ISSN 2303-4521
Original Research
Periodicals of Engineering and Natural Sciences
Vol. 12, No. 1, April 2024, pp.123-134

Financial education from elementary school, a perspective to today

David Hugo Bernedo-Moreira[1-4], Juan Alberto Almirón-Cuentas[2], Antony Paul Espiritu-Martinez[3], Freddy Antonio Ochoa-Tataje[4], Rafael Romero-Carazas[5*]

[1-4] Graduate School, Doctorate in Education, Universidad César Vallejo, Lima, Perú
[2] Faculty of Architecture, Universidad Peruana Unión, Perú
[3] Department Research, National Autonomous High Andean University of Tarma, Perú
[5] Department Research, University National of Moquegua, Perú

ABSTRACT

Regular basic education imparts knowledge based on addition, subtraction, multiplication, division and reading; Additionally, and depending on the type of educational institution, other knowledge is imparted such as religion, arts, historical and social sciences, study of geography, universal history, education and civics, etc. This leads us to reflect on the type of education that is being promoted for school children today, which is not bad if all plans are fulfilled, but what happens when money is not enough until the end of the month, or when there are problems to pay the mortgage, or when there is uncertainty about the cost of living, taxes, interests. There is a crisis within a crisis, all of this demonstrates the lack of good financial education. Therefore, through the qualitative approach, we resorted to the phenomenological-hermeneutic design, and the objective was to explore the financial education provided in elementary school, and how this has served to survive during the post-school stage. The population of interest was the graduates of public and private schools, as well as professionals dedicated to teaching of the same generation. The participants expressed their opinions and beliefs on the relevance and necessity of including financial education in the school curriculum from an early age. The study provides information on these experiences, providing a basis for establishing corrective measures and formulating guidelines to promote its teaching at some pre-professional preparatory stage.

Keywords: *Education, Financial education, Basic school, Perspectives.*

Corresponding Author:
Rafael Romero-Carazas
Departement of Research
University National of Moquegua, Perú
Address: Juan Pablo Vizcardo y Guzmán – Arequipa - Perú
E-mail: rromeroc@unam.edu.pe

1. Introduction

There is a manifest and substantial lack, a type of education that is not complementary, but rather vital: financial education, whose absence is not evident until adulthood, when it is reflected and concluded that academic education will not solve all the financial problems that arise, through a stable job, an onerous salary and an important position [1]. However, regular basic education is based on promoting knowledge of mathematics and reading, i.e., every child, from the moment he/she enters school, must be taught to add, subtract, multiply, divide and read, in essence this is what education consists of; additionally, and depending on the type of educational institution, other knowledge is provided such as religion, the arts, historical social sciences, the study of geography, universal history, education and civics, etc. The education is educated to devote a large part of one's life to the study and learning of subjects, under the argument that these will serve to survive personally and professionally [2]. In addition to this formal education, another type of education is received through the interaction with our parents and friends, which becomes a paradigm, a way of thinking and acting, and which are also part of what adults are. In this context, in Asia, Zhou et al. [3] found that 59 economies around the world are implementing national financial education strategies, thus, the implementation of large-scale financial education courses is a challenge, particularly at the primary or secondary stage, both because of the costs associated with these courses and the difficulty in adjusting existing curriculum structures. Zhang et al. [4] concluded that financial education demonstrates a greater effect on stock market returns among less experienced investors from areas with lower levels of investor protection. Suherman et al. [5] report that millennials fear financial risk. Also, Zafar et al. [6] suggest that investment in technology education and financial markets requires the attention of policy makers, as we have empirically established long-term inverse impacts of financial development and ICT on carbon emissions. Li & Lu [7] found that financial education can significantly improve students' academic performance and cognitive and non-cognitive skills and monetary transfers. By increasing investment in financial education students improved their academic performance and cognitive and non-cognitive abilities. They suggest that the government, schools and families increase investment in education.

In Europe, Bozzo & Birkner [8] state that the current need is to increase financial knowledge, and the transmission of this knowledge, in order to enable people to make sound decisions regarding personal finances. For their part, Kaiser & Menkhoff [9] concluded that teaching methods can play an important role in how financial education programs influence financial behavior and outcomes. financial education programs influence financial behavior and outcomes. Sconti [10] through the implementation of a financial education program called "Futuro Sicuro" with a sample of 650 high school students in Italy, concluded that students increased actual financial knowledge and the results also aligned with participants' realistic assessments of their own financial skills. For his part, Schoofs [11] stated that there was no treatment effect from his intervention; financial literacy training did not affect the financial literacy measure. This could be due to the fact that the measure focuses only on numeracy skills, a very common measure in the financial literacy literature.

Billari et al. [12] concluded that financial education significantly increased participants' financial literacy and survival demographics and pushed them to seek more information and participate more actively in financial decisions. Ruiz et al. [13] financial education is an ongoing societal concern, as it is essential for improving the well-being of individuals and society in general. Wrong financial decisions can have serious consequences leading to serious economic and even social problems. Therefore, an adequate financial foundation is necessary and should be inculcated from an early age. Amagir et al. [14] worked with a group of students, to whom they set a personal savings goal and issued training on how to achieve financial goals. The results of the short-term treatment indicated that the students' level of financial literacy was expanded; it fostered their intentions to save more, spend less, and earn income; and it generally improved their financial and savings behavior. The program demonstrated that it could serve as an effective and low-cost method to improve the financial literacy of pre-vocational students, a financially vulnerable group. Rojas [15] concluded that financial indebtedness among young adults could be another detrimental outcome of low school achievement in childhood, reinforcing the importance of continued attempts to reduce the number of underachieving students in society.

In North America, Blanco et al. [16] concluded that financial literacy is one of the most important skills a tech-savvy Generation Z student can acquire, they have the ability to increase their financial literacy, and catapult them into the future. Harvey & Urban [17] concluded that mandatory financial education in high school improves credit and debt outcomes, we recommend that states and educators prioritize content that has more immediate relevance to 18-year-olds, such as budgeting, long-term borrowing, and credit. Urban [18] concluded that financial education quantifies improvements in debt and credit behaviors, and these results suggest that there are no simultaneous adverse effects overall or for at-risk students. Kaiser et al. [19] showed that financial education programs have, on average, positive causal effects on financial literacy and subsequent financial behaviors. Blanco et al. [16] explored the potential benefits of digital financial education programs among Hispanics through the design, implementation, and evaluation of a community-based digital intervention called Mind Your Money (MYM). The digital financial education program had a high retention rate and a statistically significant positive effect on financial capability. Participants who completed the program activities were more likely to have a budget or spending plan and felt more confident in their ability to deal with unforeseen expenses. We also observed that those in the treatment group exhibited lower levels of financial stress compared to the control group.

In Central America, De Beckker et al. [20] through a financial education course on consumer choices made by 688 8th and 9th grade students, concluded that financial education does not automatically translate into better consumer choices. Cruz [21] concluded that the implementation of formal financial education in schools through a financial education-learning process could help students understand the economic world. The influence of the family environment has the greatest impact on financial literacy for the development of children's skills and abilities. The persistent observation of infants in everyday activities, such as accompanying their parents shopping or comparing prices, demonstrates their willingness to learn about the household's economic-financial activity.

In South America, Rodriguez and Martinez [22] found that differentiated financial literacy instruction in the learning process can be effective even if significant pre-existing differences still prevail, so it is possible to tailor children's financial literacy in educational programs. Silva and Vargas [23] report that people are beginning to seek advice and information in order to develop the skills and confidence needed to take risks and take advantage of financial opportunities, and thus improve their economic well-being. Marambio-Tapia [24] argue that households assume that debt is a necessary evil. Lechuga et al. [25] bonding skills are vital for the efficient management of people's money and resources. Avendaño et al. [26] show that there are limitations with respect to financial literacy, and the need for specific programs that contain these skills. At the national level, Salas and Ticlla [27] concluded that as a student acquires more financial knowledge, his or her level of entrepreneurship will increase, reflected in entrepreneurial attitudes, development of the entrepreneurial spirit and a greater manifestation of an entrepreneurial culture and well-being in the Peruvian social context. The previous paragraphs lead us to reflect on the type of education we are promoting for our children, which is not bad, if all the plans are fulfilled. But what happens when the money is not enough to make ends meet, or when there are problems paying the mortgage, or when there is uncertainty about the cost of living, taxes, interest, etc., which produces a crisis within a crisis, evidencing the lack of a good financial education. Statistics indicate that, in Peru, out of every 50 students who enter university, 15 drop out due to financial problems [28]. It is also noted that only 9% of the Economically Active Population (EAP) in Peru has a decent job, which complies with indicators such as a contract, income, working hours, health insurance and pension system. In this sense, the UN 2030 Agenda for Sustainable Development states that the functionality of financial development is undeniable in the broader economy towards the Sustainable Development Goals [29].

Therefore, the objective of this study was to explore how financial education taught in basic school has been internalized and how it has served to survive during the post-school stage. Likewise, this study is socially justified because it will promote the formulation of policies to establish financial education in the regular curriculum of basic education, which will result in a progressive society. In assessing the novelty of the work, the absence of previous research in this area has been considered, so it is possible to state that the research presents several important and original contributions to the existing literature related to the product of financial education provided in the classrooms of schools and colleges. It is justified at a theoretical level, because through its conclusions, it will contribute to the development of proposals to promote the teaching of financial education. It is justified at a practical level, because it will serve as a basis for other studies with the same approach, or with a quantitative or mixed approach, in order to highlight the importance of the exposed category. Finally, there are the necessary resources to carry out this research work, in order to fulfill the stated objective.

2. Research method

The research work had a qualitative approach and a phenomenological-hermeneutic design. That qualitative research aims to discover intangible factors that can be described, understood and explained using the tools of phenomenology [30]. That people reveal themselves through phenomenological and hermeneutic studies, whose interpretations allow the construction of reference points for dialogue [31]. As a consequence, the present phenomenological-hermeneutic study combines two qualitative methods that focus on the deep and meaningful understanding of human experience and its interpretation, whose basis clearly describes the phenomenon under investigation and the research question that guided the study.

The population of interest was made up of graduates of public and private schools from 1994 to 2010, and professional teachers who graduated from public and private schools, and who maintain a business venture. That the term in the qualitative context, the population of interest refers to the group of people, communities or phenomena that are the focus of the research study [32]. Unlike quantitative studies, where the population is defined more specifically and the aim is to generalize the results to a broader population, in qualitative research, the population of interest is usually more flexible and may be more oriented towards understanding experiences, perspectives and social processes in depth. The population of interest is the focus of the research study, and its definition is oriented towards understanding the experiences, perspectives and social processes in depth in a specific context [33]. The technique used to obtain the information was the in-depth interview, asking specific questions related to the proposed research; the instrument used to obtain the information was the audio recorder. Regarding the interview of the present study, it was a meeting previously agreed upon with the informants, in which four guiding questions were used, distributed in four interactions, designed to direct the conversation towards the relevant topic. With respect to saturation, which refers to the point at which enough data have been collected that no new ideas, themes or significant patterns are observed in the analysis. In the context of the study entitled "Financial education from elementary school: a perspective today", evidencing saturation implied an exhaustive data analysis, which consisted of reviewing the responses and consistently identifying the same themes and patterns in multiple participants. Also, because multiple interviews were conducted and data were collected from multiple sources (graduates and teachers), the data were compared to identify convergences and divergences to see if saturation had been reached. And to corroborate this state, it was decided to conduct more interviews and collect more data, not observing new ideas or significant topics, this indicated that saturation had definitely been reached, which consisted of 29 interactions. That the qualitative interview follows a predetermined format that will allow collecting data and systematically organizing the answers to prepare the drawing of conclusions [34].

Once the interviews were collected, they were downloaded and analyzed through the software specialized in qualitative analysis Atlas.ti, this program allowed to follow the cyclical logic of the research, since it will be possible to incorporate the data in sequential order instead of collecting them simultaneously, to obtain the tree of interactions, the word cloud and the diagram of feelings. In this way, the interviews are analyzed to identify significant themes and patterns, applying the phenomenological method to decompose the experiences into their essential elements, and in this way, it was possible to perform the theoretical experiments necessary to carry out a constructivist theoretical analysis [35].

3. Results

Figure 1 shows the code network of the first interaction with the population of interest, through the responses provided, different perspectives and opinions about the level of knowledge and skills related to financial education received in basic school can be identified. In the responses, participants express a critical but constructive view of their financial education.

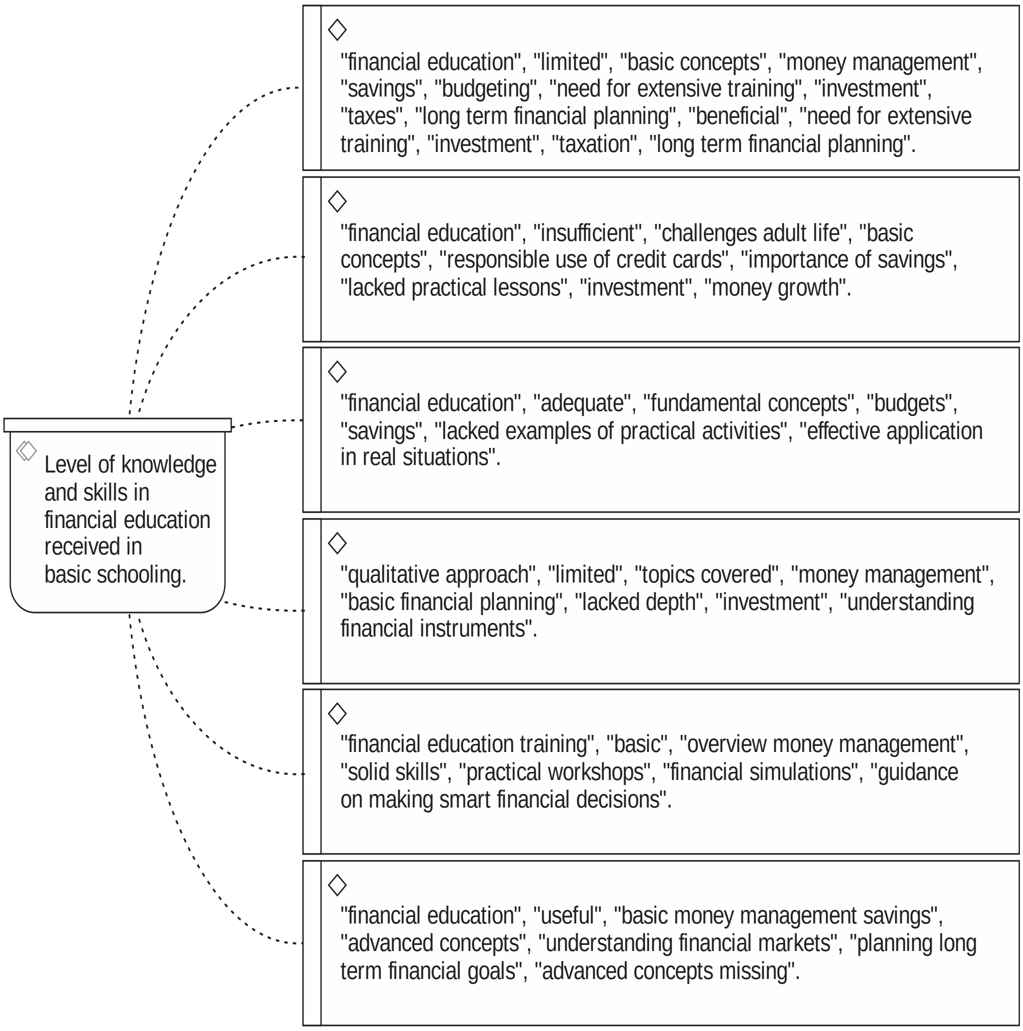


Figure 1. Code network of the first interaction

Although they recognize that basic concepts about money management, such as saving and budgeting, were provided, they wish they had received a more complete and comprehensive training. They feel that the financial education focused on the elementary, and feel that it would have been beneficial to include additional topics, such as investing, taxes and long-term financial planning. The lack of more advanced and practical knowledge in money management led them to feel that they were not fully prepared to face the financial challenges of adult life.

Participants generally acknowledge that they were provided with some basic knowledge about budgeting and the importance of saving. However, they note that the training was limited and did not go deeply enough into key areas such as investing, understanding financial markets and long-term financial planning. Some of them suggest the need for hands-on workshops, financial simulations and more guidance to develop solid money management skills.

The interactions show a common concern about financial education in basic school; participants would like more comprehensive training, including both basic and advanced concepts, and providing opportunities for practical application of knowledge in real-world situations. The combination of positive and negative perspectives highlights the importance of improving and enriching financial education programs to better prepare students today to manage their personal finances responsibly and effectively in adult life.

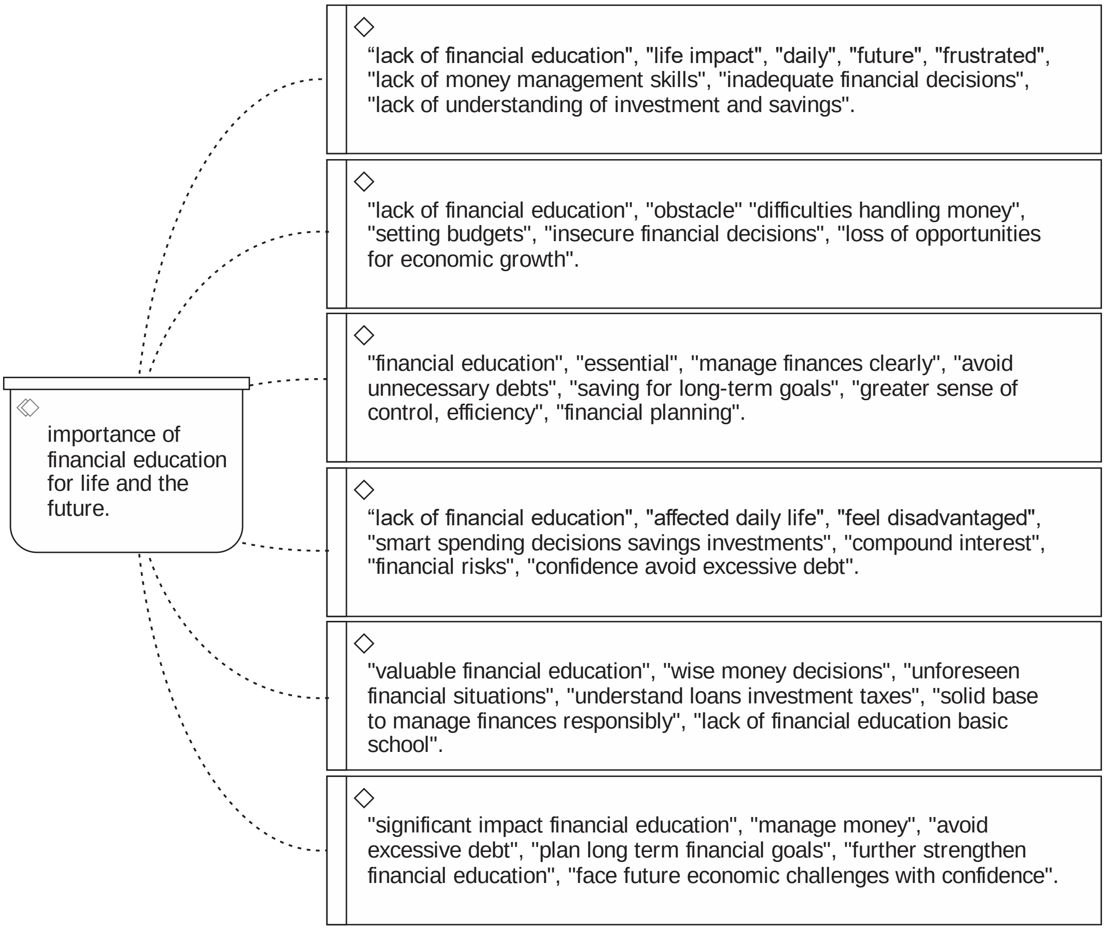


Figure 2. Code network of the second interaction

Figure 2 shows the code network of the second interaction, the responses reflect the experiences and perspectives in relation to the importance that financial education in basic school has had in life. Participants highlight the importance and positive impact, those who received this education have developed essential skills to manage their money responsibly and make informed financial decisions, thanks to this education, they feel more confident when facing financial situations and have acquired the ability to plan for long-term goals, such as buying a house or starting a business. Those who did not receive financial education in elementary school had to acquire it later, in order to make intelligent decisions and avoid situations of excessive indebtedness.

The findings revealed those who regret not having received financial education in elementary school, a situation that has led them to face difficulties in managing their money effectively and making inadequate financial decisions. They show that the lack of financial knowledge has left them at a disadvantage compared to those who did receive adequate training.

In sum, financial education has a significant impact on people's lives, helping them to make informed financial decisions, avoid unnecessary debt, plan for the future and feel more prepared to face economic challenges. Those who had the opportunity to receive this education in elementary school value it positively, while those who did not receive it or consider it insufficient, express the need to improve the inclusion and quality of financial education in school curricula.

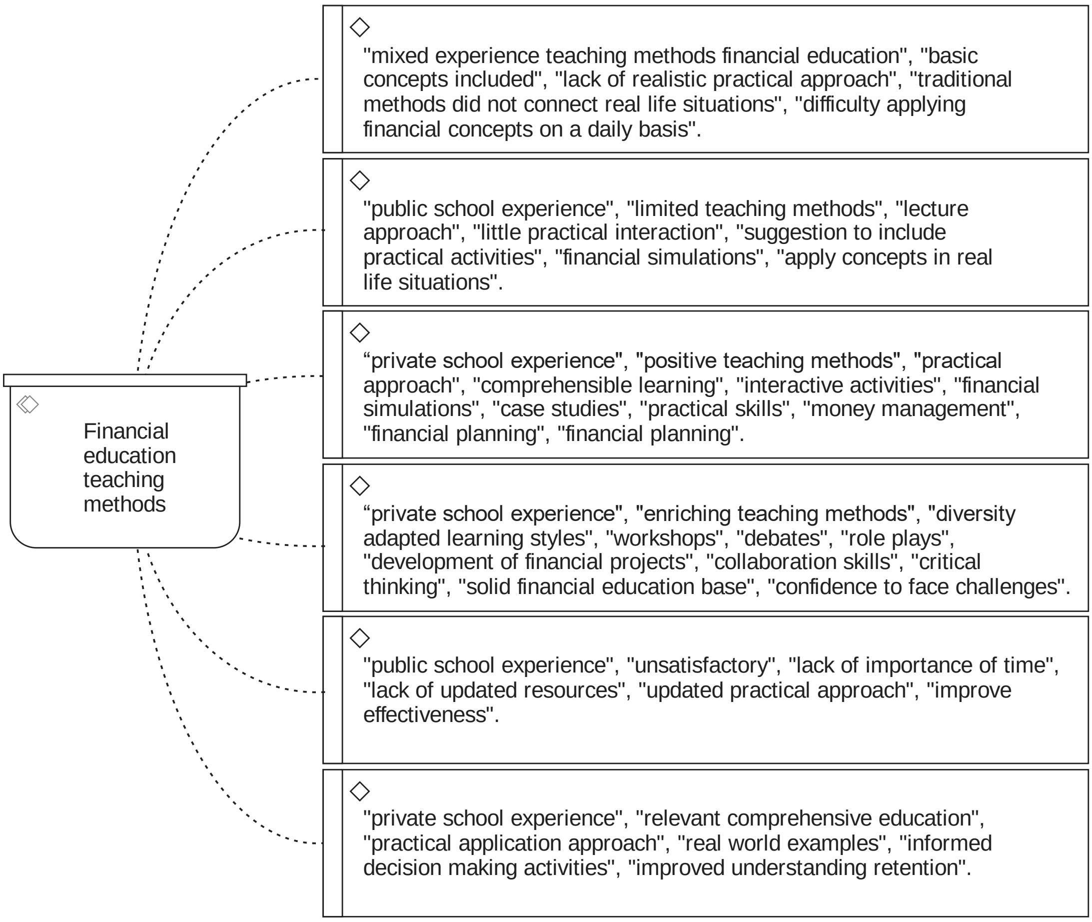


Figure 3. Code network of the third interaction

Figure 3 shows the code network of the third interaction with the population of interest, the responses provided offer a varied view on the teaching methods used in the classroom to address financial education. In the interactions, participants express a positive evaluation regarding the financial education they received at the private school. They emphasize that the teaching methods used were practical, dynamic and adapted to different learning styles. The inclusion of interactive activities, financial simulations, case studies and team work allowed students to acquire practical money management and financial planning skills. In addition, they appreciate that they have been provided with a solid foundation in financial literacy, which makes them feel prepared to face the financial challenges of adult life with confidence.

On the other hand, there are those who express a negative evaluation in relation to the financial education received at the public school, who consider that the teaching methods were insufficient or limited. Although basic concepts on money management and savings were provided, they feel that a more practical and realistic approach connecting with real life situations was lacking. It is pointed out that financial education at the public school was not satisfactory, since it was not given enough importance and time to assimilate the knowledge in a meaningful way.

The interactions reflect the importance of appropriate and effective financial education that incorporates practical teaching methods applied to real-life situations. Dynamic approaches, interactive activities and up-to-date materials can improve understanding and retention of financial knowledge, and prepare students to make informed and responsible decisions in their financial lives. The inclusion of quality financial education in school curricula is critical to empower students in their money management and future financial planning.

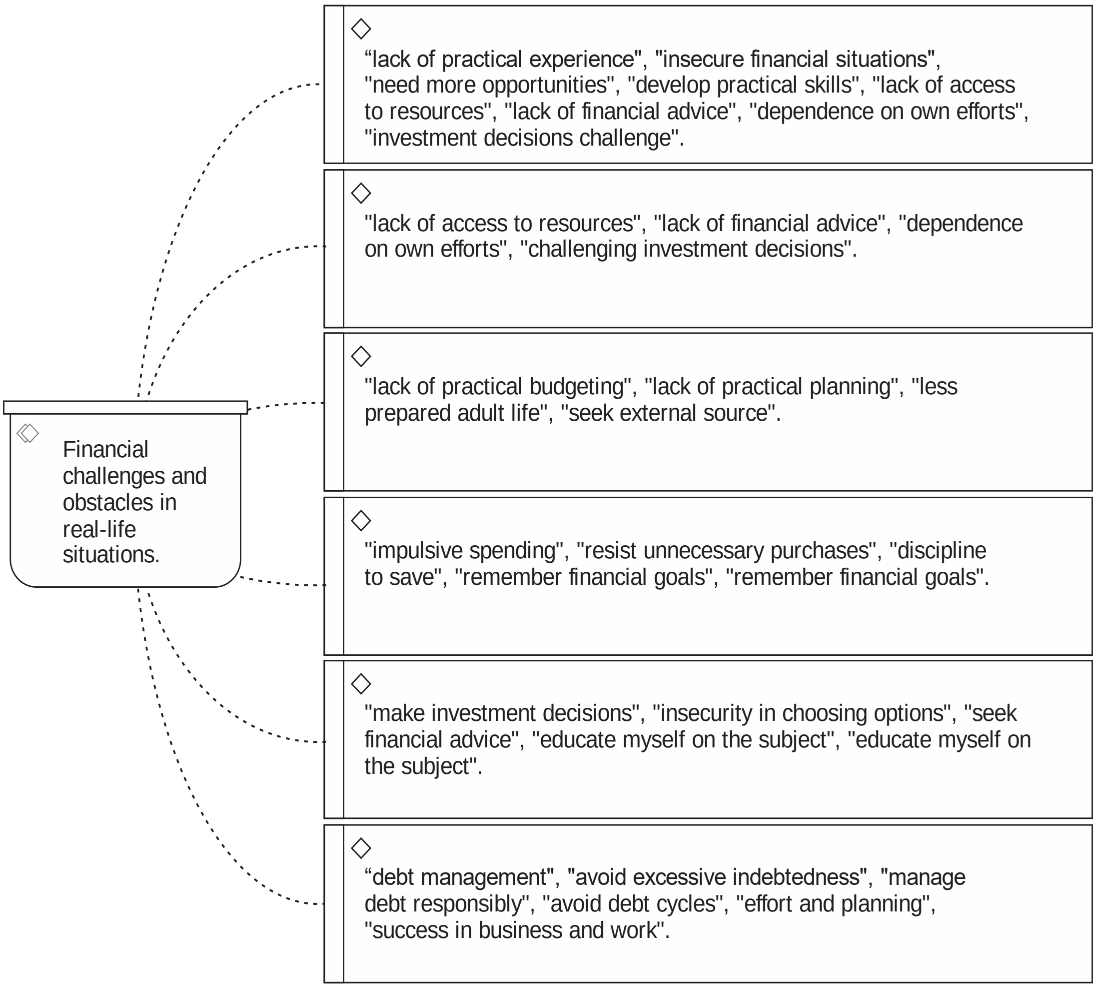


Figure 4. Code network of the fourth interaction

Figure 4 shows the code network of the fourth interaction with the population of interest, the responses provide a variety of challenges and obstacles that people faced when applying the knowledge acquired in financial education in real situations. The findings evidence the lack of practical experience in real financial situations due to the lack of teaching on how to work with money in the educational environment. This generated insecurity when facing real financial situations, such as opening a bank account or understanding complex financial contracts. However, the individual realized the need for more opportunities to put into practice what she had learned and develop practical skills in money management.

The interactions relate to the lack of access to financial resources and advice, especially compared to private schools that offered additional guidance on financial topics. This made dealing with complex situations, such as making investment decisions, more difficult and sometimes involved a process of trial and error.

The findings also revealed a lack of practice in budgeting and financial planning, despite having learned basic concepts in school. This made the individual feel less prepared to face the financial challenges of adult life and led them to seek outside sources to improve their financial knowledge and skills. Some had to face the temptation of impulsive spending, despite having learned the importance of saving and financial planning. Overcoming this barrier required constant discipline and constant reminders of long-term financial goals.

Others express insecurity when making investment decisions, despite understanding the basic concepts. This challenge led the individual to seek professional financial advice and to educate themselves further on the subject to make more informed decisions, while some had to learn to manage their debts, especially in situations where they had to resort to loans for emergencies or important projects. Learning to manage these debts responsibly and avoid falling into cycles of indebtedness was a process that demanded effort and careful planning, which allowed them to manage their business and work effectively.

Interactions inferred lack of practical experience, lack of access to financial resources and advice, lack of practice in managing budgets, temptation to impulsive spending, insecurity in making investment decisions, and debt management. Each individual faced these obstacles uniquely and sought solutions and personal reflections to improve their financial understanding and skills.

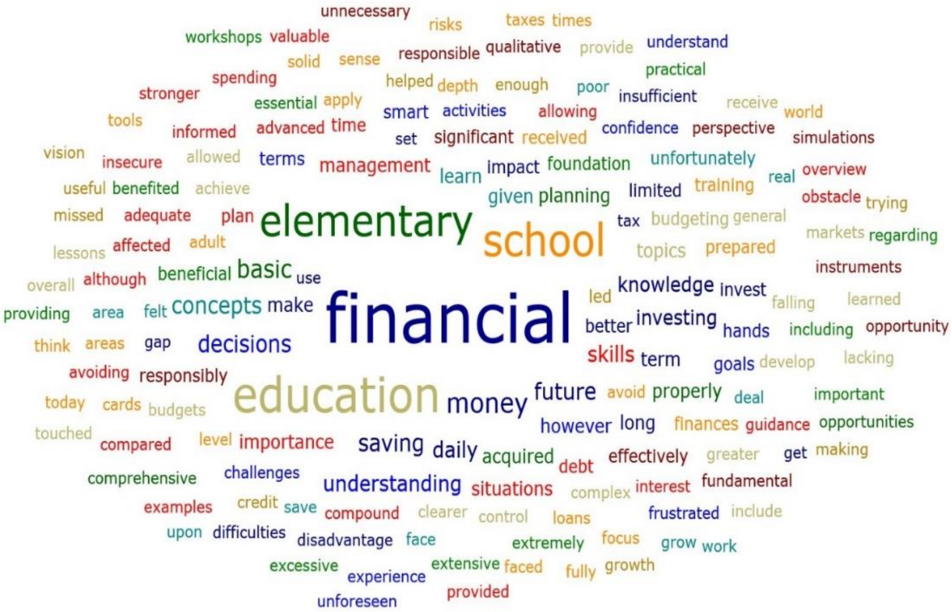
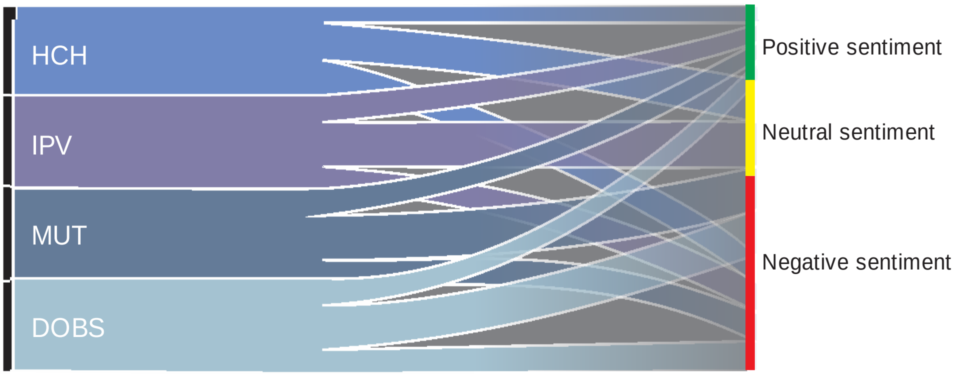


Figure 5. Word cloud

Figure 5 shows the most recurrent word cloud used in the interviews, the most prominent in the cloud was "education," indicating that the central theme of the text or dataset focuses on education. Education can be considered in a broad sense, encompassing both formal education, e.g., school, or university, as well as continuing education or lifelong learning. The presence of the word "financial" in a prominent position suggests the relationship with financial education, i.e., how knowledge and skills were acquired to properly manage personal or business finances, this implies learning about budgeting, saving, investments, debt, among other financial aspects.

Next to these words, "knowledge", "understanding" and "skills" also stand out, with a significant size in the cloud, suggesting that the process of acquiring and developing knowledge and skills was very important in people's lives, and how this could contribute to personal and professional growth. The words "situations", "experiences" and "challenges" suggest the application of knowledge and skills acquired during the school and post-school stage, for various life circumstances, both in personal and professional contexts. However, most of the interviewees emphasize that the basis of financial knowledge was not obtained in basic school, but rather, it was the result of personal and/or professional effort, because they had to overcome circumstances that forced them to focus on the importance of facing challenges, making informed decisions, learning from experiences to improve and grow.



Note: NCH: Level of financial knowledge and skills; IPV: Importance to life;
MUT: methods used; DOBS: challenges and obstacles.

Figure 6. Sankey diagram - co-occurrences and sentiment

According to the proposed study and the theories that support it, during the interactions with the interviewees, the feelings evidenced by the participants are shown in the diagram in Figure 6. These feelings present a greater incidence in the area of negative valuation, which infers that the circumstances, and the feeling of negativity was the one that abstracted most of the basic school graduates. These allow inferring that the participants, upon graduating from basic schools, did not have a level of financial knowledge and skills (NCH), which were of substantive importance for life (IPV), so that the methods used (MUT) for their financial decisions had to be perfected through new training, in order to overcome the different challenges and obstacles (DOBS) that were presented to them throughout their personal and professional lives. Many of them had the courage to go into business, many did well, for others, however, the hurdle was very high, as they had to learn to learn financial skills to lead and cope with their ventures, with optimal results. Others dedicated themselves to work and depend on a monthly stipend, through which they support their families with their basic needs.

4. Discussion

The results of the present study are discordant with Blanco et al. [16] who concluded that financial education is one of the most important competencies that a tech-savvy Generation Z student can acquire; they have the ability to increase their financial knowledge and catapult it into the future [36]. In the present study, it is evident that "Generation Z" who studied during the years 1994 to 2010, did not receive adequate financial education within the basic schools, except for some who went to private schools, and received basic financial knowledge.

They are discordant with Harvey & Urban [17] who concluded that financial education is mandatory in secondary education improves credit and debt outcomes, we recommend that states and educators prioritize content that has more immediate relevance for 18-year-olds, such as budgeting, long-term borrowing and credit [37]. For the present study, the results obtained through the interviews allow inferring that the teaching of financial education in basic schools is not mandatory in the national curriculum.

They are consistent with Urban [18] who concluded that financial education quantifies improvements in debt and credit behaviors, and these results suggest that there are no simultaneous adverse effects in general or for at-risk students [38]. It was evident from the present study that basic school graduates had to learn financial concepts, or in other cases reinforce their knowledge in order to survive and make decisions for their ventures.

They are in agreement with Kaiser et al. [19] who showed that financial education programs have, on average, positive causal effects on financial literacy and subsequent financial behaviors. Throughout the present study, many of the participants had to acquire financial knowledge and adopt behaviors based on this knowledge to make decisions related to debt and cash management.

Consistent with Blanco et al. [16] who explored the potential benefits of digital financial education programs among Hispanics, the digital financial education program had a high retention rate and a statistically significant positive effect on financial capability. Participants who completed the program activities were more likely to have a budget or spending plan and felt more confident in their ability to deal with unforeseen expenses. We also observed that those in the treatment group exhibited lower levels of financial stress compared to the control group. Similarly, participants reported that they had to participate in different financial education programs in order to make decisions related to budgeting, spending, investing and other financial management issues.

They are in agreement with Rodriguez and Martinez [22] who found that differentiated financial literacy instruction in the learning process can be effective even if significant pre-existing differences still prevail, so it is possible to tailor children's financial literacy in educational programs. Similarly, the present study shows that the teaching of finance from a very early age could have a positive impact on the management of money resources and promote many entrepreneurships, due to the skills acquired.

They are similar to Silva and Vargas [23] who refer that people are beginning to seek advice and information in order to develop skills and confidence needed to take risks and take advantage of financial opportunities, and thus improve their economic well-being. Through the present study, it was evident that many are seeking advice and information to develop skills related to financial management.

They are similar to Salas and Ticlla [27] who concluded that as a student acquires more financial literacy, his or her level of entrepreneurship will increase, reflected in entrepreneurial attitudes, development of the entrepreneurial spirit, and a greater manifestation of an entrepreneurial culture and well-being in the social context of Peru. In the present study, the participants were forced to acquire financial knowledge, and to engage in business in order to be able to economically and financially assist their beneficiaries.

5. Conclusions

The analysis of the responses from the first interaction with the population of interest leads to the conclusion that there is a shared concern about the financial education provided in basic school. Participants show an appreciation for the basic concepts taught, such as saving and budgeting, but also express the need for more complete and comprehensive training that addresses advanced topics such as investment, taxes and long-term financial planning. These findings highlight the importance of improving financial education programs and providing opportunities for practical application of knowledge in real-world situations. Overall, it is crucial that financial education not only teaches the fundamentals, but also develops strong skills in responsible and effective money management to adequately prepare students to meet the financial challenges of adult life.

Through the second interaction with the population of interest, it is concluded that financial education has a significant impact on people's lives, providing them with valuable skills to manage their money and make informed financial decisions. Those who had the opportunity to receive this training in elementary school value it positively, highlighting how it has allowed them to feel more confident and prepared to face the economic challenges of the present and the future. On the other hand, those who did not receive or consider insufficient financial education at school express the need to improve the inclusion and quality of this type of education in school curricula. These findings highlight the importance of promoting sound financial education that is accessible to all, with the aim of empowering people in their financial lives and promoting more responsible and effective economic decision-making.

The third interaction with the population of interest concludes on the importance of adequate and effective financial education that incorporates practical teaching methods applied to real-life situations. Those who express a positive evaluation of the financial education received highlight the benefits of dynamic approaches, interactive activities and updated materials, which provided them with a solid foundation in money management and financial planning. On the other hand, those who express a negative evaluation highlight the need to improve teaching methods, focusing on a more practical and relevant approach, especially in public schools. Overall, it is clear that the inclusion of quality financial education in school curricula is fundamental to empower students in their money management and prepare them to make informed and responsible decisions in their future financial lives. By adopting dynamic pedagogical approaches tailored to different learning styles, the understanding and retention of financial literacy can be significantly improved, which will benefit students throughout their lives.

The fourth interaction reveals a variety of challenges and obstacles that people faced in applying the knowledge acquired in financial education in real situations. These challenges included lack of practical experience, lack of access to financial resources and advice, temptation to impulsive spending, insecurity in making investment decisions, and debt management. Each individual approached these obstacles uniquely, seeking solutions and reflecting on how to improve their financial understanding and skills. These findings underscore the importance of not only receiving sound financial education in the classroom, but also providing opportunities for practical application of this knowledge and access to financial resources and advice. By effectively addressing these challenges, individuals will be able to make more informed financial decisions and confidently face the economic challenges that arise in their lives.

These results are supported by direct quotes and specific examples drawn from data collected during interviews and other data collection methods used in the study.

Declaration of competing interest

The authors declare that they have no known financial or non-financial competing interests in any material discussed in this paper.

Funding information

No funding was received from any financial organization to conduct this research.

Acknowledgements

The authors thank Multidisciplinary Academic Network for the advice on the project

Author contribution

The contribution of DHBM[1-4] was the conception and design of the study; and analysis and interpretation of results. DHBM[1-4], JAAC[2], RRC[5], APEM[3] and FAOT[4] were data collection and preparation of the draft. All authors approved the final version of the manuscript

References

[1] A. Mungaray, N. Gonzalez, y G. Osorio, «Financial education and its effect on income in Mexico», *Probl. Desarro.*, vol. 52, n.º 205, pp. 55-78, 2021, doi: 10.22201/iiec.20078951e.2021.205.69709.

[2] A. Chan, *Educación financiera*. Barcelona: Plataforma editorial, 2016.

[3] Y. Zhou, M. Yang, y X. Gan, «Education and Financial Literacy: Evidence from Compulsory Schooling Law in China», *Q. Rev. Econ. Financ.*, 2022, doi: 10.1016/j.qref.2022.09.006.

[4] Y. Zhang, X. Lu, y J. J. Xiao, «Does financial education help to improve the return on stock investment? Evidence from China», *Pacific Basin Financ. J.*, vol. 78, n.º January, p. 101940, 2023, doi: 10.1016/j.pacfin.2023.101940.

[5] S. Suherman, H. Kurniawati, y R. Mohidin, «Determinants of financial risk tolerance: Evidence from the Indonesian millennials», *Humanit. Soc. Sci. Lett.*, vol. 11, n.º 1, pp. 67-82, 2023, doi: 10.18488/73.v11i1.3300.

[6] M. W. Zafar, S. A. H. Zaidi, S. Mansoor, A. Sinha, y Q. Qin, «ICT and education as determinants of environmental quality: The role of financial development in selected Asian countries», *Technol. Forecast. Soc. Change*, vol. 177, n.º May 2020, p. 121547, 2022, doi: 10.1016/j.techfore.2022.121547.

[7] B. Li y S. Lu, «Labor education, cash transfers and student development: Evidence from China», *Int. Rev. Financ. Anal.*, vol. 87, n.º January, pp. 1-11, 2023, doi: 10.1016/j.irfa.2023.102565.

[8] S. Bozzo y D. Birkner, «Educación financiera ¡para todos!», *Educ. Financ. ¡para todos!*, 2020, doi: 10.32457/isbn9789568454999982020-ed1.

[9] T. Kaiser y L. Menkhoff, «Active learning improves financial education: Experimental evidence from Uganda», *J. Dev. Econ.*, vol. 157, n.º April, p. 102870, 2022, doi: 10.1016/j.jdeveco.2022.102870.

[10] A. Sconti, «Digital vs. in-person financial education: What works best for Generation Z?», *J. Econ. Behav. Organ.*, vol. 194, pp. 300-318, 2022, doi: 10.1016/j.jebo.2021.12.001.

[11] A. Schoofs, «Promoting financial inclusion for savings groups: A financial education programme in rural Rwanda», *J. Behav. Exp. Financ.*, vol. 34, p. 100662, 2022, doi: 10.1016/j.jbef.2022.100662.

[12] F. C. Billari, C. A. Favero, y F. Saita, «Online financial and demographic education for workers: Experimental evidence from an Italian Pension Fund», *J. Bank. Financ.*, vol. 151, p. 106849, 2023, doi: 10.1016/j.jbankfin.2023.106849.

[13] D. Ruiz-Palomo, M. T. Galache-Laza, A. J. Cisneros-Ruiz, y F. García-Lopera, «Financial knowledge of pre-university students: Effects of age and gender», *Heliyon*, vol. 9, n.º 4, 2023, doi: 10.1016/j.heliyon.2023.e15440.

[14] A. Amagir, H. M. van den Brink, W. Groot, y A. Wilschut, «SaveWise: The impact of a real-life financial education program for ninth grade students in the Netherlands», *J. Behav. Exp. Financ.*, vol. 33, p. 100605, 2022, doi: 10.1016/j.jbef.2021.100605.

[15] Y. Rojas, «School achievement in childhood and financial indebtedness in young adulthood – Direct effect, indirect effects, or both?», *Int. J. Educ. Res. Open*, vol. 3, n.º September 2021, p. 100117, 2022, doi: 10.1016/j.ijedro.2021.100117.

[16] L. R. Blanco, I. Hernandez, L. Chen, y J. Serido, «Mind your money : A community-based digital intervention for improving financial capability among Hispanics», *J. Econ. Behav. Organ.*, vol. 212, pp. 629-643, 2023, doi: 10.1016/j.jebo.2023.05.030.

[17] M. Harvey y C. Urban, «Does financial education affect retirement savings?», *J. Econ. Ageing*, vol. 24, n.º February, p. 100446, 2023, doi: 10.1016/j.jeoa.2023.100446.

[18] C. Urban, «Does state-mandated financial education reduce high school graduation rates?», *Econ. Educ. Rev.*, vol. 95, n.º June, 2023, doi: https://doi.org/10.1016/j.econedurev.2023.102427.

[19] T. Kaiser, A. Lusardi, L. Menkhoff, y C. Urban, «Financial education affects financial knowledge and downstream behaviors», *J. financ. econ.*, vol. 145, n.º 2, pp. 255-272, 2022, doi: 10.1016/j.jfineco.2021.09.022.

[20] K. De Beckker, K. De Witte, y G. Van Campenhout, «The effect of financial education on students' consumer choices: Evidence from a randomized experiment», *J. Econ. Behav. Organ.*, vol. 188, pp. 962-976, 2021, doi: 10.1016/j.jebo.2021.06.022.

[21] E. Cruz Barba, «Educación financiera en los niños: Una evidencia empírica», *Sinéctica, Rev. Electrónica*

Educ., vol. 7033, n.º 51, pp. 1-15, 2018, doi: 10.31391/s2007-7033(2018)0051-012.

[22] S. Rodriguez-Raga y N. Martinez-Camelo, «Game, guide or website for financial education improvement: Evidence from an experiment in Colombian schools», *J. Behav. Exp. Financ.*, vol. 33, p. 100606, 2022, doi: 10.1016/j.jbef.2021.100606.

[23] L. Silva y L. Vargas, «La educación financiera para mejorar las finanzas personales de los docentes de la Institución Educativa N° 00518 del distrito de Yantaló, 2019», UCV, 2020.

[24] A. Marambio-Tapia, «Educados para ser endeudados: la inclusión "social-financiera" en Chile», *Rev. Mex. Sociol.*, vol. 83, n.º 2, pp. 389-417, 2021, [En línea]. Disponible en: http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0188-25032021000200389&lng=es&nrm=iso&tlng=es%0Ahttp://www.scielo.org.mx/scielo.php?script=sci_abstract&pid=S0188-25032021000200389&lng=es&nrm=iso&tlng=es

[25] C. B. Lechuga Canto, B. Sauza-Ávila, S. P. Pérez-Castañeda, y D. Cruz-Ramírez, «Financial management and education: key to the efficient management of personal and business finances», *Ingenio y Concienc.*, vol. 8, n.º 15, pp. 1-7, 2021, doi: 10.29057/escs.v8i15.6138.

[26] W. R. Avendaño, G. Rueda, y B. M. Velasco, «Financial Perceptions and Skills Among University Students», *Form. Univ.*, vol. 14, n.º 3, pp. 95-104, 2021, doi: 10.4067/S0718-50062021000300095.

[27] J. Salas Tuanama y I. Ticlla Mendoza, «Educación financiera y desarrollo de emprendimiento, en estudiantes de educación superior», *Rev. Valor Contab.*, vol. 9, n.º 1, pp. 59-70, 2022, [En línea]. Disponible en: https://revistas.upeu.edu.pe/index.php/ri_vc/article/view/1782

[28] E. Comercio, «Perú: INEI: Se crearon 70 mil empresas, pero cerraron 45 mil en último trimestre», Lima, p. 17, 4 de marzo de 2019.

[29] T. Ngo, H. H. Trinh, I. Haouas, y S. Ullah, «Examining the bidirectional nexus between financial development and green growth: International evidence through the roles of human capital and education expenditure», *Resour. Policy*, vol. 79, n.º November 2021, p. 102964, 2022, doi: 10.1016/j.resourpol.2022.102964.

[30] R. Hernández Sampieri y C. P. Mendoza Torres, *Metodología de la investigación : las rutas cuantitativa, cualitativa y mixta*, Primera., vol. 1. México, 2018.

[31] A. Quintana, *Metodología de Investigación Científica Cualitativa*, Eds. UNMSM. Lima, 2006.

[32] F. Pardinas, *Metodología y técnicas de investigación en ciencias sociales*, Siglo XXI. Buenos Aires, 2004.

[33] R. Bisquerra *et al.*, *Metodología de la investigación educativa*, La Muralla. Madrid, 2009.

[34] S. García, «La Validez y la Confiabilidad en la Evaluación del Aprendizaje desde la Perspectiva Hermenéutica», *Revista de Pedagogía*, vol. 23, n.º 67. pp. 297-318, 2002.

[35] D. San Martín, «Teoría fundamentada y Atlas.ti: recursos metodológicos para la investigación educativa», *REDIE Rev. Electrónica Investig. Educ.*, vol. 16, pp. 104-122, 2014, Accedido: 11 de junio de 2021. [En línea]. Disponible en: http://redie.uabc.mx/vol16no1/contenido-sanmartin.html

[36] K. M. Gonzales López, D. H. Bernedo-Moreira, J. N. Gonzales López, Y. T. Loayza-Apaza, H. F. Pacompía Quispe, y J. N. A. Papanicolau Denegri, «Knowledge and attitudes about essential newborn care in women experiencing motherhood for the first time», *Salud, Cienc. y Tecnol. - Ser. Conf.*, vol. 2, 2023, doi: 10.56294/sctconf2023380.

[37] J. C. Cayupe *et al.*, «Self-efficacy, organizational commitment, workload as predictors of life satisfaction in elementary school teachers: the mediating role of job satisfaction», *Front. Psychol.*, vol. 14, n.º May, pp. 1-10, 2023, doi: 10.3389/fpsyg.2023.1066321.

[38] R. Romero-Carazas, A. P. Espíritu_Martínez, L. F. Villa-Ricapa, y E. L. Núñez-Palacios, «Financial literacy transdiciplinary approach in education: Bibliometric analysis of scopus», *Bibl. An. Investig.*, vol. 19, 2023.