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Analysis of Financial Education in university students from a university in Southern Sonora

Análisis de Educación Financiera en estudiantes universitario de una universidad del sur de Sonora

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Abstract

Talking about financial education today is more common, credits, exchange rates, solvency, liquidity are terms that people of adulthood often use, this research was carried out with students from a public University in the South of the State de Sonora specifically with the students of Industrial and Systems Engineering, an instrument was applied to them that is composed of 52 items that include 36 multiple choice questions, 8 about their opinions and decisions and 8 questions about sociodemographic data, it was applied to a sample of 170 subjects. The results with the greatest impact, it was found that the level of financial education is low, that the youngest subjects and those who have never worked have a lower level than those who have been part of the population economically for more years active, women denoted a lower level of financial literacy and the category with the lowest score was the one that has to do with investments

Financial Education, College students, Investments

Resumen

Hablar de educación financiera hoy en día cada día es más común, créditos, tipos de cambio, solvencia, liquidez son términos que las personas en edad adulta utilizan a menudo, la presente investigación se llevó a cabo con estudiantes de una Universidad pública del Sur del Estado de Sonora específicamente con los alumnos de la Ingeniería Industrial y de Sistemas, se les aplicó un instrumento que está compuesto por 52 preguntas que incluyen 36 preguntas de opción múltiple, 8 acerca de sus opiniones y decisiones y 8 preguntas sobre datos sociodemográficos, se aplicó a una muestra de 170 sujetos se llevaron a cabo modelos ANOVA para la presentación de resultados a través del software SPSS versión 19. Dentro de los resultados de mayor impacto se encontró que el nivel de educación financiera es bajo, que los sujetos más jóvenes y que nunca han trabajado tienen un nivel menor que aquellos que tienen más años formando parte de la población económicamente activa, las mujeres denotaron un menor nivel de alfabetización financiera y la categoría con más bajo puntaje fue la que tiene que ver con las inversiones.

Educación financiera, Estudiantes universitarios, Inversiones

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Introducción

Financial education is the process by which individuals acquire a better understanding of financial concepts and products and develop the skills necessary to make informed decisions, assess financial risks and opportunities, and improve their well-being (OECD, 2005).

The Mexican Government's approach mentions that Financial Education not only contributes to improving the performance of institutions due to a more responsible and informed clientele, but can also generate a higher quality exchange of information between financial institutions and their clients. Thanks to financial education, users demand services adapted to their needs and financial intermediaries have a better understanding of users' needs, which leads to a greater offer of innovative financial products and services, increasing competitiveness and innovation in the financial system. Financial education is the process by which individuals acquire a better understanding of financial concepts and products and develop the skills necessary to make informed decisions, assess financial risks and opportunities, and improve their well-being, as defined by OECD (2005).

Raccanello and Herrera (2014) mention that since the 2008 crisis caused by subprime mortgages, the world experienced a maelstrom of financial problems that had an impact on all economies internationally. As a result, it became evident that the general population did not have the financial education (ef) that would allow them to make appropriate decisions; on the contrary, the lack of this understanding further deepened the housing bubble. They also describe that the lack of financial literacy causes uncertainty for individuals to invest in the stock market, resulting in precarious returns on their assets.

With the above mentioned, it is important to highlight that the 2008 financial crisis was the trigger to make financial education relevant in the classroom, as educational programmes focused on teaching how to read and write, but did not raise awareness of the importance of the subject.

In this regard, the National Commission for the Protection and Defence of Users of Financial Services (Condusef, 2009) mentions that the challenge in education is to teach how to take care of and establish the basis for the formation of personal and collective wealth, i.e. ef.

Promoting financial education is fundamental to increase the socio-economic wellbeing of the population. As an example, the economic citizenship model using Child and Youth Finance's Theory of Change (2012) combines three elements: ef, social education and livelihood education, which financially empowers children and youth, hopefully resulting in a more successful population. Equipping students with the skills to make appropriate choices about the use of their resources and their future involves engaging them with the local, national and international context, leading to improvements in their personal finances.

What students know about financial education is because they have learned it from their parents and families. According to the PISA test (OECD, 2014), in all countries and economies with available data, one in two students reported that they discuss money matters with their parents on a weekly or monthly basis.

The future of the world's economies rests on the financial decisions of children and youth, as they are the future economic actors (Child and Youth Finance International, 2012). Providing the youth sector with a thriving economic and financial environment has a positive impact on actors and their communities, as they will benefit from this new generation of individuals with the right spirit for entrepreneurship and responsible investment. According to Ban Ki-moon, Secretary-General of the United Nations (2007-2016), "access to financial and social assets is essential to help young people make their own economic decisions and escape poverty" (Child and Youth Finance, 2012). Therefore, having the ability and experience in sf at an early age allows to decrease the risk of poverty caused by debt.

In this regard Chen and Volpe (1998) conducted a study to examine financial literacy; the relationship between literacy and student characteristics; and the impact of literacy on young people's opinions and decisions among 924 university students. The results showed that participants answered around 53% of the questions correctly. Students in non-business majors, women, students from lower class backgrounds, under 30 years old and with little work experience have lower levels of financial literacy. Students with less knowledge tend to have wrong opinions and make incorrect decisions. It was concluded that low levels of knowledge will limit their ability to make informed decisions.

Gutter, Copur and Garrison (2016) conducted a study assessing the effectiveness of state mandates with respect to financial literacy education in US high schools. Data were collected from college students aged 18 and older through a web-based survey from 15 college campuses in various regions of the United States. A stratified random sampling method was used. Overall, this study shows that college students' financial behaviours vary according to state high school financial education mandates, even when controlling for students' financial knowledge, financial socialisation and financial dispositions. In the current study, a "required course" policy was associated with financial behaviours in terms of regular savings, not "maxing out" and paying off credit card balances in full each month.

Another pilot study by Borden, Lee, Serido and Collins (2008) examined the influence of a financial education seminar on college students' attitudes, knowledge and intentions towards financial responsibility. With a sample of 93 young people the findings suggest that the seminar effectively increased students' financial knowledge, increased responsible attitudes toward credit, and decreased avoidant attitudes toward credit from the pre-test to the post-test. At post-test, students reported that they intended to engage in significantly more effective financial behaviours and less risky financial behaviours. Finally, demographic factors (e.g., gender and employment status) predicted students' financial knowledge, attitudes and behaviours. These results suggest that a seminar format may be useful for reaching a broader audience of university students and therefore warrants future longitudinal evaluation.

González and Gutiérrez (2017), state that students in finance-related majors are knowledgeable about the field, but their behaviour does not show relevant differences with students in other majors, as they have a very limited savings culture and show a generalised tendency to think only in the short term. Moreover, these authors point out that in Mexico there is very weak financial inclusion and individuals face significant difficulties in managing their finances, especially in long-term plans such as saving for retirement. Finally, López (2016) considers that having a society with relevant financial education has a positive impact on the country's economy, as it allows the population to take part in change, implementing collective decisions that converge with the economic and social policy objectives formulated by the government, which strengthens the persistence, momentum and expansion of bankarisation towards hitherto excluded segments of the population.

Financial inclusion in Mexico is weak and individuals face significant difficulties in managing their finances.

It is worth mentioning that the low levels of financial literacy of the Mexican population are largely due to a lack of financial education and bad habits at the time of acquiring them. The biggest problem that results from the lack of financial education is that the quality of life is very low, tending to live in poverty, since a population that does not know how to plan its income and expenses, does not have a savings culture and does not know how to get into debt without affecting its finances, cannot improve its social welfare and therefore does not contribute to the economic development of its country.

With the above described it is necessary to ask the question, what is the level of knowledge that students of a university in the south of the state of Sonora have about financial education?

The objective of this research is to determine the level of knowledge in terms of financial education and how it influences their opinions and decisions on personal finance of students at a university in the south of the state of Sonora, specifically those enrolled in Industrial and Systems Engineering, using an instrument.

Methodology

This study uses a questionnaire designed by Chen and Volpe (1998), adapted to the terms and concepts of the Mexican financial system, covering the main aspects of finance. It includes financial literacy (general knowledge), savings, loans, insurance and investments. It consists of 52 items including 36 multiple-choice questions, 8 questions about their opinions and decisions and 8 questions about socio-demographic data. The instrument was validated by experts in the area of personal finance and the consistency of the survey through Cronbach's Alpha.

The responses of each subject were used to calculate the mean. According to the existing literature the mean percentage of correct scores are grouped into (1) more than 80%, (2) 60% to 79% and (3) less than 60%. The first category represents a relatively high level, the second category represents a medium level and the third a relatively low level.

The subjects under study are students of Industrial and Systems Engineering at a public university in the south of the state of Sonora, Mexico. A random sample was taken from a population of 411 students, and the questionnaire was sent electronically and answered by 170 subjects. Of these, 60 were male and 110 female.

Results

The results of Cronbach's alpha consistency denoted .83 which indicates that the instrument is feasible since the closer it is to the number 1, the greater the reliability of the instrument.

Table 1 shows the characteristics of the subjects under study, resulting in a response rate by gender of 64% female and 35% male. In the category of the subjects' years of work experience, the predominant percentage were those with two or less years of work experience. The predominant age category of the respondents was between 18 and 20 years of age and the income of the students was predominantly between $10,000 and 29,999, it is worth mentioning that this income could not only be composed of wages and salaries, but also scholarships, allowances from parents, among others

Characteristics of the Subjects			
		Number of participants	*Percentage*
A)	Demographic Characteristics		
a)	Gender		
	Male	60	35.30%
	Female	110	64.70%
B)	Experience		
a)	**Years of work experience**		
	None	31	18.00%
	Less than two years	78	46.00%
	Two or less than four years	39	23.00%
	Four or less than six years	22	13.00%
	Six or more years		
b)	**Years of age**		
	18 a 20	128	75.40%
	21 a 23	24	14.10%
	24 a 26	18	10.50%
C)	**Income**		
a)	**Last year's income**		
	Lees of $10,000	27	16.00%
	$10,000 at $29,999	61	36.00%
	$30,000 at $49,999	73	43.00%
	$50,000 or more	9	5.00%

Table 1 Characteristics of the subjects
Source: Prepared with own data.

Table 2 demonstrates the level of financial literacy of the young respondents which overall from the instrument falls in the low category with a score of 54.93. In the general knowledge category the average was 51, savings and loans scored 58.56, insurance 58.09 and investments 46.41 which demonstrates the overall average for this application.

Average Percentage of Correct Answers for each question in the questionnaire, each section and for the entire questionnaire				
		Level of financial literacy		
		Low below 60%.	Medio 60-79%	Alto Por encima del 80%
I.	General knowledge			
	Personal financial literacy	52		
	Spending vs. saving pattern		63	
	Current account reconciliation	50		
	Personal Financial Planning	53		
	Taxes	40		
	Average number of correct responses for the section	**51.6**		
	Median number of correct answers for the section	**52**		
II.	Savings and loans			
	Solvency	50		
	Credit Bureau		61	
	Compound Interest		63	
	Annual Percentage Rate		60	
	Credit Card Usage	58.8		
	Average number of correct responses for the section	**58.56**		
	Median number of correct answers for the section	**60**		
III.	Insurance			
	Car Insurance			86.47
	Determination to buy insurance		74.35	
	Features of medical insurance	48.7		
	Insurance Dispute Resolution	48.81		
	Characteristics of life insurance	32.14		
	Average number of correct responses for the section	**58.094**		
	Median number of correct answers for the section	**53.452**		
IV	**Investments**			
	Investing in Ordinary Shares	53.68		
	Retirement - Benefits of early investment	52.39		
	Return on investment of funds	45.35		
	Changes in interest rates and treasury bond prices		68	
	Investment diversification	30.09		
	Exchange rates	28.99		
	Average number of correct responses for the section	**46.4166667**		
	Median number of correct answers for the section	**48.87**		
	Average number of correct responses for the whole instrument	**54.935**		
	Median number of correct answers for the whole instrument	**52.39**		

Table 3 Percentage of correct answers ANOVA
Source: Prepared with own data.

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Percentage of correct answers for each section ANOVA results						
		General knowledge	*Savings and loans*	*Seguros*	*Inversiones*	*Muestra*
A)	Demographic Characteristics					
a)	Gender					
	Male	66.54	58.3	61.43	46.51	61.25
	Female	54.3	51.5	62.91	38.96	50.3
	Experience	(86.49)**	(30.58)**	(29.93)**	(95.36)**	(104.68)**
B)	**Years of work experience**					
a)	**None**					
	Less than two years	47.5	41.3	46.2	28.3	43.29
	Two or less than four years	46.2	52	53.14	37.8	46.59
	Four or less than six years	53	52.39	55.68	35.92	47.89
	Six or more years	58.5	54.65	62.3	40.5	48.42
	Years of age	58.96	62.9	69.21	51.3	61.95
	18 a 20	(23.32)**	(21.82)**	(19.99)**	(25.85)**	(38.93)**
b)	21 a 23					
	24 a 26	60.23	53.22	48.5	25.9	48.96
	Income	65.8	55.29	50.2	26.8	57.63
	Last year's income	68.9	58.5	54.5	35.9	51.16
	Demographic Characteristics	(14.5)**	(12.4)**	(12.53)**	(18.96)**	(21.19)**
C)	Gender					
a)	Male					
	Menos de $10,000	60.8	52.16	61.2	38.52	52.26
	$10,000 a $29,999	62.9	56.45	63.5	41.48	56.81
	$30,000 a $49,999	65.49	57.92	61.18	43.56	55.38
	$50,000 o más	68.7	59.89	63.6	47.5	58.3
	F Estadística	(3.69)*	(6.99)*	((0.76)	(3.35)*	(4.69)**

Table 2 Average percentage of correct answers
Source: Prepared with own data

In terms of participants by category, it can be observed that students with more work experience have a better knowledge in terms of personal finance (general knowledge), participants between 24 and 26 years of age demonstrate a better level than those between 18 and 20 years of age.

It can also be observed that female participants tend to be less financially literate than male respondents. Those participants with less work experience have a lower level of financial literacy than those with more than four years of work experience.

In the category of savings and loans, work experience has significant differences: those participants who have never worked have less knowledge about savings and loans than those who have been in the labour force for more than six years.

In the same sense, knowledge in the area of insurance is the dimension with the lowest level, with age being the most significant, with younger youth demonstrating a lack of knowledge on the acquisition, knowledge and management of insurance.

Finally, the investment category shows that again the age of the population is totally significant in the level of investment knowledge of the young respondents as those in the 18-20 age range have a score of 25.9 being the lowest score obtained in the sample.

The results obtained are consistent with the findings of Chen and Volpe (1998), where it is shown that women, younger and inexperienced young people have a low level of knowledge. In the same vein, as mentioned by Gonzalez and Gutierrez (2017), young people demonstrate a limited savings culture and a tendency to think only in the short term.

These results suggest that university students need to improve their financial literacy, even though some of the items are basic, the overall mean of the participants is 54.93, where less than denotes a low level, 60-79% means a medium level and above 80% demonstrates a high level of financial literacy. None of the overall scores per category exceed 65%, the weakest area being investments.

The lowest levels were scored by women, the youngest and those who have never had a job.

Borden, Lee, Serido and Collins (2008) confirm that the introduction of curricular or extra-curricular courses in upper secondary education to encourage responsible attitudes towards credit, savings and investment is nowadays imperative, as without knowledge young people are more likely to make mistakes in the real world.

In conclusion it can be said that having a low level of financial education leads to uninformed decision making, therefore consequences that can collaterally affect the quality of life of people in the short and long term, according to the World Health Organization (WHO, 1996) cited by Quiroz, Molina, García Lirios, Murillo and Acosta (2021), as the perception that each individual gives to their life position within the contextualisation of the cultural system, as well as the values they bring with them, relating it to the stipulated goals, life expectations, standards and the concerns they perceive associated in this case with their personal finances.

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