dealt with moderately" = 2, and „the topic was dealt with significantly" = 3). The ordinal measurement level variable was transformed into a variable measurable with averages, and non-respondents were filtered out in the case of averaging calculations.

19 The 2016 research questionnaire did not include the goal "transfer of entrepreneurial knowledge".

Figure 10
Average weights for the individual topics (2016, 2020)



Source: own editing based on the data of own questionnaire survey

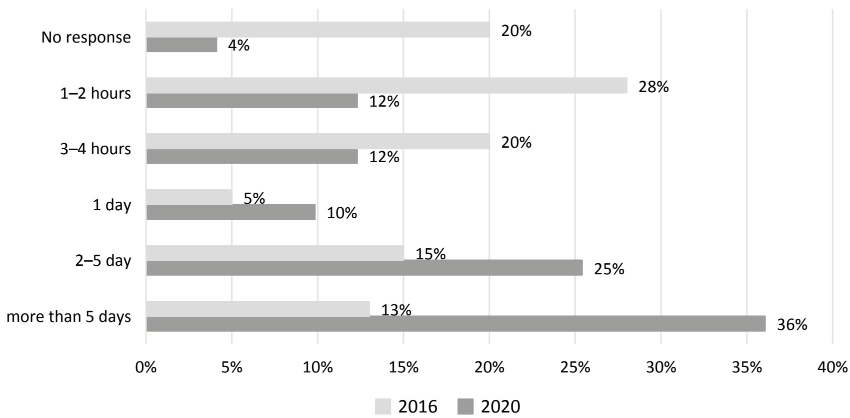
Similarly to the previous survey, financial self-knowledge, saving and budgeting appeared most frequently. Compared to 2016, a significant shift is the fallback of knowledge related to bankruptcy to the background and the decrease in the weight of entrepreneurial knowledge. At the same time, the importance of knowledge relevant to financial vulnerability slightly increased. The order of importance of the weight of the topics also points out that knowledge related to income generation, including investment knowledge, business knowledge, stock market-related information, are still less prominent elements of the trainings (*Figure 10*). The two-sample t-test, at a significance level of 5 percent, confirms that among the training topics, teaching about bankruptcy is in decline, while knowledge about financial vulnerability is given more emphasis.

4.5 Duration of the trainings

4.5.1 How has the duration of the trainings changed?

The research assessed the average duration of the trainings. The results of the research show that, compared to 2016, the proportion of trainings with a duration of 2-5 days and of more than 5 days has increased. Compared to the trainings before 2016, it is clear that longer trainings are more typical (*Figure 11*). Fisher's exact test shows a significant correlation at the 5% significance level.[20]

Figure 11
Distribution of the duration of training programmes in 2016 and 2020



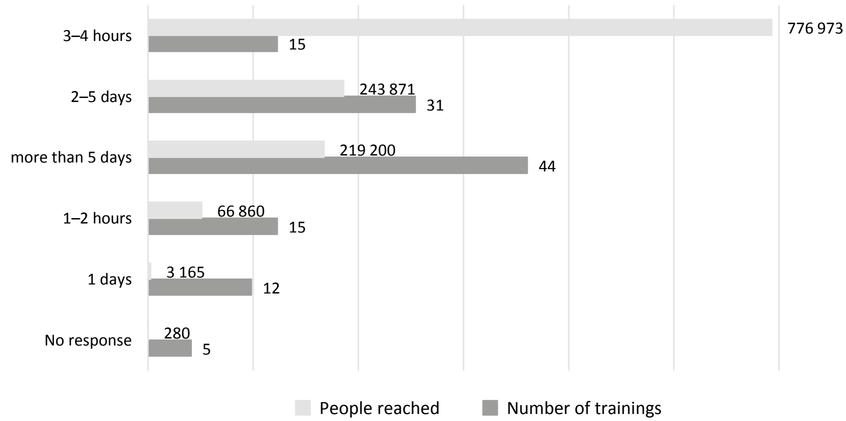
Source: own editing based on the data of own questionnaire survey

4.5.2 How many participants attend the trainings of different duration?

Nearly sixty percent of all trainees participated in 3-4 hour long trainings (*Figure 12*). With trainings lasting for 2–5 days and more than 5 days, 35% of the participants are reached, despite the fact that the number of trainings launched in these categories is more than 60%.

20 The p value of Fischer's exact test is 0.0020

Figure 12
How many participants attended the trainings of different duration in 2020?



Source: own editing based on the data of own questionnaire survey

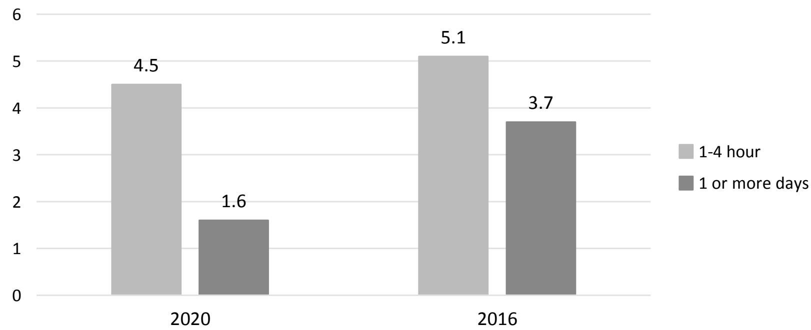
Statistically, the duration of the trainings influences the change in the number of participants by 37.37%, so there is a medium-strength relationship between the duration of the trainings and the number of participants (standard deviation ratio: 0.6113).

We examined whether there was a correlation between the duration of trainings for students in public education and the duration of trainings exclusively for other target groups. Trainings for students in public education are shorter, more frequently lasting 1-4 hours, than trainings for groups outside public education (*Figure 12*). The p-value of Pearson's chi-square (0.006) and the p-value of Fisher's exact test (0.008) are also correlated at a significance level of 5%. This correlation already existed before 2016.

4.5.3 Is there a correlation between the number of topics and the length of training?

The results of the 2016 research showed that shorter courses covered more topics on average. In view if the above, we examined again whether there was a correlation between the duration of the trainings and the number of topics covered by the individual trainings.

Figure 13
Average number of topics covered in trainings lasting 1–4 hours and longer in 2016 and 2020



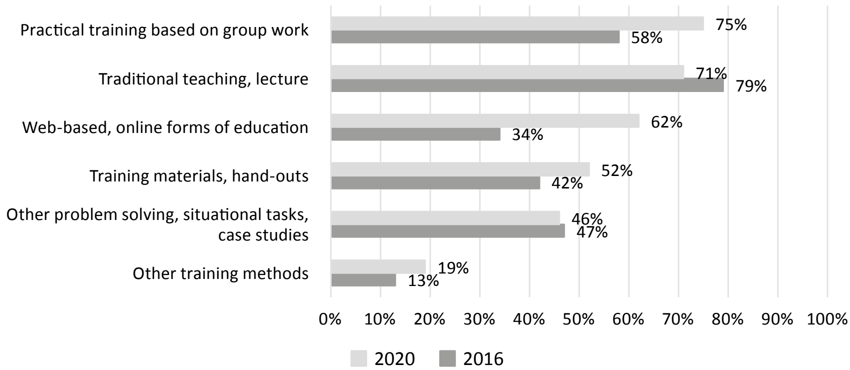
Source: own editing based on the data of own questionnaire survey

The results of the research repeatedly highlighted the contradiction that shorter-term courses cover almost three times as many topics as longer ones. At the same time, the number of topics dealt with decreased for both longer and shorter courses. There is a moderately strong relationship between the time spent on training and the number of topics taught, i.e. the shorter the training, the more topics the course covers (ratio of standard deviation is 0.5099).

4.6 Methodologies used in the training

As in 2016, we also collected information on the training methods used in the transfer of knowledge by training organizations in the 2020 survey. Respondents were able to choose the teaching and training methods they used in each training course from five possible answers. Several methods could be identified per training.

Figure 14
Percentage of teaching methods used in trainings in 2016 and 2020



Source: own editing based on the data of own questionnaire survey

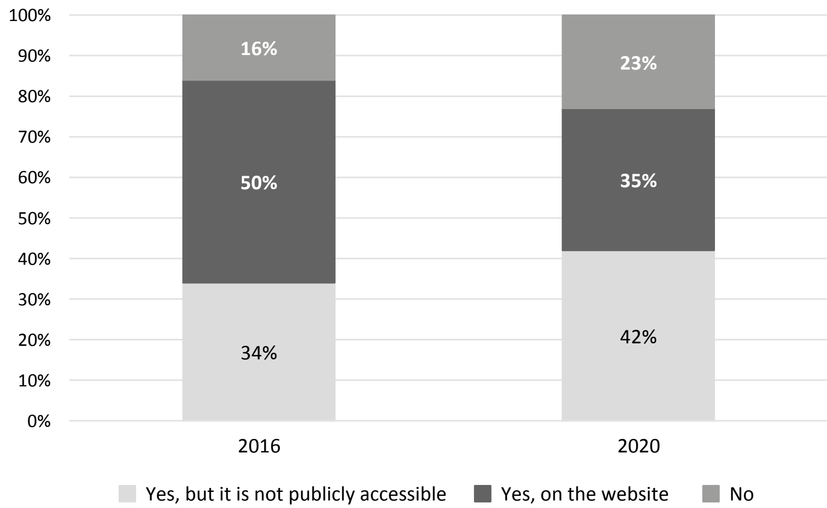
The two most widely used methods in the course of trainings are traditional teaching and practical training based on group work, supplemented by situational tasks and / or case studies. Compared to 2016, the popularity of the interactive method based on group work and the use of web-based, online forms of education had increased significantly. At the same time, traditional, "classroom" teaching methods were used by a lower percentage of responding organizations than before.

4.7 Syllabuses and curricula

4.7.1 The availability and accessibility of syllabuses

Research in 2016 found that, despite the fact that a significant proportion of training-related topics and curricula are available, it is not publicly accessible.

Figure 15
Availability of the syllabuses of the training programmes (2016, 2020)



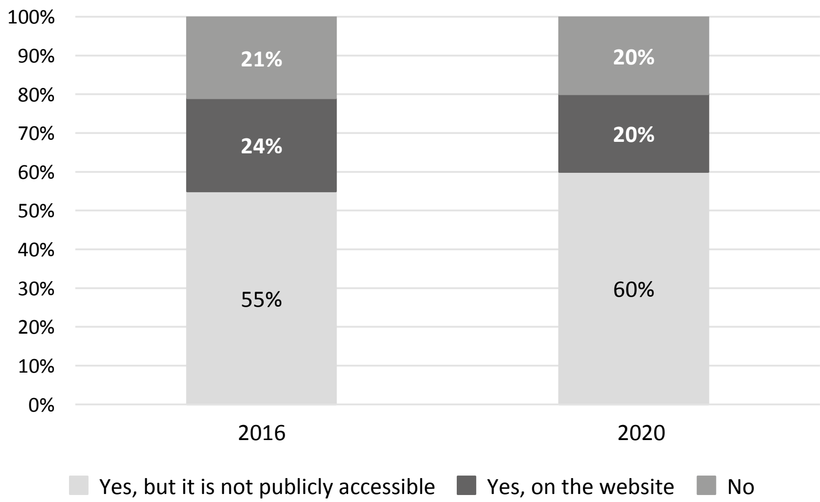
Source: own editing based on the data of own questionnaire survey

According to the survey conducted in 2020, most training programmes have syllabuses, but most of them are not publicly accessible (*Figure 15*). The proportion of trainings with available but publicly not accessible syllabuses has increased, while the number of trainings without any syllabus has increased, also.

4.7.2 The availability and accessibility of curricula

The 2016 research report pointed out that although most training programmes had a curriculum, the accessibility thereof was even lower than that of syllabuses.

Figure 16
Availability of curricula related to training programmes in 2016 and 2020



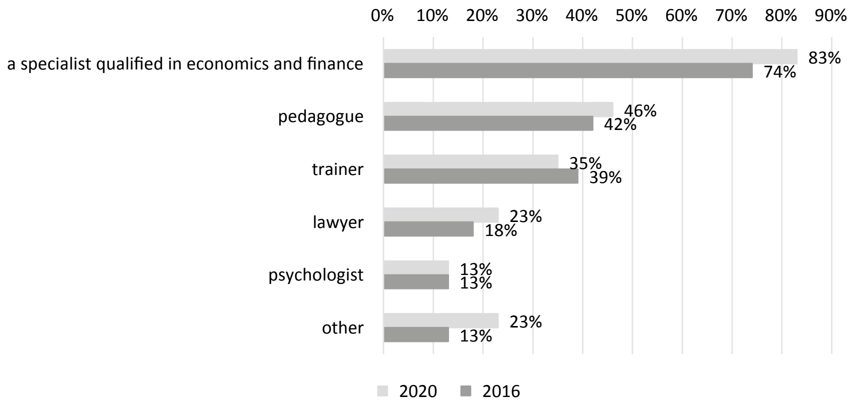
Source: own editing based on the data of own questionnaire survey

The results show that the curricula related to the training programmes are available in the case of eighty percent of the trainings, but three-quarters of these are not publicly accessible. The existence of the curriculum has not changed since 2016. However, compared to 2016, the accessibility of the curricula has slightly deteriorated (*Figure 16*).

4.8 Qualification of the trainers

The 2016 research report found that the majority of the trainings were taught by professionals with a degree in economics and finance, and in two-fifths thereof professionals qualified as teacher or trainer teach classes. Based on this, we formed the following hypothesis of the study.

Figure 17
Qualification of the trainers holding the trainings (2016 and 2020)

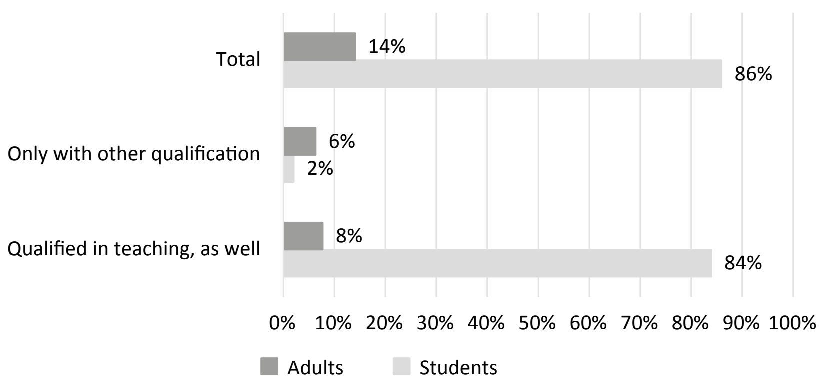


Source: own editing based on the data of own questionnaire survey

Similarly to the data of the previous survey, the trainers holding the trainings are predominantly economists. Compared to the 2016 survey, the proportion of teachers with a degree in economics and finance increased by 9%, the proportion of teachers with a degree in pedagogy by 4%, the number of teachers with a degree in law by 5% and the number of other teachers by 10%. Compared to the 2016 data, only the proportion of trainers and those in other categories decreased (*Figure 17*).

We also examined whether the students were trained by trainers with a teaching degree.

Figure 18
Who did trainers with a teaching degree teach? (2020)



Source: own editing based on the data of own questionnaire survey

Among the target groups of the trainings, the students in public education were significantly over-represented, more than 80% of them were educated in financial literacy by pedagogues, qualified in teaching (*Figure 18*).

4.9 Training of the trainers

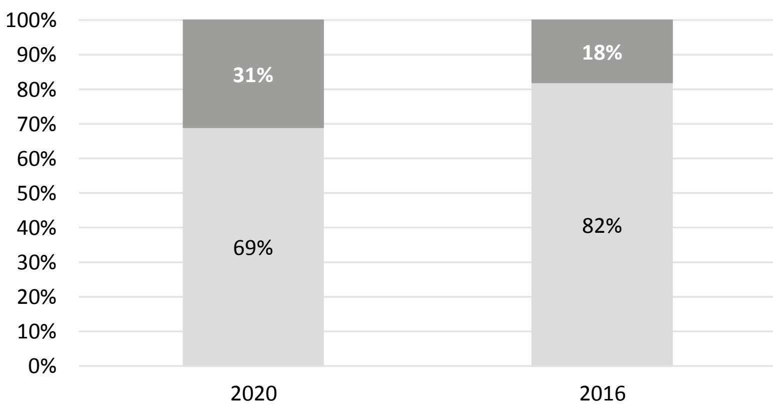
The research conducted in 2016 found that more educators holding training programmes for students in public education were trained than those in training programmes for students in non-public education. In 2020, we examined again which of the training organizations were preparing the trainers. The results showed a decrease in the proportion of organizations which help their trainers prepare through training.

While in 2016, the majority of the educators (52%) received preliminary training, by 2020, this proportion dropped by 7 percentage points to 45%.

4.10 Assessment of the needs of the participants

The research in 2016 found that in the vast majority of trainings (82%) the needs and training demands of the target group were assessed during the development of the programmes. Based on the responses received, more than two-thirds of the responding organizations assessed the needs and training demands of the target group during the elaboration of the programmes, which was a decrease of 13 percentage points compared to the 2016 data (*Figure 19*).

Figure 19
Assessment of the needs and demands of target groups (2016; 2020)

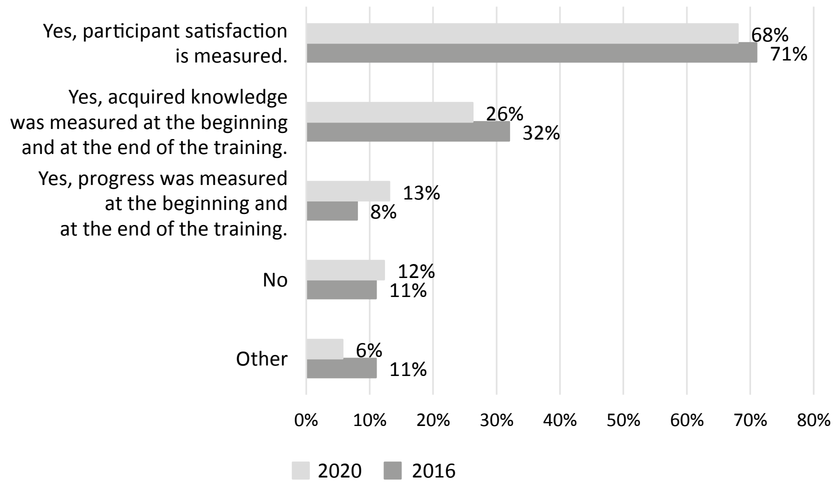


Source: own editing based on the data of own questionnaire survey

4.11 Measuring the effectiveness of trainings

The research conducted in 2016 found that the effectiveness of trainings was measured in the vast majority of cases; however, monitoring the progress of the participants at the beginning and at the end of the training was not typical. In the case of the question about the measurement of the effectiveness and efficiency of the trainings, it was possible to mark several answers (it is measured at the beginning or at the end of the trainings, or only student satisfaction is measured).

Figure 20
Is the effectiveness and efficiency of the trainings measured and how?



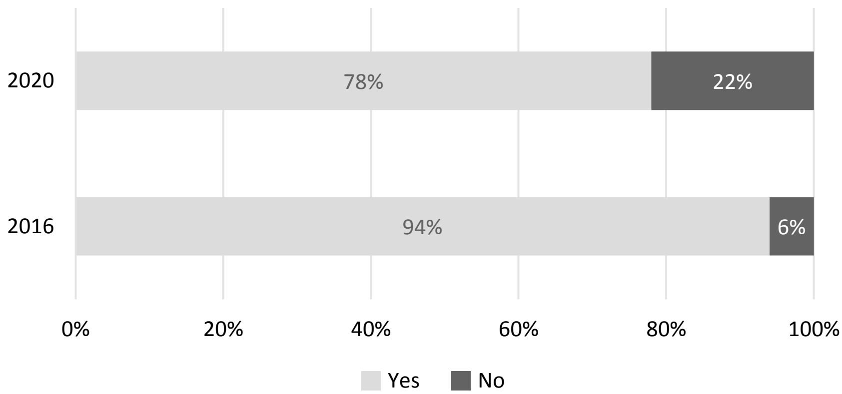
Source: own editing based on the data of own questionnaire survey

In about 40% of the trainings, the results are measured. There was no change between the two surveys in this area. At the same time, the results show that 13% of the trainings measure the acquired knowledge, i.e. the development resulting from the training, at the beginning and at the end of the training. This was an increase of 5 percentage points compared to the 2016 data. At the end of the trainings, the measurement of acquired knowledge was a practice in a quarter of the trainings. There was a decrease of 6 percentage points in this indicator. Overall, two-thirds of the trainings still measured only the satisfaction of the participants, which was a decrease of 3 percentage points compared to the 2016 data (*Figure 20*).

4.12 Use of the experience

According to the results of the 2016 research, the experience of the trainings was utilized in a very high proportion (94%). In 2020, we re-examined whether the experience of training programmes was used by the organizers and incorporated into the curricula.

Figure 21
Is the experience gained during the training programmes used? (2016; 2020)



Source: own editing based on the data of own questionnaire survey

The results show that although a high proportion (78%) of the training experience is utilized, this represents a decrease of 16 percentage points compared to the 2016 data. The change is significant.

5 CONCLUSIONS

The 2016 survey served as a source of information in the development of the national strategy for the development of financial literacy and in the preparation of operational plans. Partly as a result of the research, a number of government initiatives have been launched or implemented. In addition, several non-governmental organizations dealing with financial literacy development indicated that they had redesigned their training based on the results and recommendations of the research.

The results of the research show that the volume of trainings held by non-public educational organisations, the number of training programmes and the number of participants have considerably increased since 2016. A significant positive change is that three times as many people have received financial literacy development training in the past four years than before. However, the significant overrepresentation of school-age students has not changed.

Among the organizations providing training, the so-called organizations with a significant reach teach the vast majority of participants, within that the greatest proportion of students (more than one million) in public education. Their trainings are short, lasting for 3–4 hours. The trainings organized by financial institutions are short and reach a negligible number of participants. Banking services are emphasized in their trainings. The trainings held by non-profit organizations are mostly for adults, last for 2–5 days, and are usually funded from funded from public money. Their main profile is to develop financial awareness. In the case of trainings held by other companies, participant payment prevails. Their trainings are long. Their curricula include the topic of financial vulnerability and protection. However, the trainings are mainly financed by the participants themselves, and they do not reach the most deprived social groups.

It is also a step forward that the average duration of the trainings has increased. Multi-day trainings are organised mainly for adults. Knowledge transfer still focuses on the development of individual savings and financial awareness, financial self-knowledge, attitude and behaviour, which is reasonable, as less financial awareness and more financial knowledge and calculation tasks can be taught within the subjects. The prevalence of teaching retirement-age saving strategies shows that the training organizations have recognized to the importance thereof, resulting from demographic processes. However, teaching investment and entrepreneurship is still not a priority.

The target groups of the training were the financially vulnerable groups. However, most of the trainings for adults do not take into account the income situation and social background of the target groups, therefore few of the unemployed, pensioners and entrepreneurs have access to financial literacy development education specially designed for them.

According to the results of the research, in addition to traditional teaching methods, online and web solutions have appeared, and practical trainings based on group work are becoming more and more popular. With the rise of technological innovations, and certainly, partly due to the pandemic situation, the proportion of trainings using online and digital knowledge dissemination has almost doubled since the last survey. In addition to the use of traditional educational methods, educational solutions based on situational tasks and situational exercises came to the fore in 2020. The latter form of education is especially suitable for not only communicating knowledge, but also for shaping mentality, attitude, and financial personality.

It is particularly important that trainings are based on accessible, quality-assured curricula. The research found that the majority of trainings have a syllabus and a curriculum, but their accessibility has slightly deteriorated in comparison to 2016. The use of qualified, peer-reviewed or accredited curricula is typical of slightly more than a third of the trainings, despite the fact that since 2016 several accredited curricula, textbooks, workbooks, quality-assured and electronically accessible, usable tasks, games, quizzes, etc. have been published. The widespread use of these materials could make the trainings more transparent and effective.

Most of the trainings assess the needs of the participants in advance, but this proportion has decreased by 2020. Respondent organizations also stated that they typically used previous experience to further develop their trainings.

The measurement of effectiveness did not improve significantly compared to 2016. The majority of trainings still measure the participants' satisfaction, with barely 40% assessing whether the training goals have been met. At the same time, without measuring the effectiveness of training, the acquisition and use of experience can be limited.

While there was an increasing focus on developing a financial literacy between 2016 and 2020, the vast majority of the trainings still reach the most accessible school age group. Training programmes should pay more attention to improving the financial awareness of adults, especially those who are financially vulnerable, particularly in the case of publicly funded trainings.

The results of the research draw attention to the need to further strengthen the professional guarantees that ensure the quality of the trainings. In the case of organizations which also use public funds, the public body participating in the funding should be responsible for checking the existence of these professional guarantees, concerning both the control of the tendering procedures and the implementation of the programmes.

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IDEAS ON TEACHING FINANCE AND ACCOUNTING IN TERTIARY EDUCATION

What should future bankers and accountants learn?

Csaba Lantos – János Lukács – János Száz[1]

ABSTRACT

Designing financial education at the post-secondary level is a key component of financial culture. We are investigating in this paper what future bankers, accountants, or auditors should learn to boost the prestige of their professions, to have great value for money with their degrees, and maintain their favourable positions on the job market. All institutions must prepare for fierce competition in this country as demographic indicators are worsening and competition from abroad is intensifying. The global picture is true for our field too; institutions of tertiary financial education must find their places and select their strategy. Recalling historical examples, we present views and perspectives we believe should be considered when making decisions affecting the future.

JEL code: A20

Keywords: tertiary financial education, accounting training, probability

1 RECALLING THE PAST

To give a sensible answer, one should know what banking, insurance markets…, and business life in general…, would be like twenty to thirty years from now. What will be the impact of international regulations, IT, or what new finance products the financial sector will offer? Naturally, it is impossible to predict all that right now. On the other hand, current college, and university curricula – willingly or unwillingly – do include an implicit answer to the question.

Even if one cannot provide an exact answer, the problem is worth consideration. Firstly, some trends are highly probable (for instance, digitisation is gaining mo-

1 *Csaba Lantos* is an economist and sociologist.
János Lukács, Professor, Department of Accounting, University Corvinus of Budapest. E-mail: janos.lukacs@uni-corvinus.hu.
János Száz, Professor, Department of Finance, University Corvinus of Budapest. E-mail: janos.szaz@uni-corvinus.hu.

mentum, risks are not going to be reduced, risk management instruments are going to be more diversified, green finance is coming, ESG, big data, blockchain, AI are already with us just as thousands of enterprises built on them, etc.). On the other hand, the future could not be foreseen in the old times, either, but there were well-articulated expectations and goals set for the tertiary education of economics. **For this reason, we start our reflections on the future by recalling the past.**

The Hungarian educational system has gained its present form over centuries, and it has given the world many outstanding scientists/scholars and inventions. Built on the traditions of continental Europe, our predecessors established and operated a high-standard system of public education in the first half of the 20th century, which met the needs of all social strata. Although it lacked freedom, it did teach the upcoming generations a healthy view of life (aka: it trained them for work). The same spirit had survived until the years of 'mature' socialism in the 1970s and 1980s, so quality élite education had continued in some secondary grammar schools and universities.

On the other hand, the proportion of students admitted to colleges and universities was low, appr. 10% every year. At that time, colleges and universities were strictly separated institutionally. However, the low number of degree holders was not sufficient in the post-industrial world of the 1980s, so when Communism fell, a clear decision was made, i.e., we must catch up with the developed world (also) in this regard. At least 30% of students should be admitted to institutions of tertiary education every year. Such voluntarist socio-political expectation was met by reducing the standard of élite education gradually and continually. Colleges were renamed universities, so former director generals became rectors. Unfortunately, school standards have failed to become higher with a few honourable exceptions. The system of normative quotes encouraged all universities to enrol as many students as possible (with no regard to what their degrees could be used for later). In the spirit of democracy misinterpreted, the requirements of admission were lowered, and some students adapted to the system. Students' organisations were given political weight, which did not support the enforcement of high standard academic requirements. The conservative bureaucracy of the accreditation system slowed down adaptation, i.e., the ability to adapt quickly to the shifting requirements.

As élite universities ceased to exist, an 'equalisation' occurred; universities were sliding downwards, while colleges, which used to provide good practical training, were trying to climb upwards. At present, everything is termed 'university', irrespective of its standard or the real value of the degree it offers. Most new universities no longer have the word 'scientific' in their names. Is it modesty or a coincidence, we wonder?

At the same time, the world has opened for high-school graduates. Masses of them can study at universities abroad. Many use the opportunity, as appr. 6% of students in tertiary education study outside the borders of the country. Naturally, the distribution of youth admitted to universities abroad is not equal in any year. It is partly a question of money; what financial burden families can accept. (Taking out student loans, which is widespread in western countries, increases the number for whom it is a realistic option, still, we believe a young person must have at least a middle-class background to use the opportunity.) Unfortunately, demography is against us. The population of this country is expected to be further reduced in the coming decades. There are 2.2 million women of child-bearing age in Hungary today, which is expected to fall to 1.6 million by 2050 according to demographic forecasts. Although the trends in fertility rate have been turned around over the past ten years from 1.27 to 1.55, which is a significant achievement, but the indicator should be 2.1 to stabilise population numbers. Therefore, one can expect lower and lower numbers of classes. We must either increase the number of foreign students, or we will have to cut corners here. At present, 290 thousand students are in tertiary education (in training forms of different curricula). Of that, 38 thousand are foreign students, i.e., 13% of the total number.

Looking back at the past 30 to 40 years, there is nothing to be ashamed of in terms of financial education. The translation of the works by Nobel prize holders in economics already started in the 1970s and 1980s in a famous series of the Economic and Legal Publishing House (KJK). Standard textbooks of international finance (*Brealey–Myers*, *Bodie–Kane–Marcus*, *Hull*, *Damodaran*, etc.) were integrated into the educational materials of the University of Economics and other universities in the 1990s. Our exchange students perform well abroad. The best among our students completed their PhD studies with excellence at the best universities of the world (Princeton, Harvard, Berkeley, etc.). Few people are aware that the former top executive of the European Banking Supervision had been a student at the Budapest University of Economics. The bond portfolio manager at Apple had also learnt about the world of bonds at the same university. Fortunately, the list could go on.

Hungary was the first country of the former East European bloc where international degrees of banking and investment analysis (CFA, EFFAS, CIIA, etc.) were introduced. The first Stock Exchange and the first Institute for Training and Consulting in Banking (ITCB) with the related educational and exam schemes were set up here too.

It is not a disadvantage that most lessons have been in Hungarian, since the bulk of the articles and papers are in English, which is not a problem for most students. In terms of linguistic problems, they are not with English, but with programming languages or **with mathematics, which, according to Galilei, is the language of Nature**.

Meanwhile, the world we are trying to keep up with is changing fast. Thanks to information technology, the function of money in making a payment has changed a lot compared to the world of bills of exchange and cheques. It is not only bankcards I have in mind, but the technology of cryptocurrencies as a new development, or the acceleration of stock exchange settlements.

2 CHANGES IN RISK MANAGEMENT AND ACCOUNTING

What are future finance and accounting analysts going to need? A lot of things, for sure, but - if you can believe the statement that processes have become more sophisticated and uncertain by now - the following things are definitely on the list:

a) methodologies to describe the relationship of several factors, and their joint evolution.
b) proficiency in risk management, in particular, the assessment of the joint impact of uncertain changes.
c) proper experience in assessing the spill-over effects in space and time if something changes (for instance, the quantity of a production factor).

Matrix calculation, which has all but disappeared from education, would be needed for the group of problems a), **probability calculation** (it is also much limited compared to 20 to 30 years ago) would be needed for problems b), and **mathematical analysis** including, particularly, difference and differential equations for c). If you believe that everything moves, changes, you should know the tools to describe them and be aware of their quantitative management.

And one more thing: something that was lost in tertiary education of economics quite some time ago, an awareness of the **importance of demonstrations**.

That is why geometry might have been part of the curriculum of students of accounting 70 years ago. Certainly not because similar triangles can help decide where to book an item. It was needed for the same reason as at high school today: how to make sure if an idea is true or false. There is a difference between persuasion (negotiation strategy) and conviction. Naturally, the use of formulas will not guarantee the correctness of a line of thought. Quite often, unfortunately, it is simply trying to hide the shallowness of it.

Luca Pacioli (1445–1517) published his book „*Summa de arithmetica, geometria, proportioni et proportionalita*" in 1494, in which he presented the following problem:

Two people are playing a game of heads or tails. The one who first throws heads six times in a row will be the winner of the money the two of them put together at the start. The game is interrupted at 5:3. How should the amount be fairly split?

- Pacioli's answer is as follows: **5:3**. Here, past facts are considered, which is characteristic of the traditional approach to accounting and law.
- The solution given by *Pascal* (1623–1662) and *Fermat* (1607–1665) in 1654 is **7:1**. In this answer, the chances of the future are considered, just as in the everyday work of financial risk managers all over the world today. It is the right ratio because the disadvantaged player must win 3 times in a row to get the money. The chance for that is $(1/2)^3 = 1/8$.

One could not find a better example to illustrate the dilemma of whether accounting is finished by recording and analysing past facts. The answer in our days is: not at all. Then why is it that the probability studies of future economists have dwindled to a mere couple of weeks. Analysis, linear algebra, and probability jointly make up two short terms. Those subjects had been mandatory for all students for fifty years.

Important traditions are going to be lost in that field. In 1920 *Károly Jordán* started teaching probability at Királyi József Műegyetem [technical university] (which became Magyar királyi József nádor Műszaki és Gazdaságtudományi Egyetem [technical and economics university]) in 1934. It was unique to have it as a specific subject of economics at the time in Europe.

Accounting, finance, statistics (econometrics, data analysis), and mathematics tend to be combined in revealing and analysing financial risk. Let us return to that in more detail later.

Trying to find out who the first person we know the name of was in history, most of you would think of a great ruler, general, or high priest. You would be wrong! It was a low-standing "bookkeeper" who was in charge of the growing and storage of barley in the ancient Sumerian city of Uruk in about 4000 B.C. and whose rebus signature (*"Kushim"*) can be seen on a clay tablet recording a commercial transaction.

It is proof that the origin of book-keeping goes back to several thousand years. King *Solomon* and Roman emperors obligated merchants to keep records of their transactions. You can read in *Aristotle* that failing to present accounts was punished by death.

Goethe remarked book-keeping was the most wonderful invention of the human spirit. The profession was made popular among young people by the 2016 American action thriller *"The Accountant"* starring *Ben Affleck*. In the film, he keeps the books of gangsters and discovers an embezzlement of 61 million dollars.

Luca Pacioli, Italian mathematician and Franciscan monk, who described the system of book-keeping of Venetian traders, was the first to publish the rules of double-entry book-keeping 528 years ago. All economies in the world have been keeping their books like that, and accounting has become indispensable for management, control, and business communication. It is not a necessary evil or an end in itself, but the language of business. It is responsible for the complete, ongoing, and organised monitoring, evaluation, and recording of the operation of an economic organisation, for processing its documents, for the publication and analysis of new, systematised information and financial records. It is a beautiful and logical system all students of economics whose main subjects are finance and accounting must learn to have a competitive advantage on the market because it allows them to assess what impact a transaction might have on the assets, the financial and income position of an economic organisation including its balance sheet, profit-and-loss statement as well as its cash-flow and tax implications.

Thanks to technological development, the traditional, typically monotonous, and most time-consuming book-keeping tasks (filing of supporting documents, allocation and recording of incoming and outgoing invoices, cash register and bank statements, reconciliation of analytics and synthetics, managing payroll, labour, and contributions issues) have been pushed into the background. All that incredible drudgery has been transferred to automation. Not people but algorithms, robots, and digital technology perform it paperless, more accurately, more effectively, faster, and cheaper.

Still, you will need good accountants, who are responsible for quality tasks requiring independent decisions and considerations. They will oversee tasks where human intelligence is needed to solve complex problems, such as the preparation and upgrading of accounting policies and regulations, booking valuations, accruals, reclassifications, self-correction procedures, the interpretation of laws, the analysis of investments, securities, derivative and atypical transactions, the preparation of reports and statements. We are no longer talking about pencil pushers with elbow pads, bureaucrats, but business computer scientists disclosing data and communicating on electronic platforms, who are key to success if you want to understand the challenges of the market. They are the bastions of trust who provide financial support, advisory services increasing added value. They are aware of the changes in the regulatory environment, they do due diligence, they monitor operations, they do and optimise tax budgeting, they look out for opportunities of tendering, subsidies, and financing, they write tenders, review, and give opinion on business contracts, they deal with coaching and networking.

Every company must have a good accounting person who the management and the shareholders fully trust. The smaller the company, the more it expects to have a 'jack-of-all-trades' accountant to help everyday work. A large corporation is more likely to employ dedicated people for different tasks reducing in that way the scope of the accountant.

Large consulting companies are not successful because a person there knows everything, but because they work in teams and communicate with each other. They ask for each other's opinion and improve their staff's skills and knowledge at ongoing training courses. They set up separate units for different special tasks.

Auditors also must live up to greater expectations. They are not simply required to offer diagnosis providing the necessary reasonable explanation of past events, but to call attention to things the company may not be aware of yet. They should identify and assess future risks and comment on how the management controls them.

So, investors expect auditors to offer valuable forward-looking cooperation. They should provide long-term viability analysis, analyse major future business and financial risks, and reveal operational problems. The customers do not only want to see the reflection from the rear-view mirror (expectation gap), but they also want to have an outlook through the windshield. They want to make sure if the company is heading the right way. An auditor must help management to find their way in the labyrinth of risks, opportunities, changes of regulations, competition, and globalisation. The launch of new, more expensive audit technologies (RPA, MI) may radically transform the nature and procedure of audits, it may increase efficiency (real-time samples replaced by total population), it may change the operating process and the service provided.

To carry out complex, sophisticated accounting and audit tasks:

a) You will need a general economic literacy based on mathematical-statistical methodology, solid knowledge of the theory and practice of finance and accounting and on the other hand, highly skilled use of IT so that you could manage, interpret, and analyse databases.
b) Side by side with improving professional skills, the issue of competence must be in focus. The main goal here is to teach critical thinking and open-mindedness, the recognition and solution of problems, thinking in perspective, the development of a business sense, creativity, and innovation. Education must be centred on quality work, the will to improve, value creation, flexibility, communication, collaboration, trust, and mutual understanding.
c) The third dimension of education is to improve personal skills students can use to face future challenges and meet expectations at their jobs. Their sense of responsibility, commitment, dedication to and satisfaction with their profession must be raised.

3 CHANGES IN STUDENTS' MENTALITY AND ON THE JOB MARKET

"Members of this new generation [generation Z] *have become accustomed to receiving information quickly, favouring a multifunctional way of thinking and seeing things. They prefer to access information randomly and to think in groups, favouring rapid results and frequent rewards, and they would rather play than study."*[2]

The latter statement would have been true for earlier generations too if their parents, teachers, and compelling living conditions had let them.

Let us see the categories of generations by their dates of birth[3]:

1. Veterans (before 1945) – Traditionalists/Silent generation
2. Baby boomers (1946–1964)
3. X generation (1965–1979) – Digital immigrants
4. Y generation (1980–1994) – Millenia/YouTube/I generation
5. Z generation (1995–2009) – FB/Connections/Digital generation
6. Alpha generation (from 2010)

The "veteran" generation born 90-100 years ago were not only denied laptops or the Internet. Many of them could not even rely on a decent dinner every day. If you wanted to break out of rural deprivation, and you learnt double-entry bookkeeping well, you had a good chance to make a decent living for yourself and your family for the rest of your life. The question then was, if I learn the trade of fitter, can I bring up my children using that knowledge? Any knowledge ensuring it was respected in the past. It could be a printer, an engine driver, or an accountant.

Not long ago in the 1990s, knowledge related to securities and the stock exchange was quite popular among students and they were highly motivated. They are useful skills today too, but the new "in" topics are, among others, cryptocurrencies, big data, and green finance.

You cannot expect lifelong employment in most trades today. There is a lot of discussion about career models since careers are more and more fragmented. Students will learn something, then they will get on the "global map", let others know they exist and are smart, then they may be noticed and will be surfing continents or jobs "trying to meet new challenges".

2 Márta Aranyossy–Eszter Kulcsár (2020): Blended learning in practice: the impact of an economic simulation game on perceived learning. *Economy and Finance*, 7(2), 233–251, https://www.bankszovetseg.hu/Public/gep/2020/junius/AranyosiKulcsarE.pdf.

3 Zsófia Frányó (2021): Z generáció – az oktatás új kihívásai [Generation Z – New challenges for education]. Conference, University Corvinus of Budapest..

It is quite difficult under such circumstances to say about any knowledge, "well, this will keep you until the end of your life". The most surprising thing in that regard is that teachers are expected nowadays to be "practically oriented". However, remember the saying, *"Nothing is more practical than a good theory. It is the only thing to help you in an unexpected new situation"* (*László Mérő*).[4]

It is no accident that fifty years ago future accountants had to study maths for ten terms from commercial arithmetic to two terms of probability. The goal was to teach students to study. (As an old German saying goes, *"idle learning means learning to be idle"*). And to learn how to think, argue, and demonstrate. Mathematics, if taught well, is a good instrument for all that. But, unfortunately, it is disappearing from the curricula of business schools at the speed of light.

Let us look at the problem from another aspect: why is it more difficult today to be admitted into a good high school than to a highly publicised master course? Most master course students already have a job (i.e., they attend "evening classes"), which excludes in-depth study in many cases.

It is fashionable today to rank universities. It would be useful to survey what percentage of the students of different institutions obtain international professional certifications (e.g., Chartered Financial Analyst CFA, a certification from the European Federation of Financial Analysts EFFAS, Certified International Investment Analyst CIIA, actuarial certification from the Association of Chartered Certified Accountants ACCA, etc.) They are objective, truly international, and apply uniform professional criteria.

Side by side with the structural transformation in progress, nowadays the funding system has also changed. Earlier, when traditional state universities were funded on a "quota" basis they did not have a vested interest in providing their students with qualifications they could use in real life. You could say the quantity of state funding to be drawn was a barrier to quality education.

Structural changes go together with performance-based funding, in other words, universities must be made interested in meeting quality criteria. Funding is based on several pillars, but true quality performance proved by predefined indicators must be the prerequisite of financing. That is an opportunity for Hungarian tertiary education to remain competitive.
At the same time, the question arises **how future bankers and accountants should study or how they should be taught**.

4 László Mérő (2019): *Az ész segédigéi – A tudás és a nemtudás pszichológiája* [The auxiliaries of reason – The psychology of knowledge and non-knowledge*]*. Budapest: Tercium.

The Z and Alfa generations who have grown up on the internet and have a digital view of the world are impatient, shallow, they "burn out" quickly and regard it a waste of time to be immersed in a subject, learn the details, and reveal the connections.

They prefer problem-free, unambiguous situations where they can give fast and simple answers using the least possible energy. They trust the power of artificial intelligence, although it can only perform pattern-built tasks. Thus, it is a great challenge to make them attracted to finance and accounting, so that they would not think it outdated, monotonous, something losing topicality, or being simple "transactional book-keeping" with data recording in its focus. Their interest must be awakened for a profession centred on advisory functions, they must be motivated and encouraged to face the challenges of new areas where they can use their imagination, can assert themselves, and build their careers.

4 IN PLACE OF A SUMMARY

The core question of this paper was what future bankers, accountants, or auditors should learn to boost the prestige of their professions, to have great value for money with their degrees, good chances of employment, and higher than usual starting salaries.

In an ideal world, we would teach management with lots of maths enjoying a high degree of freedom of education so that our students could meet a range of the important intellectual trends. No one should force anybody to do anything. Nobody should be deceived. Our training should not be subject to any "ism", our teachers should not be followers of any ideology.

There are many disturbing, open questions to be answered.

a) Can we keep our best students at our master courses, or can we persuade them to participate in our doctoral programmes?
b) Should we not teach in English only at our master courses given the international nature of the profession? You need both legs for walking. Obviously, Hungarian is necessary to know Hungarian law, accounting, taxation, financial and other regulations. Not to mention that "a nation lives in its language".
c) How much should education be academic, theoretical, and how much practice-oriented, dual? Mixtures are, as a rule, quite strong.
d) Will there be a supply of excellent and committed teachers, who are devoted to talent management, mentoring, who inspire and motivate their students both in their professional and personal development, who still believe in the

importance of writing textbooks and exercise books, who want to improve educational methodologies and adjust teaching aids to match students' goals?

e) Can we attract enough "aces" with recognised in-depth professional knowledge and experience to tertiary education, persons whose professional achievement and moral integrity can be a role model for the new generation?

All institutions must prepare for fierce competition in this country as demographic indicators are worsening and competition from abroad is intensifying. The "global" picture holds for our field too; institutions of tertiary financial education must find their places and select their strategy.