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## FINANCIAL LITERACY OF SECONDARY SCHOOL LEAVERS: A CASE OF LATGALE REGION IN LATVIA

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**Abstract.** Financial literacy, as a totality of knowledge and skills, provides an opportunity for a person to manage finances successfully, and take rational decisions concerning the choice of various financial services, thus facilitating both individual and public welfare and sustainability. The financial markets have changed along with the financial consumers' awareness. Financial services have become a mass and freely accessible product group, whereas financial institutions have become a part of everyday life for all social groups. Over time, the age of the persons involved in financial processes and evolving consumers of financial services becomes younger and younger. Hence, the need for knowledge and awareness of finances, financial product diversity and related risks is growing more acute for improving financial decision-making. For this reason, financial literacy is acknowledged as a vital life skill globally. The research aims to study, assess, and analyse the financial literacy of secondary school leavers in Latgale.

**Keywords:** financial literacy; financial literacy index; youth; school learners; secondary school leavers; Latgale

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### 1. Introduction

Financial literacy is a totality of knowledge and skills that provide for understanding and successfully organising one's financial management and making rational decisions concerning the choice of various financial services and their proper use, intending to reach financial stability and sustainability (Sarnovics et al., 2016; Davoli and Hou, 2021). A financially literate individual has knowledge of finances and economics in general, and they can apply this knowledge to advance their welfare and financial growth to reach their personal goals (OECD, 2011, 2013; Taylor and Wagdand, 2013; Latvijas Universitātes, 2017; Garg and Singh, 2018; Kakinuma, 2022; Lo Prete,

2022). In Organisations for Economic Co-operation and Development, operationalisation financial literacy is divided into three constructs: financial knowledge, financial behaviour and financial attitude (OECD, 2020).

Financial literacy affects not only a person's quality of life but also sustainable economic development (Swiecka et al., 2020), the development of entrepreneurship (van Rooij et al., 2011; Riepe et al., 2020; Graña-Alvarez et al., 2022), and the improvement of business activity in region or country (Yin et al., 2015; Barba-Sánchez et al., 2018; Skica et al., 2022).

The demographical situation in Latvia, especially in Latgale, is unfavourable since the number of retired residents is larger than the ratio of children and adolescents. A prospect of a future decrease in the number of working-age residents and an increase in the demographical load. Therefore, more attention should be paid to improving education at school so that secondary school leavers can manage their finances, thus facilitating the entrepreneurship of young people that, in turn, would contribute to the national economy development.

The topicality of the research is related to the current debate in society on the financial literacy of the Latvian population. In connection with the country's economic processes, various activities are implemented to improve the financial literacy of residents in different age groups, including youth and secondary school leavers.

The paper aims to study, assess, and analyse the trends of financial literacy of secondary school leavers in Latgale using the:

- theoretical source studies on the significance and essence of financial literacy, methodology of its assessment;
- survey of secondary school leavers in Latgale to investigate their financial literacy trends.

## **2. Theoretical aspects of youth financial literacy**

On the one hand, there are views that financial literacy and education in finance are necessary for every individual's life (Asmalidar, 2019; Janusz et al., 2021; Narula, 2022). On the other hand, financial literacy is relevant for regional sustainable development (Kozubikova et al., 2015; Novokmet and Zalic, 2019). Financial literacy is vital at the person, family, organisation, regional, and country levels.

Financial literacy includes two significant issues: firstly, knowledge about finances and, secondly, the reason why such knowledge is of importance. Financial literacy is motivated by its usefulness in making everyday decisions to provide for humans' valuable existence in contemporary society (Sarnovics et al., 2014; Marinov, 2020).

There is no universally accepted definition of financial literacy, as each organisation, individual researchers, and countries define financial literacy differently (OECD, 2013; Titko et al., 2014; Riepe et al., 2020). The authors adopt the following definition: financial literacy is a totality of knowledge, skills, attitude, and conduct that helps an individual understand financial conceptions and procedures, provides an opportunity and readiness to apply one's ability for making rational decisions for one's welfare and that of the society on the whole.

According to financial socialisation, the significant agents of financial socialisation are family (Davis et al., 2018; Wann and Burke-Smalley, 2021) and school (Kuzma et al., 2022) positively affect the financial literacy of adults. Financial literacy and school-related variables also have a direct effect on economic behaviour. Researchers suggest that family factors and schooling work through complementary channels (Grohmann et al., 2015). Research results confirm the impact of parental socialisation received in childhood on adults' later financial outcomes, parents' financial literacy level and literacy socialisation influence children's financial literacy (Lusardi et al., 2010; Zhao and Zhang, 2020, Wann and Burke-Smalley, 2021). Researchers underscore the importance of

financial socialisation in the family context and encourage parents to discuss financial matters with their children at home (Grohmann et al., 2015; Hanson, and Olson, 2018; Vosylis and Erentaitė, 2019).

Prior research shows that differences in financial literacy degrees are also related to the socio-demographic characteristics – social status (the higher the social status, the better financial literacy), an education level (the higher the education level, the better financial literacy), and age (adults have better financial literacy than youth and senior citizens) (Coria et al., 2019). If a person has weak knowledge in mathematics, s/he is not involved in financial matters (financial exclusion) or does not select the right product due to difficulty in considering and comparing offers (Eiropas Parlaments, 2008). Hence, checking knowledge in mathematics is included in the assessment tool component because one of the financial literacy elements is the ability to do mathematical calculations (Widdowson and Hailwood, 2007; Barba-Sánchez et al., 2018).

According to OECD suggestions of 2005, more and more countries acknowledge the significance of financial literacy and include it in school curricula. However, there are significant obstacles to accomplishing this: lack of political will, shortage of resources and materials, overburdened school curricula, and insufficient competence (International Network of Financial Education, 2012). There are indicated preschool and primary school children among the target groups with high priority in the Latvian population financial literacy strategy 2021-2027 (2020). The problem of financial literacy of children and youth has been the object of scientific research by Iwanicz-Drozdowska (2015), Titko et al. (2015), Potrich et al. (2016), Andriichuk (2021), Kuzma et al. (2022) and others. The relevance of financial education at the university level and its economic and social significance have been revealed in the studies by Kozubíková (2015), Felipe et al. (2017), Kozubik et al. (2019), Swiecka (2018, 2019), Davoli and Hou (2021). The research by Davis et al. (2018) analyses the financial literacy of Italian students. It shows that welfare and social and economic background significantly affect students' acquisition of financial literacy skills in Italy.

Researchers argued about the continuous feature of financial education as a necessary condition of its effectiveness (Van Campenhout, 2015; Swiecka, 2018). Conclusions have been made on the necessity of teacher training and high-quality textbooks (Jayaraman et al., 2021). Other scientists emphasise teachers' role in financial education (Compen, 2019; De Beckker et al., 2019).

There is also a connection between financial literacy and the economic and education level of the family: those who are financially more skilled to a much greater extent come from highly educated and economically complex families (Lusardi et al., 2010).

While elaborating on the method for detecting the financial literacy level, it is essential to specify whether a person knows the respective information and whether s/he can deal with it adequately (Huston, 2010; Legenzova and Gaigaliene, 2017). Surveys are a powerful means of measuring financial literacy. Yet it is essential to assess financial literacy, not a subjective opinion of one's financial aptitude. This way, when doing a survey, it is advised to avoid the following: 1) approach "one size for everyone", 2) exclusive self-assessment and subjective questions. Survey questions must include definitions and several similar questions structured differently to obtain the mean that most precisely reflects financial literacy and aptitude since it solves the problem of casual choice and guessing (Capuano & Ramsay, 2011).

Several studies in the USA and other places of the world show that youth have a low level of financial literacy. Regarding financial literacy and conduct, youth become one of the most minor protected groups in the population (Lusardi and Wallace, 2013; Kozubik, 2019; Zheng et al., 2020, Andriichuk, 2021). The younger generation faces not only the growing complexity of financial products, services, and markets but, in the course of growing up, they need to assume increasing financial risks compared to their parents (OECD, 2013; Kuzma et al., 2022). It is vital to learn already at school how to spend money smartly, how to save and be able to lead a happy life. It is

necessary for school leavers who enter the age of employment to be ready to manage their income and avoid any financial problems (Chaiphath, 2019).

Researchers from a bank higher education institution (BA School of Business and Finance) in 2014 produced research in 5 secondary schools in Riga and the Riga region "Options of raising the financial literacy level at secondary school: Latvia's case". The study showed that school learners have general knowledge of financial matters but face difficulty with practical tasks requiring precise calculations and resource planning. School learners need to understand why they should learn their rights and duties concerning financial operations. The research results also reveal that school learners have heard about numerous financial regulations and services but need to understand them (Sarnovics et al., 2014) fully.

As the financial literacy issue grows more topical globally, in Latvia, a memorandum was signed in 2021 for implementing "Strategy of financial literacy of the population in Latvia for 2021-2027". The financial literacy strategy of the population in Latvia for 2021-2027 sets the goal of promoting financial literacy culture and sustainability among the people, providing a proper economic environment and improving financial literacy's strategic planning. Finance and Capital Market Commission (FCMC) and research service providers perform regular sociological research on the financial literacy of the population of Latvia. The study aims to detect changes in the financial literacy level of the population, assess their knowledge, and conduct in connection with various financial literacy issues.

Assessing the population's financial literacy levels is a vital component of a successful national strategy for financial education, enabling policymakers to identify gaps and design appropriate responses. International comparisons increase the value of such an assessment by allowing countries to benchmark themselves with other countries. Where similar patterns are identified across countries, national authorities can work together to find standard methods for improving financial literacy within their respective populations.

### **3. Assessment of the trends of financial literacy of secondary school leavers in Latgale**

The questionnaire was used to acquire research data for the present research. The obtained data allows other parties to replicate comparisons and analyses.

Taking into account the information obtained in the theoretical part, the questionnaire for the authors' research comprises self-assessment and subjective questions as well as objective questions that balance the course of the study concerning the basic financial literacy of the respondent. At the same time, objective questions make it possible to ensure whether the respondent has or has not overestimated their knowledge when answering the self-assessment/subjective questions.

The survey was done in two parts – part one (19 questions) specifies the respondent's attitude and habits regarding financial issues, and part two (10 questions) checks the knowledge of financial issues covering five topics – general financial matters, bank services and loans, insurance, taxes, investments. Each topic contains two assignments – a theoretical and a practical one (calculation).

The target group of the survey or sampling cluster comprises all secondary school learners of form 12 in Latgale, whose majority are aged 18 to 19. Via contacting each school separately, the authors found out that the number of form 12 learners in all secondary education institutions in Latgale is 1488.

The quantity of the sampling for research was calculated according to the formula (1) (Orlovskaya, 2007)

$$n = \frac{t^2 * S^2 * N}{t^2 * S^2 + \frac{\Delta_x^2}{x} * N}; \quad (1)$$

where:

N- general quantity,

t- probability coefficient,

S<sup>2</sup>- sampling dispersion,

Δ<sub>x</sub> – allowable limiting error.

The parameters of the survey sampling are as -follows:

t = 1,96, with 95% believability of results,

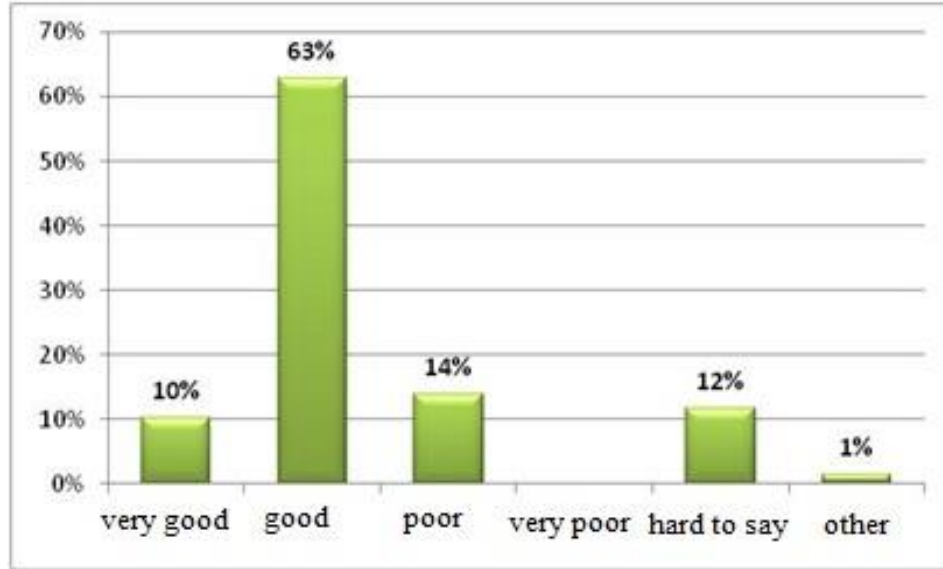
S<sup>2</sup> = 0,25, as the part of the researched feature in the cluster is not known,

Δ<sub>x</sub> = 0,05, as the maximum allowable quantity of the sampling error will be 5%.

$$n = \frac{1,96^2 * 0,25 * 1488}{1,96^2 * 0,25 + 0,05^2 * 1488} = 305 \text{ learners} \quad (2)$$

The calculations concluded that the ideal sampling volume would be 305 respondents; still, 341 were surveyed for the research. The authors calculated limiting error probability (95%) and statistical error (plus/minus 2.7%) to assess the survey data's credibility. Limiting error and statistical error are calculated mathematically based on probability theory (Orlovska, 2007).

As a result of the research, from all surveyed secondary school leavers in Latgale (the number of respondents n=341), a target group of 10% was obtained who are very knowledgeable and well informed, and 63% of respondents consider themselves as well informed and knowledgeable in financial matters. The mentioned respondents can manage their finances to reach economic well-being. Further research results show that the replies ought to be assessed more critically as those respondents who considered their financial knowledge excellent and good had overestimated their expertise and state of being informed within the given question. They may be known as concerned about using the currently selected financial products, yet, regarding future perspectives, there are financial products they have yet to deal with practically; thus, the authors assume that the respondents need to consider this fact.



**Figure 1.** Respondents' assessment of their financial literacy (% from the total number of replies)

*Source:* created by the authors on the survey result basis

The distribution of the replies in Figure 2 shows that three primary sources of obtaining information on finances among the respondents are parents, friends, acquaintances (relied on by 71% of respondents), the Internet (relied on by 69% of respondents), mass media (social networks, TV, radio, magazines, newspapers) (relied on by 53% of respondents).

Only 34% of respondents state that financial literacy knowledge was obtained at school that, according to the time spent, takes second place after the family, where knowledge and life skills have been acquired over 12 years.

This assessment suggests that the school curricula must be completed and provide young people with the essential knowledge for their further life and well-being. 11% of respondents admit that they are not interested in this information, which may testify to the youth's low level of financial knowledge that may lead to poor calculated financial decisions.

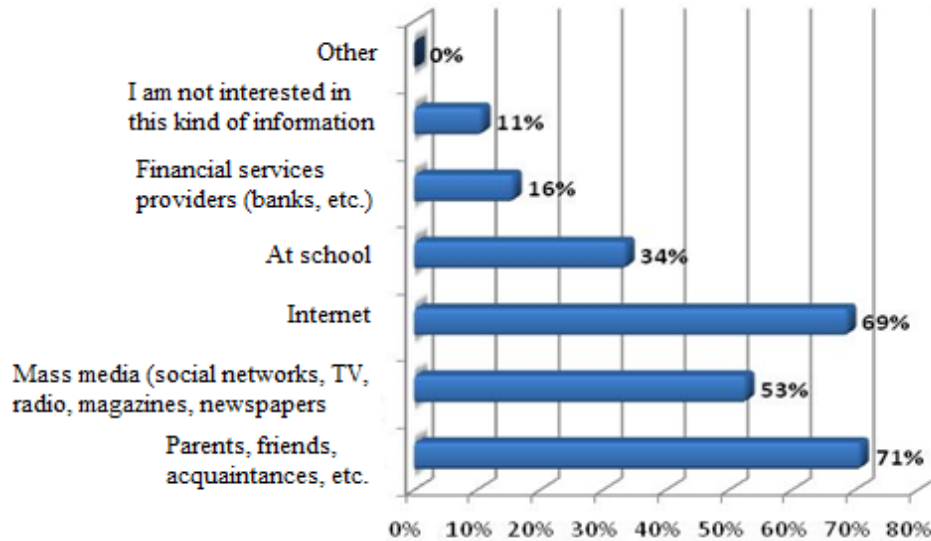


Figure 2. Sources of obtaining information on finances by the youth (% from the total number of replies)

Source: created by the authors on the survey result basis

Summarising the replies to the question of what financial products the respondents have dealt with (see Figure 3), the greater majority deal with accounts and payments (95% of respondents) and e-services (77% of respondents). Less than half – 42% of respondents have made savings and investments.

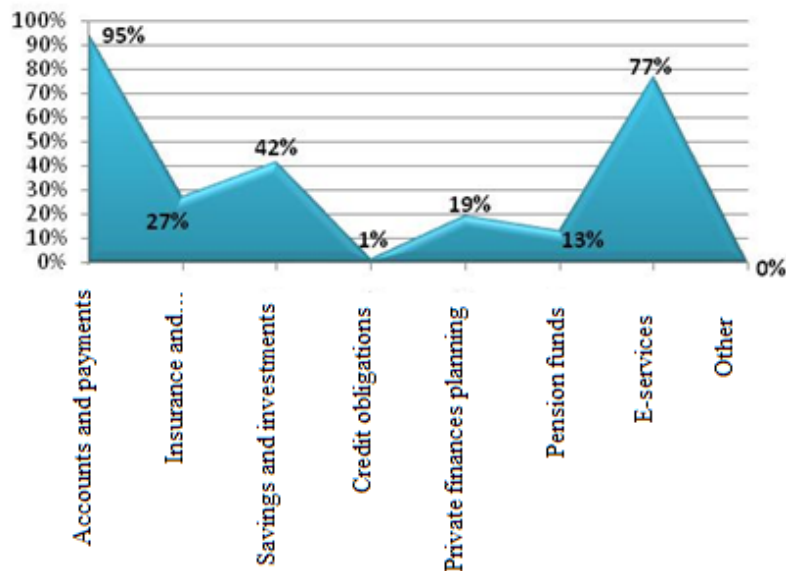
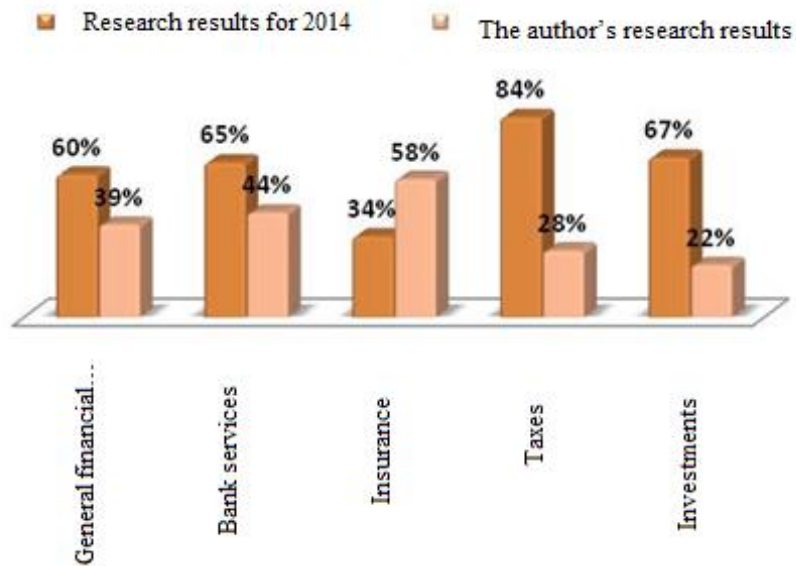


Figure 3. Financial operations dealt with by respondents (% from the total number of replies)

Source: created by the authors on the survey result basis

Figure 4 compares the authors' research data with BA School of Business and Finance research of 2014 "Options of raising the financial literacy level at secondary school: Latvia's case". The data approve that better results in almost all topics, except one, are achieved by secondary education learners at schools in Riga and Riga region. In the topic "general financial issues", learners in Riga and Riga region showed 21% better results than secondary school leavers in Latgale; a similar case is with the topic "bank services", wherein learners in Riga and Riga region showed 21% better results. The only topic wherein secondary school leavers in Latgale show better results is insurance – for 24%. The most remarkable difference appears in taxes, where learners in Riga and Riga region show 56% better results. According to the survey, the knowledge of Latgale secondary education learners for the topic "investments" is 45% poorer.



**Figure4.** Comparison of the research results for 2014 and 2020 across financial topics (%)

*Source:* created by the authors based on the obtained research results and Sarnovics et al. (2014)

These results highlight and approve the results of OECD research that school learners in Riga and Riga region show better knowledge than learners of schools in the rural areas; learners of gymnasia show incredibly high results compared to secondary schools. It has to be considered that participants of the research of the year 2014 were not only form 12 (final secondary school year) learners but also form 10 and 11 learners, and this means that they produced better results than form 12 learners in Latgale. Financial literacy differences are also observed within state regions; hence, this should be attributed to special attention.

Though school leavers estimated their financial literacy knowledge as very good and good (10% and 63%, in total 73%), the results obtained for other survey questions did not approve of their self-assessment, thus leading to a conclusion that school leavers overestimated their knowledge. This is proved by the question asking to assess one's knowledge about financial products, the replies to which show that approximately 9% of respondents are well informed about all offered financial products. In addition, respondents could not provide a correct answer or gave an incorrect answer for part two of the survey questions – the question about converting money (approximately 3/4 of respondents), a question about taxes concerning 3<sup>rd</sup> pension level (almost 4/5 of respondents), a question about deposits (more than 4/5 of respondents) and question about investing in pension levels (more than 3/4 of respondents). School leavers in Latgale showed poorer skills in practical financial literacy tasks. Only one



task from five was completed right by half of the learners. The rest was done right by an average of 23% of school leavers.

Most school leavers in Latgale who participated in the research estimated their financial aptitude too highly. At the same time, their actual knowledge in this sphere could be better. The survey results from the study show that secondary school leavers in Latgale need more theoretical and practical financial literacy knowledge, which needs improvement.

At the same time, only 14% of respondents estimate their knowledge of financial issues acquired at school as sufficient. However, the way of obtaining information to improve their financial literacy most appreciated by school leavers is through school/higher education institutions (30%). It is necessary to improve education programs so that school learners may obtain basic financial literacy at school and higher education institutions, notwithstanding the sphere of their further studies, because financial literacy knowledge must be accessible to each member of society.

#### **4. Conclusions**

The scientific novelty of the research lies in providing an original definition of financial literacy. A novel instrument of research in form of theoretically grounded questionnaire for the assessment of financial literacy of school learners of form 12 was elaborated.

According to the present research results, it is established that 10 % of secondary school leavers in Latgale access their self-financial literacy as “very well” and 63% as “well”. The assessed level of financial literacy of youth in Latgale is similar to the financial literacy level of the Latvian population and is insufficient (Finanšu un kapitāla tirgus komisija, 2021; Mavlutova et al., 2021). Although the current status of financial literacy of Latgale youth is not enough, it is slightly increased since the authors' previous research (Caplinska et al., 2019). The target youth group who are well informed in financial literacy increased by 4%, and the target group who are well informed increased by 5%. According to the Financial Literacy Survey of the Financial and Capital Market Commission (2014; 2019), the Latvian Financial Literacy Index increased slightly from 20.6 points in 2014 and reached 21.7 points in 2019 out of a possible 99.

The primary sources of obtaining information on finances among school learners of form 12 in Latgale are parents and friends 71%, the Internet 69%, and mass media 53%. The data on financial literacy in the context of the linkage between the causes of family and youth financial literacy received within the present research has confirmed the conclusions obtained by other scientists (Vosylis et al., 2021; Jančius et al., 2022). Researches highlight the school's impact on youth financial literacy level (Kuzma et al., 2022; Compen et al., 2022). Only 34% of school learners of form 12 in Latgale obtained financial literacy knowledge at school.

The findings have practical value for the State Education and Content Centre by the Ministry of Education and Science and other social agents since they allow them to set up a financial literacy standard. The institutions can develop and adjust the content of learning in various subjects for the school learners to form during 12 years of learning the basic financial literacy knowledge necessary for adult life.

As elaborated education content only sometimes yields the planned results, there is a need for research about the financial literacy of the teachers of the respective academic subjects. Consider updating teachers' competence in financial literacy issues so they can pass their knowledge over to learners.

Finance and Capital Market Commission need to list in the unified website of Latvian finance literacy activities all activities and available materials related to the acquisition and self-assessment of financial literacy offered by

strategic and other partners. At present, it is necessary to examine Internet resources in order to find out where and in what way it is possible to improve or check one's financial literacy knowledge. This would provide an opportunity to categorise the available information according to topics and target groups and spot the issues that need new activities/events for school learners/youth to obtain a complete opportunity to acquire financial literacy.

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