

International Journal of Knowledge Processing Studies (KPS)



Homepage: <http://kps.artahub.ir/>



ORIGINAL RESEARCH ARTICLE

Text Analysis of Sixth-Grade Textbooks for Financial Knowledge Application Based on Tyler Model

Zahra Sadafi Tehrani¹, Masoumeh Al-Sadat Abtahi^{2*}, Ezatollah Naderi³, Maryam Seif Naraghi⁴

¹ PhD student of Department of Education Science, Science and Research Branch, Islamic Azad University, Tehran, Iran. sadafi19707@yahoo.com

² Assistant Professor, Department of Education Science, Science and Research Branch, Islamic Azad University, Tehran, Iran. (Corresponding) abtahi2008.m@gmail.com, 0000-0002-5755-6048

³ Professor, Department of Education Science, Science and Research Branch, Islamic Azad University, Tehran, Iran. eznaderi@hotmail.com

⁴ Professor, Department of Education Science, Science and Research Branch, Islamic Azad University, Tehran, Iran. siefenaraghi.m@yahoo.com

ARTICLE INFO

Article History:

Received: 2023-09-02

Revised: 2023-09-20

Accepted: 2023-11-27

Published Online: 2024-09-01

Keywords: Text Analysis, Economics of Education, Financial Knowledge, Financial Education, Tyler Model.

Number of Reference: 51

Number of Figures: 3

Number of Tables: 5

DOI: 10.22034/kps.2023.414579.1160



ABSTRACT

The purpose of the study is to analyze the sixth grade textbooks for the application of financial knowledge from the point of view of the professors of the financial management department of public and private universities. The research method is descriptive-analytical. The statistical population of all professors of the financial management department of public and private universities with more than 10 years of experience in Tehran province is determined to be around 322 people. A researcher-made questionnaire was used to collect data. This tool is a combination of the financial knowledge tests of the National Council of Economic Education of America and the national standards for personal finance of the Jumpstart model and adapted to the conditions of Iranian students. Professors, experts of the Department of Economics of Islamic Azad University in Tehran and experts of the Education Organization have confirmed the validity of the questionnaire and its reliability has been confirmed by calculating Cronbach's alpha of 0.894. Text mining methods (mean, percentage and frequency) and inferential statistics have been used to review and analyze the data. The results of the research show that the educational goals of the framework of the personal finance book, the framework of content and learning experiences, the framework of organizing teaching-learning experiences and the design of the evaluation framework of learning experiences in the application of financial knowledge in sixth grade textbooks are effective from the point of view of financial experts and experts. ©authors

► **Citation:** Sadafi Tehrani, Z., Al-Sadat Abtahi, M., Naderi, E., & Saif Naraghi, M. (2024). Text Analysis of Sixth-Grade Textbooks for Financial Knowledge Application Based on Tyler Model. *International Journal of Knowledge Processing Studies (KPS)*, 4(3): 108-125. Doi: 10.22034/kps.2023.414579.1160

1. Introduction

Financial knowledge helps in better understanding of financial concepts and enables a person to manage their finances efficiently. In addition, it helps to manage money effectively, make financial decisions and achieve financial stability (Audrin et al., 2022). In addition, it provides various strategies that are essential for financial growth and success. In today's age, due to the rapid growth of the population, the ever-increasing development of industry, and the limitation of resources, countries can progress that can achieve the maximum use of the resources at their disposal, which cannot be achieved except through specialized and trained forces. (Gupta et al., 2022). One of these resources that plays a significant role in the production and welfare of society is financial and investment resources. Only people can be successful in this chaos of different financial markets and serve the society who have a correct understanding of financial issues and complexities, which requires having financial knowledge. Financial knowledge is one of the most basic life skills for people in society, and strengthening this skill is of particular importance to perform proper performance in political, social, cultural and scientific fields (Whitehouse, 2023). The lack of financial knowledge has negative consequences and effects on the life of a person and the society, and even affects the lives of other people, family and friends. According to most experts, a major part of financial issues and problems and poverty is caused by the lack of financial knowledge and can bring consequences and anomalies such as aggressive behavior, theft, family disputes, addiction and increasing the age of marriage. Previous studies show that the level of financial knowledge among families, children and teenagers is not satisfactory even in developed countries. For example, in 2005, the evaluation of the level of personal financial knowledge of American high school students indicated that 52% of the students received a failing grade and lacked the necessary knowledge to make appropriate financial decisions (Jamshidi

Moghadam et al., 1401). Considering that comprehensive human education is the main goal of education and educational systems, education of financial issues and improvement of people's financial knowledge from childhood should be considered by planners. In a situation where in advanced countries, financial knowledge is taught in preschool to university courses, in the official education system of the country, financial knowledge education in schools has been neglected (Mameshli, 2012) and the official curriculum It does not benefit from the modern teachings and concepts of financial knowledge to teach financial knowledge to elementary school children. While the primary period is essential for establishing the personality-behavioral structure and developing basic skills of children (Adib Manesh & Sadr, 1400). In other words, although financial knowledge education has been emphasized directly and indirectly in the general goals of the education system of Iran and in the curricula, it is necessary that the curriculum as an important element that is necessary for the transformation with the new conditions. It should be designed in a way that helps people to play an active role in society (Khodarahmi & Maleki, 2014). The sixth grade of elementary school, the last grade of elementary school, coincides with the end of childhood and the border of entering adolescence. Therefore, it has special sensitivity and importance. Upon entering adolescence, a teenager needs basic life skills. Basic life skills are classified into three categories: intellectual, emotional and behavioral skills.

The sixth grade of elementary school is the last grade of elementary school, which coincides with the end of childhood and the threshold of entering adolescence. Therefore, it has special sensitivity and importance. Upon entering adolescence, a teenager needs to have basic life skills. Basic life skills are the cognitive, emotional and practical skills that are needed for success and happiness in everyday life. It also aims to increase psychological and social skills and ultimately prevent harmful behaviors. It is

bad for health and improving people's mental health. Considering the importance of financial and economic issues from this stage onwards, financial knowledge is vital for sixth grade students.

Considering the above-mentioned materials and the importance of teaching financial knowledge to primary school students, as well as the existing shortcomings in the educational field, the educational system and primary school textbooks in the field of financial knowledge, the present research is trying to design a knowledge teaching model. pay for elementary school students. Text mining of textbooks is very important as a powerful tool in the application of financial knowledge. This method allows researchers to use the knowledge found in textbooks and intelligently transform it into financial knowledge. Textbooks provide a lot of information and teachings in different fields. By using text mining techniques, you can obtain useful information from a wide range of categories and use them in your financial decisions. It is important to recognize patterns and trends in textbook texts. In these texts, they often describe historical, economic and financial patterns and trends. By using text mining analysis, these patterns can be identified and have a better understanding of market changes and financial behaviors (CheshmehSohrabi et al, 2023). Text mining is one of the important branches in the field of extracting knowledge from data, which uses various techniques and algorithms to analyze and extract information and patterns in texts. This process pays attention to different textual components such as words, sentences, paragraphs and larger documents and uses several tools to analyze textual structures, concepts, order and connections (Gyódi et al., 2023).

In text mining, the main goal is to transform complex and large texts into understandable and conceptual information. This information can include patterns, key concepts, temporal evolutions, relationships between entities and many other components. By using text mining analysis, it is possible to convert irregular and unstructured data in texts into analyzable

data and extract valuable information from them. One of the important applications of text mining in the information age is the analysis of large and diverse texts (Zhou, 2020). This branch of knowledge mining is dedicated to the analysis of texts such as scientific articles, customer reviews, social media posts and even textbooks. Through the analysis of these texts, it is possible to identify the patterns of social changes, the needs and desires of customers, market trends and many other things and use them to make better decisions in different areas (Delcker, 2022). By carefully analyzing the text of the textbook, you can identify key signs and information that help predict important financial events. These forecasts can help in making strategic financial decisions. These texts usually use reliable sources and careful research. So with this interpretation, textbook text mining as a multifaceted tool can help you build deeper financial knowledge and make better decisions. As a result, this research seeks answers to the following questions: 1- What are the educational goals of the framework of the personal finance book for the sixth grade based on the principles of the curriculum and upper documents of Iranian education? 2- What is the framework of the content and learning experiences of the personal finance book for the sixth grade based on the principles of the curriculum and upper documents of Iranian education? 3- What is the framework for organizing teaching-learning experiences of the personal finance book for the sixth grade based on the principles of the curriculum and upper documents of Iranian education? 4- How is the design of the framework for evaluating the learning experiences of the personal finance book for the sixth grade based on the principles of the curriculum and upper documents of Iranian education?

2. Literature Review

According to the UNESCO definition, "financial knowledge" is one of the components of literacy, along with emotional literacy, communication literacy, media literacy, educational literacy, and computer literacy (Wickens & Sandlin, 2007). The

Organization for Economic Co-Operation and Development (OECD) definition of financial knowledge is: "Knowledge and understanding of financial concepts, risks and skills, motivation and self-confidence to apply this knowledge in order to make effective decisions in a wide range." From the financial fields, to improve the financial well-being of individuals and society, as well as to create participation in economic life" (OECD, 2015: 33). Financial knowledge includes a person's ability and confidence to use financial knowledge to make financial decisions; In other words, financial knowledge includes both dimensions of knowledge and application of knowledge (Rai, Dua & Yadav, 2019). After preliminary evidence that 5- or 6-year-olds in primary schools can understand financial concepts, including cost-benefit analysis and scarcity. More recent studies have also shown that teaching financial knowledge to primary school students can improve financial literacy and knowledge (Kalwij et al., 2019; Coda Moscarola & Kalwij, 2018) and financial attitude (Amagir, Groot, Maassen Van Den Brink & Wilschut, 2018), financial behaviors such as saving (Cerya, Tasman & Rahmi, 2020; Tuong & Doan, 2020) in children. Based on the research evidence from those studies that have examined the financial knowledge of Iranian students, the financial knowledge of students is very low (Loumi, 2016; Dianti Dilmoy and Hanifahzadeh, 2014; Salimipour, 2015).), which points out the importance and necessity of early education of financial knowledge, on the other hand, the teaching of financial concepts in the form of social science lessons has not had the necessary effect, and revision of the educational content of social science lessons has been suggested (Roshandel, Amiri and Taghiani, 2017). Gold (2018) and Goya, Firouzian and Gholam Azad (2018) have suggested that teaching financial knowledge and financial decision-making ability should be combined with existing curricula such as math lessons. By implementing the needs assessment of the financial knowledge curriculum in primary education, the researchers have emphasized the necessity of financial

knowledge education in the primary period. The analysis of the content of the elementary school books has also shown that in the elementary school books, the components of financial knowledge have not been properly paid attention to, and the components of economic literacy have been given more attention than the components of financial knowledge; Therefore, the shortcomings of the primary curriculum of the country's education system in the field of financial knowledge have been identified and providing a suitable solution for it is one of the duties of the curriculum planners. According to the researchers, developing children's thinking and economic reasoning power is the background of financial management skills in adulthood, which requires a long and appropriate training opportunity, and for this reason, it is necessary that these trainings start from elementary school. Jayaraman, Jambunathan & Adesanya, 2019; Firouzian and Goya, 2017). Because the delay in teaching financial knowledge causes more time to be spent on correcting incorrect information in the future. In addition to the emphasis of the Economic Development and Cooperation Organization (2014) on the importance of teaching financial knowledge in the elementary school, its necessity and importance in other researches (Seria et al., 2020; Batty, Collins, O'Rourke & Odders-White, 2020; Kalwij et al., 2019; Mishra & Kumar, 2019; Coda Moscarola & Kalwij, 2018; Batty et al., 2015; Lusardi & Mitchell, 2011). In connection with the issue of financial and economic knowledge in educational systems, various researches have been conducted, some examples are mentioned below. Kandahari, Mehrmohammadi, Talai and Faraj Dizji (2018) presented implications for economic and financial education in Iran with a comparative study of the integration of economic education in the curriculum of the primary school in Scotland, China and Australia. The results of the research indicate that the participation of the selected countries in the goals of economic education is in the two fields of knowledge and skills. In the field of organizational methods, the

integration of different subjects, especially social studies, is considered as a common subject among countries, and finally, in the field of learning opportunities, the use of activity-based methods, exploration, questioning, and debate along with information technology. And communication is emphasized. The findings of Cerya et al. (2020) showed that teachers emphasize the development of tools and media for learning financial knowledge because so far the direct teaching method has not been able to lead to a complete understanding of the material in students.

The findings of Meyers (2020) showed that the interest in personal finance and the level of wealth, income and education of parents are related to the individual's financial knowledge. In a research by Carlson (2020), the variables of ethnicity, academic progress and income have had a significant relationship with financial knowledge educational programs. Batty et al. (2020) showed that education interventions can improve students' financial knowledge. Kalwij et al. (2019) confirmed the effectiveness of financial education on financial knowledge and saving behavior and found that this program has increased students' willingness to save by 4%. According to the findings of Amagir et al. (2018), school-based financial education programs can improve the financial knowledge and attitude of children and adolescents. Also, "experiential learning" is a promising method for teaching financial knowledge to children and teenagers in elementary school. Various teaching methods such as role-playing, group discussions, interviewing people, and analyzing case problems are among the effective methods of teaching financial knowledge in elementary schools. Batty et al. (2015) by examining "experimental evidence about the impact of financial education on the knowledge, behavior and attitude of elementary school students" found that even a relatively short program increases knowledge that continues up to a year later. Students who were exposed to financial education have more savings and a more positive attitude towards personal finances. . In a study, Sherraden, Johnson, Guo & Elliott (2011) examined the effect of a four-year innovative school-based savings and financial education program entitled "I Can Save". The elementary school children who participated in the program, regardless of their parents' education and income, scored higher in the financial knowledge test than the students of the comparison group in the

same school. In general, the research results indicate that when access to financial education along with participation in meaningful financial services, the ability and financial ability of young children increases. Totenhagen and colleagues (2015) conducted a research with the aim of identifying the characteristics of financial education programs that may have positive effects on the improvement of students' financial knowledge and identified eight basic characteristics of an effective curriculum: (a) building the program and Aligning it with exact standards and criteria, (b) parental involvement, (c) evaluation, (d) teacher knowledge and teaching skills, (e) early start and continuation of the program, (d) dealing with diverse backgrounds and needs, g) alignment with student interests and motivations, and (h) basic knowledge. In connection with the issue of financial and economic knowledge in the educational systems of different countries and inside Iran, various researches have been conducted, some examples are mentioned below. Bati et al. (2020) showed that education interventions can improve students' financial knowledge. According to the research results of Amagir et al. (2018), school-based financial education programs can improve the financial knowledge and attitude of children and adolescents. Also, experiential learning is a promising way to teach financial knowledge to children and teenagers in elementary school. Jamshidi Moghadam et al. (1401) conducted a research with the aim of designing a financial knowledge curriculum model based on a hybrid approach in the second year of elementary school. The results show that the current situation of the financial knowledge curriculum in the second elementary school is unfavorable Abedini Beltrak and Jafari (2018), analyzing the content of economic literacy education in the sixth grade, one of the new issues in education in advanced countries, introducing programs for economic education and teaching the concepts of economic literacy into the education system along with skill training. It is basic and necessary. Based on this, it seems necessary to review the curriculum in order to empower people in the economy. Goya et al. (2018), promoting financial knowledge and financial decision-making through school mathematics curriculum, examining financial topics in mathematics textbooks of the 40s and 50s in Iran, shows that teaching financial knowledge and building ability Financial decision-making has been part of the math curriculum.

Motamedi Mohammadabadi et al. (1401), designing a media literacy training model for teachers, based on the foundation's data approach, the present article was carried out with the aim of presenting a media literacy training model for teachers. The obtained results showed that due to job requirements, social changes and media risks (causal factors), media literacy in terms of knowledge, attitude and skills (central phenomenon) should be provided to teachers in the form of primary and secondary education (strategies). to be Policies, program development and financing (platforms) along with motivational factors, competence of instructors, content and equipment (intervening factors) affect the success of the program and will create personal, professional and social consequences. The developed model can facilitate the planning of teaching media literacy of teachers in Farhangian University in the form of a scientific framework. Moghadam et al. (1401) conducted a research with the aim of designing a financial knowledge curriculum model for primary school students. Qualitative method was used in this research. The result of this research was the design of a valid curriculum model for teaching financial knowledge to primary school students, which had 21 indicators as goals, 26 indicators for content, 19 indicators for teaching methods, and 8 indicators for curriculum evaluation methods. The designed model can be a guide for the process of curriculum planning, implementation and evaluation. Keeping in mind the current economic situation of Iran and the world, where each country is involved in economic problems and monetary and financial crises according to its own conditions, it becomes necessary to pay attention to the design of the curriculum model of financial knowledge in the elementary school. For curriculum design, several theories are proposed and their application can be done at different levels of curriculum design and in the form of separate and integrated approaches (Moussipour, 2018). What is intended in this research is design at the "planning" level and under the "integrated approach" with commitment to "Tyler's logic". In the design of the financial knowledge curriculum based on Tyler's curriculum theory, it is expected

that the goals and objectives, learning experiences (content and subject matter), how to organize teaching and learning activities, and evaluation methods of the financial knowledge curriculum for the elementary education levels will be determined. Therefore, the current research intends to investigate the feasibility of applying financial knowledge in sixth grade primary school textbooks from the point of view of financial experts and specialists based on Tyler's model.

3. Methodology

The current article is considered practical in terms of its purpose and has little method according to the method used. Informative sources or key informants (statistical research community) include experts and specialists in financial affairs, experts and specialists in the field of curriculum planning, educational psychologists. In this research, the statistical sample consists of three sample groups that are appropriate to the statistical population, which include educational psychologists, experts and specialists in financial affairs, and experts and specialists in curriculum planning, who were selected considering a service history of more than 10 years. The sampling method for the community of educational psychologists is purposeful and for the two communities of financial experts and curriculum planners, it is randomly clustered. How to determine the sample size of the target population in this research and its selection using Cochran's size determination method. Financial experts and specialists in this research, all the professors of the financial management department of public and private universities with more than 10 years of experience in Tehran province are about 322 people, of which 243 are men and 79 are women. The sample size is based on Cochran's formula (43 women and 13 men).

Table 1. The number of male and female samples in the community and sample

Studied groups	Number of women in the sample	Number of men in the sample	Number of men in community	Number of women in community	Total number in the community
Financial experts and economists	43	132	243	79	322

The tool used to collect data is a questionnaire designed with the basic components of financial knowledge in the framework of the principles of curriculum planning according to Tyler, which questionnaire is based on the opinions of experts and professors in the 3 fields of economics, curriculum planning and psychology. Educational science was designed and prepared. For this purpose, the components of "financial knowledge" were selected from related statistical texts, and then with the help of experts in two fields, economic experts and financial experts, the most appropriate ones were selected according to collective agreement, and finally, the questions of the questionnaire, which included 27 questions based on the components of knowledge Financial is in the four axes of the goal, content, teaching-learning methods and evaluation with a Likert scale, after providing validity and reliability (Cronbach's alpha coefficient was used to determine the reliability of the instrument, and the calculated coefficient was equal to 0.894). According to the nature of the research subject and its objectives, the data analysis of the questionnaire was carried out at two levels of descriptive and inferential statistics, and it was analyzed by the method of descriptive statistics (distribution table, frequency and graph) and inferential statistics using spss software. For the statistical analysis of the data of this research, the chi-square method was used and the error rate in the current research was considered equal to 5%.

4. Findings

1- What are the educational goals of the framework of the personal finance book for the sixth grade? In this part, to answer the first question of the current research, "Educational objectives of the framework of the book "Personal Finance" (regarding the

components of earning money, buying goods and services, saving, using credit, financial investment, protection and insurance) Which one is based on the principles of the curriculum and upper documents of Iran's education for the sixth grade?" First, the distribution of the frequency and percentage of the opinions of the group of economists and financial experts related to the educational goals of the book "Personal Finance for the sixth grade of elementary school" based on the principles of the curriculum and upper documents of Iranian education is presented. The results of many statistics showed that about the goals of Education of personal finance framework, 0.6% somewhat, 20% high and 79.34% very high. Income and financial goals of life, 16% high and 84% very high. Student's familiarity with different forms of money, 1.1% somewhat; 25.7% is high and 73.10% is very high. Student familiarity with different forms of income is 1.1% somewhat; 22.9% is high and 76.00% is very high. The student used different payment methods (cash, check and electronic payments), 0.6% somewhat, 38.3% a lot and 61.10% very much. Developing money management skills (income and expenses) in the student. 1.1% is somewhat, 29.7% is too much and 69.10% is too much. The student's understanding and recognition of the importance and necessity of the concept of saving is 1.1% to some extent, 37.7% is too much and 61.10% is too much. Is. Student's familiarity with all banking services (bank accounts, credit, loans) 1.1% to some extent; 34.3% is high and 64.06% is too high. The student's preliminary knowledge of insurance and its types (such as car, travel, home, life) 0.6% low and somewhat; 41.7% was high and 57.10% was too high. The student's knowledge of his rights and responsibilities as a consumer 1.7% to some extent; 35.4% was high and 62.09% was too high.

Table 2. Distribution of the frequency and percentage of the opinions of economists and financial experts regarding the educational goals of the framework of the book "Personal finance for the sixth grade of elementary school based on the principles of the curriculum and upper documents of Iran's education and training"

Economists and financial experts	The possibility of error	Chi value	Very high		High		Fairly		Low		Very low	
			Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency
			Educational objectives of the personal finance framework (X1)	0.112	6.8	79.4	139	20.0	35	0.6	1	0
Income and financial life goals (X2)	0.189	6.13	84.0	147	16.0	28			0	0	0	0
Familiarizing students with different forms of money (X3)	0.131	7.09	73.1	128	25.7	45	1.1	2	0	0	0	0
Familiarizing students with different forms of income (X4)	0.605	2.7	76.0	133	22.9	40	1.1	2	0	0	0	0
Familiarizing students with different payment methods (cash, check and electronic payments) (X5)	0.75	1.31	61.1	107	38.3	67	0.6	1	0	0	0	0
Creating money management skills (income and expenses) in students (X6)	0.59	2.8	69.1	121	29.7	52	1.1	2	0	0	0	0
The student's understanding of the importance and necessity of the concept of savings (X7)	0.76	1.8	61.1	107	37.7	66	1.1	2	0	0	0	0
Familiarizing students with all banking services (bank accounts, credit, loans) (X8)	0.23	7.9	64.6	113	34.3	60	1.1	2	0	0	0	0
The student's preliminary knowledge of insurance and its types (such as car, travel, home, life) (X9)	0.11	7.3	57.1	100	41.7	73	0.6	1	.6	1	0	0
Acquainting students with their rights and responsibilities as consumers (X10)	0.28	5.06	62.9	110	35.4	62	1.7	3	0	0	0	0

The chi-square obtained from the comparison of the frequencies of the two groups regarding the educational goals of the personal finance framework is equal to 6.8, which is not statistically significant with a probability of error of 0.112. The chi-square obtained by comparing the frequencies of the two groups regarding income and financial goals of life is equal to 6.13, which is not statistically significant with a probability of error of 0.189. The chi-square obtained from the comparison of the frequencies of the two groups regarding the student's familiarity with different forms of money is equal to 7.09, which is not statistically significant with a probability of error of 0.131. The chi-square obtained from the comparison of the frequencies of the two groups regarding the student's familiarity with different forms of income is equal to 2.7, which is not statistically significant with a probability of error of 0.605. The chi-square ratio obtained from the comparison of the frequencies of the two groups regarding the student's familiarity with different payment methods (cash, check and electronic payments) is equal to 1.31, which is not statistically significant with a probability of error of 0.75. The chi-square obtained from the

comparison of the frequencies of the two groups regarding the development of money management skills (income and expenses) in students is equal to 2.8, which is not statistically significant with a probability of error of 0.59. The chi-square ratio obtained from the comparison of the frequencies of the two groups regarding the student's understanding of the importance and necessity of the concept of saving is equal to 1.8, which is not statistically significant with a probability of error of 0.76. The chi-square obtained from the comparison of the frequencies of the two groups regarding the student's familiarity with all banking services (bank accounts, credit, loans) is equal to 7.9, which is not statistically significant with a probability of error of 0.23. The chi-square ratio obtained by comparing the frequencies of the two groups regarding the student's preliminary familiarity with insurance and its types (such as car, travel, home, life) is equal to 7.3, which is statistically significant with a probability of error of 0.11. Is not. The chi-square obtained from the comparison of the frequencies of the two groups regarding the student's awareness of his rights and responsibilities as a consumer is equal to 5.06, which is not statistically significant

with a probability of error of 0.28. Therefore, the two studied groups are not significantly different from each other in all the studied dimensions and have similar opinions.

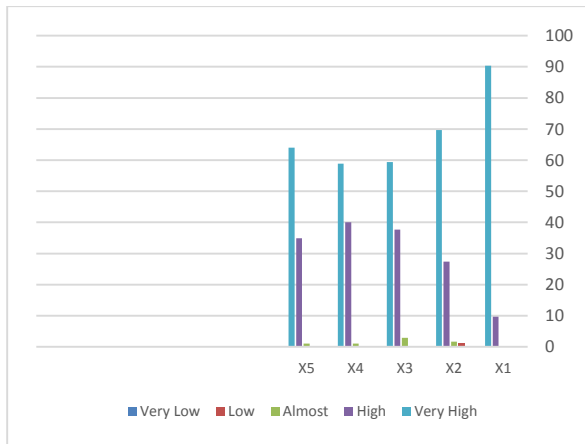


Chart 1. Distribution of the frequency and percentage of the opinions of economists and financial experts regarding the educational goals of the framework book "Personal Finance for the sixth grade based on the principles of the curriculum and upper documents of Iran's education and training"

2- What is the framework of the content and learning experiences of the personal finance book for the sixth grade? To answer the second question of the present research, firstly, the distribution of the frequency and percentage of opinions of the group of economists and financial experts related to the content of financial knowledge for the sixth grade based on the principles of the curriculum and upper documents of Iranian education is presented. The results of many statistics showed that about the content of financial knowledge, 2.3 percent; 20% is high and 70.77% is too high. introducing and taking students to various jobs, 2.9 percent to

some extent; 41.7 percent was high and 55.4 percent was too high. Introduction of different forms of money (paper - bank card - coin), 1.1 percent; 32.6% was high and 60.60% was too high. Introducing types of income through providing job examples and group games, 3.4% to some extent; 36% is high and 76.00% is too high. Introduction of different payment methods through payment of purchase costs (by money, check, payment gateways) in Rupoli game and banking, 0.6% low; 1.1 percent somewhat; 33.1% was high and 65.10% was too high. Student's self-evaluation and self-leadership by means of reward money with appropriate reinforcement and encouragement, 2.9% to some extent; 28.6% was high and 68.6% was too high. Understanding the concept of savings through practical activities such as opening an account, saving allowance money, playing the bank game at home and presenting its report on behalf of the students, 3.4 percent; 31.4% was high and 65.10% was too high. Introduction of the bank's tasks for opening an account, giving a loan through the presentation of stories, examples and group games, 0.4% to some extent; 20.6% is high and 75.40% is too high. Introducing and presenting videos and examples for all types of insurance such as: car, travel, fire, 1.7% approximately; 29.1% was high and 69.10% was too high. Providing examples and examples about the introduction of after-sales services, 0.6 percent to some extent; 26.9% was high and 72.60% was too high.

Table 3. Distribution of the frequency and percentage of the opinions of economists and financial experts of the studied sample about the financial knowledge content of the book "Personal Finance" for the sixth grade based on the principles of the curriculum and upper documents of Iranian education.

Economists and financial experts	The possibility of error	Chi value	Very high		High		Fairly		Low		Very low	
			Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency
			Content of financial knowledge (X1)	0.114	5.5	77.7	136	20.0	35	2.3	4	0
Introducing and taking students to different jobs (X2)	0.15	6.7	55.4	97	41.7	73	2.9	5	0	0	0	0
Introduction of different forms of money (paper, bank card, coin, etc.) (X3)	0.74	3.5	66.3	116	32.6	57	1.1	2	0	0	0	0
Introducing types of income through job examples and group games (X4)	0.32	5.6	60.6	106	36.0	63	3.4	6	0	0	0	0

Introduction of different payment methods through payment of purchase expenses (by money, check, payment gateways) in the Rupoli game and banking and... (X5)	0.7	3.5	65.1	114	33.1	58	1.1	2	0.6	1	0	0
Student's self-evaluation and self-leadership by means of reward money with appropriate reinforcement and encouragement (X6)	0.21	5.8	68.6	120	28.6	50	2.9	5	0	0	0	0
Understanding the concept of savings through practical activities such as opening an account, saving allowance money, playing the bank game at home and presenting its report on behalf of the students. (X7)	0.10	8.3	65.1	114	31.4	55	3.4	6	0	0	0	0
Introduction of the bank's duties for opening an account, giving a loan through the presentation of stories, examples and group games (X8)	0.11	5.2	75.4	132	20.6	36	4.0	7	0	0	0	0
Introducing and presenting videos and examples for all types of insurance such as: car, travel, fire, etc. (X9)	0.38	4.1	69.1	121	29.1	51	1.7	3	0	0	0	0
Providing examples and examples about the introduction of after-sales services (X10)	0.14	5.5	72.6	127	26.9	47	.6	1	0	0	0	0

The chi-square obtained from comparing the frequencies of the two groups regarding the content of financial knowledge is equal to 5.5, which is not statistically significant with a probability of error of 0.114. The chi-square obtained from the comparison of the frequencies of the two groups regarding introducing and taking students to different jobs is equal to 6.7, which is not statistically significant with a probability of error of 0.15. The difference between the frequencies of the two groups regarding the introduction of different forms of money (paper - bank card - coin) is equal to 3.5, which is not statistically significant with a probability of error of 0.74. The chi-square obtained from the comparison of the frequencies of the two groups regarding the introduction of types of income through the presentation of job examples and group games is equal to 5.6, which is not statistically significant with a probability of error of 0.22. The difference between the frequencies of the two groups regarding the introduction of different payment methods through payment of purchase costs (by money, check, payment gateways) in Rupoli and banking game is equal to 3.5, which is statistically significant. It is not significant with a probability of error of 0.7. The K-D value obtained from the comparison of the frequencies of the two groups regarding the student's self-evaluation and self-leadership by means of reward money with appropriate reinforcement and encouragement in the student is equal to 5.8, which is not statistically significant with a probability of error of 0.21. The difference between the two groups in terms of understanding the concept of saving through

practical activities such as opening an account, saving allowance money, playing bank at home and presenting its report by students is equal to 3.8. The rate is not statistically significant with a probability of error of 0.10. The Kheido rate obtained from the comparison of the frequencies of the two groups regarding the introduction of the bank's duties for opening an account, giving a loan through the presentation of stories, examples and group games is equal to 5.2, which is statistically with a probability of error of 0.11. It is not meaningful. The difference between the frequencies of the two groups regarding the introduction and presentation of videos and examples for various types of insurance such as: car, travel, fire is equal to 1.4, which is statistically with a probability of error of 0.38. It is not meaningful. The chi-square ratio obtained from the comparison of the frequencies of the two groups regarding the presentation of examples and examples about the introduction of after-sales services is equal to 5.5, which is not statistically significant with a probability of error of 0.14. Therefore, the two studied groups are not significantly different from each other in all the studied dimensions and have similar opinions.

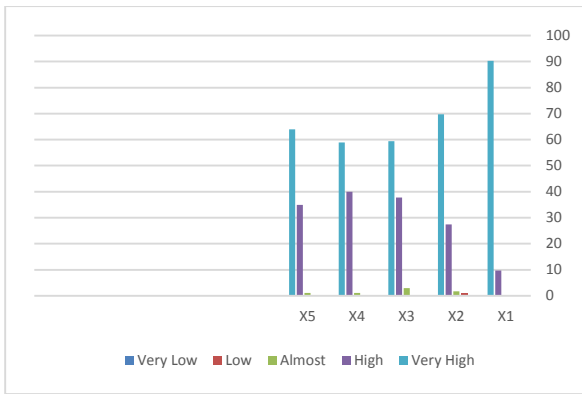


Fig 2. Distribution of the frequency and percentage of opinions of economists and financial experts regarding the educational content of the personal finance framework book for the sixth grade based on the principles of the curriculum and upper documents of Iranian education.

3- What is the teaching-learning experience of the personal finance book for the sixth grade? To answer the third question of the current research, "the framework of the teaching and learning method of the book "Personal Finance" (regarding the components of earning money, buying goods and services, saving, using credit, financial investment, protection and insurance) for the sixth grade. Which is the primary based on the principles of the curriculum and upper

documents of Iran's education? First, the distribution of the frequency and percentage of the opinions of the group of economists and financial experts related to teaching-learning experiences for the sixth grade based on the principles of the curriculum and upper documents of Iranian education is presented. The results of many statistics showed that in the case of teaching-learning experiences, 17.1% was high and 82.90% was too high. Applying educational methods individually, 1.7 percent somewhat; 1.37% was high and 61.1% was too high. Applying educational methods as a group, 1.7 percent somewhat; 37.7% was high and 60.60% was too high. Application of educational methods in the form of questions and answers, 0.4% to some extent; 30.3% was high and 65.70% was too high. Applying educational methods in the form of a workshop, 0.6% low; 1.1 percent somewhat; 32.6% was high and 65.70% was too high. Application of demonstration training methods, 1.7 percent somewhat; 31.4% was high and 66.9% was too high.

Table 4. Distribution of the frequency and percentage of the opinions of economists and financial experts of the studied sample about the teaching-learning experiences of the book "Personal Finance" for the sixth grade based on the principles of the curriculum and upper documents of Iranian education.

Economists and financial experts	The possibility of error	Chi value	Very high		High		Fairly		Low		Very low	
			Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency
Teaching-learning experiences (X1)	0.219	4.1	82.9	145	17.1	30	0	0	0	0	0	0
Applying educational methods individually (X2)	0.121	8.9	61.1	107	37.1	65	1.7	3	0	0	0	0
Applying educational methods as a group (X3)	0.11	7.4	60.6	106	37.7	66	1.7	3	0	0	0	0
Application of educational methods in the form of questions and answers (X4)	0.207	8.4	65.7	115	30.3	53	4.0	7	0	0	0	0
Applying educational methods in a workshop format (X5)	0.207	8.4	65.7	115	32.6	57	1.1	2	.6	1	0	0
Application of demonstration teaching methods (X6)	0.158	8.1	66.9	117	31.4	55	1.7	3	0	0	0	0

Application of demonstration teaching methods 0 0 0 0 3 1.7 55 31.4 117 66.9 8.1 0.158 The chi-square ratio obtained from the comparison of the frequencies of the two groups regarding teaching-learning experiences is equal to 1.4, which is not statistically significant with a probability of error of 0.219. The chi-square ratio obtained from the comparison of the frequencies of

the two groups regarding the application of educational methods individually is equal to 8.9, which is not statistically significant with a probability of error of 0.121. The chi-square ratio obtained from the comparison of the frequencies of the two groups regarding the application of educational methods as a group is equal to 7.4, which is not statistically significant with a probability of error of 0.11. The chi-square obtained from

the comparison of the frequencies of the two groups regarding the application of educational methods in the form of questions and answers is equal to 8.4, which is not statistically significant with a probability of error of 0.207. The chi-square obtained from the comparison of the frequencies of the two groups regarding the application of educational methods in a workshop is equal to 8.4, which is not statistically significant with a probability of error of 0.207. The chi-square ratio obtained from the comparison of the frequencies of the two groups regarding the application of demonstration teaching methods is equal to 1.8, which is not statistically significant with a probability of error of 0.158. Therefore, the two studied groups are not significantly different from each other in all the studied dimensions and have similar opinions.

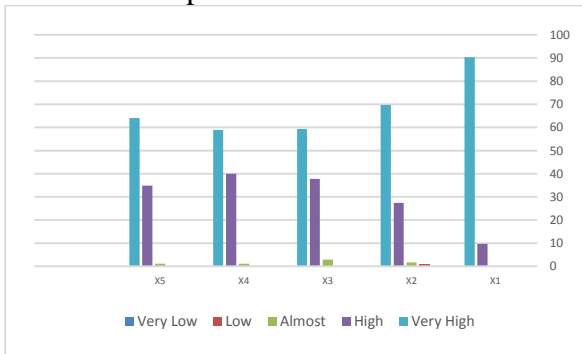


Fig 3. Distribution of the frequency and percentage of the opinions of economists and financial experts about the teaching-learning experiences of the personal finance framework book for the sixth grade based on the principles of the curriculum and upper documents of Iranian education.

4- What is the design of the framework for evaluating the learning experiences of the personal finance book for the sixth grade? To answer the fourth question of the current research, "designing a framework for evaluating the learning experiences of the book "personal finance" (regarding the components of: earning, buying goods and services, saving, using credit, financial investment, protection and insurance) for the sixth grade. How is the elementary school based on the principles of the curriculum and the upstream documents of Iran's education? First, the distribution of the frequency and percentage of opinions of the group of economists and financial experts related to the evaluation design of the personal finance book for the sixth grade based on the principles of the curriculum and upper documents of Iranian education is presented. The results of many statistics showed that in the case of evaluation design, 9.7% was high and 90.30% was too high. Conducting the pre-test in writing before the educational measures, 1.1 percent less; 1.7 percent somewhat; 27.4 percent was high and 69.7 percent was too high. Conducting formative tests in writing, 2.9 percent to some extent; 37.7% was high and 59.40% was too high. Conducting periodical tests after the end of educational topics, 1.1% to some extent; 40% was high and 58.9% was too high. Performing oral exams, 1.1 percent to some extent; 34.9% was high and 64% was very high.

Table 5. Distribution of the frequency and percentage of the opinions of economists and financial experts of the studied sample regarding the evaluation design of the personal finance book for the sixth grade of elementary school based on the principles of the curriculum and upper documents of Iranian education.

Economists and financial experts	The possibility of error	Chi value	Very high		High		Fairly		Low		Very low	
			Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency
			Teaching-learning experiences (X1)	0.110	8.4	90.3	158	9.7	17	0	0	0
Applying educational methods individually (X2)	0.132	4.7	69.7	122	27.4	48	1.7	3	1.1	2	0	0
Applying educational methods as a group (X3)	0.11	8.4	59.4	104	37.7	66	2.9	5	0	0	0	0
Application of educational methods in the form of questions and answers (X4)	0.125	7.9	58.9	103	40.0	70	1.1	2	0	0	0	0
Applying educational methods in a workshop format (X5)	0.114	5.8	64.0	112	34.9	61	1.1	2	0	0	0	0

The chi-square obtained from the comparison of the frequencies of the two

groups regarding the evaluation design is equal to 8.4, which is not statistically

significant with a probability of error of 0.110. The chi-square obtained from the comparison of the frequencies of the two groups regarding the written pre-test before the educational measures is equal to 4.7, which is not statistically significant with a probability of error of 0.122. The chi-square obtained from the comparison of the frequencies of the two groups regarding the written formative tests is equal to 8.4, which is not statistically significant with a probability of error of 0.11. The chi-square ratio obtained from the comparison of the frequencies of the two groups regarding taking periodical tests after the end of the educational topics is equal to 7.9, which is not statistically significant with a probability of error of 0.125. The chi-square obtained from the comparison of the frequencies of the two groups regarding oral tests is equal to 5.8, which is not statistically significant with a probability of error of 0.114. Therefore, the two studied groups are not significantly different from each other in all the studied dimensions and have similar opinions.

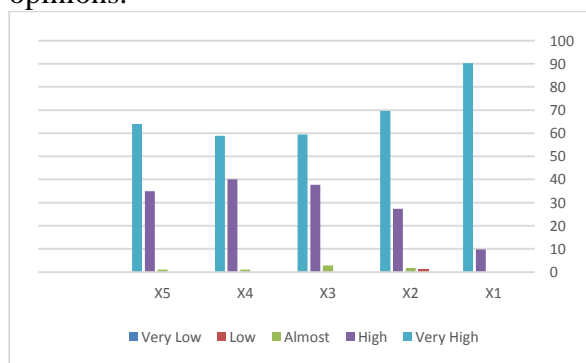


Fig 4. Distribution of the frequency and percentage of opinions of economists and financial experts regarding the design of the evaluation framework of the personal finance book for the sixth grade based on the principles of the curriculum and upper documents of Iranian education.

5. Discussion

Today, this concept is known as one of the most important basic skills of the 21st century and has other dimensions, the unity and integrity of society is seriously weakened through the imbalance of people's wealth. But providing financial education to individuals can play an important role in increasing national cohesion (Johnston, 2005). Therefore, in America and many countries including England, Australia, Italy and Malaysia, they tried to implement

various innovations in designing national financial education strategies and reforming the education system. In education and training systems, different approaches to financial education have been presented, which are: 1- Personal money management: responsible consumer behavior, 2- Critical consumer: critical consumer behavior in strengthening efficient and effective financial markets and 3- Active citizen: the consumer's ability to help shape the financial environment of society (Davies, Syed & Appleyard, 2016). One of the most important topics of financial education is the necessity of personal financial standards. The content standards describe the knowledge and skills that students should acquire at different levels of education (Moradi Basiri, 2014). In order to fulfill the standards of financial knowledge, many educational systems start this work from the elementary school. Primary education is the basis of higher educational courses and the basis of the students' subsequent learning, and since the school curriculum is considered one of the most basic sources and references for students' learning, and most of the activities are within the framework of the curriculum. is done (Gholtash, Salehi & Moradi, 2011), by including financial education in the curriculum and presenting it to younger audiences, it reduces the limitations of working with adults and it will be more effective. But the important point is that the curriculum is also a category and field mixed with culture and has a strong relationship with intellectual, belief and value needs and requirements. For this reason, philosophical and social foundations are discussed in the curriculum along with psychological foundations, and based on that, the curriculum finds a specific direction (Maleki, 2006). Therefore, the financial education program of the elementary school emphasizes the concepts of planning and budgeting, savings, expenses, investment and banking services, and then the concepts of cost and credit are of special importance. (Fernades, Lynch & Netemeyer, 2014) Yeo (Yeo, 2016). He points out the inextricable connection between financial knowledge and mathematics, and proposes it as a new idea

in the elementary school mathematics curriculum, and he is of the opinion that mathematics teachers should pay attention to the fact that financial knowledge is the teaching of a set of skills in one course. Short-term or the skills required for students with extraordinary ability and intelligence, but rather a part of the mathematics lesson that grows and develops over time. Despite these arguments, financial literacy programs should not be overly technical, but values-based. Therefore, learning the right financial values and habits is necessary for students at an early age (Koh, 2009). In line with the teaching-learning methods, it can be said that the efficient teaching of financial knowledge in elementary school has four basic principles, emphasis on financial concepts, numerical and mathematical foundations, behavioral dimensions and increasing the level of creative and critical thinking (Lusardi & Wallace, 2013).

6. Conclusion

The purpose of the study is to analyze the sixth grade textbooks for the application of financial knowledge from the point of view of the professors of the financial management department of public and private universities. It should be noted that financial education is not only for preparing children and teenagers for adult life. Rather, it is necessary to teach many important financial issues that children and teenagers are involved with in schools and evaluate their financial learning in a targeted manner. Currently, many teenagers and even children are consumers of financial services. Therefore, different financial skills needed by them should be taught. Unfortunately, in the education system of our country, despite the existence of economic and financial problems, this area has been neglected and no special strategy has been designed to promote financial knowledge (Peyghami & Moradi Basiri, 2016). While Iran claims to be the first power in the region in the vision document of 1404, and the country's education as the main pillar of scientific production and development in the process of educating the new and future generation, plays the role of the fundamental infrastructure of this claim and should to be at the forefront of this

scientific and educational competition (Zia Nejad Shirazi & Gholtash, 2018). One of the most basic ways to solve these problems in Iran's education system is to design a curriculum and use research findings related to the field of financial education. It has not been done to help elementary school students. On the other hand, in some studies, the components of financial knowledge are considered as a part of economic literacy or economic education, but financial knowledge and economic literacy are two complementary and yet different fields. Therefore, the general purpose of this article is to outline the structure and coordinates of the elementary financial knowledge curriculum model based on theoretical foundations and researches so that it can meet the needs of the modern and advanced economic system of today's society.

According to the findings of the current research, the following are suggested: Compilation and design of elementary course textbooks based on the inferred goals of the field of financial knowledge, including the promotion of financial knowledge (awareness of the market mechanism, financial services and their features, the process of interest, rent, profit, shares), promotion of financial skills, Improvement of financial management skills, improvement of financial responsibility, improvement of decision-making skills, improvement of financial confidence. Editing the content of elementary school textbooks in order to increase literacy and financial skills, which includes general and more detailed concepts, incomes and professions; money management and savings; financial investment; risk management; Credit and debt management. Using teaching-learning activities including participatory method, direct method, indirect method, deep learning, observational learning, experimental method, active learning, visual and auditory methods. The application of financial knowledge curriculum evaluation methods on the behavior of primary school students is as follows: quantitative evaluation, project evaluation or classroom research, process-oriented evaluation with observation list and portfolio. It is also

suggested that the national standards of personal financial education should be developed, a specific system should be designed to measure and evaluate the financial education curriculum, and the obstacles and problems in the way of implementing the financial education curriculum should be in accordance with the structure of education and the cultural characteristics of the country under investigation. It is suggested that elementary school courses be reviewed and the curriculum of mathematics, social studies, Persian literature, and information technology be enriched in the field of financial knowledge, and the platform for cooperation between financial organizations and education is provided. Also, considering the important role of teachers in teaching financial knowledge and the effect of their level of financial knowledge on the effectiveness of teaching financial knowledge, it is suggested that human resources be trained for effective teaching of financial knowledge curriculum.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors. If there is any fund, please mention.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

- Abedini Beltrak, M., & Jafari Samimi, A. (2018), Analysis of the content of economic literacy education in the sixth grade of elementary school, *Curriculum Research*, Volume 9, Number 2 (18), 85-103. [in Persian]
- Adib Manesh, M., and Sadr, A. (2021). Designing the ideal curriculum model for improving the life skills of elementary school students. *Iranian Curriculum Studies Quarterly*. 62: 223-256. [in Persian]
- Amagir, A., Groot, W., Maassen van den Brink, H., & Wilschut, A. (2018). A review of financial-literacy education programs for children and adolescents. *Citizenship, Social and Economic Education*, 17(1), 56-80.
- Audrin, C., Audrin, B. (2022). Key factors in digital literacy in learning and education: a systematic literature review using text mining. *Educ Inf Technol* 27, 7395–7419. <https://doi.org/10.1007/s10639-021-10832-5>
- Batty, M., Collins, J. M., O'Rourke, C., & Odders-White, E. (2020). Experiential financial education: A field study of my classroom economy in elementary schools. *Economics of Education Review*, 102014.
- Carlson, E. (2020). An Analysis of the Relationships between State Mandates for Financial Education and Young Adults' Financial Literacy and Financial Capability. *Electronic Theses and Dissertations*, 2020-. 24. <https://stars.library.ucf.edu/etd2020/24>.
- Cerya, E., Tasman, A., & Rahmi, E. (2020, March). Fillecya (Financial Literacy) Board: Analysis of Media Development Needs from the Teacher's Perspective in Understanding Financial Literacy Early. In 4th Padang International Conference on Education, Economics, Business and Accounting (PICEEBA-2 2019) (pp. 509-515). Atlantis Press.
- CheshmehSohrabi, M., Mashhadi, A. (2023). Using Data Mining, Text Mining, and Bibliometric Techniques to the Research Trends and Gaps in the Field of Language and Linguistics. *J Psycholinguist Res* 52, 607–630. <https://doi.org/10.1007/s10936-022-09911-6>
- Coda Moscarola, F., & Kalwij, A. (2018). *How informal education affects the financial literacy of primary school children developed in a formal educational program* (No. 185). Center for Research on Pensions and Welfare Policies, Turin (Italy).

- Davies, P. Syed, F., & Appleyard, L. (2016). Secondary school student's understanding of financial system. *Research in Vocational Education*, 3, 41–55.
- Delcker, J. (2023). Digitalisation in the curricula of vocational schools: Text mining as an instrument of curricula analysis. *Technology, Knowledge and Learning*, 28(3), 999-1014. <https://doi.org/10.1007/s10758-022-09591-0>
- Dianti Dilmi, Z., and Hanifezadeh, M. (2014). Investigating the level of financial knowledge of Tehrani families and related factors. *Financial knowledge of securities analysis (financial studies)*. 8 (26): 115-139. [in Persian]
- Fernades, D., J. Lynch., & R. Netemeyer. (2014). Financial Literacy, Financial Education, and Downstream Financial Behaviours, *Management Science*, 60(8), 1861–1883.
- Firouzian, A., and Goya, Z. (2017). The path to financial knowledge goes through mathematical literacy. *The growth of mathematics education*. 2: 33-28. [in Persian]
- Gholtash, A., Salehi, M., & Moradi, A. (2011). Living experiences of educational science specialists from the education curriculum Active Citizenship for the Middle School Course. *A New Approach in Educational Management*, 2(4), 55-75. [Persian].
- Gold, L. A. (2018). Financial literacy in the elementary classroom: Integrate not recreate. *Ohio Journal of School Mathematics*, 79(1). 38-42.
- Gooya, Z., Firouzian, A., & Gholam Azad, S. (2018), promoting financial knowledge and financial decision-making through school mathematics curriculum. *Curriculum Studies of Iran*, 54: 1-36. [in Persian]
- Gupta, A., Dengre, V., Kheruwala, H. A., & Shah, M. (2020). Comprehensive review of text-mining applications in finance. *Financial Innovation*, 6, 1-25. <https://doi.org/10.1186/s40854-020-00205-1>
- Gyódi, K., Nawaro, Ł., Paliński, M., & Wilamowski, M. (2023). Informing policy with text mining: technological change and social challenges. *Quality & Quantity*, 57(1), 933-954. <https://doi.org/10.1007/s11135-022-01378-w>
- Jamshidi Moghadam, K., Kian, M., Gramipour, M., & Khandozi, A. (2022). Designing financial knowledge curriculum model in elementary school. *Bimonthly scientific-research journal of a new approach in educational management*, 13(3). doi: 10.30495/jedu.2022.26370.5259 [in Persian]
- Jayaraman, J. D., Jambunathan, S., & Adesanya, R. (2019). Financial literacy and classroom practices among early childhood and elementary teachers in India and the US. *Education* 3-13, 47(6), 746-759.
- Johnston, J. (2005). Importance of Financial Literacy in the Global Economy. A Keynote address to the Financial Education Summit. Financial Literacy “Foundation for Success: A Global Perspective.
- Kalwij, A., Alessie, R., Dinkova, M., Schonewille, G., Van der Schors, A., & Van der Werf, M. (2019). The effects of financial education on financial literacy and savings behavior: Evidence from a controlled field experiment in Dutch primary schools. *Journal of Consumer Affairs*, 53(3), 699-730.
- Kandahari, A., Mehrmohammadi, M., Talai, A., & Faraji Dizji, S. (2018). A comparative study of the integration of economic education in the primary school curriculum in Scotland, China and Australia and providing implications for economic education in Iran. *Education and training scientific-research quarterly*. 35 (3): 59-78. [in Persian]
- Moghadam, K. J., Kian, M., Gramipour, M., & Khandouzi, S. E. (2022). Designing a Financial Literacy Curriculum Model

- for Elementary School. *Journal of New Approaches in Educational Administration*, 13(3). [in Persian]
- Khodarahmi, M., & Maleki, H. (2014). Examining the interactive relationship between society and school in the secondary school curriculum. *Curriculum Studies of Iran*. 10 (39): 155-182. [in Persian]
- Koh, N. K. (2009). What's actually working? Latest developments in financial education impact assessment. *Paper presented at Citi-FT Financial Education Summit*, Singapore.
- Loimi, H. (2016). *Investigating the status of financial knowledge of secondary school students in Ahvaz city and providing solutions to improve it*. Master's thesis. Ilam University. [in Persian]
- Lusardi, A., & Mitchell, O. S. (2011). Financial Literacy Around the World: An Overview. *Journal of Pension Economics & Finance*, 10 (4): 497–508.
- Lusardi, A., & Wallace, D. (2013). Financial literacy and quantitative reasoning in the high school and college classroom. *Numeracy*, 6(2), 1-10.
- Maleki, H. (2018). Preliminaries of lesson planning. Tehran: Samt. [in Persian]
- Maleki, H., (2006). *Perspective of natural-spiritual curriculum based on the philosophy of Islamic education*, National Congress of Humanities, Tehran: Institute of Humanities and Cultural Studies.
- Memeshli, M. (2012). *Needs assessment of financial knowledge curriculum in primary education for the purpose of curriculum design from the point of view of curriculum professors and financial experts*. Master's thesis. Allameh Tabatabai University. [in Persian]
- Meyers, E. (2020). Young Adult Financial Literacy and Its Underlying Factors. <https://digitalcommons.assumption.edu/honorsthesis>.
- Moradi Basiri, M. (2014). Critical Analysis of the Conventional Model for Personal Finance Education. Master Thesis, Faculty of Islamic Studies and Economics Imam Sadiq University
- Nicolini, G., Cude, B. J., & Chatterjee, S. (2013). Financial literacy: A comparative study across four countries. *International Journal of Consumer Studies*, 37(6), 689–705.
- Motamedi Mohammadabadi, M., Nasrasafhani, A., Asadi, A., & Zamani, B. (2022). Designing a Media Literacy Training Model for Teachers, Based on a Foundational Data Approach, 17(67), 139-170. [in Persian]
- OECD. (2015). National Strategies for Financial Education. OECD/ INFE Policy Handbook. OECD Publication.
- Organisation for Economic Co-operation and Development (OECD) (2014) PISA 2012 results: Students and money: Financial literacy skills for the 21st century (Vol. VI). In: PISA. Paris: OECD Publishing. Available at: <http://dx.doi.org/10.1787/9789264208094-en> (accessed 21 July 2020).
- Peyghami, A., & Moradi Basiri, M. (2016). Financial Literacy as a Model for Personal and Family Finance. First Edition, Tehran: Imam Sadegh University Press. [in Persian]
- Rai, K., Dua, S., & Yadav, M. (2019). Association of financial attitude, financial behaviour and financial knowledge towards financial literacy: A structural equation modeling approach. *FIIB Business Review*, 8(1), 51-60.
- Roshandel, A., Amiri, H., & Taghiani, M. (2017). Financial knowledge and the necessity of measuring it in the modern educational system: a case study of Shahreza. *New educational approaches*. 13: 67-86. [in Persian]
- Salimipour, M. (2012). Financial knowledge of high school students. Master's thesis. Islamic Azad University, Yazd branch. [in Persian]
- Shafaq Qaltash, A., Salehi, M., & Moradi, A. (1390). The lived experiences of educational science specialists from the curriculum of active citizenship

- education for middle school. A scientific-research quarterly of a new approach in educational management, 4(8), 55-75. [in Persian]
- Sherraden, M. S., Johnson, L., Guo, B., & Elliott, W. (2011). Financial capability in children: Effects of participation in a school-based financial education and savings program. *Journal of Family and Economic Issues*, 32(3), 385-399.
- Totenhagen, C. J., Casper, D. M., Faber, K. M., Bosch, L. A., Wiggs, C. B., & Borden, L. M. (2015). Youth financial literacy: A review of key considerations and promising delivery methods. *Journal of Family and Economic Issues*, 36(2), 167-191.
- Tuong, V., & Doan, M. D. (2020). The Correlation between Financial Literacy and Personal Saving Behavior in Vietnam. *Asian Economic and Financial Review*, 10(6), 590-603.
- Whitehouse, M. (2023). Approach Two: Product Perspective. In: *Transdisciplinarity in Financial Communication. New Perspectives in Organizational Communication*. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-031-29115-9_5
- Wickens, C. M., & Sandlin, J. A. (2007). Literacy for what? Literacy for whom? The politics of literacy education and neocolonialism in UNESCO-and World Bank-sponsored literacy programs. *Adult Education Quarterly*, 57(4), 275-292.
- Zhou, H. (2020). Text Mining. In: *Learn Data Mining Through Excel*. Apress, Berkeley, CA. https://doi.org/10.1007/978-1-4842-5982-5_12
- Zia Nejad Shirazi, A., & Gholtash, A. (2018). Investigating the content role of the curriculum on the performance of fourth grade elementary students in the international Thames exams. *A New Approach in Educational Management*, 9(4), 126-146. [Persian]
- Zia Nejad, A., & Qaltash, A. (2017). Investigating the role of curriculum content changes on the performance of fourth grade elementary school students in Tims international tests, *New Approach Scientific-Research Quarterly in Educational Management*, 4(37), 127-146. [in Persian]