European Journal of Contemporary Education
E-ISSN 2305-6746
2023. 12(2): 646-654
DOI: 10.13187/ejced.2023.2.646
https://ejce.cherkasgu.press

Financial Literacy on High School Students. How is Their Performance if Study and Work?

Esmeralda Tejada-Peña [a], Sergio Hernández Mejía [b], Violetta S. Molchanova [c, d], Arturo García-Santillán [e, f, *]

[a] Tecnológico Nacional de México, Tuxtepec campus, Mexico
[b] Cristobal Colon University, Veracruz, Mexico
[c] Cherkas Global University, Washington, DC, USA
[d] Volgograd State University, Volgograd, Russian Federation
[e] UCC Business School at Cristóbal Colón University, Ver, Mexico
[f] Tecnológico Nacional de México – Sede ITSM, Mexico

Abstract

The aim of the study is to analyze the financial knowledge of high school students in Mexico; its relationship with the student's age, gender, and condition of studying and working. The study is a non-experimental quantitative, descriptive, exploratory, and correlational cross-sectional study. Through a non-probabilistic sampling by self-determination, the total participants were 423 students enrolled in three institutions of Higher Education, all belonging to the state of Oaxaca. For the application of the instrument, we had the support of some teachers to share a link to Google forms. In order to determine the relationship between financial literacy (FL) and other sociodemographic variables (gender, age, and employment status), a dichotomous Probit model is used. The results show low financial literacy of the students, who only a fifth understand the concepts of compound interest, inflation, and diversification; no gender difference was identified in this age group. The significant effect of the interaction variable (gender and condition of studying and working) on the probability of understanding the effect of inflation on purchasing power is evident. Therefore, the results obtained can contribute to the design of financial education (FE) programs for young people at an early age that allows them to make informed financial decisions in any aspect of their personal and work life.

Keywords: financial education, financial literacy, high school, students.

* Corresponding author
E-mail addresses: agarcias@itsm.edu.mx (A. García-Santillán), esmeralda.tp@tuxtepec.tecnm.mx (E. Tejada-Peña), sergiohm@ucc.mx (S. Hernández Mejía), v.molchanova_1991@list.ru (V.S. Molchanova)

1. Introduction

According to Goyar and Kumar (2020), Financial Education (FE) influences people's daily economic decisions, hence the importance of this issue, which is becoming increasingly relevant worldwide and is included in the G20 agendas, governments, ministries and secretariats of finance, international and central organizations, banks, among others. It is relevant to have a better financial education that leads people to a better attitude and good financial practices (Yong et al., 2017); since it prepares people to make quality financial decisions, improving their financial well-being (Garg, Singh, 2018) and a better quality of future life (Domínguez, 2013).

Existing literature on Financial Literacy (FL) show that FL has a significant contribution to people's financial behavior (Arofah et al., 2018). Starting with the definition of financial education, the OECD (2005) defines it as the process through which users had better understand financial products and risks, developing skills to make better-informed decisions with the risks that these decisions entail. Given its importance, it should not only be limited to older people, it is also necessary for young people, who are already or will soon be, users of financial services (Domínguez, 2013). Even though FE allows improving the quality of people's life, especially in young people. In this idea, the study carried out by by Klapper and Lusardi (2019) worldwide, demonstrate that only one in three adults has FL, with poor and less educated people being the most likely to suffer from gaps in financial knowledge.

In this idea, Bottazzi and Lusardi (2021) analyzed the existence of difference between genders in secondary level students in Italy in relation to financial education. To do this, they used data from the Program for International Student Assessment (PISA, 2012). In their study, they identified that gender differences in FE are highly significant among young people. In addition, the impact that the family has, particularly the role of the mother, is important in the financial knowledge of girls, as well as the sociocultural situation in which they live. The life of women and men at younger ages allows us to understand the differences between both genders.

Similar results reported by Swiecka, Yesildag, Özen and Grima (2020), who conducted a study in Poland with the participation of high school students with an age range of 5 to 16 years. The goal was to measure the level of FL of high school students and to determine whether FL changes according to gender. Their study showed that there is a high level of FL among high school students in Poland, although gender influences in financial behavior and in the use of financial instruments, it does not influence the level of FL of students.

Artavanis and Karra (2020) carry out a study, in which more than 1000 students from a public university in Massachusetts participated. The purpose was to evaluate the level of knowledge of FL in undergraduate students and its implications in the payment of student debt. The results showed low levels of financial education, especially among women. They also found that students with a low FL level are more likely to disregard future student loans, hence, when they start working, they receive lower wages. This can affect their future solvency, in addition to weakening the economic capacity to pay the debt after completing their studies. On the contrary, having high FL reduces the likelihood of significant underestimation.

In the same idea, Kadoya and Rahim (2019), carry out research with students from the University of Osaka in Japan, in their study they use demographic variables (gender, age and education); as well as the socioeconomic (income and occupation) and psychological factors on perceptions of the future. The results they obtained show that these variables together significantly affect the level of FE and orientation toward the future. It is also a factor specific to FE because people tend to make better financial decisions when they perceive the future as something important.

In another sense Mancebón, Ximénez, Mediavilla and Gómez (2018), examine the development of mathematical and financial skills among 471 students in Spain. They obtain as a result, that the development of financial skills among young consumers is mediated by their mathematical skills; also, a relevant finding is how the family is a key variable in the development of financial skills.

Based on the empirical evidence presented on financial education, we can say, that it is a relatively important topic especially for policy makers, regulators and academic researchers to know the basics of financial education and identify relevant areas in need of research. Therefore, the following questions arise:

Question Research

To what degree do high school students in Tuxtepec, Oaxaca understand financial education? In addition, the level of FE of high school students differ by gender, age, and employment status?. Therefore, the following objectives are set: Determine the level of FE in the high school students. In addition, to identify if the level of FE that young people have in the high school level in Tuxtepec, Oaxaca differs by gender, age, and employment status.

Hypothesis

H1. The predominant financial knowledge of high school students differs by gender, age, and employment status.

H2. The percentage of women answering the financial knowledge questions correctly is lower compared to the group of men.

H3. The interaction of gender and student's studying and working status influence their financial literacy.

2. Literature review

The existing literature on financial education has served to design policies focused on promoting this topic, especially among the younger population. About this, in the study conducted by Lusardi, Hasler and Yakoboski (2021), results show that financial fragility is highly related to FE and that people are not prepared to face the financial decisions necessary to face a financial crisis as COVID-19 pandemic. If the level of FE of young people is high, the health of the economic indicators will be better, which becomes an economic and sustainable development, as referred by Swiecka, Yesildag, Özen and Grima (2020). Another study by Morgan and Long (2020), reveals that FE has statistically positive effects on both financial inclusion and savings.

In the same idea, the study carried out by Thomas and Subhashree (2020), to students engineering degree in universities located in Karnataka, Kerala and Tamil Nadu, showed that financial knowledge and attitude, as well as family, influence the level of FE among students. Antonio, Peña and López (2020), carried out a study with the objective to analyze the elements that help explain the level of FE in adults that live in Mexico. Their results show that a higher level of education and income, as well as marital status, age and gender are associated with better access to financial products, as well as, a higher level of FE. In addition, the factors that relate negatively are the male gender and the condition of having a job. To this work we may added the research carried out by Al-Bahrani, Buser and Patel (2020). On the other hand, Patel (2020) analyzed a sample of 529 college students in three institutions in the southeastern United States; the objective was to examine the underlying causes of the gender-based financial literacy gap. The results show that the gender gap develops in early college age, before people have had the opportunity to develop financial skills through experience or specialization in domestic roles, i.e. financial literacy is acquired through education and cultural influences, not only through experiences.

On the contrary, Douissa (2020) carried out a study in order to analyze the socioeconomic and demographic factors of FE among university students of the University of Sharjah in the United Arab Emirates. The results obtained show that factors widely used in the literature such as: gender, educational level, business studies, financial inclusion, family income, etc., only capture the knowledge dimension of financial education, but do not explain the financial behavior and financial attitude dimensions.

In the Latin American context, Ramos, García-Santillán and Molchanova (2020), measured the financial competence of 224 university students from Mexico and Colombia, their findings show a low level of FE in the analyzed population, particularly in the topics of inflation, use of credit cards, risk diversification, retirement planning, savings and investment. In addition, the results show that university Colombian students have a higher level of FE than Mexican students.

Similarly, García-Santillán (2020) conducts a study with high school students; the results indicated that according to the savings and investment variables, the perspective of economic income, the students have a favorable attitude towards their personal finances, as well as a significant relationship between financial knowledge and the use and application of financial products.

Karakurum, Kokkizil and Uysal (2019), conducted a study to a group of middle-income countries, such as Mexico, Lebanon, Uruguay, Colombia, and Turkey, with the objective to determine the factor that influences financial wellbeing. Their result found that financial education

is the main factor and this is lower among women, younger adults, and people who cannot read or write in the official language of their country of residence. In the same idea Bannier and Schwarz (2018), show that better financial education generates greater wealth.

In the study carried out by Garg and Singh (2018), they identified that the level of FE among young people is low worldwide. In addition, they found that factors related to the social, economic and demographic context of the participants, such as gender, age, education and marital status, influence the level of FE of young people and there is an interrelation between the financial attitude, knowledge and behavior.

From another perspective, Hussan, Salia and Karim (2018), carry out a study to demonstrate whether financial education helps SME owners to optimize the capital structure and improve access to financing. The results showed that financial knowledge the owners have, the better and more effective financial decisions they will make, which positively affects their economic growth.

In Mexico, high school students combine school and work. Cruz et al. (2017) identify that 10 % of male students work and study, and in the case of women, it is 5 %, associated in both cases to both sociodemographic and contextual variables. For this research, it is relevant to identify the FE of students who work and study, compared to those who study exclusively.

Design and method

The study is a non-experimental quantitative, descriptive, exploratory, and correlational cross-sectional study. The participants were 423 students enrolled in three institutions of Higher Education, Centro De Bachillerato Tecnológico Industrial y de Servicios (CBTis) N° 107; Colegio de Bachilleres de Bachilleres del Estado de Oaxaca (COBAO) and Centros de Educación Tecnológica Agropecuaria (CBTA), all belonging to the state of Oaxaca. Through a non-probabilistic sampling by self-determination, the instrument was applied to obtain the information in person with the support of some teachers.

To measure financial literacy in this research, the definition of Lusardi (2019) is used, which uses three fundamental concepts for financial decision-making: i) arithmetic, related to the ability to perform calculations and understand compound interest; ii) inflation; iii) risk diversification. According to Lusardi (2019), FL is measured based on three essential questions. Question 1: "If you deposit 100 pesos in a savings account that gives you a profit of 2 % per year and you make no deposits or withdrawals, including interest, will you have at the end of five years: (Answers: more than 102 pesos?, exactly 102 pesos?, less than 102 pesos?, no answer, don't know)"; question 2: Imagine that your savings account has an interest rate of 1 % per year and that inflation is 2 % per year. After 1 year, with the money in this account, you could buy: (Answers: more than today, exactly the same, less than today, no answer, don't know; question 3: Indicate whether the argument is true or false: buying stocks of a single company generally provides a safer return than a stock mutual fund (answers: true, false, no answer, don't know).

In the empirical measurement, for each financial literacy question, a dichotomous variable is designed: 1 if the respondent answers correctly and 0 otherwise, from which the percentage of correct answers to each question is obtained. To determine whether the results differ significantly between men and women, a test of population proportions is performed.

In order to determine the relationship between FE and other sociodemographic variables (gender, age, and employment status), a dichotomous Probit model is used. Gender is coded as a dichotomous variable: 1 if male, or 0 if female; age is coded as a numerical variable; employment status is coded as a dichotomous variable with 1 if the subject is working and studying, and 0 otherwise. Likewise, an interaction variable is included between gender and the student's work status. The binary Probit response model is denoted as:

$$P(y = 1 \,/\, X) = G(\beta_0 + \beta_1 X_1 + \cdots \beta_{k-1} X_{k-1} + \beta_k) = G(\beta_0 + X\beta)$$

Where G is the cumulative normal distribution function and X denotes the characteristics of the respondents (Wooldridge, 2015). From the estimation, the significant variables related to financial literacy and the probability of answering each of the questions correctly are identified, for which the z-contrast statistic is used. Under the null hypothesis $H_0: \beta_i = 0$,

$$z = \frac{\beta_i^{'} - \beta_i}{\sqrt{var(\beta_i^{'})}} = \frac{\beta_i^{'}}{\sqrt{var(\beta_i^{'})}} = \sim Z(0,1)$$

If α is the significance level of the test and Z tables is the critical value, then the testing mechanism that rejects the null hypothesis is when,

$$P[|Z| > Z_{tablas}] = \alpha$$

The marginal effect of the quantitative variable is calculated by means of the expression,

$$\frac{dP_i}{dX} = G(\beta_0 + \beta_i X_i)\,\beta_i$$

and for the case of binary explanatory variables the marginal effect of going from xk=0 to xk=1, keeping all other feasible variables fixed, is computed as

$$= G(\beta_0 + \beta_1 X_1 + \cdots \beta_{k-1} X_{k-1} + \beta_k) - G(\beta_0 + \beta_1 X_1 + \cdots \beta_{k-1} X_{k-1})$$

Where the expression $G(\bullet)$ is evaluated with the average value of the independent variables.

3. Data analysis

The sample is made up of 423 high school students, whose age range is between 15 and 20 years old, 40 % are men and 60 % are women, 19 % of them study and work; 80 % of the students receive a scholarship from the Federal Government, an average of $3,200.00 pesos.

The distribution of financial literacy responses of the students in the sample is presented in Table 1. From the results, about one-fifth correctly answer the financial literacy questions; 17.49 % correctly answer the compound interest question, 17.30 % correctly answer the inflation knowledge question and 21.62 % correctly answer the diversification question. The results obtained give evidence of the difficulty that the students surveyed have in answering questions that incorporate the concept of the interest rate, the effect of inflation on purchasing power after one year, as well as the concept of diversification.

In the comparison of results by gender, in the three FL questions, the percentage of men who answer the questions correctly is higher compared to the percentage of women who answer correctly. The largest difference by gender (up to 4 percentage points) is in the diversification question. Likewise, the results obtained not only distinguish between correct and incorrect answers, but also between answers that indicate that the respondent "does not know" or "does not answer". In all three questions, the most frequent response (around 35 %) is the "don't know" option, for both men and women. These results show that, this is a group that does not have the knowledge regarding these concepts.

Table 1. Distribution of responses on financial knowledge, by gender

Questions/answers	Male	Female	Total
Knowledge of compound interest			
More than $102 (*Correct answer)*	18.93 %	16.54 %	17.49 %
Exactly $102	12.43 %	10.24 %	11.11 %
Less than $110	15.38 %	17.32 %	16.55 %
Do not know	34.32 %	35.43 %	34.99 %
Refuses to answer	18.93 %	20.47 %	19.86 %
Knowledge of inflation			
More than today	20.71 %	21.34 %	21.09 %
Exactly the same as today	7.69 %	13.44 %	11.14 %
Less than today (*Correct Answer)*	18.93 %	16.21 %	17.30 %
Do not know	37.28 %	35.18 %	36.02 %
Refuses to answer	15.38 %	13.44 %	14.22 %
Knowledge of diversification			
True	20.83 %	24.90 %	23.28 %
False *(correct answer)*	24.40 %	19.76 %	21.62 %
Do not know	35.12 %	33.20 %	33.97 %
Refuses to answer	19.64 %	21.74 %	20.90 %

Source: own

The results of the population proportions test indicate that there is no significant difference between the two genders for each financial literacy question, given by the p-value (greater than 0.05), as seen in Table 2.

Table 2. Test of difference of proportions of financial literacy between men and women

	Proportion	Z statistic (Ho:difference=0)	p-value
Compound interest			
Men	18.93 %		
Women	16.54 %		
Difference	2.39 %	0.63	0.52
Inflation			
Men	18.93 %		
Women	16.14 %		
Difference	2.79 %	0.74	0.45
Diversification			
Men	24.26 %		
Women	19.69 %		
Difference	4.57 %	1.23	0.21
Sample size:			
Men	169		
Women	254		

Source: own

The results of the Probit model estimation for each financial literacy question are presented in Table 3. In all three models, the gender variable is not statistically significant, indicating that there is no difference between the two genders with respect to the probability of correctly answering the compound interest, inflation and risk diversification questions. The age of the students does influence the probability of correctly answering the compound interest question. The negative sign of the age variable is evidence that older students are less likely to answer the compound interest question correctly compared to younger students.

Since the results in the three models, we identified that the gender variable and the student's employment status individually do not influence the probability of correctly answering the financial literacy questions. By including the interaction variable between gender and the student's employment status, we identify its statistical significance in the probability of correctly answering the inflation question.

Table 3. Probit model estimates of financial literacy concepts

	Compound interest model		Inflation model		Risk diversification model	
	Coefficient	Marginal effect	Coefficient	Marginal effect	Coefficient	Marginal effect
Constant	1.1170		-0.9077		-0.7041	
	(1.0403)		(1.0516)		(1.0001)	
Gender (male)	0.0636	0.0163	-0.0983	-0.0244	0.1790	0.0528
	(0.16211)		(0.1661)		(0.1554)	
Age	-0.1252**	-0.0319	-0.0018	-0.0004	-0.0117	-0.0034
	(0.0626)		(0.0630)		(0.0597)	
Study and work	-0.05471	-0.0137	-0.2713	-0.0627	0.2133	0.0652
	(0.2363)		(0.2497)		(0.2145)	
Interaction Variable	0.0806 (0.3774)	0.0212	0.9997*** (0.3693)	0.336440	-0.0926 (0.3498)	-0.0261

Number of observations:	423	423	423
Number of 'correctly predicted' cases	349 (82.5 %)	350 (82.7 %)	332 (78.5 %)
McFadden's R-square	0.011749	0.023007	0.005394
Likelihood ratio test: Chi-square(4)	4.60822 [0.3299]	8.95257 [0.0623]	2.44602 [0.6543]

Notes: *,**;***: Statistical significance at 10 %, 5 %, 1 % respectively. Standard errors in parentheses. Source: own

From the results of the Probit model, the probability of correctly answering the inflation question is obtained, given the characteristics of the student regarding gender and employment status, as presented in Table 4.

Table 4. Probability of answering the inflation question correctly, by gender and employment status

	Male student (studying and working)	Female student (studying and working)	Male student (studying)	Female student (studying)
Estimated probability	0.3789	0.1132	0.1499	0.1740

Source: own

The results show that male students who study and work are 26.57 (0.3789-0.1132) percentage points more likely to answer the inflation question correctly compared to females in the same condition, and 22.9 (0.3789-0.1499) percentage points more likely than male students who only study. Of the group of students (male and female) who only study, females are 2.4 percentage points more likely than males.

4. Discussion

Financial literacy is a topic of great relevance for decision-making in various contexts of daily life. Hence, to the extent that individuals are better financially prepared, it will improve their well-being. The results of the National Survey of Financial Inclusion of Mexico 2021 (CNBV, 2022) show that only 40 % of respondents aged 18 and over correctly answered the compound interest question, 76 % understand the impact of inflation on purchasing power and 69 % understand the advantages of diversifying savings, in whose results a difference by gender is identified.

The results of this research show that around 20 % of high school students correctly answer the financial literacy questions. The percentage is lower compared to those obtained in other populations (Lusardi, 2014; Silgoner, 2015; Villagómez, 2016; Hasler, Lusardi, 2017; Lusardi, 2019; OECD, 2020). It is relevant to mention that the results are consistent with specialized literature on the subject, considering that the respondents are students who are in the stage of educational training and some in the first stage of their working life (Garg, Singh, 2018).

In our results of the econometric model, the gender variable does not influence the probability of correctly answering the financial literacy questions, which indicates that there is no gender difference. These results differ from those obtained by Bottazzi and Lusardi (2021) and Hasler and Lusardi (2017), but coincide with those obtained by Villagómez (2016) regarding groups of high school youth and with those obtained by Swiecka, Yesildag, Özen and Grima (2020).

The results of the Probit model show that the interaction variable between gender and the student's employment status is significant in the probability of correctly answering the inflation question. This result indicates that students who are in the condition of studying and working understand the effect of inflation on purchasing power, through experience, contrary to what Al-Bahrani, Buser and Patel (2020) point out.

5. Conclusion

The aim of this research was to determine the financial knowledge of high school students in Tuxtepec, Oaxaca, as well as its relationship with the student's gender, age, and employment status. The results show low FE of the students, who only a fifth of them understand the full meaning of concepts like compound interest, inflation, and diversification.

The results coincide with the empirical evidence regarding the financial literacy of groups in the school stage. The significant effect of the interaction variable (gender and the condition of studying and working) on the probability of understanding the effect of inflation on purchasing power is evident. The results obtained can contribute to the design of financial education programs for young people at an early age and that allow them to make informed financial decisions in any aspect of personal and work life.

References

Al-Bahrani et al., 2020 – *Al-Bahrani, A.A., Buser, W., Patel, D.* (2020). Early Causes of Financial Disquiet and the Gender Gap in Financial Literacy: Evidence from College Students in the Southeastern United States. *Journal of Family and Economic Issues*. 41: 558-571. DOI: https://doi.org/10.1007/s10834-020-09670-3

Antonio-Anderson et al., 2020 – *Antonio-Anderson, Ceyla, Peña Cárdenas, Maricela Carolina, López Saldaña, Cristina del Pilar* (2020). Determinantes de la alfabetización financiera [Determinants of financial literacy]. *Investigación administrativa*. 49(125): 12505. DOI: https://doi.org/10.35426/iav49n125.05

Arofah et al., 2018 – *Arofah, A.A., Purwaningsih, Y., Indriayu, M.* (2018). Financial Literacy, Materialism and Financial Behavior. *International Journal of Multicultural and Multireligious Understanding*. 5(4): 370-378. DOI: http://dx.doi.org/10.18415/ijmmu.v5i4.171

Artavanis, Karra, 2020 – *Artavanis, N., Karra, S.* (2020). Financial literacy and student debt. *The European Journal of Finance*. 26(4-5): 382-401. DOI: https://doi:10.1080/1351847x.2019.1711435

Bannier, Schwarz, 2018 – *Bannier, C. E., Schwarz, M.* (2018). Gender- and education-related effects of financial literacy and confidence on financial wealth. *Journal of Economic Psychology*. 67: 66-86. DOI: https://doi:10.1016/j.joep.2018.05.005

Bottazzi, Lusardi, 2020 – *Bottazzi, L., Lusardi, A.* (2020). Stereotypes in financial literacy: Evidence from PISA. *Journal of Corporate Finance*. Working Paper 28065 DOI: https://doi:10.1016/ j.jcorpfin.2020.1018

Cruz Piñeiro et al., 2017 – *Cruz Piñeiro, R., Vargas Valle, E.D., Hernández Robles, Ana Karina, Rodríguez Chávez, Ó.* (2017). Adolescents who study and work: sociodemographic and contextual factors. *Revista Mexicana de Sociología*. 79(3): 571-604.

Domínguez, 2013 – *Domínguez, J.M.* (2013). Financial Education for Young People: An introductory view. University Institute of Economic and Social Analysis. Working Paper 05/2013, [Electronic resource]. URL: http://www3.uah.es/iaes/publicaciones/DT_05_13.pdf

Douissa, 2020 – *Douissa, I.B.* (2020). Factors affecting College students' multidimensional financial literacy in the Middle East. *International Review of Economics Education*. 35: 100173. DOI: https://doi:10.1016/j.iree.2019.100173

Garcia-Santillán, 2020 – *Garcia-Santillán, A.* (2020). Knowledge and application toward financial topics in high school students: a parametric study. *European Journal of Educational Research*. 9(3): 905-919. DOI: https://doi.org/10.12973/eu-jer.9.2.905

Garg, Singh, 2018 – *Garg, N., Singh, S.* (2018). Financial literacy among youth. *International Journal of Social Economics*. 45(1): 173-186. DOI: https://doi.org/10.1108/IJSE-11-2016-0303

Goyal, Kumar, 2020 – *Goyal, K., Kumar, S.* (2020). Financial literacy: A Systematic Review and Bibliometric Analysis. *International Journal of Consumer Studies*. 45(1) 80-105. DOI: https://doi:10.1111/ijcs.12605

Hussain et al., 2018 – *Hussain, J., Salia, S., Karim, A.* (2018). Is knowledge that powerful? Financial literacy and access to finance: An analysis of enterprises in the UK. *Journal of Small Business and Enterprise Development*. 25(6): 985-1003. DOI: https://doi.org/10.1108/JSBED-01-2018-0021

Kadoya, Khan, 2019 – *Kadoya, Y., Khan, M.S.R.* (2019). What determines financial literacy in Japan? *Journal of Pension Economics and Finance*. 1-19: 353-371. DOI: https://doi.org/10.1017/ S1474747218000379

Karakurum-Ozdemir et al., 2019 – *Karakurum-Ozdemir, K., Kokkizil, M., Uysal, G.* (2019). Financial Literacy in Developing Countries. *Soc Indic Res*. 143: 325-353. DOI: https://doi.org/ 10.1007/s11205-018-1952-x

Klapper, Lusardi, 2019 – *Klapper, L., Lusardi, A.* (2019). Financial literacy and financial resilience: Evidence from around the world. *Financial Management*. 49(3): 589-614. DOI: https://doi.org/10.1111/fima.12283

Lusardi, Mitchell, 2009 – *Lusardi, A., Mitchell, O.S.* (2009). The big three and big five. [Electronic resource]. URL: https://gflec.org/education/questionsthat-indicate-financial-literacy/

Lusardi et al., 2020 – *Lusardi, A., Hasler, A., Yakoboski, P.J.* (2020). Building up financial literacy and financial resilience. *Mind & Society*. 1-7. DOI: https://doi:10.1007/s11299-020-00246-0

Mancebón et al., 2018 – *Mancebón, M.-J., Ximénez-de-Embún, D. P., Mediavilla, M., Gómez-Sancho, J.-M.* (2018). Factors that influence the financial literacy of young Spanish consumers. *International Journal of Consumer Studies*. 43(2): 227-235. DOI: https://doi.org/10.1111/ijcs.12502

Morgan, Long, 2020 – *Morgan, P.J., Long, T.Q.* (2020). Financial Literacy, Financial Inclusion, and Savings Behavior in Laos. *Journal of Asian Economics*. 68 June 2020, 101197. DOI: https:// doi.org/10.1016/j.asieco.2020.101197

Ramos et al., 2020 – *Ramos, J.J., García-Santillán, A., Molchanova, V.S.* (2020). Financial Literacy Level on College Students: A Comparative Descriptive Analysis between Mexico and Colombia. *European Journal of Contemporary Education*. 9(1): 126-144.

Swiecka et al., 2020 – *Swiecka, B., Yeşildağ, E., Özen, E., Grima, S.* (2020). Financial Literacy: The Case of Poland. *Sustainability*. 12(2): 700. DOI: http://doi:10.3390/su12020700

Thomas, Subhashree, 2020 – *Thomas, B., Subhashree, P.* (2020). Factors that Influence the Financial Literacy among Engineering Students. *Procedia Computer Science*. 172: 480-487. DOI: http://doi:10.1016/j.procs.2020.05.161

Yong et al., 2017 – *Yong, S., Yong, C.C., Cheong, Kee., Tey, N.* (2017). Does Financial Education Matter? Education Literacy among Undergraduates in Malaysia. *Institutions and Economies*. 9(1): 43-60.