

Level of financial education: a study of high school students

Nivel de educación financiera: estudio en estudiantes de bachillerato

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ABSTRACT

Financial education is becoming increasingly important given the growing number of products offered by financial markets and their impact on the economic development of a country and the quality of life of its citizens. The objective of this work is focused on to measure the level of financial knowledge of the students of the "Elvia Jiménez de González" Educational Unit ; for this purpose, an exploratory-descriptive research was carried out, in which 56 students were surveyed. For the analysis and processing of the information collected, the tools PSPP and spreadsheets were used for subsequent interpretation. The results revealed that the students are at level 4 in relation to knowledge of financial education. The research concludes the need to continue providing financial education programs that will allow in the medium and long term to strengthen students' financial skills and knowledge.

Keywords: financial literacy, financial decisions, students, personal finance, skills

RESUMEN

La educación financiera cobra cada vez más importancia dado el creciente número de productos que ofrecen los mercados financieros y su impacto en el desarrollo económico de un país y la calidad de

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vida de los ciudadanos. El objetivo del presente trabajo se centra en medir el nivel de conocimiento financiero que poseen los estudiantes de la Unidad Educativa “Elvia Jiménez de González”; para ello se realiza una investigación de carácter exploratorio - descriptivo, en el cual fueron encuestados 56 estudiantes. Para el análisis y procesamiento de la información recopilada se utilizó las herramientas PSPP y hojas de cálculo para su posterior interpretación. Los resultados revelaron que los estudiantes se ubican en un nivel 4 en relación a conocimientos de educación financiera. La investigación concluye la necesidad de seguir impartiendo programas de educación financiera que permita en el mediano y largo plazo fortalecer la habilidades y conocimientos financieros en los estudiantes.

Palabras clave: conocimiento financiero, decisiones financieras, estudiantes, finanzas personales, habilidades

INTRODUCTION

Financial education is defined as the process through which people better understand financial products and risks, developing skills to make more informed decisions with the risks that these decisions entail. The main characteristic of financial education and personal finance is to enable people to make coherent decisions in their daily activities, due to the accelerated growth of financial products that are becoming more complex every day; within this scenario, financial education has the power to provide information and tools on the functioning of the economy at a general level, giving priority in daily life. To analyze the topic in question, it is essential to know that today's world is increasingly demanding in the various aspects in which we interact with other actors in our economies, in addition to the great development of information and communication technologies, finance is no exception, which leads to a sea of new knowledge that requires greater preparation and development of specific skills to achieve the success desired by each individual.

The World Bank presented a report in 2015, and gives an overview of the level of financial literacy of citizens worldwide. The report is based on a survey conducted by telephone in 2014 to more than 140,000 adults (over 15 years old) of 140 nationalities, consisting of four basic questions on risk diversification, inflation, and simple and compound interest rate; according to the results obtained, only 33% of the world population exceeds this threshold (Lopez, 2015). In 2015 Standard and Poor's with the

collaboration of the World Bank conducted a study with issues related to financial education from which it could be determined that only 1% of the world population would have received financial education, based on these results it can be verified that illiteracy in the matter of finance is really alarming (Haba et al., 2018).

In developing countries, especially in Latin America, the young population (between 15 and 24 years old) represents about one fifth of them, and its impact can be even more significant due to the greater ease with which young people learn and innovate, which makes this segment of the population very attractive for faster and more effective bankarization. However, one challenge facing financial education aimed at young people is that this segment is characterized by a high degree of impatience. Regarding the means of dissemination, there are those who propose that the most effective way to educate financially is through a subject in the curricula of schools (Gómez, 2009).

In this way, the importance of educational preparation that allows the individual to acquire financial knowledge and skills is evident, considering that people begin to be linked to the economic reality almost always from the everyday life of the home, based on family economic activities and experiences.

In the Ecuadorian context, the result of the I Financial Education Day organized by the Association of Private Banks of Ecuador (ABPE) in 2016 stands out, in which the results of the report of the Development Bank of Latin America (CAF) with 1200 people surveyed were presented, from which it was highlighted that 41% of the population does not have a savings culture or does so with methods that do not involve financial institutions (Méndez & Quimis, 2018)..

Financial education is now recognized as a fundamental economic issue by international organizations such as the World Bank, the United Nations (UNICEF) and UNESCO, which have warned about the need to develop and deepen the financial capacity of the world's population. As a result, financial education has begun to be recognized by public policy makers in Latin American countries as an important part of the dynamics of economic growth (López et al., 2022).

The BAC-Credomatic Financial Network (2008) states that financial education has become important for all people and not only for those who have a high participation in the financial markets or are engaged in investment tasks. Financial education contributes to improving the quality of life and is an educational process through which people become aware of the importance of developing skills, abilities and knowledge in the management of personal and family finances, through the knowledge and use of the basic tools and instruments of financial life.

Under the concepts mentioned above by different authors, it can be considered that financial education has become a basic pillar to promote national development, because it allows the acquisition of knowledge, skills and abilities to understand how money works and how to invest to improve their quality of life through the development of financial competencies that enable autonomous and conscious decision making, with the help of the appropriate and responsible use of financial products and services.

From the point of view of Estrada et al., (2017) define personal finance as: "all financial decisions and activities that include household income and expenditure budgeting, savings, investments, mortgages, insurance and all other decisions that require money, establishing short-term and long-term objectives". Personal finance is largely related to the family economy and the consumer economy, because the family economy maintains close links with the economy of the individuals that make up the family unit, as well as, in the economy, consumption dynamizes the market.

For their part, Rojas et al., (2017) state that personal finance is a set of concepts, tools and skills required to solve problems and for the correct management of family and personal economic resources, therefore, personal finance represents the financial situation of a person, and is related to the problems faced by each individual to manage their resources and decide the most appropriate way to manage them.

According to García et al. (2013), they recognize that the insertion of financial education in schools is one of the fundamental elements of a national strategy and the most effective way to impact an entire generation. Furthermore, financial education in schools is the most efficient method of spreading financial literacy and creating the conditions to have a positive impact on the community at large, including parents.

In view of this perspective, it is of utmost importance that this topic includes a broad approach in educational institutions; likewise, the family environment plays a crucial role as it is where values are managed on a daily basis, with the purpose of covering the debts that are acquired to solve the economy of a household; that is why talking about financial education with young people somehow fosters in them a prosperous financial culture so that later on they manage their money and do not get into debt beyond their ability to pay.

The research has been organized under the main objective of measuring the level of financial knowledge possessed by high school students of the "Elvia Jiménez de González" Educational Unit, because many times the lack of knowledge or the so-called financial illiteracy leads young people to make incorrect decisions about their personal finances. Finally, this work proposes the following research question: What is the level of financial knowledge and personal finances that high school students of the "Elvia Jiménez de González" Educational Unit have?

MATERIALS AND METHODS

The methodology applied in this research work was exploratory and descriptive, with the collection of information on the level of financial knowledge of high school students of the "Elvia Jimenez de Gonzalez" Educational Unit. In order to obtain the data, a structured questionnaire was developed, divided into categories: general data and financial knowledge, structured in 10 questions related to financial education and personal finances.

The total population under study consisted of 56 students specifically comprised of first, second and third year students of the Unified General High School of the Educational Unit "Elvia Jiménez de González", located in the Rumishitana neighborhood, belonging

to the Malacatos parish, canton and province of Loja, which works in the morning and offers the educational levels of Initial Education, General Basic Education (EGB) and Unified General High School (BGU). The application of the instrument was carried out in person; and with respect to data processing, the PAPP tool and spreadsheets were used to tabulate the information for later interpretation.

For the assignment of the score to each question of the survey applied, a matrix was used in which 4 components were considered, the distributions are expressed with a determined weight, the weights and the components were considered based on the weighting applied by the (Organization for Economic Cooperation and Development, 2016)..

Table 1. *Score distribution according to content.*

Components	Weight	Description
Money and transactions	30%	This content area includes understanding the different forms and uses of money and the management of foreign exchange transactions, which may include spending or payments, considering value for money, and the use of bank cards, checks, bank accounts and foreign currency.
Financial planning and management	25%	Income, expenses and wealth must be planned and managed in the short and long term. The content reflects the process and understanding of managing, planning and monitoring income and expenses.
Risk and benefit	25%	They are a key area of financial education and include the ability to identify methods to balance and hedge risk, and the ability to manage financial uncertainty with an understanding of the probability of economic gain or loss in different financial environments.
Financial overview	20%	This content area is relevant to the nature and characteristics of the financial world.
Total	100%	

Source: Organization for Economic Cooperation and Development (2016).

Likewise, a matrix was used in which the different levels of financial education are detailed based on the PISA 2015 scale.

Table 2. *Standardization of financial education levels*

Level of financial education	Description
Level 5 81% - 100%	Students can analyze complex financial products and can take into account features of financial documents that are significant, but not stated or not immediately apparent. They can work with a high degree of accuracy, solve unconventional financial problems, demonstrating a broad understanding of the financial situation.
Level 4 61% - 80%	Students can interpret and evaluate a range of detailed financial documents, such as bank documents, and explain the functions of less commonly used

	financial products. They can make decisions for long-term financial products, such as a loan over a longer period.
Level 3 41% - 60%	Students begin to consider the consequences of financial decisions and can make simple financial plans in familiar contexts. They can make straightforward interpretations of a range of financial documents and can apply a range of basic numerical operations.
Level 2 21% - 40%	Students can use the information given to make financial decisions in familiar contexts. They recognize the value of a simple budget and interpret the essential characteristics of everyday financial documents. They can apply basic numerical operations to answer financial questions. Demonstrate an understanding of the relationships between some financial elements, such as the amount spent and the expenses incurred.
Level 1 0% - 20%	Students are able to recognize the difference between needs and wants and can make simple decisions about daily spending. They can also recognize the purpose of everyday financial documents such as an invoice and apply simple, basic numerical operations (addition, subtraction, or multiplication) in financial contexts that they are likely to have experienced personally.

Source: Blas & Cariaga (2020).

RESULTS

First, the results obtained related to the demographic characteristics of the population under study are presented.

Table 3. *Demographic characteristics of the study population*

Description	Frequency	Percentage
Man	30	53,57%
Woman	26	46,43%
14 years	4	7,15%
15 years	18	32,14%
16 years old	14	25,00%
17 years	11	19,64%
18 years old	9	16,07%
First year of high school	21	37,50%
Second year of high school	17	30,36%
Third year of high school	18	32,14%

Source: Own elaboration based on the surveys applied.

The total number of participants was 56 students, of whom 53.57% were men and the remaining percentage were women, with a predominance of 32.14% aged 15 years. However, it was found that 37.50% of the students were in the first year of the Unified General Baccalaureate, 30.36% in the second year and the remaining 32.14% in the third year.

Table 4. Knowledge of financial terms (correct answers).

Knowledge of terms	Description	Frequency	Percentage
Investment	Placing a certain amount of money in some activities to obtain profits in the future	43	76,79%
Credit	A loan at a fixed interest rate	44	78,57%
Budget	Instrument to help measure household income and expenses	39	69,64%
Savings	Saving part of the proceeds for use at an appropriate time	46	82,14%
Personal Finance	They refer to the management and administration of money and assets of an individual or family.	36	64,29%

Source: Own elaboration based on the surveys applied.

Table 4 shows the most important and relevant terms presented in the survey; however, it is important to recognize that in this segment of the population the percentages of each item are higher than 50%, which could be considered a positive element and is detailed as follows:

76.79% are clear about the concept of investment and therefore affirm that the term means placing a certain amount of money in some activities to obtain profits in the future; 78.57% of the population state that credit is a loan at an established interest rate; 69.64% have a clear and complete idea about the term budget, this being the instrument that helps to measure household expenses and income. The 82.14% indicate that saving means saving part of the income to use it at an appropriate time and 64.29% of young people respond that the term personal finances refers to the management and administration of money and goods of an individual or family.

Table 5. Matrix of weights to measure the level of general financial literacy of high school students.

Component	Ask	Weight	Weight per question	Total hits	Hit ratio	% of hits
Money and transactions	question 1	30,00%	15,00%	43	76,79%	11,52%
	question 2		15,00%	44	78,57%	11,79%
Planning and management of finance	question 3	25,00%	8,33%	39	69,64%	5,80%
	question 4		8,33%	44	78,57%	6,55%
	question 5		8,33%	18	32,14%	2,68%
Risk and benefit	question 6	25,00%	6,25%	46	82,14%	5,13%
	question 7		6,25%	19	33,93%	2,12%
	question 8		6,25%	10	17,86%	1,12%
	question 9		6,25%	53	94,64%	5,92%
Financial overview	question 10	20,00%	20,00%	36	64,29%	12,86%
TOTAL		100%	100,00%			65,48%

Source: Own elaboration based on the matrix of financial education components.

Based on the weighting matrix, the level of financial knowledge of the students of first, second and third year of General Unified High School of the "Elvia Jiménez de González" Educational Unit is evidenced, obtaining as a result 65.48%, which shows that the students are located at Level 4 of financial knowledge according to the standardization matrix of financial education levels according to the methodology of the Organization for Economic Cooperation and Development (2016).

In this context, it is reflected that students are able to understand less common financial concepts and terms, as well as interpret and evaluate a range of financial documents, such as bank documents. They can make decisions on financial products, such as a long-term loan.

Table 6. Level of financial knowledge of the population by level

Level of Education Financial	Population	Percentage
Level 1	2	3,57%
Level 2	6	10,71%
Level 3	10	17,86%
Level 4	24	42,86%
Level 5	14	25,00%
Total	56	100,00%

Source: Own elaboration based on the matrix of financial education levels.

Based on the table of the level of financial knowledge of the population by level it is concluded that: 42.86% of the students are at learning level 4, which implies that they understand financial concepts and terms less common to contexts that will be relevant to them as they move towards adulthood; 25.00% are located at the highest level which evidences that students analyze complex financial products, likewise they manage to take into account characteristics of financial documents that are significant but not stated such as transaction costs and describe the potential outcomes of financial decisions, showing a broad understanding of the financial landscape.

At knowledge level 3, 17.86% of students consider the consequences of financial decisions and can develop simple financial plans in a familiar environment. They are also able to interpret a variety of financial documents directly and apply some basic numerical operations, including the calculation of percentages.

10.71% of the target population are at level 2 of financial literacy which represents that they recognize the value of a simple budget and interpret the basic characteristics of everyday financial documents. They apply basic numerical operations to answer financial questions and demonstrate an understanding of the relationships between some financial elements, such as the amount spent and the expenses incurred.

Finally, the remaining 3.57% are at level 1, at this level students are able to identify the difference between needs and wants and manage to make simple decisions about daily spending. Similarly, they identify the purpose of everyday financial documents such as an invoice and apply simple and basic numerical operations (addition, subtraction or multiplication) in financial contexts that they may have experienced firsthand.

Financial education according to author López (2016) covers a wide range of topics that are important to become a conscious and responsible citizen in making financial decisions. Today, young people from high school onwards make important financial decisions that affect their future, as they face complex financial products and markets on a daily basis, which, if they do not understand their potential and risks, can lead to a significant deterioration in their quality of life and their future. For his part, Domínguez (2013) points out that financial education is necessary for citizens of any age, given that it is a continuous process throughout life and the best way to assimilate it is gradually, from an early age, so that they can satisfy their current priorities and preferences without having to sacrifice them in the future.

In this context, financial education and personal finance have a great impact and incidence on the life of each individual. Limited financial literacy is reflected in poor planning, organization, management and control of income and expenses. Financial education can be defined as the set of tools and practical knowledge that allow to make a good use of financial services, as well as to manage, increase and protect the patrimony, in addition to making better economic decisions in the different stages of life.

According to the survey applied to the students of the "Elvia Jiménez de González" Educational Unit, it can be summarized that the target population is located at level 4 of financial knowledge, so the students are able to understand a wide range of financial terms and concepts, mainly because the students receive the subject of entrepreneurship

and management within their study plan; This result is similar to the study conducted by Blas & Cariaga (2020) where it was found that students belonging to Generation Z are at level 4 of financial knowledge due to the fact that the population studies a career related to finance.

In the present study, students reported having knowledge about some financial terms such as: investment (76.79%), credit (78.57%), budget (69.64%), savings (82.14%) and personal finances (64.29%), percentages that show that they are higher than 50%, which could be considered as a positive element because students with higher levels of financial education are able to make better responsible decisions regarding financial products and services. For his part, author Portillo (2021) concludes that students have knowledge about saving: saving money for the future (55.17%); saving money for emergencies (17.24%); not spending money unnecessarily (17.24%) and saving money for investments (8.62%); he also states that an important element in financial education is saving and its implications, both at the informal and formal levels. In relation to budgeting, 54.4% of the students said that they do not prepare a budget in their homes, while 45.6% of them do.

Financial education has a well-defined purpose: to improve personal financial well-being. Therefore, financial education should focus on personal finance, i.e., training to understand, manage and plan financial affairs, both their own and their families' or households'. However, proper understanding, management and planning at the personal or family level requires an understanding of broader aspects of the financial system and the economic system whose development impacts the lives of individuals and families, in many cases considerably.

It is necessary for young people to know about financial terms so that they can plan the possible use of their resources in the short and long term and strengthen their capacity to respond to uncertainty, and thus make appropriate decisions about personal finances, be it investments, insurance, real estate, basic payments, educational payments, budgets, retirement, among others, that arise in daily life and that deserve proper financial management.

CONCLUSIONS

Financial education has become more relevant in recent times, because adequate financial education is imperative to improve the standard of living of individuals. Financial education provides people with the tools to make effective decisions to improve their economic well-being. The present research concludes that the students of the Unified General High School of the "Elvia Jiménez de González" Educational Unit are at level 4 of financial knowledge, which means that they possess financial competencies, for example: interpreting and evaluating a series of detailed financial documents and explaining the functions of the least used financial products. Make financial decisions with long-term consequences in mind, such as understanding the overall cost of repaying a long-term loan.

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