

## FINANCIAL TOPIC IN SCHOOL CURRICULUM: CASE SLOVENIAN ELEMENTARY SCHOOLS

Valerij Dermol

International School for Social and Business Studies, Slovenia

valerij.dermol@gmail.com

Aleš Trunk

International School for Social and Business Studies, Slovenia

ales.trunk@yahoo.com

### **Abstract:**

For successful participation in a society that faces global economic, technologic, social and cultural changes, development of different forms of literacy is necessary such as informational, digital, media and financial literacy. An appropriate system of financial education stimulates different factors of active citizenship like socially responsible behavior and decision making, cooperation, mobility as well as ethics and moral. In the study, we used text analysis approach; we collected 49 syllabuses of elementary school and check them for the keywords describing financial literacy. In the second step of the analysis, we visualized the networks - which keywords appeared together in individual courses. The study represents a starting point for further research in the area of financial education and promotion of financial literacy in Slovenian schools.

*Keywords: financial literacy, elementary schools, syllabus, society, Slovenia.*

## **1. INTRODUCTION**

The study represents a starting point for further research in the area of financial education and promotion of financial literacy in Slovenian schools. In the study, we used text analysis approach, with two computer programs. After we identified specific keywords in the syllabuses, we joined all the nouns with different inclinations but the same meaning and appropriate indefinite verbs. This way we got the list of 31 keywords. In the second step of the analysis, we visualized which keywords appeared together in specific courses. We are going to perform a similar study at the secondary level of education as well as at tertiary level. This way comparison will be possible, and we will be able to provide a suggestion of a systematic way of introducing financial education in the schooling system.

In the paper, we present the definition of financial literacy and the need for financial education, followed by the research methodology and analysis of 49 syllabuses of elementary school. In conclusion, we present possibilities for further research.

## **2. DEFINITION OF FINANCIAL LITERACY**

Literacy is a permanently evolving ability of individuals to use socially agreed systems of symbols for the reception, understanding, creation, and use of texts for living in a family, school, workplace, and society. Acquired knowledge and skills enable individuals' successful integration in a community, organization or society, taking responsibility for own activities in professional and social contexts as well as create personal and professional growth.

In modern terms, literacy means, as a rule, the ability to read and write at a level suitable for written communication and generally at a level that enables an individual to function successfully at a certain level of society. In addition to the ability to read, write and calculate - the necessary literacy abilities, in today's world also the importance of other skills is emphasized (e.g., listening) and different kinds of literacy, such as information, digital, media, financial, cultural and others are promoted, which seem to be essential for individual's successful integration in modern societies. As ability and social practice, literacy may be acquired and developed throughout the whole life, under different circumstances, and in various fields. Nowadays, literacy pervades all human activities (Mora, 2016).

For successful acting in a society that faces global economic, technologic, social and cultural changes, the development of different forms of literacy is necessary like informational, digital, media and financial literacy. The financial literacy covers the basic literacy, consequently the reading and mathematical literacy and is simultaneously its upgrade because it requires more knowledge and skills specifically in the financial field (Mason in Wilson, 2000). Here are all principles of the general literacy valid that is above all understanding and the skill using financial data when making decisions. In this context, the financial literacy does not present a separated type of literacy but as a link between general reading and mathematical literacy and other basic knowledge and skills connected to personal and other financial matters (Murray, 2010).

## **3. THE NEED FOR FINANCIAL EDUCATION**

Starček and Trunk (2013) highlight the changes in economic, demographic, technologic and other conditions in Europe as well as in the world. The changes lead to a delegation of responsibility for the financial security of individuals and consumers (also the young ones) from the state institutions to each individual. Above all, the changes have also modified money-related habits, requirements, expectations, and behavior of individuals as well as the risks they are exposed to.

An appropriate system of financial education stimulates different factors of active citizenship like socially responsible behavior and decision making, cooperation, mobility as well as ethics and moral. Therefore, the level of risk decreased significantly recently in the field of financial activities done by individuals. Individuals have been improving their financial literacy and their understanding of financial products and financial concepts. Financial literacy is widely acknowledged as the essential element of economic and financial stability and development. Financially literate Individuals contribute positively also to the functioning of financial systems, economy, and society. Financial education represents a lifelong learning process.

However, OECD (2012) PISA financial literacy research shows that financial literacy in many EU countries remains poor. Also, across the EU, there seems to be no systematic financial education in the

curricula of elementary schools and secondary schools (i.e., non-business/economy fields) nor higher education institutions (i.e., non-business/economy fields).

**Table 1:** Results of PISA financial literacy research

	Performance in financial literacy				Relative performance in financial literacy, compared with students around the world with similar performance in mathematics and reading
	Mean score in PISA 2012	Share of lowest performers (Level 1 or below)	Share of top performers in financial literacy (Level 5 or above)	Gender difference (Boys - Girls)	
	Mean score	%	%	Score dif.	Score dif.
<b>OECD average-13</b>	500	15.3	9.7	1	2
Shanghai-China	603	1.6	42.6	-1	0
Flemish Community (Belgium)	541	8.7	19.7	11	9
Estonia	529	5.3	11.3	-3	5
Australia	526	10.4	15.9	-3	18
New Zealand	520	16.1	19.3	3	12
Czech Republic	513	10.1	9.9	6	19
Poland	510	9.8	7.2	3	2
Latvia	501	9.7	4.6	-11	1
United States	492	17.8	9.4	1	1
Russian Federation	486	16.7	4.3	1	14
France	486	19.4	8.1	-6	-24
Slovenia	485	17.6	5.8	-8	-8
Spain	484	16.5	3.8	6	4
Croatia	480	16.5	3.8	5	2
Israel	476	23.0	8.5	-6	-5
Slovak Republic	470	22.8	5.7	-3	2
Italy	466	21.7	2.1	8	-14
Colombia	379	56.5	0.7	0	-5

Source: OECD, 2012.

The research stresses out wrong insurance decisions, investments of money in financial products that one does not know, borrowing cash beyond individuals' means, etc. All these, in turn, lead to a shortage of money and resulting financial problems that sooner or later show up in various areas of individuals' lives. Financial crises even deepen such problems.

It is vital to increase awareness of financial education and necessity for it as well as to make it accessible. Financial education is not just for investors. It is just as important, if not even more, for average families trying to balance their budgets and save for children's education and parents' retirement. Financial education can enable individuals to effectively use financial products and services and to make sound choices to protect themselves and fruitfully participate in financial and economic activities in a country.

More needs to be learned about the financial education needs of consumers at various stages in their lives and how financial education programs can be designed to best address these needs and to understand how people can become financially literate or, in other words, have the knowledge, understanding, skills, and competence to deal with everyday financial matters and make the right choices for their needs.

#### 4. RESEARCH METHODOLOGY

In the research, we used text analysis approach. From the web pages of Slovenian ministry for education, we collected 49 syllabuses of elementary school; 17 of them were syllabuses of obligatory courses and 32 of elective courses.

For the text analysis, we used two computer programs. With Hermetic Word Frequency Counter, we checked the syllabuses for the keywords describing financial literacy. The list of keyword was developed on the base of several papers, reports, and questionnaires measuring financial literacy. In Table 2 we present the whole list of the keyword. The text analysis was done in the Slovene language in which

several noun inclinations exist different for singular, plural as well as dual. Besides nouns, we include in the list indefinite verbs as well.

**Table 2:** 74 keywords describing financial literacy

Money	Investment	Finance	Financing	Investing	Business
Price	Buying	Buy	Borrow	Lend	Loan
Interests	Bank	Invoice	Savings	Interest Rate	Bonds
Payment Card	Credit Card	Debit Card	Credit Card	Mutual Fund	Taxing
Tax	Capital	Profit	Shares	Securities	Savings Account
Yield	Profitability	Stock Exchange	Stock Market	Revenue	Income
Cost	Expense	Monetary Reserve	Insurance Company	Insurance	Exchange rate
Insurance Premium	Insurance sum	Inflation	Deflation	Budget	Gold Reserve
Expenditure	Financial product	Financial instrument	Balance sheet	Deposit	Life insurance
Currency	Property	Real Estate Fund	Returns	Property	Investment Risk
Risk	Trust	Bankruptcy	Equity Fund	Taxation	Pay
Salary	Financial Plan	Expenditure	Installment	Savings	Mortgage
Property	Transaction				

For the text analysis, we used two computer programs. With Hermetic Word Frequency Counter, we checked the syllabuses for the keywords describing financial literacy. The list of keyword was developed on the base of several papers, reports, and questionnaires measuring financial literacy. In Table 2 we present the whole list of the keyword. The text analysis was done in the Slovene language in which several noun inclinations exist. Because of a variety of inclinations, the number of analyzed keywords increased to approximately 600. After we identified the specific keywords in the syllabuses, we joined together all the nouns with different inclinations but the same meaning and appropriate indefinite verbs. This way we got the list of 31 keywords.

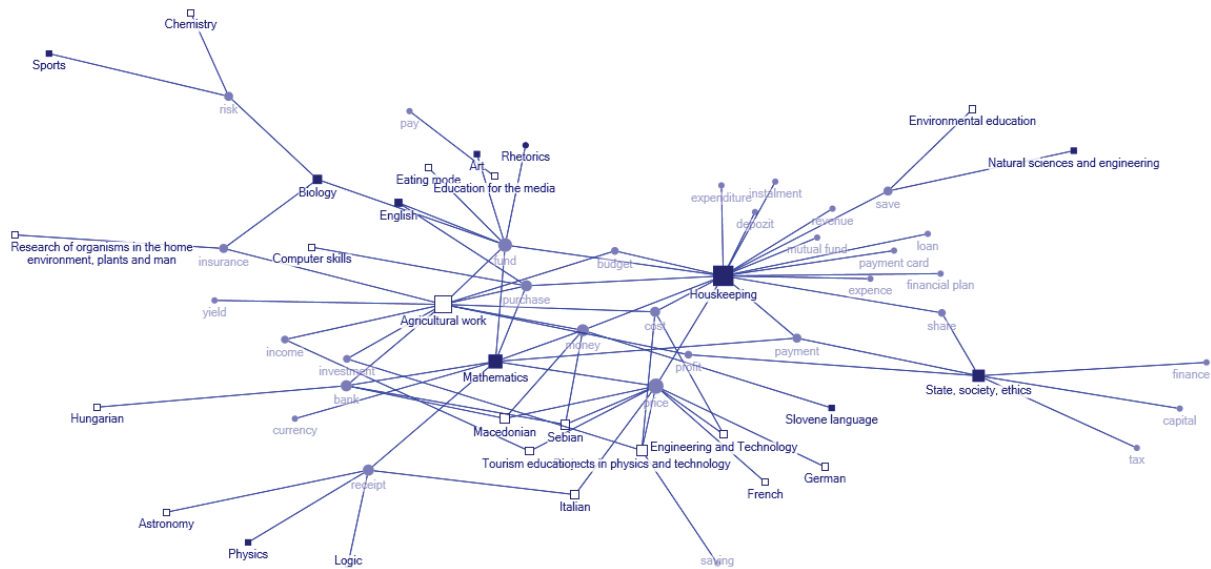
In the second step of the analysis, we visualized (1) two-mode network comprised of the names of the courses and the keywords belonging to particular courses, and (2) one-mode network with keywords showing which keywords appeared together in certain courses. To visualize the networks, we used NodeXL Excel template.

## 5. RESULTS AND DISCUSSION

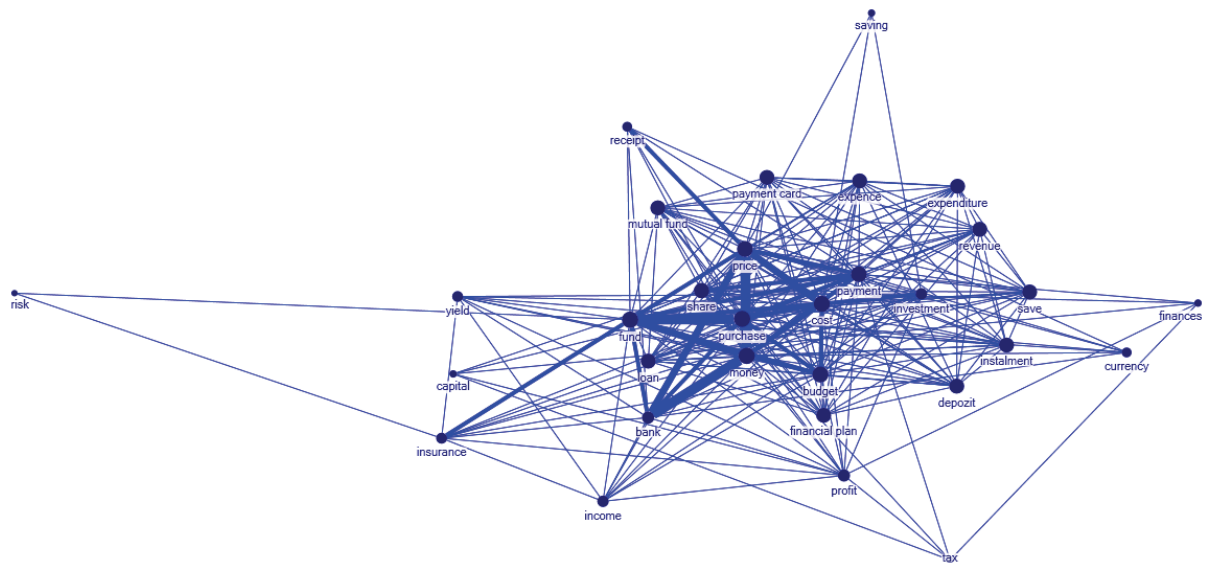
Picture 1 presents two-mode network comprised of the courses (obligatory courses marked as Solid Square and elective courses as squares) and financial literacy keywords (marked as solid circles). The size of a square or a circle represents degree measure. The degree measure shows either how many keywords appear in a course or in how many courses appear a keyword.

From the picture 1, we can see, that the financial literacy keywords appear in syllabuses of 10 obligatory courses (59 %) and 20 elective courses (63 %). However, it is the obligatory courses which cover the highest number of financial literacy keywords. Most keywords are included in the Housekeeping, Mathematics and State, society, and ethics syllabuses. On the other hand, there is only two elective course including 4 or more keywords - Agricultural work with the second highest number of keywords after the Housekeeping course and Engineering and Technology course. The keywords which appear most often are price, fund, purchase, money.

**Picture 1:** Two-mode network of courses and related keywords if financial literacy



**Picture 2:** One-mode network of financial literacy keywords



Picture 2 presents one-mode network including only financial literacy keywords. The keyword from the very center of the network are the ones appearing most often in the syllabuses of the courses. As already indicated, these are, for example, purchase, money, price, fund, and also cost, payment, budget, bank, loan, and share. From the network in Picture 2, we can also see the ones which most often appear together in the syllabuses. The frequency of appearance is indicated by the thickness of the links between the keywords. On the other hand, there are quite some keywords which appear on the outer side of the network. These keywords, such as risk, income, tax, finances, saving, etc. are more rarely used in syllabuses of elementary schools.

In literature, authors emphasize at least four areas of financial literacy which should be covered by financial education – (i) money and transactions (paying, purchase, credit cards, bank account), (ii) planning and management of finances (budget, yields, lending of money, etc.), (iii) risks and profit (investments, insurance, instalments, interest rates, currencies), and (iv) financial maps. From the list of

the keywords appearing most often in the syllabuses, it seems that the topics of financial literacy in elementary school mostly relate to the first area of financial literacy, i.e., spending money. Other areas are somehow neglected.

## 6. CONCLUSION

The study represents a starting point for further research in the area of financial education and promotion of financial literacy in Slovenian schools. We are going to perform the similar study at the secondary level of education as well as at tertiary level. This way comparison will be possible, and we will be able to provide a suggestion of a systematic way of introducing financial education in the schooling system. Besides the inclusion of all three levels of education in the investigation of financial literacy, the more qualitative approach to research may be useful to deepen the knowledge about financial education and financial literacy in the society.

## REFERENCE LIST

1. Mason, C., & Wilson, R. (2000). *Conceptualizing financial literacy*. Business School Research Paper 2000:7, Loughborough University.
2. Mora, Raúl Alberto. (2016). Translating Literacy as Global Policy and Advocacy. *Journal of Adolescent & Adult Literacy*, Volume 59, Issue 6, pp. 647-651.
3. Murray, T. S. (2010). *Financial Literacy: a Conceptual Review*. DataAngel Policy Research. Research paper prepared for the Task Force on Financial Literacy.
4. OECD. (2012). *PISA 2012 Results: Students and Money - Financial literacy skills for the 21st century*. Retrieved from <http://www.oecd.org/pisa/keyfindings/PISA-2012-results-volume-vi.pdf>
5. Starček, Simon & Aleš Trunk. (2013). *The meaning and concept of financial education in the society of economic changes*. IN: DERMOL, Valerij (ed.), TRUNK ŠIRCA, Nada (ed.), ĐAKOVIĆ, Goran (ed.). Active citizenship by knowledge management & innovation: proceedings of the Management, Knowledge and Learning International Conference 2013, 19-21 June 2013, Zadar, Croatia. Bangkok; Celje; Lublin: ToKnowPress, pp. 1443-1452.