

Financial education among University students**Educación Financiera entre Universitarios: Ahorro y Crédito**

ZAPATA-AGUILAR, José Apolinar†*

*Universidad Tecnológica Metropolitana*ID 1st Author: *José Apolinar, Zapata-Aguilar* / **ORC ID:** 0000-0002-1596-4916, **Research ID Thomson:** Q-7516-2018, **CVU CONAHCYT ID:** 601306**DOI:** 10.35429/JFE.2023.13.7.1.10

Received September 10, 2023; Accepted December 20, 2023

Abstract

Financial education is one the driving factors of the economy, so its attention must be a priority. The present research study investigates the knowledge that a sample of university students from a Higher Education Institution in the city of Merida, Yucatan, Mexico has regarding the variables savings and credit. The research was descriptive, with a non-experimental cross-sectional design, in which the survey was used as a means of collecting information, with a 25 item questionnaire. It was found that both men and women reported knowledge about what savings, is however, it was men who demonstrated greater knowledge about what credit is compared to women, as well as a general interest among university students, both men as women, to continue educating themselves in savings and credit, to make better financial decisions.

Economy, Finance, Education**Resumen**

La educación financiera es uno de los factores de impulso de la economía, por lo que su atención debe ser prioritaria. El presente estudio de investigación indaga sobre el conocimiento que posee una muestra de universitarios de una Institución de Educación Superior de la ciudad de Mérida, Yucatán, México respecto a las variables ahorro y crédito. La investigación fue descriptiva, de diseño no experimental transversal, en la que se utilizó la encuesta como medio de recolección de información, con un cuestionario de 25 ítems. Se encontró que tanto los hombres como las mujeres reportaron conocimiento sobre lo que es ahorro, no obstante, fueron los hombres quienes demostraron un mayor conocimiento sobre lo que es el crédito en comparación con las mujeres, así como un interés generalizado entre los universitarios tanto hombres como mujeres, por continuar instruyéndose en ahorro y crédito, para tomar mejores decisiones financieras.

Economía, Finanzas, Educación

Citation: ZAPATA-AGUILAR, José Apolinar. Financial education among University students. *Journal-Financial Economy*. 2023. 7-13: 1-10

* Correspondence to Author (e-mail: jose.zapata@utmetropolitana.edu.mx)

† Researcher contributing first author.

Introduction

Financial education throughout history has demonstrated its effectiveness, because countries that have provided it to their citizens from an early age have reported better results in economic matters, compared to those that have not, because when a person has financial education, he or she is expected to make better decisions that allow him or her to protect his or her assets and achieve economic stability.

Camargo (2016) points out that education should prepare people for life, teach them to give importance to things, injecting motivation that leads people to use, transform and improve that knowledge.

Financial education enables people to strengthen their financial literacy to better manage their resources (OECD, 2013, p.11).

Financial education is not a set of concepts that are difficult to assimilate, but a lifelong learning process, where the best way to acquire it is little by little, starting at an early age (Domínguez, 2013).

The relevance of financial education is the fact that it allows people to make more informed decisions in order to achieve better benefits (Anderson, Peña and López, 2020, p. 2). Making the right financial decisions not only provides people with present well-being, but also gives them financial certainty to face the constantly changing environment.

Financial education is a set of steps that should be followed throughout life, where although they should be considered as part of formal education, they could also be complemented by additional training without conflict (Domínguez, 2013, p.73).

Empowering people with financial decision-making skills enables them to have access to better income, promotes savings and improves the quality of life in society (Calderón, 2018, p. 46).

The aim of this research study is to identify the knowledge of a sample of university students regarding savings and credit, through a survey, in order to find out their level of financial education on the aforementioned topics.

Financial education covers a range of concepts, but the study will focus on savings and credit. The research was conducted among a sample of university students from a private higher education institution located in the city of Mérida, Yucatán, Mexico, both men and women were randomly selected.

Theoretical framework

Financial inclusion has been one of the main objectives of the financial system, and all strategies are aimed at the inclusion of society; any life project of any kind only fulfils its objectives if it is accompanied by financial resources. The lack of financial resources has generated serious problems of a personal and social nature, causing economic problems and, in turn, the loss of its dynamism. Non-payment of obligations resulting from the misuse of financial resources and their deficient use in a correct economic context has contributed to a process of exclusion of the individual, disqualifying them from accessing formal credit and increasing its cost (Calderón, 2018).

For their part, Anderson, Peña and López (2020) state that "financial education has become relevant both internationally and nationally, due to the benefits it implies not only at the individual level but also for the economy in general".

Pérez and Fonseca (2017) addressed the relationship between financial inclusion and poverty at the municipal level in Mexico using data from 2010. The analysis was based on a spatial regression model that included as variables: population density, illiteracy rate, population employed in the primary sector, rurality, distance of the municipality from the regional economic centre, and the municipal financial inclusion index. They concluded that there is a negative and significant relationship between financial inclusion and municipal poverty.

While Bruhn and Love (2014) analysed the impact of access to finance on poverty; the role of finance in the labour market and very specifically the opening of a new bank targeting low-income people. They applied a difference-in-differences regression to compare municipal data before and after the opening of Banco Azteca. The data come from the National Employment Survey and the CNBV from 2000 to 2004.

They found that the share of informal businesses increased by 7.6 percent and overall employment increased by approximately 1.4 percent with the opening of Banco Azteca.

An increase in income of 7 per cent was observed in those municipalities where formal banking services were not available. They concluded that improving access to financial services for low-income households had a significant impact on both labour market and income levels.

Bozkurt, Karakus and Yildiz (2018) studied the factors influencing the level of financial inclusion in 120 countries for 2011 and 2014 using data from The World Bank Global Financial Inclusion Database. Using spatial regressions, they found that age, female population, unemployment, inequality in income distribution, tax burden and free trade were associated with a negative change in the financial inclusion index; while Muslim population, gross national income, education, internet usage, government integrity, government spending, monetary freedom, political stability and government effectiveness are statistically significant and associated with a positive change in the financial inclusion index. They also found that there is a process of convergence in financial inclusion among the countries analysed.

Savings

Savings is a portion of income that we decide not to spend during a given period. People generally do not spend all of their income for the following reasons: to meet unforeseen expenses or emergencies, to buy the goods and services of their choice, to invest and try to generate more wealth, or to help disadvantaged people (Ortega, Pino, Merino and Ledrado, n.d.).

It is important to mention that, according to the previous source, savings will be possible in those cases where income exceeds budgeted expenditure, hence the importance of having a budget that allows knowing the consumer's purchasing capacity, and based on the income obtained, having the possibility of allocating part of it to savings.

Saving is the habit of saving a part of our income to achieve a goal in the future or to create a fund that allows us to face an emergency.

Saving implies not consuming part of our income today in order to spend it in the future. As the purpose of saving is to achieve an upcoming goal or to face an emergency, we need to have those resources available and protected (CONDUSEF, n.d.).

Credit

"Credit is the amount for which there is a specific repayment obligation over a period of time, usually with interest. Credit is extended to finance consumption and investment expenditure and financial transactions" (OECD, 2013).

Credit is a loan of money that one party grants to another, with the commitment that, in the future, the borrower will repay the loan gradually (through instalments) or in a single payment and with an additional interest that compensates the lender for all the time he or she did not have the money (Educa, n.d.).

According to Rodríguez (2008), trade credit is a relatively little studied category in financial economics. It is a type of short-term, informal debt, the terms of which are generally not legally fixed. Thus, trade credit can be granted through formulas such as the deferral of payment of a transaction on goods or services that are the subject of typical company business, where the buyer acts as a borrower or seller as a lender.

Financial education is of great importance nowadays and offers an adequate accompaniment to the individual throughout his or her life cycle, not only in the process of financial accumulation but also in the process of de-accumulation, providing well-being and quality of life (Calderón, 2018).

Methodology

The research study is quantitative in approach. The research to be carried out will be descriptive. Descriptive studies seek to specify the properties, characteristics and profiles of people, groups, communities, processes, objects and any other phenomenon that is subjected to analysis (Hernández, Fernández and Baptista, 2014).

The research design will be non-experimental, i.e., time-based, and will be cross-sectional, as it is planned to approach a sample of university students on a single occasion.

For Hernández, Fernández and Baptista (2014), a research design is a plan or strategy conceived to obtain information that is desired in order to respond to the problem statement.

The survey is proposed as the information collection strategy for this research. According to García (n.d.), the survey is a technique that uses a set of standardised research procedures through which a series of data is collected and analysed from a sample of cases representative of the population to be explored.

As the data collection technique is the survey, the data collection instrument will be the questionnaire. For García, Alfaro, et al. (2006) the questionnaire should collect information on all the variables considered to be of interest in the research study.

Descriptive statistics will be used for data analysis. For Faraldo and Pateiro (2012) descriptive statistics is a set of numerical and graphical techniques to describe and analyse a group of data, without drawing conclusions about the population to which they belong.

Subjects of study: In the research study developed, the subjects of study will be men and women in an age range of 18 to 29 years who are studying a university education programme in the area of accounting, in a private university located in the city of Merida, Yucatan, Mexico. For Furmero, Guerrero and Quintana (2015) the subject is language and shapes a socio-cultural context that assumes the meaning of its existence as a contradiction that not everything is given, but is socially constructed through institutional environments and practices. It is assumed that the proposed age range is the average age of men and women studying for a bachelor's degree in Mexico.

The research population was the totality of students of a private Higher Education Institution, located in the city of Merida, Yucatan, Mexico, which has an enrolment of 510 students in two educational programmes at the undergraduate level. We worked only with the Bachelor's degree programme in accounting.

In this research study, a sample size was calculated considering a finite population with 95% confidence, a 6% estimation error, a 50% probability of success and a 50% probability of failure.

The formula used was as follows:

$$n = \frac{k^2 qpN}{e^2 (N-1)+k^2 pq} \tag{1}$$

Where:

- n= Sample size.
- K= Confidence level
- p= Probability of success
- q= Probability of failure
- N= Size of the population or universe
- e= Estimation error

$$n = \frac{(3.84)(0.50)(0.50)(510)}{((0.06 \times 0.06) (509) + (3.84) (0.50) (0.50))}$$

$$n = 489.60 / 2.7924 = 175 \text{ cuestionarios.}$$

The selection of the study subjects was through a simple random probability sample, which means that from the whole population any university student, male or female, in the established age range can be selected to participate as a study subject.

The research variables were:

Dependent variable	Independent variable	Indicators
Financial literacy	Men	Knowledge of Savings and Credit Education acquired on the subject Academic background Propensity for continuous education
Financial literacy	Women	Knowledge of Savings and Credit Education acquired on the subject Academic background Propensity for continuous education

Table 1 Research variables

- Independent variables: It will be men and women, since what is sought, is to measure the degree of financial education possessed by each sex.
- Dependent variables: It will be the financial education possessed by university men and women, in terms of their knowledge of savings and credit, instruction acquired on the subject, academic training in finance and their propensity to continue educating themselves on the subject.

The survey was chosen as the data collection technique, and consequently the data collection instrument was the questionnaire. The questionnaire was designed based on the information needs of the project.

The questionnaire was designed using Likert-type scaling, with 25 items divided into five sections: savings, credit, acquired instruction on the subject, academic training and propensity to educate oneself on the subject on an ongoing basis.

According to Hernández, Fernández and Batista (2014), validity is the degree to which an instrument measures the variable it is intended to measure. In this case, we resorted to expert validity, using two expert researchers in financial education, who reviewed and approved the instrument, after making adjustments to the one originally constructed.

Instrument reliability refers to the degree to which an instrument produces consistent and coherent results (Hernández, Fernández and Baptista, 2014). In this case, the database of the respondents' answers was taken and Cronbach's Alpha was applied as a statistical tool to test the reliability of the instrument using the following formula:

$$\infty = \frac{K}{K-1} \left(1 - \frac{\sum vi}{vt} \right)$$

Where:

∞ = Cronbach's Alpha

K = Number of items

Vi = Variance of each item

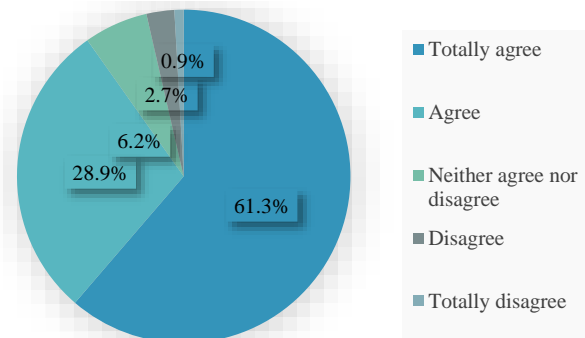
Vt = Total variance

A reliability of 0.86460332 was obtained, which allowed us to observe a high level of confidence in the instrument assessed, based on the responses obtained from the survey applied to university students. According to Mateo (2012) Cronbach's Alpha correlations between 0.8 and 1.0 are considered very high and consequently denote high levels of reliability in the instruments developed.

The questionnaire was applied to 175 university students, whose participation requirement was that they were currently enrolled in a higher education programme, i.e. that they were regular students in a higher education programme.

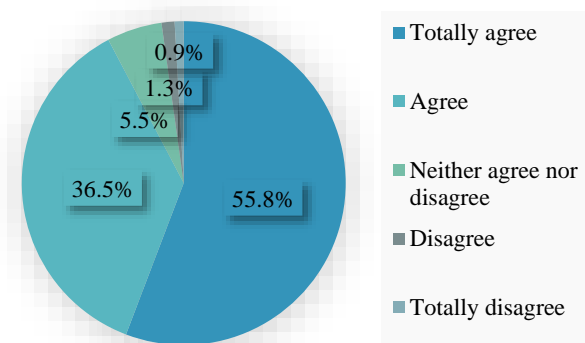
Results

Below are the graphs of the results, in which descriptive statistics were used to analyse the findings.



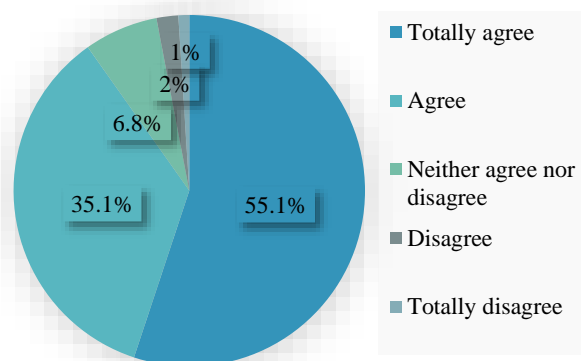
Graph 1 Saving is part of my income that I choose not to spend in order to keep it in reserve
Source: Own Elaboration (2022)

Analysis in interpretation: This statement is key to the study, as it clearly defines what savings is and respondents were expected to strongly agree or agree, with 90.2% of responses ranging from agree to strongly agree. This confirms that respondents are clear about what savings is.



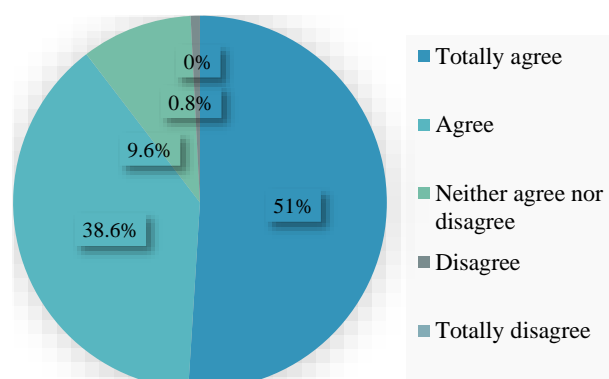
Graph 2 Saving is an amount of money that I keep for unforeseen events
Source: Own Elaboration (2022)

Analysis on interpretation: In this question, it was found that more than 90% of the respondents, use their savings to face unforeseen events, which demonstrates the value that respondents give to their savings, as a means to face moments of lack of liquidity.



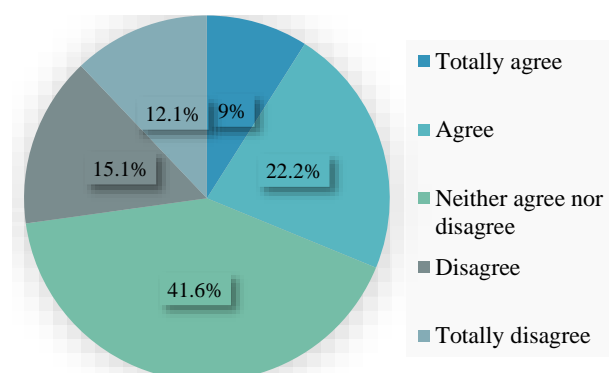
Graph 3 I save whenever I get the chance
Source: Own Elaboration (2022)

Analysis in interpretation: In this questioning, it was observed that more than 90% of the respondents give value to saving, and generate it whenever they can, as it will depend on their surplus income.



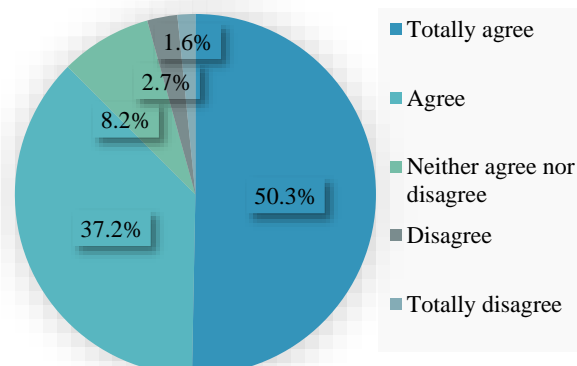
Graph 4 Saving enables me to achieve my personal goals
Source: Own Elaboration (2022)

Analysis in interpretation: In this item, it was sought to know the use that respondents usually give to their savings, the highest percentage of responses was expected, between agree and totally agree, confirming the use that respondents give to their savings, since 89.6% of respondents, responded to agree and totally agree with this argument.



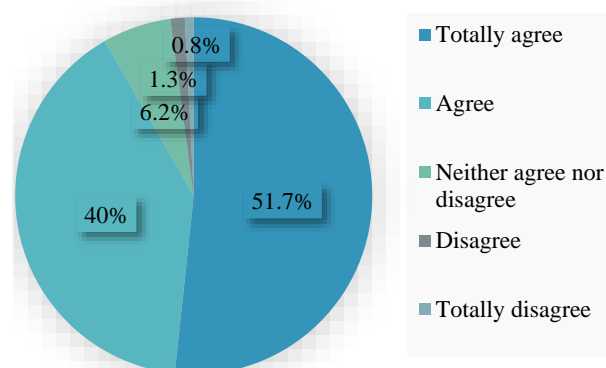
Graph 5 Tandas or mutual funds are the easiest way for me to save
Source: Own Elaboration (2022)

Analysis in interpretation: In this item, it was observed that batches or mutual funds are not the main strategy used by university students to save, as most of them, neither declined in favour, nor against.



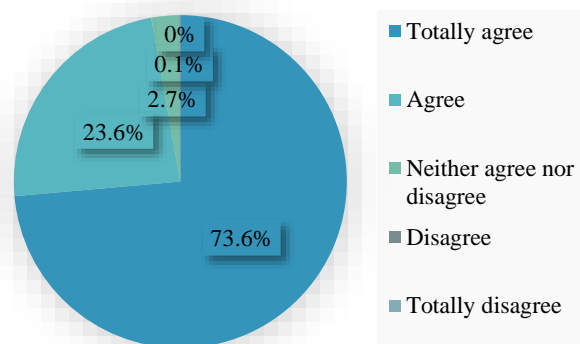
Graph 6 Credit is borrowed money that I have to pay back
Source: Own Elaboration (2022)

Analysis and interpretation: In this item clearly defines what a credit is, responses of agreement and total agreement were expected to confirm the knowledge that university students have about the variable credit. The results were conclusive, as 87.5% of respondents answered between agree and strongly agree, confirming their knowledge of the term studied.



Graph 7 Credit has a cost that I have to pay called interest
Source: Own Elaboration (2022)

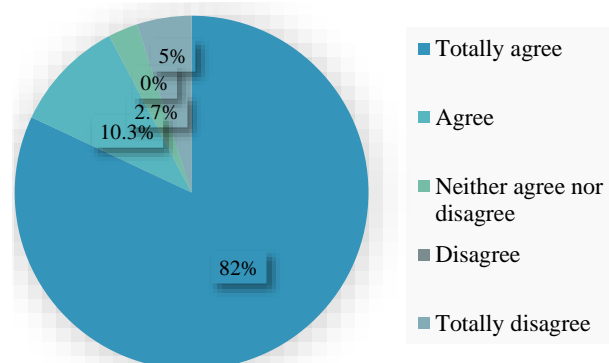
Analysis and interpretation: This item assesses a fundamental fact in credit which is the cost paid for it, called interest. It was essential for respondents to be clear about this term and they were questioned about it. It was found that 91.7% of the respondents were clear that credit has a cost, which is interest, and that it has to be paid in order to be able to use it.



Graph 8 Before applying for a loan, I check that I can pay for it

Source: Own Elaboration (2022)

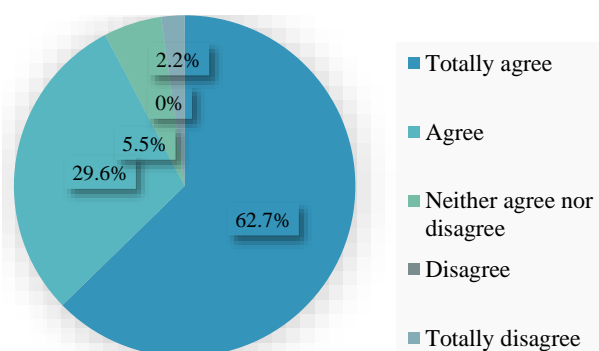
Analysis and interpretation: This item shows the level of responsibility of the respondents, as they are aware that in order to apply for a loan they must have sufficient liquidity to repay it.



Graph 9 I currently have no debts in the credit bureau

Source: Own Elaboration (2022)

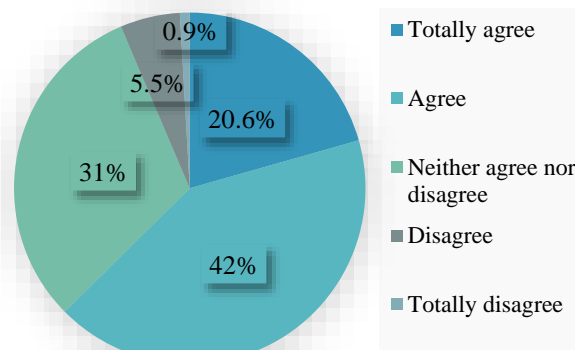
Analysis and interpretation: In this item we found financial health among the respondents, who affirm in more than 90%, not to be in the credit bureau, nor to be listed as clients with debts.



Graph 10 I am a good payer when I apply for a loan

Source: Own Elaboration (2022)

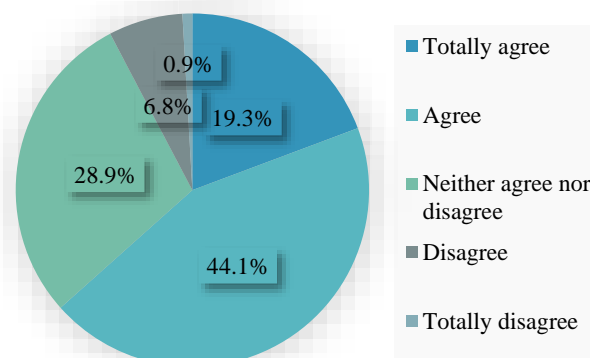
Analysis and interpretation: In this item more than 90% of the respondents, have a positive perception of themselves as good payers of credit, which speaks of a financial education oriented towards the responsible use of money, mainly when it is obtained by financing which implies a cost that has to be paid.



Graph 11 I make good financial decisions thanks to the knowledge I have about personal finance

Source: Own Elaboration (2022)

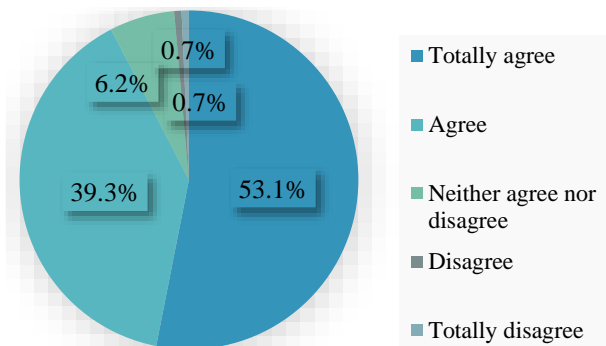
Analysis and interpretation: It was found that more than 60% of respondents consider that they make good financial decisions with their current financial education, which is expected to translate into good future personal finance decisions.



Graph 12 Possesses sound savings and credit knowledge

Source: Own Elaboration (2022)

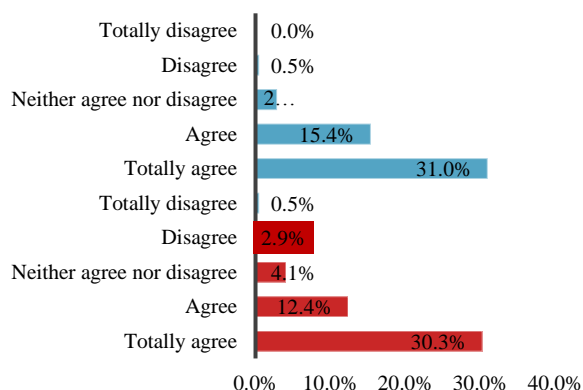
Analysis and interpretation: It was found that more than 60% of the respondents consider that they have a solid knowledge of savings and credit, which allows answering the first research question posed in the study, confirming that most of the university students surveyed do have knowledge of savings and credit.



Graph 13 Desire to continue learning about personal finance

Source: Own Elaboration (2022)

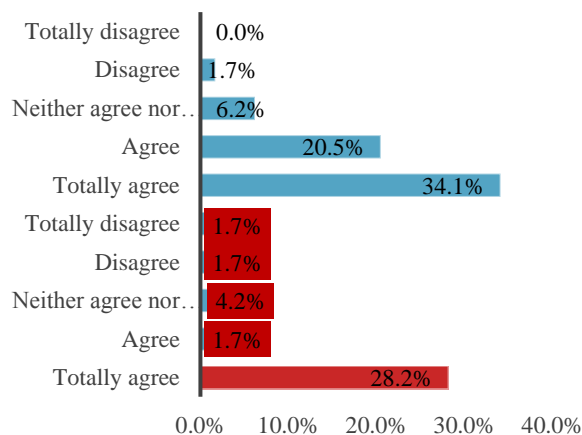
Analysis and interpretation: It was very satisfying to find interest among the university students surveyed to continue preparing themselves in terms of financial education, since the economic success of future professionals will depend to a large extent on the right decisions they make regarding their personal finances.



Graph 14 Saving is part of my income that I choose not to spend in order to keep it in reserve (Comparison between male and female responses)

Source: Own Elaboration (2022)

Analysis and interpretation: We compared the responses of men and women on the first item, and found that it is men who report a greater knowledge of savings compared to women, whose responses were slightly below those of men. The red bars correspond to women and the blue bars to men.



Graph 15 Credit is borrowed money that I have to pay back (Comparison between men's and women's responses)

Source: Own Elaboration (2022)

Analysis and interpretation: We compared the responses of men and women on the sixth item, which assesses the respondents' knowledge of credit, and found that it is men who report greater knowledge of credit than women, whose responses were lower than those of men. The red bars correspond to women and the blue bars to men.

Acknowledgements

To CONAHCYT and the Universidad Tecnológica Metropolitana, for the facilities received in the development of this research study.

Conclusions

It was significant to find, as a result of the research study, that the sample of university students surveyed showed a strong knowledge of the variables savings and credit, within the framework of financial education. The sample was made up of men and women in equal proportions, and it was found that it was the men, not the women, who demonstrated greater knowledge of the variables studied.

Another significant finding was the interest shown by the university students surveyed in continuing their education in personal finance, in order to learn how to use their economic resources as efficiently as possible, which will allow them not only to increase their wealth, but also to act responsibly in the financial decisions they make.

Although the Mexican Federal Government has mandated CONDUSEF to promote the annual Financial Education Week in Mexico, in which lectures and talks are offered to students at public universities, and today university students have access to a great deal of information on personal finance, this is not enough, so parents should become more involved in the topic to increase interest in the subject among their children.

Recommendations

It is recommended that the Federal Government

1. Increase the coverage of the Financial Education Week promoted by CONDUSEF at the basic level, so that students become familiar with the subject from an early age.
2. Increase the budget for Financial Education Week activities.
3. Incorporate compulsory workshops for university students, to increase their knowledge in the management of personal finances.

It is suggested that university students

1. Take financial education courses that are available.
2. Gradually enter the financial market with a savings account or credit card,
3. Plan their income and expenditure.
4. Be responsible in managing your personal finances.

References

Anderson, A., Peña, M. y López, C. (2020) Determinantes de la alfabetización financiera. *Investigación Administrativa*, vol. 49, núm 125. 2020. Instituto Politécnico Nacional.

Bozkurt, I., Karakus, R. y Yildiz, M. (2018) Spacial Determinants of Financial Inclusion over Time. *Journal of International Development*. <https://onlinelibrary.wiley.com/doi/10.1002/jid.3376>

Bruhn, M. y Love, I. (2014) The real impact of improved access to finance: Evidence from México. *The Journal of Finance*. <https://onlinelibrary.wiley.com/doi/10.1111/jof.12091>

Calderón, E. (2018) Educación económica y financiera, una solución a la exclusión. *Revista INNOVA ITFIP*, 3 (1), 44-51 <http://www.revistainnovaitfip.com/index.php/inovajournal/article/view/38>

Camargo, M. (2016) La importancia de la educación en el desarrollo de competencias para la vida. México: Escuela Normal Superior. Profesor José E. Medrano R.

CONDUSEF (s.f.) Crédito. Úsalo responsablemente. Recuperado de: https://www.condusef.gob.mx/documentos/299134_Cr_dito-2018.pdf

Domínguez, J. (2013) Educación financiera para jóvenes: Una visión introductoria. Universidad Alcalá. Recuperado de: http://www3.uah.es/iaes/publicaciones/DT_05_13.pdf

Educa (s.f.) ¿Qué es el crédito? Recuperado de: <https://www.cmfchile.cl/educa/621/w3-article-27152.html>

Faraldo, P. y Pateiro, B. (2012) Estadística descriptiva. http://eio.usc.es/eipc1/BASE/BASEMASTER/FORMULARIOS-PHP-DPTO/MATERIALES/Mat_G2021103105_Presentaci%C3%B3n_Tema1.pdf

Furmero, F., Guerrero, G. y Quintana, J. (2015) El sujeto y el objeto en la investigación: Aproximación del uso del lenguaje. *Revista Arje*. Vol. 9 No 17 pp. 19-32 <http://www.arje.bc.uc.edu.ve/arj17/art02.pdf>

García, F., Alfaro, A., Hernández, A. y Molina, M. (2006) Diseño de cuestionarios para recogida de información: Metodología y limitaciones. <https://www.redalyc.org/articulo.oa?id=16961761600>

García, M. (s.f.) La encuesta. En García, M., Ibañez, J. y Alvira F. *El análisis de la realidad social. Métodos y técnicas de Investigación*. Madrid: Alianza Universidad.

Hernández, R., Fernández, C. y Baptista, P. (2014) Metodología de la investigación. México: Mc Graw Hill.

OCDE (2013) Advancing National Strategies for Financial Education. <https://www.oecd.org/finance/financial-education/advancing-national-strategies-for-financial-education.htm>

Ortega, M., Pino, C., Merino, M. y Ledrado, M. (s.f.) Educación Financiera en Enseñanza Secundaria Obligatoria. España: Banco de España.

Pérez. P. y Fonseca, M. (2017) Análisis espacial de la inclusión financiera y su relación con el nivel de pobreza en los municipios mexicanos. Revista Mexicana de Economía y Finanzas. Nueva Época. Pp-45-66

Rodríguez, O. (2008) El crédito comercial: Marco conceptual y revisión de la literatura. Investigaciones Europeas de Dirección y Economía de la Empresa. Vol. 14, núm 3 Septiembre Diciembre 2008. https://www.redalyc.org/pdf/2741/Resumenes/Resumen_274120249002_1.pdf