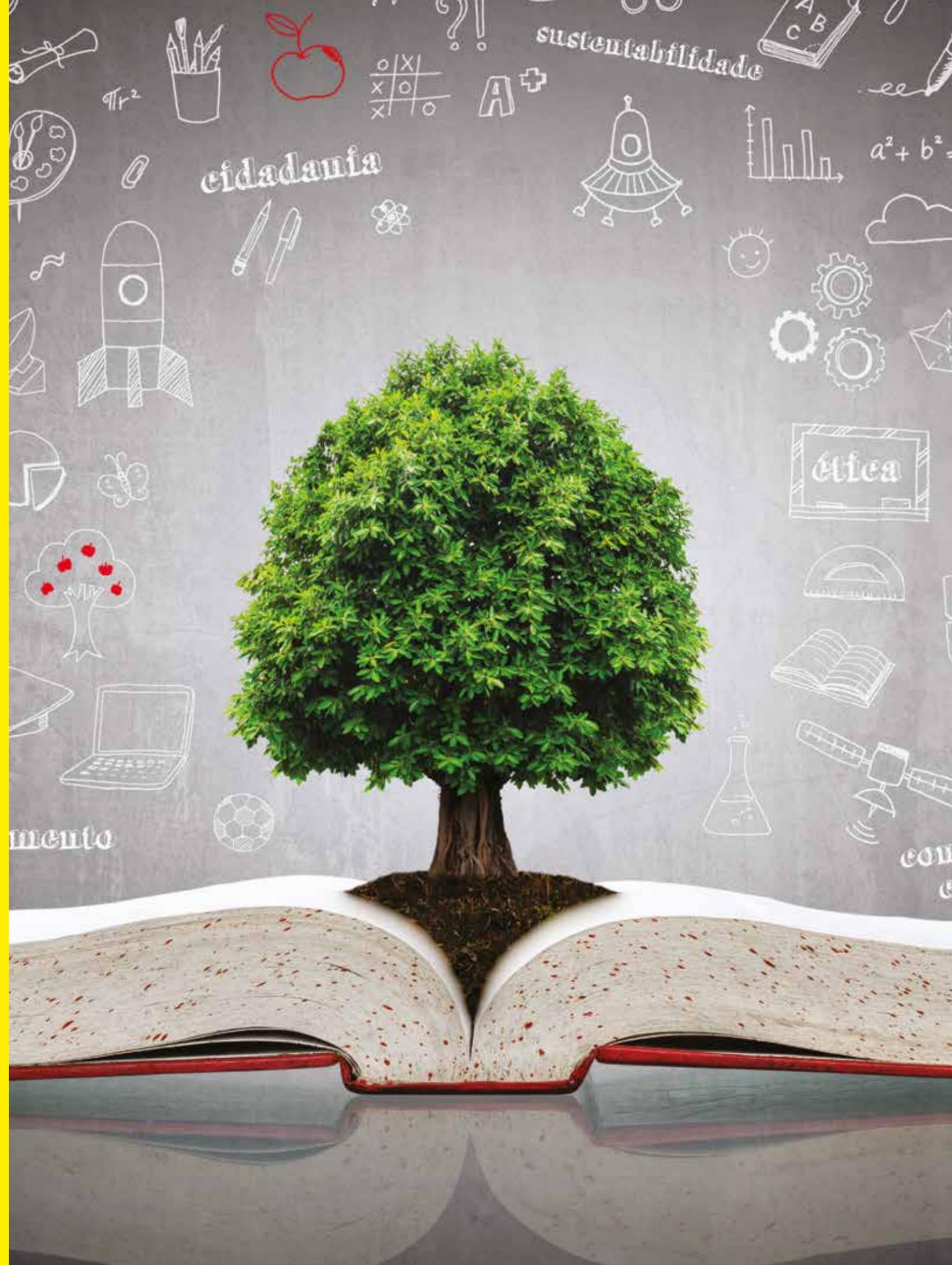




NATIONAL STRATEGY FOR FINANCIAL EDUCATION (ENEF) Working towards a better Brazil

ORGANIZED BY
Claudia Forte, PhD



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Acknowledgments

Over the ten-year trajectory of the ENEF (National Strategy for Financial Education), success in the programs undertaken has only been achieved thanks to the strategies devised by many people, whom I simply had to include in this book. On behalf of the AEF-Brasil (Association of Financial Education in Brazil), I extend a special thanks to:

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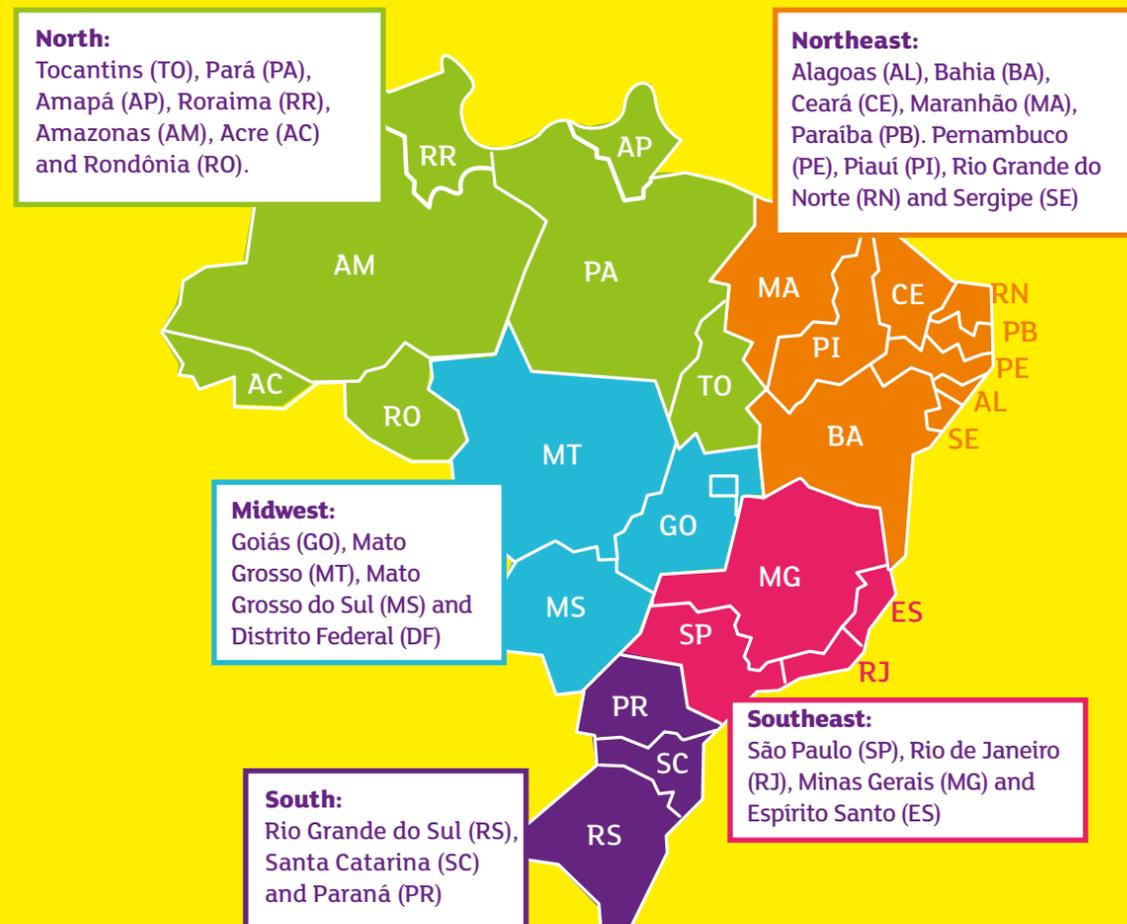
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Brazil is the largest country in Latin America, being the fifth country in the world in terms of territorial extension. The country, with its continental size of over 8,000,000 km², is home to nearly 213,000,000 Brazilians, being the sixth most populous country in the world. Brazil is divided into 5,570 municipalities, 26 states and the Federal District, where Brasilia - the country's capital - is located. Furthermore, the country has six very heterogeneous biomes with a rich variety of animal and plant species, the Amazon biome being the largest rain forest in the world, covering nearly 40% of the national territory. As a developing country, its economy is rather complex and is now ranked the twelfth largest economy in the world, when taking into account its Gross Domestic Product. Brazil is the third largest food exporter and the largest net exporter of agricultural and livestock commodities in the world, these commodities accounting for 67% of all Brazilian exports. The most important commodities exported include soybeans, oil, iron ore, cellulose, animal protein, coffee and other products. With huge challenges ahead, the country is trying to decrease poverty and criminality levels, as well as fight against the high concentration of income and unequal distribution of wealth, being one of the worst countries in the world in these aspects. Moreover, it is a fertile ground for opportunities in terms of investments in infrastructure, especially those aimed at ensuring that people have access to some of the most important conditions for their well-being, such as basic sanitation, education and health care. Throughout this book, many abbreviations representing the Brazilian states will be used, and in order to facilitate the visualization and identification of the regions where projects have been developed, please find below a map of Brazil and its respective regions.

Cláudia Forte & Bruno F. Frascaroli



This book is dedicated to each and every Brazilian that, in one way or another, views financial education as necessary and urgent!

“An investment in
knowledge pays
the best interest.”
Benjamin Franklin



Contents

Introduction_12

Isaac Sidney, President of FEBRABAN

Chapter 1 – Financial education: why do we need it?_16

Adriana Toledo toledo.adriana@uol.com.br

Chapter 2 – The role of the AEF-Brasil in executing the National Strategy for Financial Education_30

Claudia M. J. Forte claudiamjforte@gmail.com

Chapter 3 – The participation of the private sector and the importance of multi-sector alliances for the development of the ENEF_60

Thiago Godoy Nascimento thiagognasc@gmail.com

Chapter 4 – Financial education, the BNCC (National Common Curricular Base) and the curriculum: contexts and challenges for Brazilian public schools_78

Alessandra Camargo Godoi camargo.alessandra@gmail.com

Sandra Zita Silva Tiné sztine@gmail.com

Chapter 5 – The experience of the financial education hub in the state of Paraíba_116

Bruno F. Frascaroli frascaroli.b@gmail.com

Chapter 6 – The trajectory of financial education in schools in the state of Tocantins: from the pilot project to the establishment of a teacher training hub at the Federal University of Tocantins_146

Juliana Aguiar de Melo aguiarmelo@mail.uft.edu.br

Gisele Barbosa de Paiva gisele.paiva@uft.edu.br

Alessandra Camargo Godoi camargo.alessandra@gmail.com

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Chapter 7 – The experience of training teachers in the state of Rio Grande do Sul_174

Élsio José Corá cora@uffs.edu.br

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Chapter 8 – Financial education at school: the experience of training teachers in the hub of the state of Minas Gerais_192

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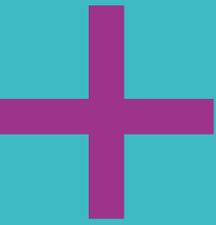
Chapter 9 – Financial Education and Economic Psychology: a brief discussion and some recommendations_222

Vera Rita de Mello Ferreira verarita@verticepsi.com.br

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Chapter 10 – Map of research sources on Financial Education in Brazil_250

Claudia M. J. Forte claudiamjforte@gmail.com



Ten years of the National Strategy for Financial Education (ENEF)

Have you heard about financial education? Do you know what it means? Why do we need it? If you're not sure, start reading this book immediately. It will transform your perception of the importance of caring for your finances, whether in a personal or professional sphere.

If you already know, reading this book is fundamental to further understanding this world in greater detail.

This book provides the actual meaning of the term, the reason why we should worry about the subject and what has been done over the past ten years to promote cataloged themes as part of this new branch of knowledge, which is of such extreme importance to individuals and the nation.

I have had the privilege of accompanying the process from the outset, as the attorney general of the Central Bank of Brazil and later as the director of Institutional Relations and Citizenship, dealing directly with actions to leverage its development. In 2016, I presided over the National Financial Education Committee (CONEF, Portuguese acronym).

Financial education is fundamental to people, to society, the banking sector and, especially, to the Brazilian economy of the 21st century. There is widespread consensus that citizens with greater awareness, better guidance, information and engagement with their financial lives generate positive effects for all economic sectors.

There are only gains. No one loses when consumers have a healthier, more autonomous and sustainable financial life.

And this is a challenge faced not only by Brazil. In recent years, several incentives towards this end have been taken up around the world.



In 2020, due to the Covid-19 pandemic, we faced even greater challenges, impacting planning in families, businesses and companies. And banks have never been as proactive as they were during this crisis.

Within the context of a post-pandemic world and economic recovery, financial advisory and education actions will be even more relevant. This moment in time should be seen as an opportunity to accelerate this process.

Historic, cultural, economic and even psychological factors explain why so many citizens have a hard time dealing with money. Towards this end, Brazilian Federation of Banks (FEBRABAN, Portuguese acronym) and banks have developed a series of actions to promote financial education and the responsible use of credit.

Besides individual initiatives among banks, FEBRABAN has a history of financial education actions, striving constantly to generate expertise able to produce positive long-term transformations in people's behavior, improving their relationship with money and their quality of life. Financial citizenship is a key part of our commitment to a healthy, ethical and efficient financial system.

This book is a collective effort and was conceived with two objectives in mind: to share best practices in financial education, so as to spread them to every corner of Brazil, and to register the historic tenth anniversary of the National Strategy for Financial Education (ENEF) in Brazil, to which the Brazilian Financial Education Association (AEF-Brasil, Portuguese acronym) has contributed immensely.

The AEF-Brasil was created in 2012 as a non-profit social organization by representatives of the financial market, presided over by FEBRABAN, with the goal of developing actions towards promoting financial education and showcasing its relevance.

And it is with great satisfaction that I dare say we have done it!

During this time as the official executor of ENEF in Brazil, the AEF-Brasil has developed several projects for members of the school community and for adults in situations of economic vulnerability, involving partners from several sectors, specifically banks, and reaching the 26 states and Federal District of Brazil through the dissemination of its programs. Many of these incentives are recounted in this book.

Through ten chapters, the narrative of facts that have become part of the history of the nation is retold by professionals that led the way in overcoming challenges to develop this new agenda, essential to the development of the economy and the formation of active citizens.

The 17 authors that penned the chapters of this book, along with several other professionals, form a network of bold educators fighting for a better Brazil. I honor and admire each of them.

The sharing of this book is geared towards nurturing the seed planted ten years ago with the creation of the National Strategy for Financial Education and will enhance the outlook of all agents, both public and private, who are jointly responsible for the formation of financial citizenship as a vector for our nation's growth.

FEBRABAN, the leading representative entity of the Brazilian banking sector, tasked with the mission of contributing to the economic, social and sustainable development of the country, though continued improvement of the financial system and its relationship with society, is proud to sponsor this effort. And I am exceptionally proud to present it to you.

Enjoy reading!

Isaac Sidney

President of the Brazilian Federation of Banks - FEBRABAN and AEF-Brasil

Chapter 1

Financial education: why do we need it?¹

Adriana Toledo²

For the longest time, roughly from the 16th century, with the establishment of capitalism around the world, people have been working towards ways of ensuring their survival by accumulating assets and money.

Capitalism is a system predominated by private ownership and the constant quest for profit and the accumulation of wealth. Despite being conceived as an economic system model, it influences political, social, cultural, ethical and many other spheres, encompassing our affecting our entire nation.

With the onset of globalization over the past 50 years, the capitalist system has become the predominant system throughout the world and effects all beings in one way or another. In an effort to generate wealth, many factors influence decisions made within the world of finances, and ignorance of the theme is no longer an option.

Financial education is an important discipline in providing citizens the opportunity to exercise their rights and duties within the financial world, allowing for more accurate decision-making.

Financial citizenship entails an individual's ability to make the right choices, exercising their rights and fulfilling the associated duties. It is a concept taken from the term citizenship.

1. The information presented in this chapter was gathered through the consultation of the following websites: www.vidaedinheiro.gov.br; www.bcb.gov.br/cidadaniafinanceira; www.meufuturoseguro.gov.br; www.investidor.gov.br; www.previc.gov.br; e www.aefbrasil.org.br.

2. Master's degree in Law and Economics. Head of the Susep (Superintendence of Private Insurance) Administration and Financial Department. Sitting member of the Brazilian Financial Education Forum (FBEF, Portuguese abbreviation). Sitting member of CONEF's Permanent Financial Education Commission, from January 2016 to June 2018.

According to *Dicionário Aurélio*, a citizen is an individual subject to the civil and political laws of a State, or in the performance of duties pertaining to said State. According to the Federal Constitutions, being a citizen means having the right to life, liberty, prosperity and equality under law: possessing civil rights.

In turn, citizenship entails a set of rights and duties exercised by an individual living within society, in terms of their power and degree of intervention in the use of their space and their capacity to intervene in and transform said space. The expression is taken from the Latin word *civitas*, which means city.

Thus, to ensure people are fully embracing their conditions as citizens, they must also exercise their rights as pertaining to the world of finance. And, to make that possible, it is necessary to learn and understand the basic concepts of this environment. Thus the importance of financial education in the world, as highlighted in the text below:



The S&P Global Financial Literacy Survey, the most comprehensive global study on financial education, published in 2016, showed that two in three adults around the world are financially illiterate. Based on interviews with 150,000 adults in more than 140 countries, the survey investigated global population expertise regarding four basic financial concepts: risk diversification, inflation, numerical ability and compound interest.

Unfortunately, with the high rates of global illiteracy, the challenge of educating citizens with respect to financial issues is not exactly a priority among governments. And, far from being a simple task, it has been a cause for concern among many economists and regulating agents, as there is clear evidence that public policies geared towards economic development are severely affected due to the impacts of financial choices made by society.

As from the 2008 economic crisis, the subject has gained interest among several experts and the number of investigations and studies continue to grow, showing a cause-and-effect correlation between the absence of the effective financial standards and the major crises.

The conclusions of these surveys are that the abilities to manage money are more important than ever in dealing with the economic realities of the modern market. They significantly influence success in the effort generate wealth and impact the results of public policies in several sectors, as they aid society to better understand the economy as a whole, increasing the likelihood of savings for retirement and reducing the level of indebtedness, etc.

It is fitting that financial education is cited in at least 8 of the 17 Sustainable Development Goals (SDGs) part of the UN General Assembly's International Protocol, related to Agenda 2030 for Sustainable Development. Brazil, along with 193 other nations, joined the commitment in 2015. The figure below shows the SDGs:



The 17 Sustainable Development Goals linked to Agenda 2030 for Sustainable Development.

Agenda 2030 offers guidelines on planning long-term actions and public policies able to direct the world towards sustainable development. In an effort to balance human prosperity and the protection of the planet, the main goals include: ending poverty and hunger, fighting inequality and combating climate change.

As such, financial education plays a relevant role in the construction and consolidation of the policies and actions developed, as, by molding the consumption behavior and choices of individuals, an environment is created that favors generalized equilibrium, a trait essential to the sustainability of the results afforded by each of the SDGs.

FINANCIAL EDUCATION AROUND THE WORLD: THE ROLE OF THE ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT – OECD

Financial education has become an important accessory in steering market behavior, prudential regulation (financial regulation that established the requirements for financial institutions, with a focus on risk management and minimum capital requirements to deal with the risks inherent to their activities) and in improving individual financial behaviors. It is now a long-term priority in many nations.

The Organisation for Economic Co-operation and Development (OECD)³ and its International Network on Financial Education (INFE)⁴ are in charge of conducting surveys and developing tools to support member nations in planning and implementing national financial education strategies.



At this point, in 2012, the High-level Principles on National Strategies for Financial Education were developed by the OECD's International Network on Financial Education (OECD/INFE), with representatives from more than

3. The OECD is an international organization currently comprised of 35 countries and is headquartered in Paris, France. It is geared towards promoting policies that leverage economic development and social well-being throughout the world. Brazil is not a member of the group, though it is a key partner and has maintained a cooperative relationship with the OECD since the early 1990s. In this position, it has the opportunity to participate in several of the entity's bodies, adhere to its legal instruments, integrate statistical reports and peer reviews in specific sectors of the body, and it has been invited to participate in all ministerial meetings since 1999. Brazil has contributed to the work undertaken by the committees and participates should-to-shoulder with other member nations in several important bodies and projects spearheaded by the entity.

4. As part of the International Network on Financial Education OECD/INFE, Brazil is represented by the BCB and the CVM as sitting members. Furthermore, Susep, Previc (National Superintendence of Complementary Social Security), the National Consumer Department of the Ministry of Justice and Public Safety (MJSP), the social security Department of the Ministry of the Economy and the Ministry of Education.

100 economies, including all the members of G20 and other relevant international organizations. The final version of these principles was approved by the Financial Markets Committee and by the Securities and Private Pension Committee in April 2012, with backing from G20 leaders at the Los Cabos Summit.

In a growing number of countries, the long-term implications of low levels of financial education amongst most of the population are leading governments to adopt a more active role in mitigating this scenario. 2021, the OECD/INEF includes over 240 public institutions – including central banks, regulating agencies and financial supervisors – in more than 110 countries.

In 2013, in an effort to monitor the progress of governments in the world's leading economies as to the implementation of a national strategy to improve financial education, in conjunction with presidency of the G20 summit held in Russia, the OECD published a document entitled *Advancing National Strategies for Financial Education*.



The publication, which included contributions from twenty-one G20 member-nations and guest nations⁵, highlights the leading characteristics of each country's experience and, specifically, the logic behind developing national strategies, the status of each nation, leading objectives and their founding elements.

It also points out the different governmental structures established to design and implement national strategies, along with the role of stakeholders and their principal guidelines and challenges in terms of implementation. Lastly, it proposes possible areas for fresh political actions.

Other relevant publications related to the issue include reports from periodic test part of the OECD's International Student Assessment Program (PISA), which appraises student performance. Around 600.000 students participated in the appraisal in 2018, representing something around 32 million youths aged 15, in schools in 79 participating nations and economies. In Brazil, 10.691 students,



5. Argentina, Australia, Brazil, Canada, People's Republic of China, France, India, Indonesia, Italy, Japan, South Korea, Mexico, Netherlands, Russian Federation, Saudi Arabia, Singapore, South Africa, Spain, Turkey, United Kingdom and United States of America, as well as the European Union.

in 638 schools, took the test, representing 2,036,861 students aged 15 years old (65% of the total population of 15-year-olds).

The data from the 2018 PISA exam, published in 2020, show that⁶:

- a) Social and economic status was a significant performance predictor in reading, mathematics and science in Brazil. Privileged students outperformed less privileged students in reading by 97 points (OECD: 89 points). In the 2009 edition of PISA, the reading performance difference related to social and economic status was 84 points in Brazil (OECD average: 87 points).
- b) In Brazil, around one in ten high-performance underprivileged students fail to complete higher education, while the ratio among high-performance students is one in twenty-five.
- c) On average, in OECD nations/economies, 94% of the students state they get financial information from their parents; 77% state that the internet is their source of data; approximately half of the students said they got information on financial issues from friends (51%), from television or radio (50%) or from teachers (50%); and approximately a quarter of them stated that they get information from magazines (25%).
- d) Students more familiar with finances or the terms related to economics also possessed greater financial knowledge, gauged through the 2018 PISA financial literacy assessment. Each additional term, from the 18 proposals, that a student reported having learned at school over the previous 12 months and the definition of which the student actually knew was associated to an increase in said student's financial literacy score, on average in OECD nations/economies. After considering gender, the student and the social and economic profile of the school, as well as the history of immigrants, each official term was associated to an improvement of three points in the financial literacy score.
- e) On average, in OECD nations and economies, 15% of the students obtained a performance below level 2 in financial literacy. These students presented only basic abilities in terms of financial literacy, such as identifying common terms and financial products and interpreting information related to basic

financial concepts. They were able to recognize the difference between needs and desires and simple decision making about daily spending, though they were not yet able to apply their expertise in making financial decisions in contexts that were not immediately relevant to them, such as recognizing the value of a simple quotation or making a mere assessment of value in money. More than one in three students in Brazil, Bulgaria, Georgia, Indonesia and Peru were below level 2; and even in countries and regions with a high economic performance such as the Canadian provinces (British Columbia, Manitoba, New Brunswick, Terra nova and Labrador, Nova Scotia, Ontario and Prince Edward Island), Estonia, Finland and Poland, between 5% and 10% of the students obtained a score below level 2.

In Brazil, around one in ten high-performance underprivileged students fail to complete higher education, while the ratio among high-performance students is one in twenty-five

These results point to the conclusion that increasingly early investments are needed to promote the population's financial of education, at all social and economic levels. Countries that invest in this type of education have the potential to reach the most positive results in the implementation of public policies geared towards economic and financial stability.

The challenge is certainly not a simple one, and it is worse in countries like Brazil, which has a high rate of illiteracy among the population and an elevated percentage of school truancy. In the last edition of the 2018 PISA, results showed that the country has a low proficiency in reading, mathematics and the sciences, when compared to 78 other countries partaking in the assessment. The publication further revealed that 68.1% of Brazilian students aged 15 years old do not possess a basic level in mathematics, the minimum requirement to exercise full citizenship. Indexes have been stagnated since 2009. We certainly have a long way to go!

ENEF REGULATORY MILESTONE

The 2010 publication of Decree 7,397 in Brazil established the National Strategy for Financial Education (ENEF), aimed at promoting and disseminating financial education in the country through the union of agents from several sectors.

The strategy secured the participation of stakeholders from the banking, securities, insurance and social security sectors, as well as the areas of education and consumer protection



6. Data translated by text author.

Everything originated within the scope of COREMAC (Regulation and Inspection Committee for Financial, Capital, Insurance and Capitalization Markets), instituted by Decree 5,685 of 2006 – currently Decree 10,465, of 2007 – with the goal of promoting the coordination and enhancement of federal administrative entity operations that regulate and inspect activities related to public funding to establish savings. This committee is made up by the Central Bank of Brazil (BCB), the Brazilian Securities and Exchange Commission (CVM), the National Superintendence of Complementary Social Security (PREVIC) and the Superintendence of Private Insurance (SUSEP).

The proposal for the adoption of the National Strategy for Financial Education (ENEF) was the result of 18 months of group work under the umbrella of COREMEC and coordinated by a representative of the CVM. The ENEF was officially created in 2010, with the goal of promoting and fomenting a culture of financial education in Brazil, increasing comprehension among citizens so they are able to make conscientious choices when it comes to managing their resources, while contributing to the efficiency and solidity of financial, capital, insurance, social security and capitalization markets.

The ENEF was developed at a historical point in time during which the government and organized society adopted measures to mitigate the local impacts of the significant global financial crisis. The subject had already cropped up in debates, chiefly due to the expanding banking market and the inroads in financial inclusion. It gained further relevance as from the 2008 crisis, when the real estate bubble burst in the United States of America and agents realized it was impossible to guarantee the financial health of a country without the corresponding capacity of the population to make educated decisions. In other words, it was clear that the financial stability of the market also relied on consumer attitudes.

A financially educated society paves the way towards sustainable social and economic development, helping to overcome inequality and promoting active citizenship.

A year after its creation, the National Financial Education Committee (CONEF, Portuguese acronym), the ENEF governance body, by means of Decision 2,

7. Following the termination of boards under Decree 9,759, in 2019, within the scope federal public administration, Coremec (Decree Regulation and Inspection Committee for Financial, Capital, Insurance and Capitalization Markets) was recreated by means of Decree 10,465, dated August 18, 2020, with the same attributions.

May 5, 2011, established the Strategy Master Plan, containing programs and actions planned for development.

On the same date, by means of Decision 3, CONEF released the names of the entities selected to represent civil society in the constitution of the aforementioned committee and to initiate the partnership to educate the Brazilian population, which took on the following composition:

GOVERNMENT (PUBLIC INSTITUTIONS)



CIVIL SOCIETY INSTITUTIONS



The figure above shows two members of civil society present: CONSED (National Council of State Secretaries of Education) and SEBRAE (Brazilian Micro and Small Business Support Service), which joined CONEF at the end of 2017, as decided at the 29th meeting of the aforementioned committee.

Governance of the National Strategy for Financial Education in Brazil, as in the great majority of other nations, fell predominantly to financial market regulatory agencies, though its composition has changed over the past ten years.

Decree 9,759 was edited on April 2019, establishing rules and restricting the existence of boards in federal public administration, terminating the National Financial Education Committee (CONEF) and its subcommittees. However, the National Strategy for Financial Education remained valid as a public policy, as laid out by Decree 7,397, of 2010.



With the publication of Decree 10,393, of June 9, 2020, a new National Strategy for Financial Education was created, further instituting the Brazilian Financial Education Forum (FBEF, Portuguese abbreviation), uniting the Central Bank of Brazil (BCB), the Brazilian Securities and Exchange Commission (CVM), the National Superintendence of Complementary Social Security (PREVIC) and the Superintendence of Private Insurance (SUSEP),



National Consumer Department (Senacon), National treasury Department (STN), Pension Department (SPREV) and the Ministry of Education (MEC) to oversee the governance of the new ENEF.

As defined by the decree, the forum has the following attributions:

- a) To implement and establish the principles of the ENEF.
- b) Divulge financial, insurance, pension and tax education actions proposed by its members and by other public bodies and entities or private institutions.
- c) Share information about financial, insurance, pension and tax education actions produced by the bodies and entities represented, to identify opportunities for articulation.
- d) Promote dialog between the public bodies or entities and private institutions to bolster and, whenever possible, integrate financial, insurance, pension and tax education actions.

In the new conception of the ENEF, with the express mention of sector branches that comprise the national strategy, specialized themes have gained relevance, such as insurance and pension, which form the Financial Education discipline in a general sense.

ENEF GOVERNANCE FROM 2010 TO 2020

During these ten years of the National Strategy for Financial Education in Brazil, of note has been the *modus operandi* of the governance selected, involving a public interest non-governmental organization – the Association of Financial Education in Brazil (AEF-Brasil) – in the direct execution of transversal actions.

Through this hybrid composition, including State agents and civil society entities in the construction and application of the aforementioned policy, a Technical Cooperation Agreement was celebrated between CONEF and the AEF-Brasil, aimed at the development of transversal programs through fund raising within the private sector and partnerships with a series of Brazilian and multinational companies and organizations.

The agreement in question was aimed at establishing rules on cooperation for planning, developing and accessing initiatives relative to financial, insurance and pension education by the AEF-Brasil, in accordance with the

guidelines set out by the committee. The execution of the agreement was detailed through work plans presented twice a year by the AEF-Brasil and approved by CONEF.

ENEF governance further included three important subcommittees to support the work by CONEF: the Permanent Commission, the Pedagogical Support Group and the Executive Secretariat.

The Permanent Commission, comprised of a sitting representative and a proxy for each entity part of the CONEF, provides technical support to the National Strategy for Financial Education. In turn, the Pedagogical Support Group (GAP, Portuguese acronym) provides counsel on pedagogical aspects related to financial and pension education. Besides representatives of regulatory agencies, the GAP also included the significant participation of technicians from the area of education, professionals that steered the preparation of material and content prior to publication. The Executive Secretariat, a permanent body instituted by the Central Bank of Brazil, provided administrative support and the means necessary to attain CONEF objectives in a general sense.

ENEF governance further included three important subcommittees to support the work by CONEF: the Permanent Commission, the Pedagogical Support Group and the Executive Secretariat.

The current composition of the forum, fostering synergy among the several public entities responsible for regulating matters linked to the country's financial and economic system, seeks to ensure the efficiency and relevance of the financial, insurance, social security and tax education programs for different players within society, avoiding the repetition of efforts. Furthermore, based on the vision of tax education, attempts are underway to integrate the necessary comprehension among the population concerning the relationship between public and private finances, with the short, medium and long-term positive impacts for citizens and society as a whole.

There is no outlook to create permanent subcommittees within the scope of the FBEF. In line with the guidelines contained in Article 6, VI, of Decree 9,759, of 2019, in exceptional cases, when a specific matter requires analysis, work groups may be created in a temporary character and with pre-established deliveries for these purposes.

THE EXECUTION OF THE ENEF OVER THE PAST TEN YEARS

Up to this point, the strategy has been executed through the development of transversal actions, coordinated by the CONEF, but also by means of sectoral actions, developed separately by each of the members that comprise it.

Transversal actions are those implemented through joint efforts among the members that make up the ENEF governance body during the period. Part of this branch includes the Financial Education in Schools Program, the Financial Education for Vulnerable Adults Program, the ENEF Seal and the organization of ENEF Week.

Sectoral actions, on the other hand, are those developed separately by each of the members, always in line with the guidelines proposed by the ENEF and governed by the objectives and the roles performed by each institution involved in and contributing to the strategy.

Examples include: the Social Security Education Program (PEP, Portuguese acronym), developed by the INSS (National Social Security Institute) with the aim of expanding social security cover through the inclusion and maintenance of Brazilian workers in the social security systems, the Consumer Advisory and Defense Guide developed by the Superintendence of Private Insurance (SUSEP), published in 2016 in celebration of 50 years of self-governance, and the website *Meu Bolso em Dia*, geared towards the financial education of people and families, by FEBRABAN (Brazilian Federation of Banks).



Geared towards fostering the development and execution of the strategy, the ENEF website (www.vidaedinheiro.gov.br) was launched in August 2008, with the initial goal of registering free financial education actions and non-commercial content available in Brazil, permitting the creation of a national inventory.

Between 2010 and 2011, in partnership with the World Bank, a pilot project was launched related to Financial Education at High Schools, covering 891 public schools in six of Brazil's states. Later, the AEF-Brasil took part in disseminating the material prepared in this pilot project, reaching around 3,000 schools.

In 2017, the CONEF's effort and dedication bore fruit thanks to the relevant participation of the Pedagogical Support Group with financial education officially included in the National Common Curricular Base (BNCC, Portuguese abbreviation), an official legal document that defines the essential knowledge that all Basic Education students have the right to attain. The BNCC must be observed in the preparation and deployment of curricula in both public and private schools, in rural and urban regions.

The BNCC was approved thanks to the support of entities linked to the sector, among them the AEF-Brasil. In practice, this means that the subject of financial education has become part of a list of subjects incorporated into education plans for states and municipalities. Directly, the content and abilities part of the theme are now applied to mathematics, in years 5, 6, 7 and 9 of Primary Education, with other possibilities for interdisciplinary work with other areas of knowledge. The work with financial education, which previously occurred through voluntary adhesion among states and municipalities, became official for all, as laid out in the BNCC, and is further explored in chapter 4.

Since then, much has been achieved as part of the agreement between the CONEF and AEF-Brasil. Projects and programs will be detailed in the coming chapters.

Chapter 2

The role of AEF-Brasil in the execution of the National Strategy for Financial Education

Claudia M. J. Forte⁸

Convinced of the importance of financial education to the solidity of the financial system and the quality of life of Brazilian society, four institutions representing the financial market instituted AEF-Brasil in 2012, geared towards elevating this cause to the level of the most pressing causes in Brazil. They are: ANBIMA (Brazilian Financial and Capital Markets Association), B3 (Brazil Stock Exchange and Over-the-Counter Market), CNSeg (National Confederation of Companies of General Insurance, Private Pension, Life, Supplementary Health Insurance, and Capitalization Insurance) and FEBRABAN (Brazilian Federation of Banks). Allowing financial education to reach every Brazilian means leveraging equal opportunities for autonomous and healthy financial decisions in their lives, thereby bolstering citizenship. By developing these projects, AEF-Brasil has contributed and continues to contribute to social and economic development and, especially, to the exercise of full citizenship and the practice of democracy.

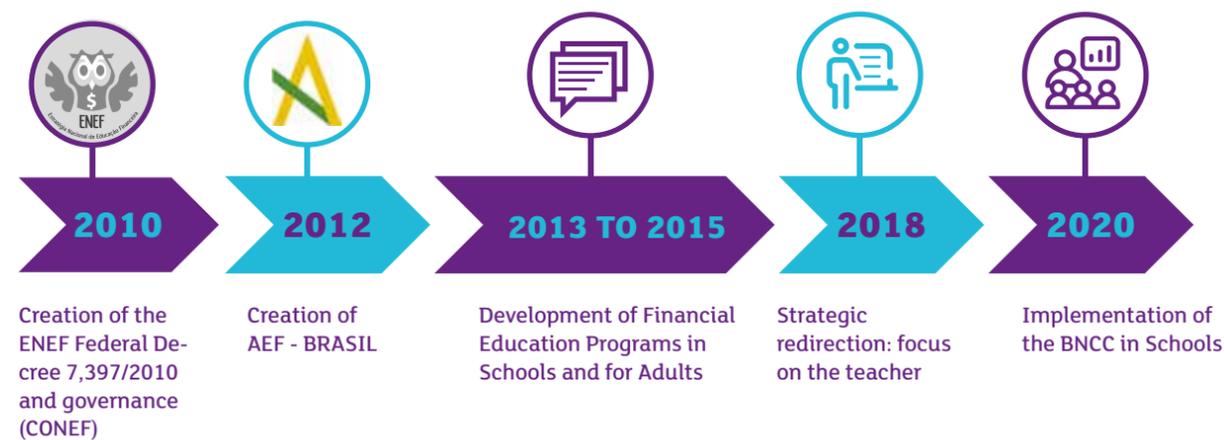
This configuration of the constitution of AEF-Brasil fostered a stable operating model, as its board is made up of the four most relevant private institutions in the financial market, creating even more space for raising resources within the private sector for the execution of free public projects, at that stage overseen by CONEF, and through the implementation of annual plans of action (biannual as from 2016).

AEF-Brasil's operational platform for the execution of the agreement was a public-private partnership, either through support or sponsorship to make projects viable, as well as institutional technical cooperation for the application of these projects in a fitting environment.

The principles that form the basis of all AEF-Brasil actions, whether in portfolio development or the phase of disseminating programs include:

⁸. PhD in Latin American Integration, professor, researcher and superintendent of AEF-Brasil since December 2015.

- a) Technical rigor: investments in research, methods and evaluation, in order to obtain technical responses for the results attained.
- b) Innovation: efforts to identify new ways of promoting financial education.
- c) Collaboration: participate in several sectors and with specific organization profiles to attain results.
- d) Exemption and transparency: transparent and autonomous operations, with resources and efforts channeled exclusively towards the promotion of financial education.



The above figure shows a timeline for AEF-Brasil, from the 2010 Federal Decree, which positioned Brazil among the world's nations with a National Strategy for Financial Education. To execute, develop and disseminate the strategy, a public interest non-governmental organization was created. The newly formed Association of Financial Education in Brazil (AEF-Brasil) assumed the coordination of public policies, as well as the execution of projects geared towards financial education in the country, aimed at public primary and high schools, as well as adults in situations of social vulnerability.

From 2013 to 2015, AEF-Brasil developed financial education programs for two targets, creating social technologies and educational material in support of the initiatives, such as educational books for teachers and students in primary and high school. In 2018, teachers became the central focus of AEF-Brasil actions, with the creation of the Financial Education Ecosystem and the development of a portfolio of material for use in the classroom, which included a new online platform called *Vida e Dinheiro*, a game called *Tá O\$\$\$*, a distance education program called *Finanças sem Segredos*, a web series

called *R\$100 Neuras* and five national documentaries entitled *Sua Escola, Nossa Escola*. Throughout the course of developing actions and material, the association continued to articulate to ensure financial education was introduced into the BNCC (National Common Curricular Base) and victory arrived in 2018, with approval of the common curricular base and inclusion of financial education as a transversal theme.

In line with its mission and in compliance with the agreement with CONEF, AEF-Brasil developed and executed four major “umbrella” projects, as outlined below.

PROJECT 1 – FINANCIAL EDUCATION IN PUBLIC SCHOOLS

According to the ENEF's 2010 Master Plan, carrying guidelines on Financial Education in Schools, financial education is important as it develops the skills and abilities in children and adolescents necessary to deal with the financial decisions they will make throughout their lives.

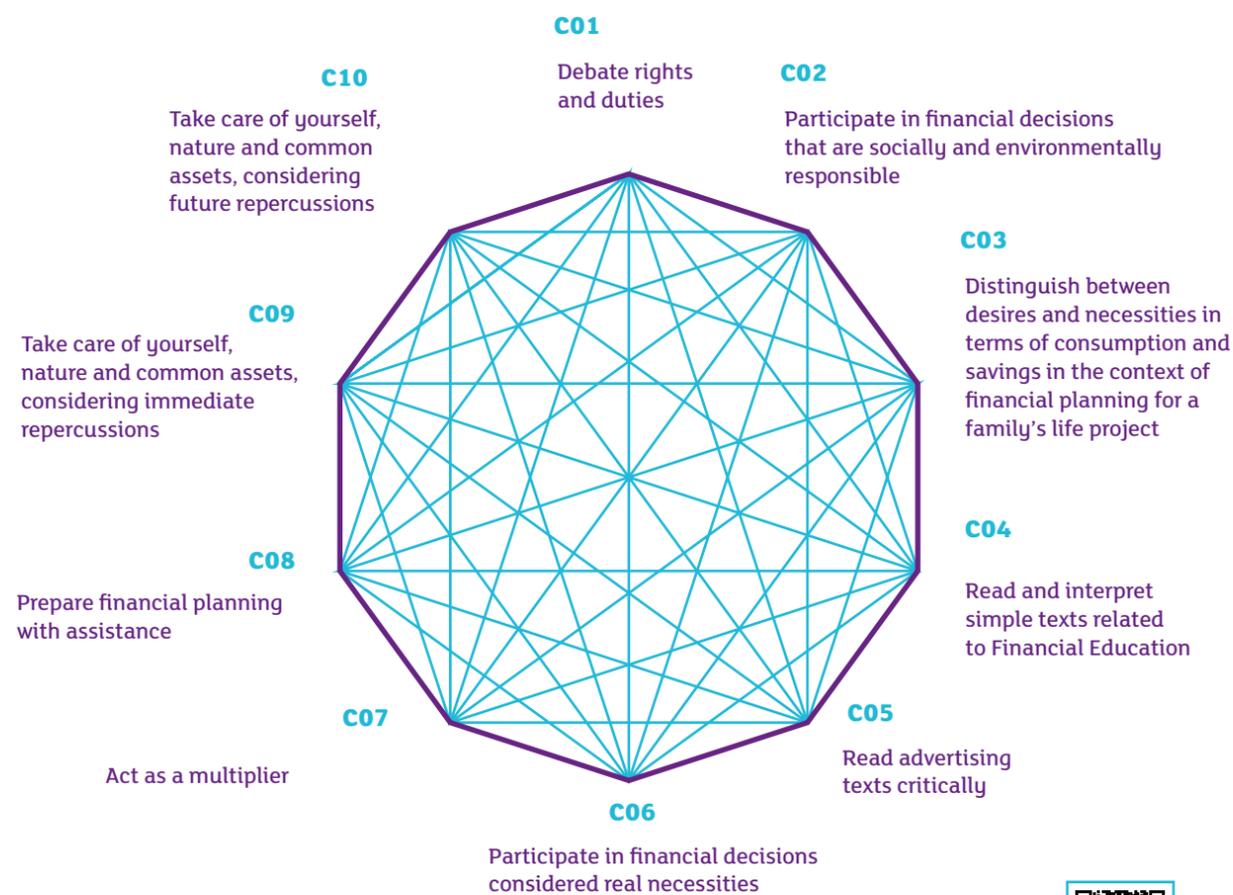
Financial education is not merely a series of purely mathematical knowledge or calculation instruments. It is associated to complex areas, like Economic Psychology and Behavioral Economics and, as such, access to financial education provokes changes in behavior, by means of correctly interpreting reality, life planning, prevention and individual and collective achievement. Thus, as with all educational processes, the earlier we start with children, the better the chances of having adults that are more conscientious and autonomous in relation to the financial decision-making process.

School is obviously a learning environment for students. It is there that they learn not only cognitive expertise, but also what provokes the feeling of belonging, which provides the capacity to manage their lives within society, to make choices and to dream, as well as to discover ways of attaining success along the paths they have chosen. Financial education, herein considered a transversal theme, dialogs directly with the array of content and competencies specified in the BNCC, both for high school and primary school.

The Program for Financial Education in High School and Primary Schools was conceived as a pedagogical model and completed with a collection of books for the 12 years that make up Basic Education, providing students and teachers with educational activities that introduce the topic into school life.

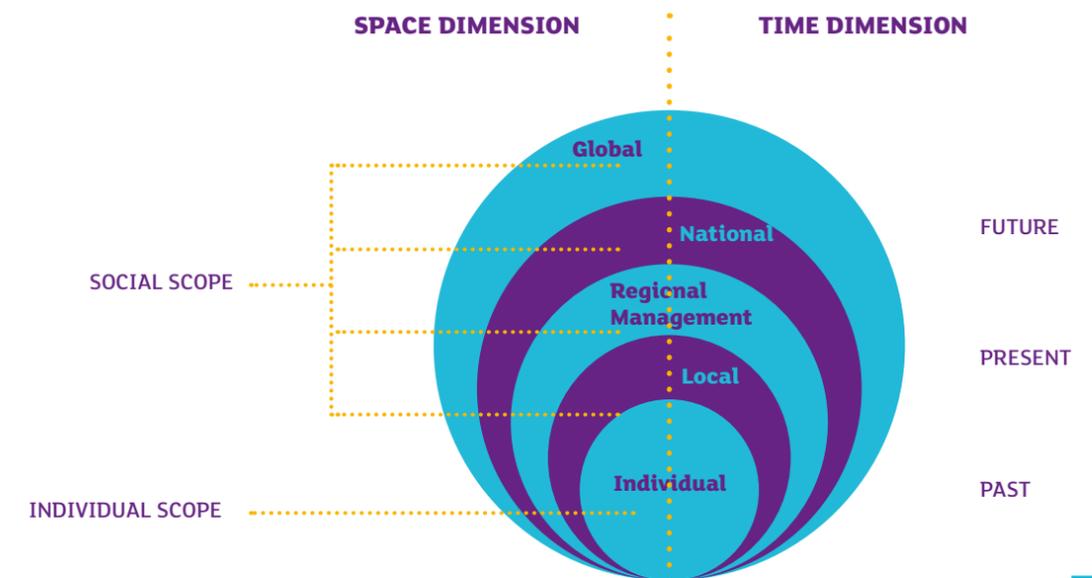
The pedagogical model and the content were conceived based on the Master Plan document “Guidelines for Financial Education in Schools” (2017), developed over the course of a year, with the participation of the Ministry of Education (MEC), the National Union of Municipal Education Directors (UNDIME), the National Council of State Secretaries of Education (CONSED) and several other educational and financial institutions, under the coordination of the Securities and Exchange Commission of Brazil (CVM).

This document forms the basis of and proposes a means to align financial education with the content in the curriculum for Basic Education, grounded on the Law of Guidelines and Bases of National Education and its regulatory statutes. The idea was to offer students information and counsel that favored the construction of consistent financial thinking and the development of more autonomous, conscientious and healthier behaviors. The figure below describes the competencies:



Both the pedagogical model and the collected information allow students to take the lead role in their own stories, helping them to build their life projects, providing clear and well-advised conditions for planning, organizing and achieving the desired future, in connection with the family and social surroundings they are part of, showcasing the transformative force of financial education at different stages of life. This force provokes social mobility, improves the level of savings in the country, reduces indebtedness and emotional stress, among other potential transformations.

The figure below shows how financial education is compromised in the daily routine, which always plays out in two dimensions: time and space. In the dimension of space, financial concepts are approached starting with the impact of individual actions on the social context, in other words, from varying parts to the whole, and vice-versa. This dimension also includes individual, local, regional, national and global levels, which are organized inclusively. Within the dimension of time, concepts are approached based on the idea that decisions made in the present may affect the future. Spaces are traversed by this dimension, which connects the past, present and future through a chain of interrelationships that allows the present to be perceived not only as fruit of past decisions, but instead as the time in which certain initiatives are taken, the results and consequences – positive or negative – of which will be harvested in the future.



A) FINANCIAL EDUCATION IN HIGH SCHOOL



Educational technology was tested in 2010 and 2011, as a pilot project, involving 891 public schools from five Brazilian states (Tocantins, Rio de Janeiro, Minas Gerais, São Paulo and Ceará) and the Federal District, including the participation of some 27,000 students and 1,800 teachers. The result, obtained based on the strict World Bank appraisal method, pointed out a higher capacity among youths to save money, make monthly spending lists, negotiate prices and forms of payment when making purchases, in addition to building personal plans to attain their objectives. In this pilot project, in which the students' parents were involved, there was greater participation amongst all when discussing financial issues, such as family budgets for the home, for example.

The high school books were prepared based on certain pedagogical principles as differentiating features:

- a) Social and environmental responsibility and an ethical attitude as a relevant factor and linked to the behavior of citizens and the concept of active citizenship;
- b) Students' attitudes as multipliers of this knowledge within their social context, especially within the family;
- c) Autonomous and conscientious decision making, considering there are several paths, scenarios and specific realities in dealing with daily financial issues and those in the long-term.



The set of books for high school teachers and students was developed with the support of Unibanco Institute, in collaboration with the Pedagogical Support Group, led by the Ministry of Education, with the special participation of CONSED (National Council of State Secretaries of Education) and UNDIME (National Union of Municipal Education Directors), as well as public and private institutions representative of the financial sector. The content and didactic material that comprise the book are in line with the varying areas of knowledge and school life of youths in high school, which allows teachers to work with financially related content from the daily routines of these students, associated to their phases in life, such as work, entrepreneurship, achievements, desires, protection, investment, family and university.

From 2012 to 2015, AEF-Brasil acted specifically within the first wave of disseminating the Program for Financial Education in High Schools, reaching almost 3,000 schools, building the capacities of over 10,000 teachers in the 26 states of the Union and Federal District. The focus of the first wave of dissemination was to fulfill the agreement with the MEC, at the time of Minister Aloizio Marcadante, regarding testing the material in 3,000 schools across the country, through the delivery of books to students and teachers and capacity building for at least three teachers from every school.

In the second wave of the program's dissemination, from 2016 to 2019, four state hubs were defined in partnership with the departments of Education and federal universities in the states of Paraíba, Minas Gerais, Rio Grande do Sul and Tocantins. The results of the hubs will be presented in detail in chapters 4 to 8.

B) FINANCIAL EDUCATION IN PRIMARY SCHOOL

Considering the inroads made with the pilot project in a high school setting and given the need to also introduce financial education into the early years of basic education, a structured pedagogical project was developed to contribute to the leading current branches of knowledge in schools, triggering thinking with respect to financial education from early on, with the action focused on public schools. Regarding learning, besides contributing to inserting the subject of financial education into different areas of knowledge, it also improves student performance in Portuguese Language and Mathematics, as the content and the pedagogical proposal were defined in a transversal and interdisciplinary manner.



Both the conceptual model, which involves the entire portfolio, and the educative actions proposed were constructed and validated by the representatives of the education and financial sectors, including the Ministry of Education, UNDIME and CONSED, as part of the GAP – Pedagogical Support Group.

Technology was developed based on the reproduction of the idea of cycles and integrating the formal (financial) content into content of a social nature (real daily situations for the student age bracket, involving personal and financial organization, as well as decisions on consumption and savings).

The objectives proposed for the conceptual model for Primary Education were:

- ✓ Educate to ensure active citizenship
- ✓ Teach to consume and save ethically, conscientiously and responsibly
- ✓ Offer concepts and tools for autonomous decision making based on changes in attitude
- ✓ Teach short, medium and long-term
- ✓ Develop a culture of prevention

Books for the 1st to 4th years covered subjects such as: a) production and consumption; b) organization; c) care; and d) planning, which are repeated over the four years, though with social content approached in different manners each year.

The books from the second cycle of primary education – from 5th to 9th years – saw these concepts approached in playful manner through the use of imaginary narratives called for more active participation among students.

In 2015, the program was applied in two municipalities: Joinville (Santa Catarina) and Manaus (Amazonas). It included the participation of 400 teachers, 14,886 students from 651 classes from 201 public schools, with 72 in Joinville and 129 in Manaus.



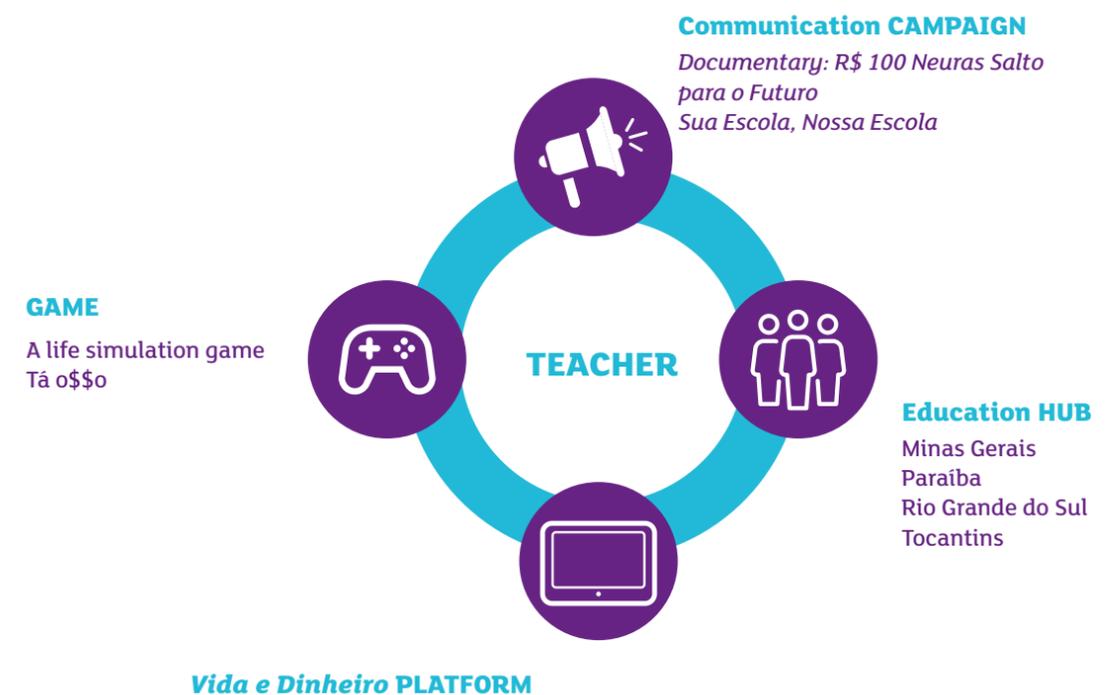
In 2016, results were published for an **Impact Assessment**, conducted by the World Bank. Later that same year, all the books and videos for teacher training were made available at no cost on the website www.vidaedinheiro.gov.br.



As such, since 2016, AEF-Brasil has elaborated and disseminated the Program for Financial Education in Primary Schools, reaching some 1,340 schools, building the capacities of around 8,000 teachers and multipliers in 12 states and impacting over 207,510 students.

In 2017, through a partnership with *TV Escola*, the Financial Education Ecosystem was created to host the new *Vida e Dinheiro* platform, under the coordination of CVM (in the exercise of presiding over CONEF) and operated by AEF-Brasil. The system places teachers at the core of actions as they are seen as the leading vectors to consolidate financial education concepts and to change behaviors in new generations. The figure below illustrates the essence of the ecosystem: a convergence of actions and views, with a focus on teachers as active agents of change.

FINANCIAL EDUCATION ECOSYSTEM



The evident changes in the standard of behavior in terms of using information technology also influenced the proposal for the 2017-2018 period. An increase in online means as work tools, the propagation of social networks and the use of pedagogical games revealed the need for actions in virtual learning environments, seeking alignment with the online culture. As such, a portfolio was developed, comprised of the items described below.



R\$100 Neuras web series

R\$100 Neuras web series

Through thirteen 5-minute episodes, the web series deals with subjects like financial balance, intelligent money management, savings and control of spending, all played out within a country called 'Perrenguistão', a term often used amongst Brazilian adolescents when referring to situations in which financial resources are running low. Content is presented in the voice of a YouTuber called Fernanda (or Fê), a character portrayed by actress Raissa Venâncio, who shares her difficulties in managing her own expenses, offering tips on more effective financial administration. Aimed at youths aged 14 to 18 years old, the web series was produced by Roquette Pinto Comunicação Educativo, in partnership with AEF-Brasil.



Episodes are screened by [TV Escola](#) and are also available on the [Vida e Dinheiro](#) YouTube channel.



Sua Escola, Nossa Escola (Your School, Our School) Documentaries

The TV Escola documentary series already is in its 6th season and, since 2008, it has been showcasing successful experiences with a focus on improving teaching and learning process in public schools. Mathematics, Literacy in Portuguese Language and Scientific Initiation have all been covered in previous season.

Five 26-minute documentaries were recorded entirely at municipal schools in Araguaína (TO), Palmas (TO), Macapá (AP), Joinville (SC) and Manaus (AM), featuring interviews with teachers, parents, students, directors, pedagogical coordinators and other personalities from daily school life.



Making of the *Sua Escola, Nossa Escola* (Your School, Our School) documentaries

Game Tá O\$SO

The game is set in a city and the characters are all represented in a playful way and have fun missions to fulfill. In other words, students acquire knowledge and skills through the mechanics of learning introduced through evolution in the game. While controlling the life of their virtual character, players are challenged to make decisions in simulated situations, regarding issues like financial education, entrepreneurship, sustainability, conscientious consumption, investments, quality of life, personal and professional development.



Game Tá O\$SO

Game development relied on a series of pre-tests and test, beginning with a workshop in 2016 at the *TV Escola* facilities. The event included the participation of professionals from the gaming market, as well as teachers and members of the CONEF and AEF-Brasil. Outcomes showed that

educative games and virtual reality apps have the potential to disseminate the theoretics behind financial education through a playful language adapted to younger generations.

The general and main objective of the “Financial Education Game” was to promote the adaptation and convergence of all the didactic-pedagogical material developed by the ENEF into a language suited to the target public, namely students aged 7 to 18, thereby making the subject more attractive and promoting significant behavioral changes.

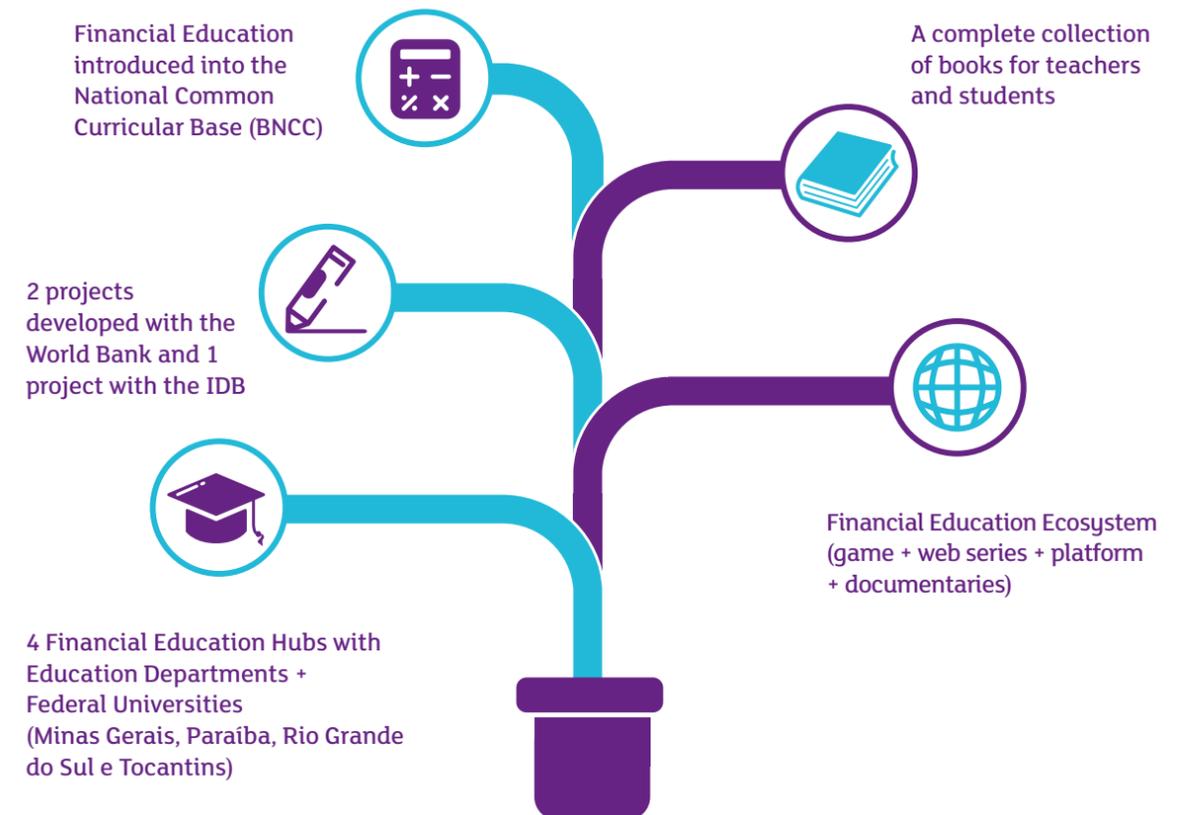
The “gamification” of content was overseen by TV Escola, in conjunction with an internal team and third-party consultant, including specialist in financial education Cássia D’Aquino Filocre and education gaming specialists from Manifesto Games, with all game content approved by the Pedagogical Support Group – GAP.

The game was tested twice in 2018, with 14 professional players in Rio de Janeiro and at two state public schools in Belo Horizonte/MG. Padre João Botelho (Middle School and High School) and Professora Alaíde Lisboa (High School) –, with 542 students and the participation of six teachers, who joined in spontaneously. Below are statements from two participants:

I enjoyed the experience, because it showed that we need to be careful and not overdo it when buying things, so we can enjoy a better financial life and invest in our future. – Jéssica Dandara. 16 years old, from Alaíde Lisboa State School (Belo Horizonte, MG).

[...] I found the game in the mathematics class interesting, because it's a fun way for students to learn certain concepts and those taking the financial mathematics test today will benefit in life, right? They will learn how to consume, to consume conscientiously... I'm participating in a number of groups and they are all really enjoying it: “Ah, that's not important”, “this is too expensive”. – Silvia, mathematics teacher at Padre João Botelho State School (Belo Horizonte, MG).

To the school community, the legacy left by the ENEF has been highly significant and is expressed in the figure below:



PROJECT 2 – FINANCIAL EDUCATION FOR ECONOMICALLY VULNERABLE ADULTS

A survey conducted by Data Popular Institute, in 2008, a result of the development of the National Strategy for Financial Education, revealed several interesting numbers: a rise in consumption-related spending among Brazilians from 74.59% in the 1974-1975 biennium to 82.41% in the 2002-2003 biennium, while the opposite was true for that aimed at investments, falling from 16.5% to 4.76%. As for the domestic financial organization of Brazilian families, the number shows that 36% of those surveyed classified themselves as “spenders”; 54% were unable to honor a debt at least once in their life; and only 31% regularly save for their retirement. The facts and numbers reveal, lastly, that it is necessary to offer the adult public a broad series of guidelines about attitudes and behaviors suited to planning and the use of financial resources, with the goal of leading them to plan their lives and futures more accurately, fostering better conditions to attain their goals and dreams.



A recent survey, called the **Consumer Indebtedness and Default Survey (PEIC, Portuguese abbreviation)**, conducted by the CNC (National Trade Confederation), shows that in the past ten years there has been a 10.3% rise in indebtedness among families. In July 2020, this index was 67.4%, while in July 2010, the number was 57.7%.



Data from Serasa Experian show that the number of **Brazilians in default** reached 63.8 million in January 2020, a 2.6% rise in comparison to the first month of 2019. The volume of people with bills in arrears represents 40.8% of the nation's adult population.

In the face of this situation, knowing how to discuss financial education with the adult population is vastly different to the approach taken with children and youths. If, on the one hand, children and adolescents are linked to a school and undergoing a cognitive learning process with respect to world views, vulnerable adults, on the other hand, are not institutionalized and already have set views that are often deeply entrenched. Challenges include access to this population and the development of technologies that not only result in knowledge about financial education, but which fundamentally influence their choices, through healthy financial attitudes and behaviors.

Based on these findings and the principle of innovation, from 2014 to 2017, AEF-Brasil developed the Financial Education for Adults Program, aimed at building social/education technologies: for retirees with an income of up to two minimum wages and for women part of the **Bolsa Família** (Family Allowance) income transfer program (PBF, Portuguese abbreviation).



The principle of social innovation proposed in these projects is grounded on research into psychological, social and cultural factors that influence financial decisions and the work undertaken in conjunction with these portions of the population, to further understand which factors bolster new attitudes and behaviors⁹. The result is data on what influences the array of financial behaviors, leading to the construction of social and education technologies.

⁹. Behavioral Economics and economic Psychology for the basis for the material produced and, in Brazil, Professor Vera Rita de Mello Ferreira (PhD) is the leading authority on the subject.

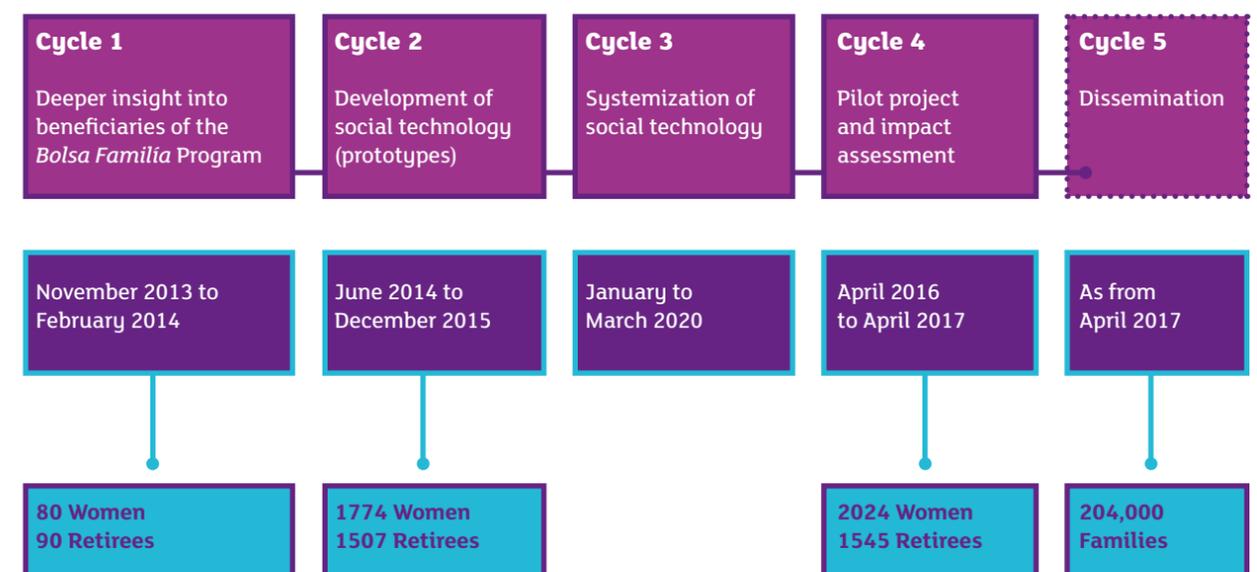
Structured projects foster a deeper understanding of the behavior of the target public and inserts this public into the process of developing technologies, so that the ideas generated form a huge database of financial education technology proposals. The project was focused on impacting 2,700 women and 2,700 retirees, with incomes lower than two minimum wages, in states in three regions of Brazil: North, Northeast and Southeast.

PRODUCTION OF SOCIAL AND EDUCATIONAL TECHNOLOGIES

The involvement of AEF-Brasil is strategically dedicated to developing educational and social technologies, as financial education is still a relatively unknown field within Brazilian society and, despite the existence of a series of actions, it is necessary to conduct a more qualified analysis of the factors that trigger healthy financial behavior. Due to this necessity, AEF-Brasil found it relevant to include the public set to benefit in the stage of developing the social technology, ensuring the outcome was as close as possible to the reality, language and cultural and social context of this target public. The following figure shows the phases fulfilled to finalize the project:

DEVELOPMENT CYCLES FOR SOCIAL TECHNOLOGIES FOR ADULTS.

49 municipalities and + the Brasilia - Federal District in all.



The project was structured in five cycles that provided insight into the context of women benefiting from the *Bolsa Família* Program and retirees, allowed for the definition and testing of social technology prototypes developed with the target public, and the systemization of social technologies, forming the final kit. The application of final social technologies in financial education workshops hosted by CRAS (Social Welfare Center) and the CCI (Senior Citizen Social Center), along with an impact assessment to check if the program generated a positive impact in the lives of the beneficiaries and retirees. And, lastly, the dissemination of social technologies developed for other beneficiaries and retirees living throughout the rest of Brazil. The details of each cycle are discussed below:

Cycle 1 – Deeper insight into beneficiaries of the PBF and retirees: immersion into the context of women beneficiaries and studies of documents from the *Bolsa Família* Program, to better understand how the program works and the pattern of financial behaviors presented by the beneficiaries. Field research lasted four months (November 2014 to February 2014) and included the participation of 80 women in 15 municipalities in the North, Northeast and Southeast of Brazil, in both urban and rural settings, along with riparian communities, resulting in the identification of four specific personas that inspired the production of social technologies and which are highlighted further on.

Immersion into the context of retirees with an income of up to two minimum wages to understand the program's operation and the financial behavior patterns of this target public. Field research ran for four months (November 2013 to February 2014), with 90 participants in 12 municipalities in the North, Northeast and Southeast, in both rural and urban environments.

Cycle 2 – Development of social technology (prototypes): based on the findings from Cycle 1, ideas were generated about how to contribute to reducing and preventing over-indebtedness. Based on vulnerability criteria for application and dissemination, ideas were selected and turned into prototypes, in other words, initial samples that could become a social technology, providing demonstrations of the content, language and format. During this cycle, three rounds of prototyping took place with the prototypes refined in each round, excluding or incorporating until reaching the final version.

Cycle 3 – Systemization of social technology: at the end of the round of testing, the resulting social technology was systematized and made available in formats that facilitated dissemination and adopted by governmental bodies

and voluntary sector entities. All the material was provided at no cost through a website, offering public access to social technologies and the means to use them.

Cycle 4 – Pilot project and impact assessment: with the goal of replicating and incorporating the social technology into existing programs and policies, a pilot study was undertaken involving 2,024 women in 9 municipalities and 1,545 retirees in 12 municipalities. The technology was applied by local agents, followed by processing and control groups, passing through the first assessment, which collected data on the level of knowledge pertaining to financial education and about specific financial behaviors – indebtedness. After six months, a new assessment was conducted, seeking the difference between the processing and control groups.

Cycle 5 – Promotion of the program: provide the social technologies to base line organizations that cater to the target public and develop trainers to promote the program in vulnerable areas, leveraging project sustainability.

The stages involving interaction with the end beneficiary and technical rigor in the development of the technology allowed AEF-Brasil to share the relevant results so that other organization could become dissemination partners. An example of these technical aspects is the development process for an educational program or action as an experiment or a test with criteria guided by selection, monitoring, assessment and systematization of the experience, so as to ensure the identification of a model with lower application costs and a higher certainty of positive effects.

Pilot projects geared specifically towards two adult publics were aimed at developing, testing, assessing and systematizing social technologies for financial education that could be adopted and replicated at a low cost by ministries and social, private and public organizations throughout Brazil.

a) Target Public: women beneficiaries of the *Bolsa Família* Program

The *Bolsa Família* Program reached 14,283 million families throughout the country in July 2020, according to data from the Ministry of Social Development (MDS, Portuguese abbreviation). Of the total, more than 90% of the people registered with the program are women. Despite being targeted at families, in most cases, the person legally responsible is the woman. This is not only true in Brazil: around the world, initiatives for income transfer, micro credit, among others, have been highlighting the role of women in family budget management. Women responsible for the family allowance experience employment instability, worsened by low levels



of education, which triggers an unstable flow of income, thereby reiterating the importance of financial education among this portion of the population.

In one of the project execution phases, four personas were identified among the target public: the dreamer (lacks responsibility in terms of spending due to impulse buying, with the challenge here to encourage more mature and conscientious financial decisions while providing the necessary tools); the visionary (generates wealth and income and generates risks and investments, with the challenge, in this case, to provide support in their expansion and protection of their equity while encouraging their role as a multiplier); the survivor (limited resource optimization, with the challenge to enhance the scarce talent of resource management and build their capacity); and the warrior (focused on the short-term, choices, with the challenge being to develop a perception of risks and guidance so they can plan for the medium and long-term).

The analysis of the Cartesian plane below considered the recognition of a dream, or lack thereof, and the inertia and movement in specific situations.

IDENTIFICATION OF THE PERSONAS RELATIVE TO THE WOMEN BENEFICIARIES OF THE PBF



The social technologies and the trainers to build the capacities of technicians were prepared in a way to encourage the profiles of beneficiaries represented by these *personas* and to overcome obstacles and identify and use their strengths to generate reflections on their behaviors and changes in habits, developing financially educated citizens.



b) Target Public: retirees earning up to two minimum wages in situations of vulnerability

The global trend is that the world’s elderly population is set to grow. According to the United Nations (UN), the global number of elderly people – those aged 60 and over – is projected to rise from 962 million in 2017 to 1.4 billion in 2030 and 2.1 billion in 2050, all over the world, except Africa. However, in Brazil, of note is that retirees have contracted many debts, especially through the poor use of consigned credit. These people also have problems dealing with bureaucracy and are frequently approached by family members for loans simply because they have a fixed income. In many cases, this entire situation leads to over-indebtedness among low-income retirees and this is the leading point to be combated through the dissemination of financial education among this public.



Four *personas* were also identified for the retirees, each facing challenges and with specific strengths always listed on a Cartesian plane, shifting towards the higher or lower limit in relation to the other and whether the action is driven by reflection or impulse. They are:

**IDENTIFICATION OF THE PERSONAS
RELATIVE TO THE RETIREES**



The social technologies and the trainers to build capacities were prepared in a way to encourage these *personas* to overcome obstacles and identify and use their strengths to generate reflections on their behaviors and changes in habits, developing financially educated citizens.

The legacy of the program for adults resulted in an impact in 11% of the Brazilian municipalities, all of the states and the Federal district with almost 2,000 technicians from CRAS (Social Welfare Reference Center) and CREAS (Specialized Social Welfare Reference Center) trained, and a total of 218,000 adults impacted.

**AEF-BRASIL ACHIEVEMENTS
WITH THE PROGRAM FOR ADULTS**



Following this effort, AEF-Brasil can further be credited with the development of 43 social technologies for adults in situations of social vulnerability, created, tested and approved with this public over a period of two years of work. The recognition of the quality of this material is evident when learning it is used by the Ministries of the Economy and Citizenship in social programs of a national scope, such as the *Progridir* (Progress) and *Renova* (Renew) projects, organized in partnership with Renova Foundation in the area struck by the collapse of the dam in Mariana, Minas Gerais, in 2015. Furthermore, these technologies and methodologies are available to civil society at no cost, especially when considering the estimate of 35 million retirees and 19 million women enrolled in the *Bolsa Familia* Program in Brazil in 2020.

PROJECT 3 – ENEF WEEK

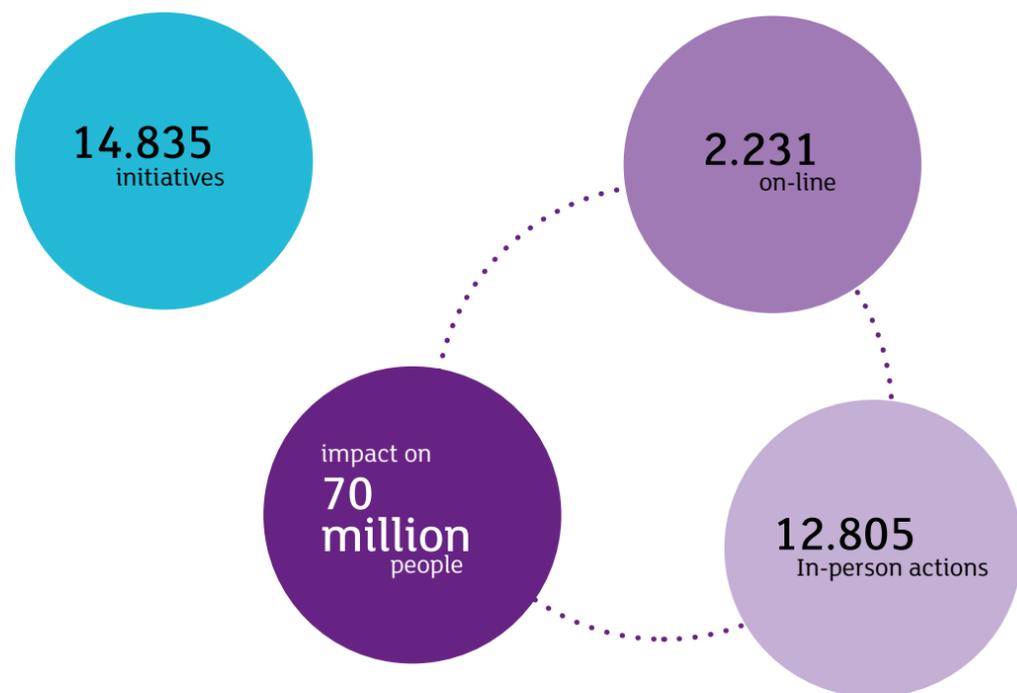
AEF-Brasil has been actively participating during National Education Week since its first edition in 2014, both in organizing the event and in promoting actions through external media (creation of art for social media platforms and press consultancy). The ENEF Week is hosted each year in May and, besides in-person actions, AEF-Brasil was also responsible for raising funds for investments in the development and maintenance of the official ENEF Week website up to 2019.

The numbers attest to the relevance and growth of the ENEF Week. The first edition, in 2014, tallied over 170 events, both in-person and online, in 21 cities from 17 Brazilian states and the Federal District. In 2015, hosted during the same period as Global Money Week, there were 505 in-person and online events, impacting thousands of citizens.

In 2016, there were 1,044 actions – in-person and online – organized by 153 institutions and which impacted some 1.3 million people, in 458 municipalities throughout Brazil. In 2017, the number rose to 1,826 actions – in-person and online –, a 75% rise in relation to the year before, with the participation of 1.9 million people through 3,781 events.

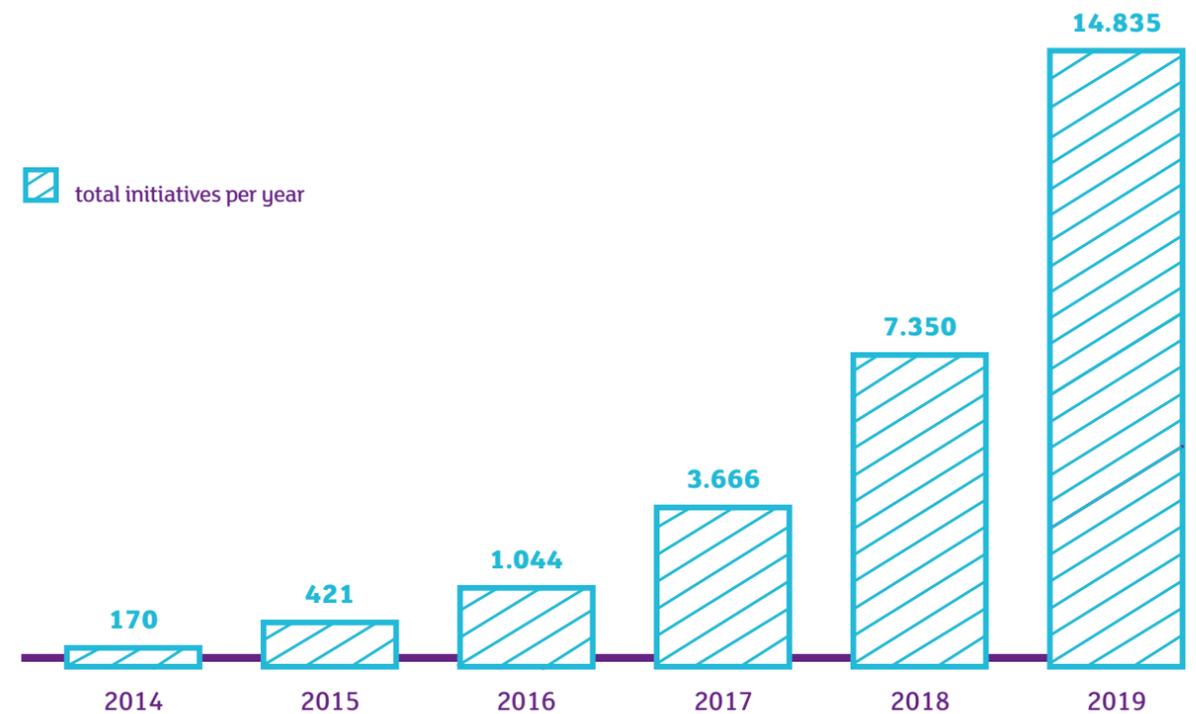
The year 2018 saw 7,350 actions, almost double the year before. The initiatives involved 344 institutions and supporters that promoted themes related to personal finance, conscientious consumption, social security, insurance and a balanced relationship with money. The actions reached all 26 Brazilian states and the Federal District, with in-person and distance activities, impacting 4 million people.

6TH ENEF WEEK - 2019



The 6th ENEF Week, which occurred in 2019, broke records for the number of events and public reached. There were 14,835 initiatives and a total public of 70 million people. The events were split into 2,030 on-line and 12,805 in-person actions. The majority of these initiatives – 2,231 – played out in schools, showing the growing importance attributed to the issue amongst youths. The graph below shows the evolution in initiative numbers presented during the ENEF Week since 2014.

EVOLUTION OF ENEF WEEK INITIATIVE NUMBER BY YEAR



National Financial Education Week – ENEF Week – is an important initiative to popularize and disseminate financial education in the country, among specific publics and regions and with different players, from both private and public initiatives. It is, without doubt, Brazil’s biggest project focused on financial education in number of participants and in scope of actions. Simply by democratizing information, the ENEF Week has already fulfilled a relevant role that, to AEF-Brasil, is of even greater value, as each year has become an opportunity to shine a light on the initiatives undertaken, especially in public schools.

PROJECT 4 – THE ENEF SEAL AND MAPPING OF NATIONAL FINANCIAL EDUCATION INITIATIVES

The National Mapping of Financial Education Initiatives and the ENEF Seal are important branches of knowledge and recognition for those committed to disseminating financial education. These projects were aligned with the general objectives of AEF-Brasil’s Plans of Action in compliance with the agreement formed with the CONEF, such as, for example: bolstering of the network, promotion of the subject throughout the country, incentives for those already hosting incentives, in addition to the encouragement of new actions/participants.

In terms of mapping, two studies were conducted in 2013 and 2018, with results showing the scenario of the topic in the country with details that formed the foundation for new actions, or complementing those already existing, and are essential to comparative analyses and the generation of indicators. The ENEF Seal recognizes initiatives that are in line with the ENEF objectives and which foster visibility:



ENEF OBJECTIVES



Act based on **information, guidance and training.**



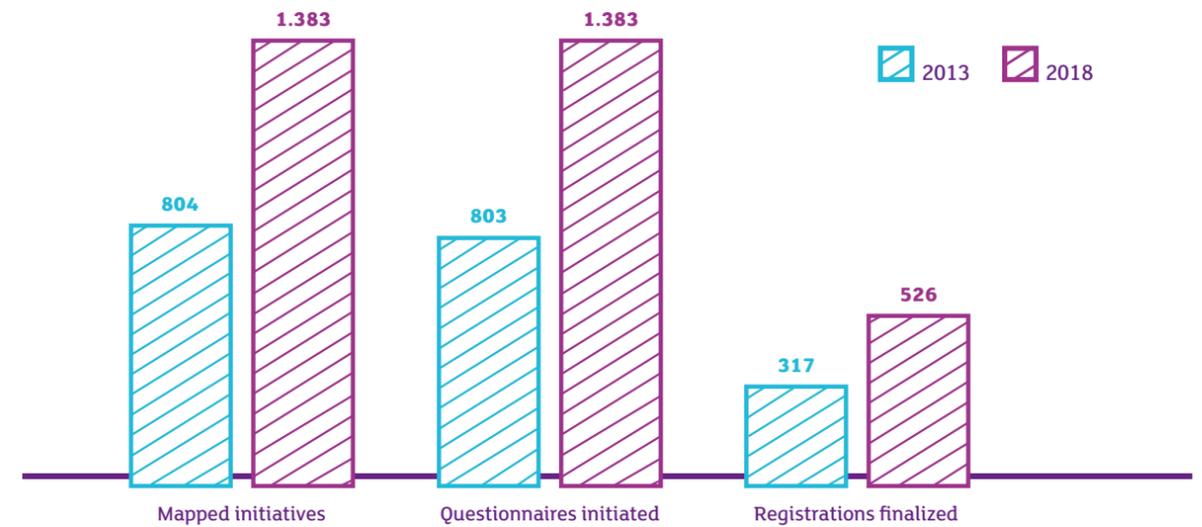
Gratuity of actions and **public interest** above all else.



Centralized management, **decentralized** activities

In the second mapping effort, in 2018, 1,383 initiatives were identified. Of these, 437 were considered eligible for the ENEF Seal and invited to participate in the recognition process.

MAPPING OF FINANCIAL EDUCATION INITIATIVES



- a) In 2018, there was a 72% increase in mapped initiatives compared to 2013.
- b) In 2018, 72% more questionnaires were initiated than in 2013.
- c) In 2018, 66% more registrations were completed than in 2013.

MAPPING OF INITIATIVES REGISTERED AND APPROVED FOR THE ENEF SEAL



- a) Number of initiatives mapped and registered at the 2nd edition in 2018, with an increase of 268% compared to 2013.
- b) Number of initiatives approved at the 2nd edition in 2018, with an increase of 650% compared to 2013.



**EXAMPLES OF INITIATIVES THAT EARNED
THE ENF SEAL AT THE 2018 EDITION:**

Supervising Institution	Initiative	Target Public
School Community Association of Beira R State School, in Porto Nacional (TO)	Take care when spending, your money may be ending!	School community
Brejão State School Support Association	Brejão State School Initiative: "saving change"	Students from Brejão State School
School Board Association of Vila União School	My money, my choice!	School community
Junior Achievement Association of Brazil	My money, my business	High School students
Professora Eladir Skibinski Municipal School, in Joinville (SC)	National Financial Education Week	School community of the Professora Eladir Skibinski Municipal School, in Joinville (SC)
Children's Institute	Citizen Space Project	Youths and adults in situations of social vulnerability, in Rio de Janeiro and São Paulo
Federal Institute of Education, Science and Technology of Rio de Janeiro – Belford Roxo Campus	Financial education for youths and adults	Youths and adults from the Metropolitan Region of Rio de Janeiro
NGO Bem Gasto	Well Spent Project	Youths and adults
Plan International Brasil	Generation Project: social education and financial education leveraging life projects	Boys and, especially, girls aged between 11 and 14 years old, from 26 public school in six cities simultaneously, namely Teresina (PI), São Luís (MA), São José do Ribamar (MA), Paço do Lumiar (MA), Codó (MA) and Jaboatão dos Guararapes (PE).
Universidade Federal de Itajubá (MG)	How much is money worth to youths? Construction and consolidation of financial education among university students	University students
Universidade Federal da Paraíba	Financial education for life	From service providers to society, both academic and external publics.
Universidade Federal do Pará	GEFAM and the application of financial education	The elderly and indigenous communities
Vera Rita Ferreira – Institute of Economic Psychology and Behavioral Sciences	Drops of economic psychology	Interest public in general

NUMBERS REACHED BY AEF ACTIONS



With adults:

- Around 218,000 adults impacted;
- In-person workshops at 960 CRAS and CREAS units;
- 2,000 technicians and welfare assistants trained.



In the school community:

- 7,500 schools impacted;
- 25,000 teachers and technicians trained;
- 703,000 students reached;
- 30,000 families impacted.



In Brazil:

- Workshops in 26 states and the Federal District;
- 11% of Brazil's municipalities reached

In this chapter, we present the leading achievements by AEF-Brasil in its fight to defend financial education in the country. As shown in the figure above, AEF-Brasil has contributed to the insertion of financial education as a transversal theme in the National Common Curricular Base, in addition to having developed an on-line portfolio for students and teachers. During this journey, two other projects were conducted in partnership with the World Bank and another project in conjunction with the Inter-American Development Bank – IDB; a financial education ecosystem was created, which includes an on-line game, a web series, a digital platform and a documentary series; and, lastly, four Financial Education State Hubs were established, in partnership with federal universities and state departments in Tocantins, Rio Grande do Sul, Minas Gerais and Paraíba.

REFERENCES

FERREIRA, V. R. M. - Confluência de Fatores em Educação Financeira, Políticas Públicas e Mudança de Comportamento – O “Quinteto Fantástico”. 2017 - FGV-SP

LUSARDI, Annamaria. Financial literacy: Do people know the ABCs of finance? Em Public Understanding of Science, 2015. Disponível em <http://journals.sagepub.com/doi/10.1177/0963662514564516>.

MULLAINATHAN S. & SHAFIR E.: Escassez: uma nova forma de pensar a falta de recursos na vida das pessoas e nas organizações. Rio de Janeiro: Best Seller, 2016.

<https://www.fincap.org.uk/en/articles/what-is-financial-capability> - Money and Pension Services. (2020) UK Strategy for Financial Wellbeing.



Chapter 3

The participation of the private sector and the importance of multi-sector alliances for the development of the ENEF

Thiago Godoy Nascimento¹⁰

The National Strategy for Financial Education, created in 2010 through Federal Decree 7,397/2010 and renewed by Federal Decree 10,393, was developed as a multi-sector mobilization initiative with the goal of promoting financial education actions in Brazil.

As a multi-sector strategy, a governance committee was created, including the participation of both public and private sector representatives. The participation of the private sector in the development of the ENEF occurs through an array of actions, such as the construction of proprietary education projects and participation at the National Financial Education Week, as well as support for education projects organized by civil society organizations. However, it also arose through a more direct need, along two main lines. The first initiated in 2012 with the constitution of AEF-Brasil (Association of Financial Education in Brazil, a Civil Society Organization of Public Interest – or OSCIP in the Portuguese acronym used – created to develop and scale projects involving financial education and developed according to the premises of the ENEF, namely: free access to beneficiaries and no form of product or service recommendation. The second was direct sponsorship of projects developed by AEF-Brasil. From 2012 to 2020, a series of strategies and projects were implemented by AEF-Brasil, each in partnership with and funded by major companies, international entities and investor funds. The projects are detailed in Chapter 2 of this book, highlighting the diversity of publics and the initiatives developed by AEF-Brasil.

10. Thiago Godoy Nascimento holds a master's degree from the Getúlio Vargas Foundation. From 2014 to 2019, he was at the head of resource Mobilization and Partnerships for AEF-Brasil. He is currently the head of Financial Education at XP Inc.

THE ROLE OF MULTI SECTOR ALLIANCESS

The mobilization of resources for social projects is a practice that has been developing each year in parallel with the professionalization of the voluntary sector, with better structured entities that are more determined and focused on their concrete objectives to ensure the sustainability of institutional projects.

Even so, there are cultural hurdles to be overcome, from more intense relations with the private sector to greater participation from civil society in this process. The donation culture in Brazil is still at an early stage. According to the World Giving Index, a global study that measures the culture of donation in 126 countries with over 1.3 million people, Brazil is ranked in 74th among countries that donate.



BRAZIL'S POSITION IN THE GLOBAL RANKING



Source: CAF/Idis

Regarding the size of the population, the GDP and the disparity of income in Brazil, it is essential that the donation culture be amplified. For this to happen, we need civil society organizations to be regulated fairly, consistently and transparently. Additionally, it is mandatory to increase tax incentives for donations, to promote civil society as an independent voice in public life and respect the rights of non-profit organizations, among other measures.

A strong donation culture also results from the development and bolstering of multi-sector alliances. The involvement of the three sectors of the economy and their alignment for the common good enhance the impact of social projects within society. Core issues like education, health, poverty and inequality must be faced with the participation of society as a whole.

One of the biggest challenges among Brazilian non-profit organizations is the development and diversification of resources to guarantee effective action within civil society. Thus, increasing source of financing and resource has become necessary to both the survival of entities and so they may be effective in their organization mission in different areas. Social organizations raise funds in several manners, from direct donations from individuals to partnerships with companies, foundations or even international entities. The main models of fund raising in Brazil are:

- 1) Direct donations from companies
- 2) Donations from foundations and corporate institutes – bids
- 3) Incentive laws
 - a) Funds from children and adolescent rights
 - b) Cultural and artistic projects
 - c) Audiovisual activities
 - d) Donations destined for teaching and research institutes
 - e) Sports incentives
 - f) The elderly
- 4) Direct donation to entities
- 5) Donations destined for teaching and research institutes
- 6) Income generating activities
 - a) Sale of products and services
- 7) Equity funds
- 8) International foundations and organizations
 - a) Calls for Tender
- 9) Fund raising with the government
- 10) Fund raising with individuals
 - a) Telemarketing
 - b) Face-to-face
- 11) Volunteer recruitment
- 12) Campaigns
- 13) Fund raising events

Throughout its history, AEF-Brasil has relied on funds raised through direct donations from companies, foundations and institutes. Despite having staged several smaller events to recruit partners, direct access to financiers through the presentation of proposals has proven the most efficient. The establishment of partnerships between participating private organizations and the sponsors of the ENEF programs was chiefly through corporate social responsibility (CSR). The core premise of CSR is that companies should take on a bigger role in society, which is not merely restricted to maximizing profit and creating wealth. (BERTONCELLO; CHANG JÚNIOR, 2007).

By practicing corporate social responsibility, also referred to as **corporate citizenship**, companies foster awareness about the type of impact they are causing in all aspects of society, including economic, social and environmental effects.

In practice, CSR is based on the premise of companies adopting measures to guarantee positive social and environmental effects associated to their business operations. Companies actively engaged in CSR activities weigh up the impact of how they operate in the world to incorporate means to deal with cultural and social issues, with the aim of benefiting both in the process. The **CSR** models have the potential to increase business and revenue, while also promoting changes and progress throughout, which generally involves helping people with little or no resources.

Towards this end, it is important to establish the difference between CSR and philanthropy, as, when correctly implemented, CSR should become rooted in the values and culture of the company and positively affect the way the company does business, becoming inherent to the mission and the message of an organization and also occupying a place of prominence in marketing and advertising.

Financial education and inclusion lead to an increase in the population's financial capacity (CYFI, 2016), with this agenda already in line with globally outlined objectives like the Sustainable Development Goals (SDGs) (ASSEMBLY, 2015), developed by the United Nations (UN), highlighting the urgent need to promote improvements to individual well-being, seeking to redefine the production and consumption patterns of contemporary society (ROBERT; PARRIS; LEISEROWITS, 2005).

As mentioned in Chapter 1, many of the objectives part of the Sustainable Development Goals promoted by the UN in September 2015 express

alignment with the premises of building a financial education network, as shown below. One of the guiding principles is Goal 17, which reiterates the importance of forming partnerships in favor of these goals.

The agendas of organizations, governments and civil society are mobilizing to jointly act in attaining these objectives. Mobilization efforts and mapping stakeholders are strategic in contributing to this agenda.

The agendas of organizations, governments and civil society are mobilizing to jointly act in attaining these objectives

Guiding principle:

Goal 17. – Create incentive for and promote effective public, public-private and civil society partnerships, based on the experience garnered through resource mobilization strategies fruit of these partnerships.

Goals related to education and financial inclusion

Goal 1.4 – By 2030, guarantee that all women and men, especially the poor and vulnerable, have equal rights to economic resources as well as access to basic services, property and control over land and other forms of ownership, inheritance, natural resources, suitable new technologies and financial services.

Goal 2.3 – By 2030, double agricultural productivity and income for smallholdings farmers dealing in food, especially women, indigenous people, family farmers, herders and fishers, including through safe and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities to add value and non-agricultural employment

Goal 5.a – Generate reforms to ensure women have equal rights to economic resources as well as access to property and control over land and other forms of ownership, financial services, inheritance and natural resources, in accordance with national law.

Goal 8.10 – Bolster the capacity of domestic financial institutions to provide incentives to expand access to banking, financial and insurance services for all.

Goal 9.3 – Increase access for small industries and other companies, especially in developing nations, to financial services, including the right to accessible credit, and their integration into value chains and markets.



Goal 10.c – By 2030, reduce costs for migrant transfer transactions to less than 3% and eliminate “transfer brokers” that charge in excess of 5%.

In line with the objectives listed above, AEF-Brasil created a mentoring group during the biennium of 2017-2018 comprised of experienced professionals from partners and members of the ENEF, seeking to exchange expertise on the following topics:

- a) Introduce outside knowledge into the organization
- b) Expand comprehension of trends in the three sectors of the economy
- c) Propose solutions to tactical and operational problems
- d) Oxygenate the organization with ideas and insights based on different points of view
- e) Encourage and support the exploration of new ideas and projects
- f) Contribute to the establishment of an international network in reference to financial education
- g) Contribute with updated and appealing content

These articulations are geared towards involving partners in more than just sponsorship, instead incorporating their respective expertise to add knowledge and increase the success of projects led by AEF-Brasil.

THE CONTEXT OF FINANCIAL EDUCATION

The importance of financial education has been under discussion for some time among the different players in the economic sectors. Financial literacy, in the nomenclature more commonly used internationally, entails the essential abilities to empower citizens, in a way that increases the offer and improves financial literacy of populations, according to Gale and Levine (2010), and are essential responsibilities that the developers of public policies should aim to fulfill.

According to these authors, literacy will promote greater security both during a person’s professional life and later, during retirement. Lesser financial vulnerability fostered by greater literacy in this area provides economic and social gains not only for the individual, but for society as a whole (GALE; LEVINE, 2010).

Financial literacy began taking on significant relevance as from the middle of the first decade of this century. The Organisation for Economic Co-operation and Development (OECD) created the International Network on Financial Education (INFE), an institution that directly supports public policy developers and their representatives, for the implementation of their national strategies for financial education. The INFE also promotes direct support in the development of innovative methodologies to expand financial literacy among these populations (OECD, 2019).

This network was directly developed through the articulations aimed at mitigating the impacts of the 2008 global economic crisis, geared towards reinforcing the protection and inclusion of consumers, as well as their financial stability (OECD, 2015).

The International Survey of Adult Financial Literacy Competencies, promoted by the OECD/INFE, showed that the current economic context calls for citizens to possess knowledge, skills and behaviors necessary to safely navigate an increasingly complex economic environment.

The exceptionally low levels of literacy mapped by the OECD (2015) reiterates the need to implement programs like these on a global scale, with the participation of several sectors of society.

The National Strategy for Financial Education created in Brazil is in line with the international guidelines from the leading forums, like G20, which see the constitution of a multi-sector national strategy as an efficient vector to guarantee long-term impacts.

This strategy is considered a reference in terms of its capacity to combine joint efforts from several sectors. The ENEF, created with the clear purpose of expanding the offer of financial education in Brazil and to contribute to “leveraging citizenship, the efficiency and solidity of the national financial system and to ensure conscientious decision-making among consumers” (ENEf, 2010), stands out in terms of involvement in multi-sector alliances, chiefly by giving the private sector the strength need to play a lead role.

This network was directly developed through the articulations aimed at mitigating the impacts of the 2008 global economic crisis

AEF-BRASIL RESOURCE AND PARTNER MOBILIZATION GUIDELINES

AEF-Brasil has established premises, principles and guidelines to steer the resource mobilization actions necessary to attain the goals of the mission and the institutional objectives provided in its articles of incorporation.

AEF-Brasil understands the mobilization of resources as the set of actions undertaken by the organization to obtain material, technical, human and financial support necessary to the execution of its institutional objectives, as well as the sources and means of financing for programs and projects. As such, all those involved in AEF-Brasil's resource mobilization actions must observe the principles of ethics, integrity, legality, transparency and gratuity of educational actions proposed.

The premises of AEF-Brasil resource mobilization actions are the quest for diversification in the sources of financing and resources; the autonomy of AEF-Brasil in fulfilling its mission and institutional objectives and in making decisions related to content, programming or recruiting professionals and specific companies; the mobilization of resources as a means to implement actions and never as the main purpose, as the support received may, within the contractually established limits with partners, reference or insert the logos of supporters, while the promotion and/or recommendation to contract or purchase products or services from said partners is strictly prohibited.

The premises of AEF-Brasil resource mobilization actions are the quest for diversification in the sources of financing and resources

The mobilization of resources and partners established by AEF-Brasil is chiefly aimed at the promotion of the organization's financial sustainability, aimed at attaining the social objectives, by bolstering its institutional capacity and the coordination and execution of programs or projects, whether its own or those of third parties. After forming these partnerships, the organization's resource

mobilization department and executive superintendence sought to promote the development of lasting and transparent relationship.

Depending on the established form and the contract signed with the AEF-Brasil, individuals and organizations involved can be treated as sponsors, investors, supporters, donors, collaborators or another suitable nomenclature, while the organization accepts resource aimed at AEF-Brasil programs or projects, whether its own or those of third parties, from

individuals or organizations, as long as the mobilization of these resources is not in opposition to the mission, institutional objectives and nature of AEF-Brasil and existing laws. All partnerships developed and formed by AEF-Brasil received support and authorization from the Administrative Board, while each year, the organization publishes a report on the activities and financial statements at the close of the fiscal year on its website or other institutional communication pieces.

This Civil Society Organization of Public Interest renders accounts for all mobilized resources through terms of cooperation, partnerships, agreements, among other such arrangements, according to pertinent legislation and in line with the established guidelines. Within the scope of terms of cooperation, partnerships, agreements and/or arrangements formed with the Public Authorities, it is subject to monitoring and inspection from regulatory bodies.

The alignment of resource mobilization strategies and actions with all involved in AEF-Brasil governance and management process and the establishment of parameters on how these sponsors and donors can invest in the institution's projects are a key process to initiating resource mobilization.

Later, it was necessary to define the best approach for each of the projects, keeping in mind the identification of sponsor interests and values, as well as fostering appreciation for the cause of financial education.

In terms of resource mobilization, one of AEF-Brasil's principal guidelines has always been quest for partnerships with organizations that recognize the ENEF as a genuine Brazilian action to disseminate the subject of financial education, seeing its support for action plan projects as a means to contribute to leveraging the strategy.

This way, AEF-Brasil sought support from organizations that see financial education as a way to improve the quality of the future relationships with their consumers and clients, investing in projects as a part of their social responsibility, and that believe that financial education contributes to the economic and social development of individuals and families, while simultaneously promoting active citizenship and investing in projects as a philanthropic action.

In terms of resource mobilization, one of AEF-Brasil's principal guidelines has always been the quest for partnerships with organizations that recognize the ENEF as a genuine Brazilian action.

There is also an opportunity for tax benefits, as AEF-Brasil is classed as an OSCIP (Civil Society Organization of Public Interest), which allows its supporters operating under the real profit accounting system to deduct part of the donation or sponsorship provided (at a limit of 2% of the operating profit).

It is important to reiterate that all sponsors focus their resources exclusively on the development of projects. As previously mentioned, the members of the Administrative Board act as sponsoring partners, guaranteeing human and institutional resources necessary to coordinate AEF-Brasil.

OPPORTUNITIES AND CHALLENGES IN RESOURCE MOBILIZATION

With the goal of identifying opportunities and challenges for AEF-Brasil in relation to projects presented to potential partners and sponsors, in 2016 the resource mobilization department held a study whose result was a determining factor in aligning entity actions and the development of the plan of action for the 2017-2018 biennium, as well as the planning of resource mobilization actions in order to attain the objectives outlined in this plan.

In the diagnosis conducted with more than 120 potential sponsors – companies, institutes, foundations and international organizations, among others -, showed that financial education is considered extremely important: in 70% of the organizations there is space for the

development of a financial education project. However, companies remain hesitant to make direct donations, a situation worsened by the possibility of only partially deducting the amount from income tax.

A diagnosis conducted with more than 120 potential sponsors, showed that financial education is considered extremely important

As a result of this field work, the organization mapped the organization points that make alliances and partnerships with companies appealing, with the following considered strong points: a solid cause seen as strategic to the nation's development; the fact that AEF-Brasil is a non-profit organization working with financial education, though without specifically representing a financial institution, instead, a large and articulated group, encompassing the public and private sectors; the fact that AEF-Brasil has the capacity to scale and multiply initiatives and is recognized for its responsibility, transparency and good-standing.

CONSTRUCTION OF A FINANCIAL EDUCATION ECOSYSTEM

During the first semester of 2016, two actions conditioned the restructuring of the Program for Financial Education in Schools. In partnership with IBM Latin America, specifically with the department of Citizenship and Corporate Affairs, workshops were staged by AEF-Brasil's team, which resulted in the development of a strategic plan, the objective of which was to directly respond to the needs of the organization, in a way to define updated guidelines for the creation of new projects, enhancing management tools and practices, while also structuring new resource mobilization models.

In the second semester of 2016, AEF-Brasil, in collaboration with CVM and other members of CONEF, developed an innovative strategy to form a national financial education network – to be structured in state hubs involving federal universities, Education department and AEF-Brasil –, which fosters the formation of teachers through financial education extension programs, to qualify them to execute financial education in schools.

The premises of this network were:

- a)** Provide quality and inclusive training in financial education through partnerships between AEF-Brasil, universities and education departments
- b)** Appreciate teachers as central agents in developing change and leaders in disseminating the subject
- c)** Increase the financial proficiency of participating teachers
- d)** Foster a critical mass with qualified teachers to disseminate financial education
- e)** Leverage the creation of scientific expertise with the production of articles, dissertations, etc.
- f)** Encourage the development of a culture of financial education in schools of participating teachers under instruction
- g)** Create an online learning environment with interactive tools, publications and spaces for exchanging experiences and expertise
- h)** Allow for the certification of participants with approval from promoting universities

As detailed previously, besides developing this network, AEF-Brasil created an online strategy and visually reformulated the *Vida e Dinheiro* portal, with the aim of increasing access and to democratize financial education.

PARTNERSHIPS DEVELOPED AND INSTITUTIONAL REPRESENTATION 2012-2019

With the aim of increasing financial education in the country, AEF-Brasil is involved in several operational fronts. Whether through the development and operation of projects financed through the private sector, or through the participation in and contribution to national and international events, the organization has positioned itself within the financial education scenario and articulated with the biggest players in this ecosystem.

The organization has led multi-sector mobilizations around the promotion of funding education initiatives in the country. Some of the leading results include the development of solid and sustainable partnerships with the following organizations.

INSTITUTIONS AND SPONSORED PROJECTS

Institution	Sponsored Project	Period
Abecs	Financial Education Ecosystem	2017-2018
Banco Bradesco	Elementary School Education Pilot Project	2015
	Financial Education Ecosystem	2017-2018
Inter-American Development Bank (BID)	Women Beneficiaries of the <i>Bolsa Família</i> Program	2013 to 2016
Banco Itaú	Financial Education in High Schools	2011
	Financial Education Ecosystem	2017-2018
World Bank	Financial Education in High Schools	2011
	Elementary School Education Pilot Project	2015
Brazilian Development Bank (BNDES))	ENEF Week Event	2016
Citibank Foundation	Women Beneficiaries of the <i>Bolsa Família</i> Program	2015 to 2019
Fundação Itaú Social	Financial Education in High Schools	2011
	Financial Education Ecosystem	2017-2018
Google	Institutional Support	2017-2018
IBM	Institutional Support	2017-2018
Instituto Samuel Klein	Elementary School Education Pilot Project	2015

Institution	Sponsored Project	Period
Instituto Unibanco	Financial Education in High Schools	2011
	Financial Education Ecosystem	2017-2018
KPMG	Independent audit	2015 a 2019
Serasa Experian	Financial Education Ecosystem	2017-2018
TV Escola	Financial Education Ecosystem (2017 -2018)	2017-2018
Visa do Brasil	Financial Education Ecosystem	2017-2018

INSTITUTIONAL REPRESENTATION

In 2008, during the economic crisis, countries part of the OECD officially recognized the importance of financial education with the launch of the International Network on Financial Education (OECD/INFE). The main objective of this network is to develop financial education methodologies, gauge their impacts and share experiences and best practices so that organizations and governments can implement programs and scale up the dissemination of financial education. Together with governments, the OECD also promotes the implementation and effective monitoring of these programs.

The OECD/INFE Network is comprised of members from more than 125 countries and supervised by an Advisory Board. It disseminates the work undertaken in several manners, including through the production of global and regional reports, and through the organization of high-level seminars, round table meetings and technical workshops.

Articulated with the OECD, AEF-Brasil was present institutionally at events in Moscow (2019) and Paris (2017-2018), in addition to having presented its strategy for building a Financial Education Ecosystem at the 2017 GFLEC – Global Financial Literacy Excellence Center – event at George Washington University, in the United States of America, coordinated by Professor Anna Maria Lusardi, PhD.

To follow is a list of international events in which the AEF has participated.

Event	Participation
Encuentro Sparkassenstiftung Latinoamérica y el Caribe – Quintana Roo, Mexico, August 2019	The guest speaker discussed financial behavior and financial education for life changes
5th Child and Youth Finance International – Johannesburg, South Africa, June 2019	Participation as a speaker at this important financial education event for youths around the world. The discussion panel touched on the digital opportunities and risks for youths in the world of finance.
OECD Symposium - Russia, about financial education, October 2018	The subject was financial literacy in global terms, and included: <ul style="list-style-type: none"> • new digital trends in the provision of financial services and in financial education • financial education for vulnerable groups, like youths and migrants • approaches to financial education and consumer protection. Over 200 international specialists from around 60 nations participated.
Association for Fundraising Professionals, April 2018	Lecture title: Development of Effective Governance for Raising Funds and Important Impacts (case of the Brazilian National Strategy for Financial Education).
Bett Education Technology Conference – London, United Kingdom, January 2018	Participant at the Bett Show, in London, United Kingdom.
Department of Planning and Management of the State of Rio Grande do Sul, November 2017	Presentation of the experiences with the Financial Education Impact Assessment at a workshop promoted by the world Bank at the Department of Planning and Management of the State of Rio Grande do Sul.
Cherry Blossom Financial Education, at the Global Financial Literacy Excellence Center (GFLEC), April 2017	Presentation of the National Financial Education Strategy (ENEF) at an event promoted by the Global Financial Literacy Excellence Center (GFLEC) in Washington, United States of America.

These representations added intellectual value and leave behind an important legacy of knowledge for the institution, promoting a wealthy exchange of expertise.

The AEF also articulated with international bodies and departments of Education from other countries, seeking to learn the international best practices for education, such as the program Me and My city, in Finland, and Finans Danmark, in Denmark, among others.



The superintendent of AEF-Brasil, Dr. Claudia Forte, and the coordinator of Resource Mobilization, Thiago Godoy, at a meeting with executives from the Partners department of the International Monetary Forum (FMI), in Washington, USA, in April 2017.

SOME CONSIDERATIONS

The involvement of the private sector in the National Strategy for Financial Education fostered a wide array of results, which go far beyond the financial resources invested. By forming a multi-sector financial education network, CONEF and AEF-Brasil attained success in promoting the democratization of access to this subject for vulnerable populations, such as public-school students, women and low-income elderly people.

Establishing governance that includes the participation of the three sectors of the economy leveraged a series of benefits for the ENEF. Even so, there are still a great many challenges, especially in terms of wider participation of the private sector. Partnerships formed within this scope were advantageous, though it is clear that investments from the private sector could have been more intense. This is certainly not a challenge faced exclusively by AEF-Brasil, instead it is something inherent to public-private partnerships, which still face a long road in terms of development.

There is a recognized mismatch of time between the expected returns from the private sector and the maturation process of an educational project. Education is a long-term investment and must be handled consistently and

continuously. Furthermore, the private sector seems not to have realized yet that the benefits of investing in education reflect directly on an instructed and qualified workforce.



According to a study by the United Nations Educational, Scientific and Cultural Organization (UNESCO), the contributions of the private sector to education are less than 0.1% of the profit of some of the world's largest companies. And private contributions to education in developing countries represent just 5% of all the support provided to education.

In the United States, for example, 53% of subsidies from foundations are allocated to health, while only 8% is destined for education. The UNESCO report affirms that, if all the students in low-income nations left school with basic reading skills, poverty would fall by 12%. This is certainly a result that would positively impact all, including the private sector.

The document carries the following recommendations to expand investments in education from the private sector:

1. All private organizations must be transparent about the purpose of their commitments. This would ensure that the commercial interests do not override the collective objectives.
2. To ensure a lasting impact, private organizations need to provide enough funding over several years, in order to guarantee the sustainability of initiatives, considering that education is a long-term enterprise.
3. Better assessment is needed to gauge the impact of investments from the private sector on education.

In the United States, for example, 53% of the subsidies from foundations are allocated towards health, while only 8% is destined to education.

We need to intensify efforts and initiatives so that the private sector can invest together with governments in a way to guarantee that all our youths have the opportunity to receive a good education.

REFERENCES

- BERTONCELLO, Silvio Luiz Tadeu; CHANG JÚNIOR, João. *A importância da responsabilidade social corporativa como fator de diferenciação*. FACOM – Revista da Faculdade de Comunicação da Faap (17), p. 70-76, 2007.
- CYFI. *Economic citizenship and the sustainable development goals*. 2016a
- ENEF – Decreto nº 7.397, de 22 de dezembro de 2010. Disponível em: http://www.planalto.gov.br/ccivil_03/_Ato20072010/2010/Decreto/D7397.htm. Acesso em: 22 set. 2020.
- GALE, W. G.; LEVINE, R. *Financial literacy: what works? How Could it be More Effective?* 2010. Disponível em: <https://ssrn.com/abstract=1758910> ou em: <http://dx.doi.org/10.2139/ssrn.1758910>. Acesso em: 22 set. 2020.
- OECD. *National Strategies for Financial Education OECD/INFE*. Policy Handbook. OCDE, 2015.
- OECD. *International Gateway for Financial Education (INFE)*. 2019. Disponível em: <http://www.oecd.org/financial/education/>. Acesso em: 12 set. 2020.
- ROBERT, Kates W.; PARRIS, Thomas M.; LEISEROWITZ, Anthony A. *What is sustainable development? Goals, indicators, values, and practice*. Environment: Science and Policy for Sustainable Development, 47(3), 8-21, 2005.
- UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development*, 21 October 2015

Chapter 4

Financial education, the BNCC and the curriculum: contexts and challenges in Brazilian public schools

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Sandra Zita Silva Tiné¹²

Financial education has gradually been extending its reach, supported through the efforts of the Brazilian government and organized civil society, in the face of the social and economic challenges besetting the world. Like any educational process, financial education requires planning, engagement and mobilization, even considering that the results do not necessarily have a short- or medium-term effect. Considering the trajectory of financial education in Brazil, this text aims to discuss it within an educational context and describe its trajectory up to incorporation into the National Common Curricular Base (BNCC), highlighting its recognition in this important and most current curricular document in Brazilian education.

Since the [Hamburg Declaration](#), in 1990, some countries have conceived new paths towards education, given the concerns surrounding low economic development and its educational and economic implications. Efforts were made to steer discussions and views towards education as a driver of social development, through quality teaching and learning and also through a more equal view of education. The term equality has been incorporated into education in a general sense, as a basic element in dealing with inequality and providing access and the right to education with equal opportunities, though also with the outlook of offering more to those in most need. Financial education is a key element in this process.

At school, this subject was anchored to the intentions of teachers and national campaigns with certain associated economic elements. Programs that followed this prerogative were more focused on consumption and



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on consumer rights, like the actions linked to entities such as PROCON (Consumer Protection Service), SERASA (Advisory Services), SPC (Credit Protection Service), CCF (Bad Check Database), among others.

In 2010, only 51 countries around the world had some form of action geared towards economic issues as part of their public policies. In Brazil, Federal Decree 7,397/2010 was the first document towards this end, generating several developments in both public and private institutional sectors. This gave rise to the National Strategy for Financial Education (ENEF), followed by specific projects to introduce the subject into public schools. Gratuitous and aimed at disseminating content and expertise regarding some of the most basic issues that may affect the financial lives of individuals, the proposal for financial education in schools resulted in an organized project to develop, steer, coordinate and accompany the dissemination of the Program for

In 2010, only 51 countries around the world had some form of action geared towards economic issues as part of their public policies

Financial Education in School, coordinated by the Association of Financial Education in Brazil (AEF-Brasil), as proposed by the National Financial Education Committee (CONEF), then the administrative board of the ENEF. It is currently governed by Decree 10,3939/2020, which instituted the National Strategy for Financial Education and the Brazilian Financial Education Forum, with the same proposals.

This led to the creation of the Program for Financial Education in High School, aimed at public schools (2010-2011). This program included a series of books, divided by learning level, for students and teachers, featuring educative activities that introduced the subject into school life. A group of specialists was invited to develop this material. Among them were teachers Heloisa Padilha, Carlos Klimick, Laura Coutinho and Vera Rita de Mello Ferreira, including several other specialists overseeing important actions in the field of financial education. The didactic material used in the program is available at no cost on the website [Vida e Dinheiro](#).



An assessment of the program's impact shows significant improvement in financial expertise among participating students, in addition to the intent to save and ensure financial autonomy. The repercussion of this saw participating students take a more active role in home finances. The program was expanded in 2014 to include Primary Education and involved subjects like Mathematics, Science, History, Geography and Portuguese Language. A report called 'The Impact of High School Education: Experimental Evidence from Brazil', by the World Bank, showed that even with only early advances in

financial education, it was possible to obtain a body of knowledge of the area likely to leverage other actions. This was an important milestone in the growth of financial education in Brazilian schools.

REGULATORY MILESTONES – THE BNCC AND FINANCIAL EDUCATION

In 2015, Brazil implemented an important curricular document: the *Base Nacional Comum Curricular* – BNCC (National Common Curricular Base), approved in December 2015 to regulate Preschool and Primary Education and, in 2018, High School Education. The BNCC is not a recent demand or one associated with one or another government. It goes back to the Federal Constitution of 1988, which outlines the presence of “minimum content” in the school curriculum. In 1996, the Law on Guidelines and Bases of National Education (LDB), applied the term, asserting, in Article 26, that “preschool, primary and high school education must have a common curricular base”. Since then, and considering that the studies, debates and legislation have all advanced, the BNCC was finally made official with the participation of different segments of society, in a process that lasted approximately two years.

Law 13,005/2014, which approved the National Education Plan (PNE), also highlighted the need for the BNCC. Another important document that dealt with the common curricular base was the National Curriculum Guidelines. Under Article 14, these guidelines defined the BNCC as a set of “[...] expertise, knowledge and values produced culturally, expressed in public policies and generated in institutions that produce scientific and technological knowledge; in the world of employment; in the development of languages; in sporting and physical activities; in artistic production; in the diverse types and exercise of citizenship; in social movements” (BRASIL, 2010).

New High School, established under Law 13,415/2017, which altered LDB/1996, proposes changes in this stage of learning through a reform that would increase the number of hours for the curricular matrix (curricular architecture), in line with the BNCC, is currently the most recent curricular movement in education and is underway with the deadline for standardization by 2022 for the entire Brazilian educational network. As provided in CNE Resolution 04/2018, the number of hours rises from 3,000 hours, with 1,800 for mandatory learning with an emphasis on preparing youth for the job market and the full exercise of citizenship, developed through competencies

and abilities, and 1,200 hours for the formative itinerary, as from the first year of High School, including technical and professional formation, as per Directive 1,432/2018. This new curricular architecture hints at the possibility of interdisciplinarity and curriculum flexibility.

As such, the BNCC became a benchmark able to guide the right to learn and develop among Basic Education students, preserving diversity and inclusion for all, as well as providing counsel on choices for developing the elective subjects that comprise the curriculum. However, it is important to note that the BNCC is not the curriculum, rather a curricular reference that serves as a management instrument for states and municipalities to mold their curricular and school pedagogical projects.

Towards this end, it is important to highlight the understanding of the curriculum, as the literature presents differing positions. Sacristán calls it a social construction, not a forged abstract concept that exists outside of human experience, but, rather, a way to organize educative practices (SARCRISTÁN *apud* GRUNDY, 2000, pg. 14). The author goes on to state that the curriculum should be viewed from different angles, such as the objective to be reached, what should be taught, the paths to reaching these objectives and how the content correlates. Thus, the application of the curriculum should consider the local culture, the reality of where students are from and the way they live, building learning through knowledge, challenging them to reflect, analyze and interact.

The BNCC is a benchmark able to guide the right to learn and to develop among Basic Education students, preserving the diversity and inclusion of all

An interesting way to approach the curriculum, from this perspective, is to experience it through integrating themes. As the name says, they are subjects able to integrate different areas of knowledge and different curricular components. This interlink allows students to understand the concepts with better contextualization, ensuring that their learning gains meaning. From the perspective of the Paulo Freire methodology, it is possible to understand the need to begin with the context, the experienced reality, to make sense of what is being learned.

In this sense, financial education is presented as a theme that can integrate multiple areas due to its complex nature involving several areas and expertise, in addition to being experienced in daily practice by subjects and, thus, building active and participative citizenship.

It is worth remembering that, as shown in Chapter 2, the regulatory milestones of financial education precede the regulatory milestones of the BNCC. The idea here is to study the understanding of the respective competencies, the way they articulate and complement one another in the daily tasks of teachers in the classroom.

PATHS TOWARDS THE IMPLEMENTATION OF TRANSVERSAL CONTEMPORARY THEMES

Considering that historical contexts are conducive to reformulations in all social areas, among them education, of note is that certain countries that attained success in education dedicate much effort and time to establishing education reforms, electing priorities in terms of the quality of education to attain global excellence.

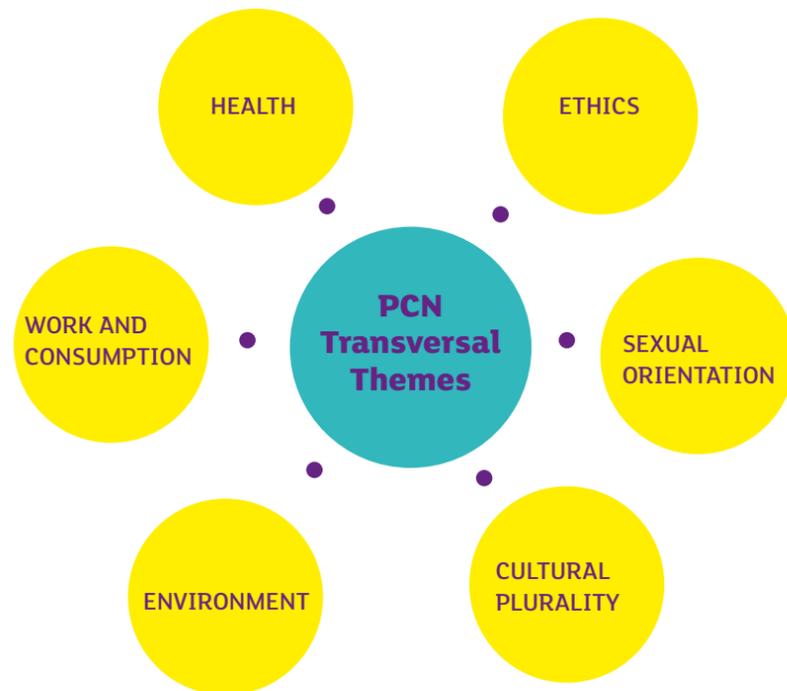
At the same time that education has never been so broadly discussed, there have never been learning performance results as complex in Basic Education, reaching the worst condition in the past 20 years in High School Education (MEC, 2016). There are many possible explanations for this scenario, however, as important as pinpointing these explanations is noting how the situation impacts existing public policy, to identify what this change could cause within education.

Since the establishment of the **National Curricular Parameters (PCNs)** (1999), the advances made in Basic Education are considered substantial in terms of “new paths” for Brazilian education. Nevertheless, in the past five years, emphasis has fallen on curricular debates, which have passed through a series of stages in institutions and education agents in all public spheres. There have been many initiatives to fulfill LDB 9,393/1996, with respect to implementing curricula in a way to promote a continuous advance in education quality. They include curricular proposals and references, national guidelines for Basic Education and modalities that steer curricular planning for schools and teaching systems, until reaching the National Common Curricular Base (BNCC).

The PNCs already showed signs of attempts to establish transversal themes, namely: Health, Ethics, Sexual Orientation, Cultural Plurality, Environment, Work and Consumption. These six themes provide a notion of specific, though complementary, subjects, as shown in the figure below.



PCN TRANSVERSAL THEMES



Source: BNCC documents, adapted by the authors.

Resolution 7, dated December 14, 2010, which defined the National Curricular Guidelines for Primary Education for Nine Years with protocols about the approach of themes in curricula in Article 16 determined that:

*Curricular components and the areas of knowledge must articulate in terms of their content, based on the possibilities created through their references, the approach of **comprehensive and contemporary** themes that impact human life on a global, regional and local scale, as well as within an individual sphere [...] which should be included in the development of **content for the national common curricular base and electives curriculum** (CNE/CEB 2010, pg.5, emphasis added).*

In line with this legal position, the National Board of Education (CNE) made great effort to highlight transversality in Expert Opinion 7, dated April 7, 2010:

***Transversality** points to the need to institute an analogy between learning systematized theoretical knowledge (learn about reality) and the issues of real life (learn in reality and about reality) in educational practice. Within an interdisciplinary understanding of knowledge, transversality carries meaning as a didactic proposal that allows elements of school knowledge **to be integrated**. As such, in this approach, knowledge management begins with the supposition that the subjects are agents of the art of discussing and interrogating and seek interdisciplinary procedures able to spark the flame of dialog among different subjects, sciences, wisdom and themes (CNE/CEB, 2010, pg. 24, emphasis added).*

This reveals the elements that advance the integrated format of the curriculum and the opportunity for it to establish itself as a “transversal” fact, contributing in a way so that pedagogical fragmentation, peddled in previous decades, loses its meaning, even though it continues even today. Despite the process only advancing gradually, once the first step has been taken, the formation of teachers, both initial training and continued training, is headed in the direction of integrality. To this end, it is an opportune and continuous itinerary for didactic-pedagogical changes that should be at the base of teacher professionalization.

FINANCIAL EDUCATION IN THE NATIONAL EDUCATION PLAN AND IN STATE EDUCATION PLANS

When reviewing the movement of civil and organized society, which culminated with the **National Education Plan**, Law 13,005/2014, of note was the need for and the attention given to the preparation of pedagogical guidelines, added to the requirements to construct curricula for the different stages of Primary and High School Education (BRASIL, 2014), a considerable gap, given the existing curricular demands since the Federal Constitution of 1988 and the array of educational efforts since the time of the PNCs.

When analyzing the National Plan and the 26 State Education Plans, as one of the leading educational legislations for steering guidelines, objectives, goals and strategies for Basic and Higher Education – which covers the period from 2015 to 2025, a document analysis methodology was applied to these plans, searching for keywords that would lead to a context geared towards:

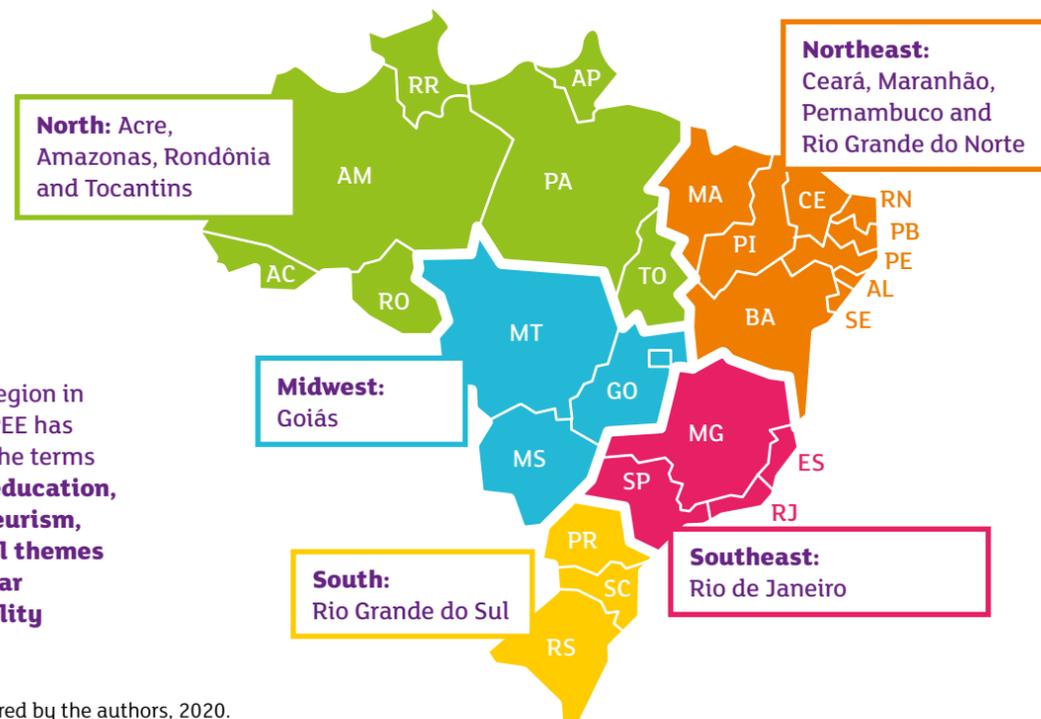


- a) financial education
- b) entrepreneurism
- c) transversal themes
- d) transversal curriculum

In the body of the National Education Plan (2014-2024), the elected terms were not identified in the proposed context for this item of the article. These plans showed that 53.8% of the states have no record of these words, while 46.2% present some of them and only Acre and Tocantins include all these terms in their State Education Plan (PEE), representing 1.6% of the studied sample.

When conducting a more specific analyses, by geographic region, there are records of these keywords as shown in the map and the regions in the figure below. Note that the Northeast and North regions have the highest number of states with studied records.

MAP OF RECORDS OF TERMINOLOGY LINKED TO FINANCIAL EDUCATION.



Source: prepared by the authors, 2020.

Only 11.5% of states included the term “financial education” in their plans: Acre, Ceará and Tocantins. The term “entrepreneurism” appears in 19.2% of the states, namely Acre, Amazonas, Goiás, Pernambuco and Tocantins, while “transversal themes” is present in 15.3%, corresponding to Acre, Paraíba, Rio de Janeiro and Tocantins. Lastly, the expression “curricular transversality” is recorded in 18.2% of the state education plans analyzed: Acre, Amazonas, Maranhão, Paraíba, Pernambuco, Rio Grande do Norte and Tocantins.

In the plans for the 12 states that have some record of these terms, one to four goals and/or strategies dedicated to each were identified. Considering that goals may change in terms of numbers in different states, note:

TABLE 1 – ANALYSIS OF THE PRESENCE OF TERMS GEARED TOWARDS FINANCIAL EDUCATION IN NATIONAL AND STATE EDUCATION PLANS

State	Law number	Goal/strategy	Financial, entrepreneurism, curricular transversality
Acre	Law 2,965/2015	Goal 3 High School	1.6. In the construction of a new high school curricular matrix, include different transversal themes , such as: environmental education, traffic education, financial education , education for entrepreneurism , education for human rights, citizenship and diversity, as well as public policies on State economic development.
Amazonas	Law 4,183/2015	Goal 6 Integral Education	6.9. Promote a transversal program about entrepreneurism and other professionalizing activities as part of the curricular matrix for integral High School education, aimed at developing competencies for the job market.
Ceará	Law 16,025/2015	Goal 3 High School	3.13. Implement and improve policies on curricula, the continued training of teachers and the acquisition of pedagogical material that guarantees the insertion of expertise on [...] financial education and consumption [...] to coexist with the Semiarid region of Brazil.

State	Law number	Goal/strategy	Financial, entrepreneurship, curricular transversality
Goiás	Law 18,969/2015	Goal 10 Professional education	10.21 Promote the deployment of company incubators (in their array of modalities) in at State Network Professional and Technological Education (EPT) units, to promote development, growth and the establishment of innovative business, bolstering the offer of capacity building for entrepreneurism .
Maranhão	Law 10,099/2015	Goal 7 Social rights and the right to education	Guarantee 100% of Basic Education schools, levels and modalities, conditions for transversality for the development of pedagogical actions aimed at diversity and social issues (social rights and the right to education).
		Goal 12 Professional education	12.11. Leverage the offer of technical professional education at a middle school level based on social and environmental entrepreneurism , providing youths and adults with the opportunity to participate in the social and economic development of their regions.
Paraíba	Law 10,488/2015	Goal 13 Human Rights	13.5. Encourage educational studies in human rights and diversity, in early and continued training of education professionals, in teaching activities, research and extension programs, in an interdisciplinary, transdisciplinary and transversal manner, articulating them with the promotion of human rights (goal of the National Education Plan on Human Rights).
Pernambuco	Law 5,533 /2015	Goal 7 Quality of Basic Education	7.16. Raise the discussion around public policies, as well as themes relevant to the current reality of youths, in the curricular matrix for Primary and High School Education in a transversal manner .
		Goal 10 Education of Youths and Adults	10.6. Expand the offer of technical professional education at a middle school level to Education for Youths and Adults, geared towards entrepreneurism , considering the local productive arrangements, catering to the peculiarities of each region and involving cultural content corresponding to the respective communities.

State	Law number	Goal/strategy	Financial, entrepreneurship, curricular transversality
Rio de Janeiro	Law 5,597/2015	Goal 33	Through the publication of this plan, guarantee the inclusion of transversal themes and content in the curricular matrix for Basic Education.
Rio Grande do Norte	Law 10,049	Dimension 8: Education: Social movements, inclusion and human rights	Item 11 – Seek financial and pedagogical support through partnerships with entities that develop environmental education actions, aimed at developing projects in Basic Education schools, considering the principles of transversality and interdisciplinarity.
Rio Grande do Sul	Law 14,705/2015	Goal 8 Rural, indigenous communities, quilombola communities	8.12. Promote conditions, through collaboration with Seduc (State Department of Education), Municipal Education Departments, higher education institutions and sponsors of private institutions, to develop curricular proposals that include issues like inclusion, human rights, ethnicities, gender and sexuality as transversal themes in order to encourage discussion about ways to overcome discrimination and prejudice.
Rondônia	Law 3,565/2015	Goal 7 Social rights and the right to education	7.4. Establish partnerships and/or interfaces, in the form of collaboration, with municipal, state and federal governmental bodies and non-governmental organizations, for the development of actions relative to the construction of public policies related to issues of diversity and transversal themes .

State	Law number	Goal/strategy	Financial, entrepreneurship, curricular transversality
Tocantins	Law 2,977/2015	Goal 11 Environmental education	11.6. Up to the second year of validity of this PEE/TO, encourage the collaborative creation and revitalization of [...] sustainable educational spaces in schools and communities, in collaboration with the Federal Government and Municipalities, to leverage the participation of the school community in planning and managing projects [...] tackling practices related to waste, degradation and consumerism, while bolstering the practice and dissemination of financial education in schools .
		Goal 12 Professional education	12.2. Create a joint and permanent commission at SEDUC/TO and Regional Boards of Education, comprised by professionals with the suitable profile to plan and assess the education policy in terms of human rights, while also guaranteeing transversality and interdisciplinarity in the school curriculum.
		Goal 14 Rural and quilombola	Guidelines IV. Guarantee professional education that creates incentive for innovation and entrepreneurism , incorporating new technologies in pedagogical practices, catering to the demands signaling new professional profiles.
		Goal 23 Quality of Education	23.27. Guarantee the expansion of tax education, financial education , environmental education, traffic education, education in human rights, by means of the transversality of the Basic Education curriculum, in all stages and modalities, [...] in order to bolster the social and integral formation of citizens.

Source: prepared by the authors, 2020.

Note that the volume of records per theme is centered on: High School (2 records), in Acre and Ceará; Integral education (1 record), in Amazonas; Socio-educational education (2 records), in Rondônia and Maranhão; and Rural, quilombola community and indigenous education (2 records), in Rio Grande do Sul and Tocantins; Professional education (3 records), in Goiás, Maranhão and Tocantins; Environmental education (2 records), Rio Grande do Norte and Tocantins; Human

rights (1 record), in Paraíba; Quality Basic Education (2 records), in Pernambuco and Tocantins, Educational *System* (1 record), in Rio Grande do Norte.

The state with the highest number of goals and strategies within the studied context is Tocantins, with four goals, followed by Maranhão, Paraíba, Pernambuco and Rio Grande do Norte, each with two. The remaining studies recorded one goal or sign of the terms in the form of objectives.

The scenario at both a federal and state level remains a major hurdle in reaching the goals and strategies established in their plans and considering the need to implement a new curriculum that encompasses the entire array of decisions from all the authorities and professionals. Thus, all education professionals are jointly responsible for implementing strategic actions, programs, projects and proprietary regulation, during the course of their plans, in order to both fulfill them and monitor them systematically. Nowadays, states already rely on two monitoring assessments by State Board of Assessment, which can be accompanied on the [website of the education plan observatory](#).



In 2017, with the approval of Resolution 02/2017, the BNCC saw the expansion of social themes under the premises of justice, equality and ethics, proposing changes in attitudes and procedures through the adoption and application of concepts learned at school for the daily lives of students.

The construction of the BNCC was truly a long and participatory process. As from 2015, a board of specialists was formed by MEC to develop the first draft for public consultation. This consultation resulted in 12 million contributions that culminated with the second version, systematized by the University of Brasília (UnB) and by the Pontifical Catholic University of Rio de Janeiro (PUC-RJ). Further actions included five seminars hosted in each Brazilian region, with the participation of managers, specialists, teachers and civil society organizations. At that time, institutions lined to the ENEF were actively involved, including AEF-Brasil and the Central Bank of Brazil.

In the final draft of the BNCC, transversal themes were renamed Contemporary Transversal Themes, with guidance provided to states with the imperative of fostering opportunities for a transversal and integrating citizen and social experience.

*It is up to education systems and networks, as well as schools, in their respective spheres of autonomy and competence, to **incorporate the discussion of contemporary themes into the curricula and pedagogical proposals**, namely issues that*

*impact daily life on a local, regional and global scale, preferably in a **transversal and integrating manner** (BRASIL, 2017 pg. 19, emphasis added).*

Considering the size of the challenge, since 2010, the subject of financial education has leveraged a wide array of possibilities to enterprise in the area of education. It is already possible to note that authors, publishers and private companies offer curricular material relative to the theme regularly in private institutions, but also in public institutions. However, governmental and non-governmental agencies also mobilized to offer financial education programs and projects. And, interwoven with this historical line, the National Financial Education Committee (CONEF), part of the Association of Financial Education in Brazil (AEF-Brasil), as well as the Pedagogical Support Group (GAP) spared no effort in inserting the theme from the time of the BNCC discussions.

The GAP was created within the structure of the ENEF and is responsible for evaluating all the decisions made of a pedagogical nature. The group was formerly presided over by the Ministry of Education, featuring representatives from the education sector, notable universities and civil society organizations. Based on CONEF decision 19/2018, guidelines were created for the execution of the Program for Financial Education in Schools, namely:

- I - universalization of the subject of financial education in schools through its progressive insertion in school curricular activities and integration into the Brazilian school culture;
- II - prioritize actions focused on teachers, leading figures in the process of disseminating the theme in schools, with action to build capacities;
- III - participation of higher education institutions;
- IV - leveraging decentralized production of educative content; and
- V - articulation with public teaching systems.

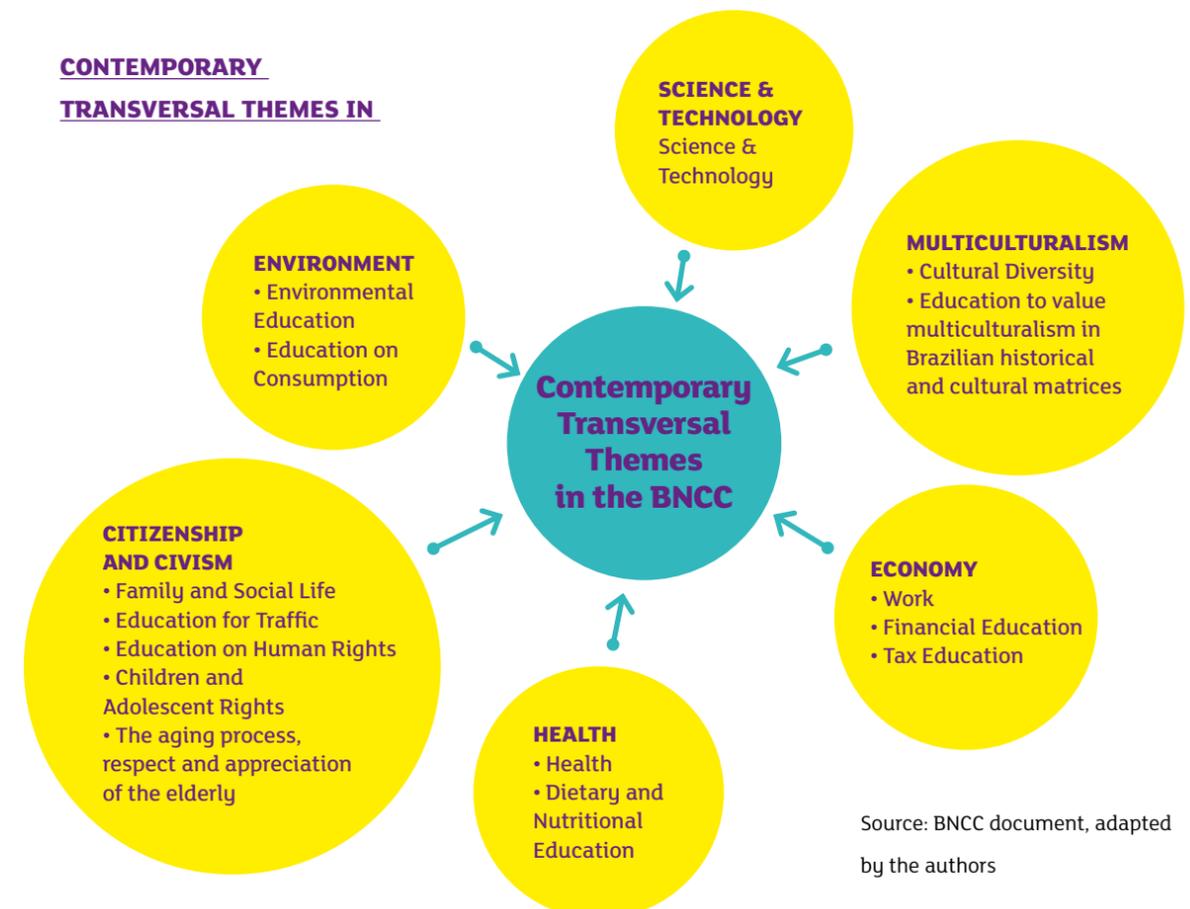
The GAP played a direct role in the construction of these guidelines. Besides these guidelines, the group was responsible for developing a reference document, called “Guidelines for Financial Education in Schools”.

This document formed the basis for a pilot project developed in schools and stated, among other things, that students should be taught to exercise citizenship; to consume and save ethically; to make autonomous decisions based on a change in attitude, as well as learn to plan for the short, medium and long-term. As such, the content produced could deal with consumption, savings and sustainability, among others.

Following the approval of the BNCC, with the inclusion of the Contemporary Transversal Theme “Financial Education”, the ENEF found its feet, as, from that point on, teachers could be encouraged to teach the subject in the classroom, without the need for short-lived projects lacking any compatible didactic sequence with the stages of Basic Education. The idea is to continuously teach Basic Education students through the promotion of knowledge and by experiencing content, easily leading to changes in behavior and attitudes, with an individual, family and social reach.

At this point, of note is the training provided to teachers through the ENEF, by means of AEF-Brasil, which offered a training course with financial education for Basic Education, open to teachers and managers in regional hubs, with the participation of teaching networks, Education departments and universities, as described in Chapter 2.

With the approval of the BNCC, the Contemporary Transversal Themes found their place, as they were recognized as determining factors in developing new themes, expanding on the facultative idea of the PCNs and introducing new perspectives as to the six branches comprised of “sub-themes”, as shown in the figure below.



These branches and developments being permeated by subjects pertaining to the daily reality of society is clearly significant, not because of the non-disciplinary nature, but because of the articulation of knowledge that is of a local and global interest. There is also a methodological break in paradigm as to curricular matrices, deeply rooted in the educational practice of many teachers to always “stick to the subject” while teaching. In other words, the Contemporary Transversal Themes provide opportunity to extract teachers from their traditional teaching methods, limited to the curricular component, to instead offer a more comprehensive view of knowledge.

CONTEMPORARY TRANSVERSAL THEMES: HISTORIC CONTRIBUTIONS AND ARTICULATIONS IN THE BASIC EDUCATION CURRICULUM

Based on the pedagogical presuppositions of Brazilian Basic Education laid out in the education proposal for active citizenship, in existence since the 1990s, with the implementation of the National Curricular Parameters (PNCs) to guide learning, questions have been raised as whether to provoke social issues as a means to encourage reflection among students with regards to the themes that permeate life as part of society. This outlook was preceded by studies and the development of educative actions linked to Social and Natural Sciences, initially highlighting the Environment, Health and Human Rights as fundamental transversal themes to be included in the school curriculum. In the Federal Constitution of 1988, Article 225, carries the affirmation that:

Everyone has the right to an ecologically balanced environment, a common of the people and essential to a healthy and quality life, with the government and society charged with the duty to defend it and preserve it for present and future generations (BRASIL, 1988, emphasis added).

Similarly, Law 9,394/96 and Law 10,172/2001 determined support and incentive to integrate society and school, with the guarantee of community participation in the management of the school, the organization of school boards as a space for and exercise of active citizenship.

A series of programs are highlighted here, fostering actions for reflection and important attitudes of a transversal nature, which developed into the future branches of financial education, especially for the call for collective and

structured action for commitment from subjects, from the schools and the community due to the collective impacts within a local environment.

Many public actions anchored in programs like the Commission for the Environment and Quality of Life at Schools (Con-Vida), part of Agenda 21¹³, when in 2004, 179 countries defined and signed commitments to develop a new model that would ensure a better quality of life for humanity, considering sustainable economic, social and environmental aspects. In 2002, the Brazilian Agenda 21 was drafted, with the participation of thousands of people, mobilized especially withing schools and education institutes. Strategies included, for example, the creation of local commissions, with a specific target public to build collective projects and with the legal backing on platforms to disseminate actions. The contributions bolster the theme, which has become a recurring subject in schools across the nation. Training children and youths to take a lead in their local and national story was punctuated by organized events that, besides mobilizing students and teachers, created a sense of belonging in the world, through articulation with peers and the environment.

In the field of health, the Health in School Program, first drafted in 2007, was aimed at leveraging integral development, through the participation of the school community in programs and projects that would integrate health and education, under the premise of tackling vulnerability among children, adolescents and young Brazilians. Schools provide a unique opportunity for actions that promote health and the prevention of a series of diseases, thanks to information and guidance for comprehensive student development through structured content specifically for this purpose. This includes actions from the Pedagogical Pilot Project in Schools, under the aegis that it is “necessary to develop the capacity in everyone to interpret daily life and to act in a way to incorporate attitudes and/or behaviors suited to a better quality of life” (BRASIL, 2011), raising questions about the economy and domestic budget, reuse and better use of food for a healthier diet and preventing some of the most recurring diseases among children and youths.

13. Agenda 21 is a program with actions of a global reach. It contains 40 chapters, that touch on everything, from air to sea, forests to deserts; it proposes the establishment of a new relationship between wealthy and poor nations. Agenda 21, as with any other agenda, highlights Humanity's commitments to the 21st century, aimed at ensuring a better future for the planet, while respecting human beings and their environment (BRASIL, 2004).



The National Program for Education on Human Rights (PNEDH) began in 2003, with the creation of the National Committee of Education on Human Rights (CNEDH), aimed as serving as a reference for the implementation of policies, programs and actions that encompass a culture of promoting human rights, respect for human rights and, fundamentally, equality, leveraged through the universalization of Basic Education. The concepts of this program affirm that:

*[...] education on human rights goes beyond cognitive learning, including the **social and emotional development** of those involved in the teaching-learning process [...] education, in this sense, must occur within the school community in interaction with the local community (BRASIL, 2006, pg.31, emphasis added).*

The principles of PNEDH present six guidelines, of which we highlighted two that, in our view, are closely related to the transversal themes:

*e) education on human rights must be one of the fundamental branches of basic education and **permeate the curriculum**, for early and continued training of education professionals, schools' pedagogical pilot projects, didactic-pedagogical material, the management and assessment model; f) school practice must be steered towards education on human rights, ensuring its **transversal character and the dialogical relationships** among the array of social actors (BRASIL, 2006, pg. 32, emphasis added).*

With the approval of the new National Common Curricular Base (BNCC) in 2017, for the stages of Preschool and Primary Education, and for High School Education in 2018, the document fostered the perception of a more comprehensive curriculum, combining several themes of a social nature, thereby forming the Contemporary Transversal Themes.

If on the one hand its expansion allowed for dialog within a specific theme, among them and also as a common core of the curricular matrices, on the other hand, it also raised doubts and uncertainty about the proposal regarding application in the classroom at all stages of Basic Education, especially in introducing interdisciplinarity and transversality as complementary themes to the continuous nature and a shift towards constructing realities.

From that point on, the didactic-pedagogical task was centered on defining how these themes would feature in the curricular document and, further, how they would be effectively articulated with the other curricular components at each stage of Basic Education – Preschool, Primary and High School Education – and their modalities.

Considering the most generalized question about the objectives of education and its importance as a prerogative for changing the social reality, given the existing scenario in both the regional and local scopes, as well as nationally and internationally, the aim shifts to the promotion of social critique, in line with the existing problems and possible solutions through specific measures to foment the pedagogical process and drive them, in favor of integration and the interaction of school content and its applicability in daily life.

In this sense, one may infer that the presence of Contemporary Transversal Themes in a curricular document allows for articulation among the different curricular components, in which the school context, the social context, diversity and dialog permeate their development based on the knowledge objectives described in the BNCC, thereby guaranteeing the “right to learning, education for work, for citizenship and for democracy, respecting regional and local characteristics, culture, economy and the population attending school” (BRASIL, 2019). It is within this horizon that one may imagine that financial education gains force and set roots in fertile ground, especially within Basic Education.

When thinking of curricular components common to curricula, one imagines they must be strictly structured with defined nomenclatures and hours to be developed in Brazilian school, giving one the idea that there is no space for another organization. This becomes clear when discussing new programs and projects with teachers. But the curriculum is not only a space for traditional curricular components. There is space for content diversity, objects of knowledge and themes that involve the daily reality of students. However, it is worth considering whether the Contemporary Transversal Themes should have space in the curriculum in what lies outside of the traditional curricular components. Would this be the exclusive locus of these themes? Wouldn't this curricular organization also be a form of fragmentation? Should the Contemporary Transversal Themes integrate the curriculum comprehensively? Would this not be the opportunity to connect knowledge and the traditional curricular components?

Bolstering the theme and its potential, Moreno (1999) notes the “capacity to think, understand and manage the world” fostered by Contemporary Transversal Themes. This also gives rise to the more emphatic meaning of **transversal curriculum**, associated with the “disciplines”. This idea gained force in actions and projects both within schools and in governmental and non-governmental organizations, which proposed to develop, in partnership with the schools, didactic activities in curricular support material, allied with the “training of teachers” aimed at the social formation of citizens, in this case the students.

The provocation that arises is that there is a powerful drive for Contemporary Transversal Themes to be veritably transversal, not only with the common or elective components, but also equally among these Contemporary Transversal Themes. When looking back to the school context, diversity and dialog find space for the development of an integrated and integral curriculum for the comprehensive formation of students, in a way to perpetuate something afforded by the school in their academic, cognitive and, above all, social and emotional lives for the rest of their lives.

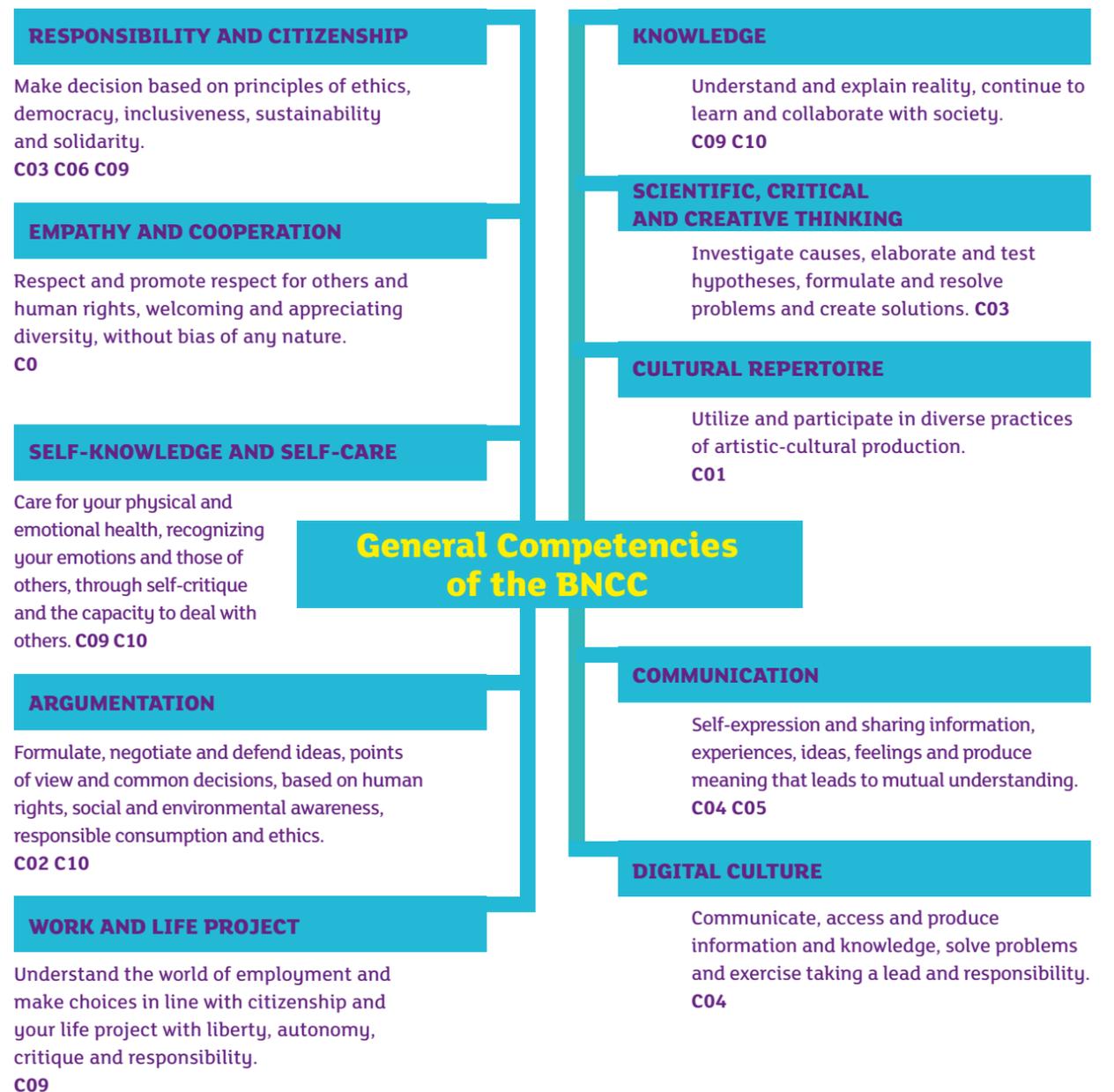
FROM THE TEN COMPETENCIES OF FINANCIAL EDUCATION TO THE TEN GENERAL COMPETENCIES OF THE BNCC

The ten General Competencies of the BNCC offer a perspective of the past, present and future, shifting from simpler to more complex situations, though without jeopardizing the starting point as the basis for advancing the other competencies. The ten competencies of financial education promote articulating dialog between the several areas of expertise, in a transversal manner in the school curriculum in dimensions of space and time, as well as the BNCC General Competencies, as shown in the figure on the page alongside.

The organization presented in the BNCC General Competencies is continuous and articulated with the proposal of advances throughout the school life, the intention of which is to fix these competencies in life after Basic Education. It may seem that there is nothing new in this organization of nomenclature, as there are those who noted, earlier on, the need for these competencies to be included somehow in the curriculum applied in teaching networks. However, the perception of the correlation between the competencies of the BNCC and the competencies of financial

education is not very common, with the latter associated with objectives systematically organized for didactic dissemination in schools.

GENERAL COMPETENCIES OF THE BNCC



The pedagogical organization of financial education studies, highlighted in the document “Pedagogical Guidelines for Financial Education”, previously mentioned, shows this articulation as presented in the table below.

	OBJECTIVES	COMPETENCIES
SPACE OBJECTIVES	OB1 Educate to foster citizenship	CO1 Debate rights and duties
	OB2 Teach ethical, conscientious and responsible consumption and savings	CO2 Make socially and environmentally responsible financial decisions
		CO3 Harmonize desires and needs in life project financial planning
	OB3 Offer concepts and tools for autonomous decision making based on changes in attitude	CO4 Read and interpret simple texts related to Financial Education
TIME OBJECTIVES	OB4 Train multipliers	CO5 Read advertising texts critically
		CO6 Make autonomous financial decisions in accordance with your real needs
	OB5 Teach short, medium and long-term planning	CO7 Act as a multiplier
	OB6 Develop a culture of prevention	CO8 Elaborate financial planning
		CO9 Analyze long-term prevention alternatives
OB7 Provide opportunity to change the current condition	CO7 Analyze alternatives to overcome economic difficulties	

Source: Teacher's Book – Block 1 High School, 2013

Based on the general competencies of financial education and the General Competencies of the BNCC, it is possible to note articulation between what is required from the student profile at the end of Basic Education with the mobilization of knowledge necessary to the construction of financial citizenship.

Starting with the General Competencies of the BNCC, the table alongside shows the financial education knowledge that can be articulated in a way that reveals possibilities for overcoming the curricular fragmentation between the area comprised of traditional curricular components and the projects, whether

they are specific projects or, possibly, the construction of a life project required from all basic education, so that youths can plan their academic, personal and professional futures.

LINKS BETWEEN THE GENERAL COMPETENCIES OF THE BNCC AND THE POSSIBILITIES OF STUDYING FINANCIAL EDUCATION CONTENT

GENERAL COMPETENCIES OF THE BNCC

1. Knowledge. Appreciating and using the historically constructed knowledge about the physical, social, cultural and digital world to understand and explain reality, continue learning and collaborate in building a more just, democratic and inclusive society.

2. Scientific, critical and creative thinking. Exercise intellectual curiosity and apply the scientific approach, including investigation, reflection, critical analysis, imagination and creativity, to investigate causes, prepare and test hypotheses, formulate and resolve problems and create solutions (including technological solutions) based on knowledge from different fields.

3. Cultural repertoire. Appreciate and apply the range of artistic and cultural manifestations, from local to global examples, while also participating in diverse practices of artistic-cultural production.

4. Communication. Use different languages – verbal (oral or visual-motor, such as sign language and writing), body, visual, sound and digital –, as well as knowledge of artistic, mathematic and scientific languages, in order to express and share information, experiences, ideas and feelings in different contexts, while also producing meanings that lead to medium and long-term mutual understanding.

FINANCIAL EDUCATION CONTENT

Make choices based on knowledge approached to understand financial behavior, to learn to plan, learn and consume responsibly, among others. Study of social and economic models. Study of currency: exchanges and circulation. Studies on the financial system. Tax education

Develop attention, memory, perception and reasoning. Provoke an investigation of subjects relative to consumption, savings, investments and present solution with the knowledge acquired

Build values based on multicultural awareness that fosters respect for others, and the choices of others. Encourage curiosity and experimentation based on the multiplicity of artistic productions that reflect the social and economic context, in a way that fosters comprehension.

Study of content from the financial world: its messages, objectives and contexts, using the repertoires of communication and multiliteracies as access to different platforms and languages.

GENERAL COMPETENCIES OF THE BNCC

5. Digital culture. Comprehend, use and create digital information and communication solutions in critical, significant, reflexive and ethical manners in the array of social practices (including schools) in order to communicate, access and disseminate information, produce knowledge, solve problems and exercise leadership and responsibility in personal and collective life.

6. Work, life project. Appreciate the diversity of cultural knowledge and experiences, appropriating knowledge and experiences that foster an understanding of the relationships part of the work experience and make choices in line with the exercise of active citizenship and the life project, with liberty, autonomy, critical awareness and responsibility.

7. Argumentation. Argue based on facts and reliable data and information, to formulate, negotiate and defend ideas, points of view and common decisions that respect and promote human rights, social and environmental awareness and responsible consumption within a local, regional and global sphere, with an ethical position in relation to self-care and care for others and the planet.

8. Self-knowledge and self-care. Self-awareness, self-appreciation and care of physical and emotional health, understanding yourself within human diversity and recognizing your emotions and those of others, applying self-criticism and the capacity to deal with them.

9. Empathy and cooperation. Exercise empathy, dialog, conflict resolution and cooperation, respecting and promoting respect for others and human rights, embracing and appreciating the diversity of individuals and social groups, their wisdom, identities, cultures and strengths, without prejudice of any kind.

FINANCIAL EDUCATION CONTENT

Contact with online tools, multimedia production and programming languages geared towards the financial education topics. Activities with online tools are especially necessary in contemporary education, considering the increasing offer of online financial products.

A particularly expressive competence for working with financial planning and behavior, in addition to the formation of values by leveraging an understanding about the value of effort and capacities, like determination and self-assessment.

Plan your financial life and live according to that plan, so as not to overlap into other levels of space. Assess savings options and decide on the one most suited to your needs.

Formation of specific competencies to understand and act within the financial world. Particularly with regards to choices and investments, forming awareness about ways to express and recognize different points of view.

Study and analysis of financial behaviors by recognizing emotions and feelings and their influence on attitudes towards knowing how to plan. Integrity and honesty. Formation of values.

Particularly important to moments of personal financial crises. How to understand and help resolve the.

Comprehension of the perspectives of others.

GENERAL COMPETENCIES OF THE BNCC

10. Responsibility and citizenship. Act personally and collectively with autonomy, responsibility, flexibility, resilience and determination, making decisions based on principles of ethics, democracy, inclusiveness, sustainability and solidarity.

FINANCIAL EDUCATION CONTENT

Active participation in the analysis of current problems, considering challenges like conflicting values and individual interests.

Study of taxes and contributions.

Social justice. Apply the 5 R's of conscientious consumption: refuse, reduce, reuse, repurpose, and then recycle. What to consume. Donate objects no longer being used. Research prices.

Prioritize purchases from companies and establishments that are regulated and follow principles of social and environmental responsibility. Study subjects related to responsible consumption and social and environmental responsibility. Study green finances.

Source: prepared by the authors, 2020

Despite the table first listing the BNCC competencies, it is worth remembering that the financial education competencies are dated 2009, when the didactic-pedagogical material was prepared by several specialists with ample experience in both curricular issues and an array of other areas of expertise linked to financial education.

The description of BNCC competencies allows one to note each objective, purpose and level of progression, cited in the Bloom's Taxonomy, which hierarchically classifies organization according to levels of increasing complexity, without which it is impossible to progress in understanding concepts, covering the cognitive, affective and sensory domains (FERRAZ; BELHOT, 2010). Furthermore, the competencies don't end there. Instead, for each stage of learning, they unfold into Rights and Objectives and their Field of experience in Preschool Education, in themed units, Objects of Knowledge, Skills and their Areas of Knowledge in Primary Education and in skills in Areas of Knowledge in High School Education. This organization can foster the practice of leadership among students, as well as developing competencies and abilities in areas of knowledge.

THE INTRODUCTION OF FINANCIAL EDUCATION IN PUBLIC SCHOOLS: BEGIN OR CONTINUE?

Looking at the pertinence of financial education as a contemporary transversal theme in the curriculum, it is possible to note a window of opportunities that is easily revealed. Based on the General Competencies of the BNCC, one may infer that the universe is vast in terms of inspiring teachers to provide transversal and integral classes. The curricular documents developed in each state and referenced in the BNCC is geared towards the implementation of their respective regional traits and this is exceptionally favorable considering the local social and economic contexts. The skills and objectives of learning for the several curricular components of Primary Education, for example, are introduced directly in mathematics in grades 6, 7 and 8, which creates possibility for interdisciplinarity with other components. In High School, organized into areas of knowledge, the possibilities for transversality are even higher.

However, the most vital element to allowing this to happen seems to be the actual intention of state and municipal curricular documents and, fundamentally, the involvement of teachers in planning and administering classes, introducing content on financial education. As such, it is necessary to review State and Municipal Education Plans and the Pedagogical Proposal of central bodies, to ensure curriculum is in line with legal dispositions, aimed at the coherent organization of pedagogical efforts in public schools in terms the proposed transversality.

According to experts in educational transversality, there are lingering misconceptions regarding actual realization, and it is considered by some to be a mere trend. Admittedly, this “new way” of organizing pedagogical work the methodological development may still be an obstacle to many teachers, worsened by the absence of this concept and its practice in many teaching degree programs. Transversality is never experienced and disciplinary boundaries practiced from the early stages of education.

Morin understands transversality as “having to replace one way of thinking that separates and isolates for another way of thinking that distinguishes and unites” (2002, pg. 88). There have been times in Brazilian education when terms like interdisciplinary, multidisciplinary and transdisciplinary prompted passionate discussions regarding the elaboration of curricular proposals and references among States in contrast to the disciplinarity largely practiced by teachers. This occurred following National Curricular Parameters (PCN) in Action

– a structured training program for teachers, covering the entire nation from Preschool to High School, conducted by previously prepared instructors trained by universities, in partnership with state education departments. This training was aimed at providing practical meaning to the National Curricular Parameters that, to that point, were seen as guidelines somewhat detached from teachers’ pedagogical practice, and too complex to “explain in the classroom”.

To this end, Zabala (2008, pg. 27) postulates that:

*[...] in teaching, the search for answers to the issue of organizing content generated several responses that can be viewed from two angles. On the one hand, the **globalized methods and the globalizing focus**, which are concepts only linked to education; the first alluding to the complete teaching methods, and the second to a means of and attitude towards conceiving teaching.*

The focus here is on the term transdisciplinarity to highlight the globalizing character of learning integrated into Contemporary Transversal Themes. Zabala’s concept goes beyond the idea of a disciplinary model and hints at overcoming the idea of developing school content that ends with itself so as to establish the intentionality of integrated teaching. The authors goes further, saying that “in these systems, the learning content and its organization into didactic units is only relevant due to their capacity to understand a reality that is always manifested globally” (2008, pg. 144). Thus, Contemporary Transversal Themes are seen to enter schools as a window of opportunity to organize actions, strategies and projects already undertaken by them, though now with a sense of totality due to the integration they possess, promoting the protagonism of students and their learning.

The training of teachers is, without doubt, the most relevant point in the development of Contemporary Transversal Themes; promoting curricular transversality and the development of methodologies that leverage pedagogical practice within several Brazilian scenarios and realities. Possessing knowledge of and using financial education material is also at the core of disseminating the topic in the classroom.

The legal provision for New High School Education, presented here in the item “Regulatory milestones” provide States with the opportunity to learn, understand and execute the new curricular process, backed by a structural,

curricular and implementation flow, forming the set of materials necessary and vital to the writers, coordinators for the BNCC Implementation Support Program for High School, state coordinators, articulators and state education board members, professionals directly involved in this unprecedented, historic and procedural effort as per the public policy established. However, it is worth reiterating that, considering local realities, the states are autonomous due to offering programs for “professional technician or continued training” for their students.

When studying the scenario as to the elaboration of curricula according to BNCC determinations, it is possible to map certain obstacles that seem complex in terms of that proposed and that actually practiced, like students selecting the educative itinerary, in line with the Life Project, as well as the choice of Elective subjects (curricular components from the new curricular architecture), as these promote aspects of solidarity, empathy, the control of emotions, the choice process and leadership, among others, in complement to the conceptual content proposed. Thus, the comprehensive development of students must reflect in their actions and experiences, establishing themselves as protagonists of their own stories, whether that be of overcoming challenges or difficulties in experiencing success and frustrations as a result of their choices, while above all knowing how to deal with them.

Within this systematically organized world of pedagogy are social and emotional competencies that refer to the “process of understanding and managing emotions, with empathy and responsible decision making” and which are featured in the ten general competencies. They should be developed within the scope of the school for all students, based on a curricular proposal provided by states, as determined by the BNCC. It is worth remembering that these competencies also include the wide scale assessment, both nationally and internationally. Examples include ENEM (National High School Education Exam) and PISA (Programme for International Student Assessment) (BRASIL, 2015).

Social and emotional competencies are interlinked and lead towards a process of advance, which shares the dimensions of time and space of financial education. The table alongside illustrates possibilities to identify the presence of social and emotional competencies related to financial education competencies, an exercise of reflection, not to classify one under the other, but rather to consider its position depending on the context found by teachers and the pedagogical practice through which both competencies can be articulated.

TABLE 2 – ARTICULATION POSSIBILITIES – SOCIAL AND EMOTIONAL COMPETENCIES AND FINANCIAL EDUCATION COMPETENCIES

Social and emotional competencies	Social and emotional competencies	Financial education competencies
Self-awareness	Involves the knowledge of each person, as well as their strengths and limitations, always maintaining an optimistic attitude geared towards growth.	C02 – Participate in financial decisions that are social and environmentally responsible. C04– Read and interpret simple texts related to Financial Education. C08 – Prepare financial planning with assistance.
Self-management	Related to the efficient management of stress, the control of impulses and the definition of goals.	C03 – Distinguish between desires and necessities in terms of consumption and savings in the context of financial planning for a family’s life project. C06 – Participate in financial decisions considering the real needs.
Social awareness	Requires the exercise of empathy, of placing oneself “in someone else’s shoes”, respecting diversity.	C01– Debate rights and duties. C04 – Read advertising texts critically. C07 – Act as a multiplier.
Relationship skills	Related to the ability to listen with empathy, speak clearly and objectively, cooperating with others, resisting improper social pressure (bullying, for example), resolving conflicts in a constructive and respectful manner, as well as helping others when necessary.	C01 – Rights and duties. C07 – Act as a multiplier. C10 – Take care of oneself, nature and the commons, considering immediate repercussions of actions taken in the present.
Responsible decision making	Relates to personal choices and social interactions in accord with regulations, care for the safety and ethical standards of a society.	C07 – Act as a multiplier. C00 – Care for oneself, nature and the commons, considering immediate repercussions of actions taken in the present.

Source: prepared by the authors, 2020.

It is clear that once explored, both the general and social and emotional competencies and the financial education competencies are complementary on a vast number of levels and have a place in the curriculum. This reiterates that intentionality, once again, may speak louder when dealing with the organization of pedagogical work in the classroom.

FINANCIAL EDUCATION DURING PANDEMICS: WHAT IS THE RELATION TO SCHOOLS?

The global and Brazilian context in 2019 and 2020 was marked by the Covid-19 pandemic, with millions of people infected and millions of others losing their lives. Job loss, reduced family income and a rise in spendings in the homes of thousands of students creates an immense need for individual and collective action, mutual collaboration, emotional and financial control as an element for overcoming realities whether in major cities or in remote regions of the country. The first technical note issued by *Todos pela Educação*, which dealt with distance education in Basic Education due to the Covid-19 pandemic, affirmed that “Although remote teaching may contribute to reducing the impact of schools closing on learning, a response in scale and up to the challenges set to arise will only be provided with a robust series of actions at the time when in-person classes resume” (TODOS, 2020, pg. 8).

It is of sum importance to understand the role of school in overcoming the challenges of maintaining functions open despite “physically closed buildings”. As described by Borstel, Fiorentine Mayer (2020, pg.38),

[...] with the start of the pandemic caused by the coronavirus (Covid-19), the process, which seemed slow and gradual, was systematic, and students and education professionals lacked the time necessary to adapt. A global event that called for mass social distancing remodeled plans already underway and required immediate and efficient responses from education regulation bodies/entities throughout the country.

In this sense, it was noted that in some states the drive for continuity of classes through remote methods was the strategy found to overcome the impacts of a lack of in-person classes. Through this, in addition to the curricular challenge already underway, teachers were now faced with one of the biggest methodological challenges of their careers: administering classes using educational resources

mediated by technology, methodologies that were not always part of the pedagogical tasks among many of them. Todos Pela Educação went on to say that “it is of sum importance that public power mobilizes in provide teachers with guidelines and adequate support, especially considering they will be equally impacted by the pandemic” (TODOS, 202, pg. 14). Similarly, the World Bank highlighted the “need for technological instruction among educators is consistent with Brazilian evidence that, even in the wealthiest states, schools have access to the Internet, but teachers are not used to using the Internet in the classroom (WORLD BANK, 2020, pg. 4).

Furthermore, the way of teaching in the classroom now has a vast field of possibilities and, also, a home environment, which functions as the daily school space, with no forecast of return to the old “normal”. The subject of protocols for returning to in-person classes became another point of discussion among several bodies involved in the issue.

However, the volume of stress to which teachers are now subject due to increase work volume is undeniable, as is the alteration of their pedagogical routines. According to the *Instituto Península*, 2.2 million teachers operate through remote classes to teach 48 million students. A study used an online questionnaire between March 23 and 27, 2020, to interview teachers of different teaching levels from across the country. The data highlights 2,400 responses, of which we selected the following data for the topic of training: when asked about the interest in *receiving content and information on courses that help deal with the moment*, 36.13% stated “yes, regularly”, 38.33% responded “yes, though not regularly” and 25.51% responded “no, not now”.

Note that teachers involved in basic education, and potentially active in financial education topics, have demonstrated greater resilience in administering classes during the pandemic. However, it has not been an easy time in overcoming limitations, especially technological ones. On the other hand, on social media, live streams and meetings specifically for this purpose¹⁴, they assess the moment as being favorable to these expertise acquired in the classroom to be practices comprehensively in the family environment. The eminence of crises situation in which we all find ourselves

14. Conversations with representatives of the states of Goiás, Piauí, Paraíba, São Paulo and Tocantins in a meeting promoted by the Ambassador of Financial Education Alessandra Camargo, in July 2020, via Meet

has become a beneficial space to exercise the objectives and competencies of financial education provided in the teachers' didactic material.

Teachers state that they are able to work in a transdisciplinary manner with curricular components such as Mathematics, Geography and English Language, among other curricular components and that their education departments provided general guidelines for the classes and that these should insert didactic situations aimed at tips on home economics in the family, with the recommendation of applications that facilitate the organization of the home budget, with teachers expected to teach financial education technique when administering in-person classes. Teachers further confirmed that being trained in financial education is fundamental to their work in any space, with in-person classes or otherwise.

Of note is that there are still many teachers unaware of the Program for Financial Education in Schools, who do not have access to the free didactic material offered, however, all feel encouraged to work on the subject, along with the other transversal themes.

During the pandemic, due to the economic strain caused, this is a particularly important and unique moment to articulate areas of knowledge around financial education in schools. It is a concrete opportunity to introduce these school expertise into the reality of students.

POSSIBLE CONSIDERATIONS

Even in the face of a journey that promises to be a long one for financial education in Basic Education, it was possible to note that many advances have been made and many bridges built. We have not forgotten that processes in education are never simple or very rapid. Building competencies requires the mobilization of content and skills that are acquired gradually. Within the scope of inter sector mobilization around the theme, the path has been successful and the actions have taken assertive directions.

Even considering all the efforts within the legal provisions, both on national and state scales, the presence of the contemporary transversal theme from the branch of Economics, specifically Financial Education in Education Plans and in the actual BNCC, still requires systemization or a return to the path due to the understand that, sometimes, the theme referred to as "transversal"

is not always developed in the ample sense of the word. In some states, fragmented actions in strategic actions, guide and advisory documents, understood as pedagogical guidelines, require more in-depth studies.

The importance of transversal themes in the PCNs, initiated by certain structured programs to be developed at school, was an important step in Contemporary Transversal Themes making inroads in the pedagogical spaces and curricula, especially in the classroom, so as to influence students and teachers in making the pedagogical proposal concrete so as to attain the institutional, academic and social objectives and purposes, particularly for financial education.

Curricular transversality is still not fully grasped by teachers, nor is transversality in the organization of pedagogical work, which must be modified according to developments in the BNCC and the curriculum for each state. This leads back to the issue of training teachers, both for early and continued education, as an element to leverage professional education practice, especially considering the current scenario: pedagogical routines affected and new demands to deploy methodological resources mediated by technology.

The three competencies into which this study unfolded – the BNCC's general and social and emotional competencies and the financial education competencies – is reason to reflect on the pedagogical practices developed in basic education.

The fact that we are experiencing such a unique moment in our history, due to the pandemic, in which the "building is closed but the school isn't" reiterates that student and teacher resilience is possible. This is coupled with efforts to ensure the importance of financial education in student and citizen education is recognized not only in schools, but throughout society as a whole.

REFERENCES

- ACRE, Lei nº 2.965, de 2 de julho de 2015. *Plano Estadual de Educação*, 2015.
- ALAGOAS, Lei nº 7.795, de 22 de janeiro de 2015. *Plano Estadual de Educação*, 2015.
- ALMEIDA, Fabiana Cezário de. *Os livros didáticos de matemática para o ensino fundamental e os Temas Contemporâneos Transversais: realidade ou utopia?* Dissertação (Mestrado). Universidade Estadual Paulista. Faculdade de Ciências, Bauru, 2007.
- AMAZONAS, Lei nº 4183, de 26 de junho de 2015. *Plano Estadual de Educação*, 2015.
- AMAPÁ, Lei nº 1.907, de 24 de junho de 2015. *Plano Estadual de Educação*, 2015.
- BANCO MUNDIAL. *Políticas educacionais na pandemia da COVID-19: o que o Brasil pode aprender com o resto do mundo?* Versão de 25 de março de 2020.
- BORSTEL, Vilson von; FIORENTIN, Marianne Jungbluth; MAYER, Leandro. *Educação em tempos de pandemia: constatações da Coordenadoria Regional de Educação de Itapiranga*. In: PALÚ, Janete; SCHUTZ, Jenerton A.; MAYER, Leandro. *Desafios da educação em tempos de pandemia*. Cruz Alta: Ilustração, 2020.
- BRASIL. Lei Federal nº 13.005, de 24 de junho de 2014. *Plano Nacional de Educação*, 2014.
- BRASIL. Lei nº 13.415/2017 – Altera a Lei nº 9.394, de 20 de dezembro de 1996, que estabelece as diretrizes e bases da educação nacional, 2017
- BRASIL. Base Nacional Comum Curricular. Resolução CNE/CP nº 02/2017.
- BRASIL. Constituição Federal, 1988.
- BRASIL. Diretrizes Curriculares Nacionais para a Educação das Relações Étnico-Raciais e para o Ensino de História e Cultura Afro-Brasileira e Africana – Resolução CNE/CP 1/2004.
- BRASIL. Diretrizes Nacionais para a Educação em Direitos Humanos. Resolução CNE/CP nº 1/2012.
- BRASIL. *Diretrizes Curriculares Nacionais para a Educação Ambiental*. Resolução CNE/CP nº 2/2012.
- BRASIL. *Diretrizes Curriculares Nacionais para o Ensino Fundamental de Nove Anos*. Resolução CNE/CP nº 7/2010
- BRASIL. *Resolução CNE nº 04/2018. Institui a Base Nacional Comum Curricular na Etapa do Ensino Médio (BNCC-EM), como etapa final da Educação Básica*, 2018
- BRASIL. *Resolução nº 7 CNE/CEB*, de 14 de dezembro de 2010.
- BRASIL. Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Atenção Básica. *Instrutivo PSE/Ministério da Saúde*. – Brasília: Ministério da Saúde, 2011.
- BRASIL. Ministério da Educação. Secretaria de Educação Continuada, Alfabetização e Diversidade. Brasília, 2004.
- BRASIL. *Portaria MEC nº 1.432/2018*. Estabelece os referenciais para elaboração dos itinerários formativos conforme preveem as Diretrizes Nacionais do Ensino Médio, 2018.
- BRASIL. *Programa Mundial de Educação em Direitos Humanos*, 2005.
- BRASIL. *Temas Contemporâneos Transversais*, Ministério da Educação, Secretaria de Educação Básica, Diretoria de Políticas e Regulação da Educação Básica, Coordenação-Geral de Temas Transversais da Educação Básica e Integral, Coordenação-Geral de Inovação e Integração com o Trabalho. MEC, 2018.
- BAHIA, Lei nº 13.559 de 11 de maio de 2016. *Plano Estadual de Educação*, 2016.
- CEARÁ. Lei nº 16.025, 30 de maio de 2016. *Plano Estadual de Educação*, 2016.
- ESPÍRITO SANTO. Lei nº 10.382, de 24 de junho de 2015. *Plano Estadual de Educação*, 2015.
- FERRAZ, Ana Paula do Carmo Marcheti; BELHOT, Renato Vairo. *Taxonomia de Bloom: revisão teórica e apresentação das adequações do instrumento para definição de objetivos instrucionais*. Gest. Prod., São Carlos, v. 17, n. 2, p. 421-431, 2010.
- GOIÁS. Lei nº 18.969, de 22 de julho de 2015. *Plano Estadual de Educação*, 2015.
- INSTITUTO PENÍNSULA. Pesquisa – *Sentimento e percepção dos professores brasileiros nos diferentes estágios do Coronavírus no Brasil*, mar.2020.
- MINAS GERAIS. Lei nº 23197, de 26 de dezembro de 2018. *Plano Estadual de Educação*, 2018.
- MATO GROSSO. Lei nº 10.111, de 6 de junho de 2014. *Plano Estadual de Educação*, 2014.
- MATO GROSSO DO SUL. Lei nº 6.621 de 22 de dezembro de 2014. *Plano Estadual de Educação*, 2014.
- MORIN, Edgar. *A cabeça bem-feita: repensar a reforma, reformar o pensamento*. Tradução de Eloá Jacobina. 3 ed. Rio de Janeiro: Bertrand Brasil, 2001.
- MORENO, Jean Carlos. *História na Base Nacional Comum Curricular*. História & Ensino, Londrina, v. 22, n. 1, p. 7-27, jan./jun. 2016.
- PARÁ. Lei nº 8.186, de 23 de junho de 2015. *Plano Estadual de Educação*, 2015.
- PARAÍBA. Lei nº 10.488 de 23 de junho de 2015. *Plano Estadual de Educação*, 2015.
- PARANÁ. Lei nº 18.492 de 24 de junho de 2015. *Plano Estadual de Educação*, 2015.
- PERNAMBUCO. Lei nº 15.533 de 23 de junho de 2015. *Plano Estadual de Educação*, 2015.
- PIAUI. Lei nº 6.733 de 17 de dezembro de 2015. *Plano Estadual de Educação*, 2015.
- RIO GRANDE DO SUL. Lei nº 14.705, de 25 de junho de 2015. *Plano Estadual de Educação*, 2015.
- RORAIMA. Lei nº 1.008 de 3 de setembro de 2015. *Plano Estadual de Educação*, 2015.
- RIO DE JANEIRO. Lei nº 5.597/2015. *Plano Estadual de Educação*, 2015.
- SACRISTÁN, G. *O currículo: uma reflexão sobre a prática*. Porto Alegre: Artmed, 2000.
- SANTA CATARINA. Lei nº 16.794, de 14 de dezembro de 2015. *Plano Estadual de Educação*, 2015.
- SÃO PAULO. Lei nº 16.279, de 8 de julho de 2016. *Plano Estadual de Educação*, 2016.
- TOCANTINS. Lei nº 2.977, de 8 de julho de 2015. *Plano Estadual de Educação*, 2015.
- TODOS PELA EDUCAÇÃO. *Ensino a distância na educação básica frente à pandemia da Covid-19*. 2020.
- ZABALA, Antoni. *A prática educativa: como ensinar*. Trad. Hernani da F. F. Rosa. Porto Alegre: ArtMed. 2008.

The experiences of universities in establishing financial education hubs – training of public network teachers

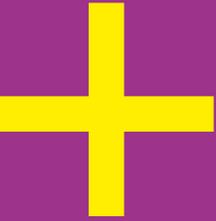
Regional Financial Education Hubs provide in-depth training suited to teachers' work environments, respecting the specificities of culture and regional development. The goal is to consolidate the National Financial Education Strategy in schools, as it covers all municipalities of the state, while also positioning teachers as active agents in the process of curricula change proposed in the implementation of the BNCC for High School. In addition to teaching in the classroom, the teachers trained at these hubs become important assets of the ENEF's social capital.

Maintaining focus on capacity building and increasing the perceived value of teachers, positioning them as leading agents in the subject to disseminate and consolidated financial education in the country, the reason behind the regional hubs is to consolidate training for the Financial Education Network initiated between 2017 and 2018, while also expanding it, through the establishment of partnerships with universities, Education departments and AEF-Brasil, for the development of financial education courses for different levels of graduation and training tailored to local necessities, while catering to the demand generated by the BNCC. In other words, establishing a hub goes beyond administering a course, it's about creating dialog at the points of the network present in every state.

The course to be developed considers local and regional characteristics, as well as the necessities of the State Department to certify and train its staff of teachers. As such, departments enable teachers to advance their careers in the State, providing instruction through partnerships between federal universities, state Education departments and AEF-Brasil, to develop specialization, enhancement and extension programs for teachers from the public Primary and High School network, with a minimum number of 80 course hours.

The idea is that this training builds capacities for these teachers to act as multipliers. To this end, there was a direct impact on 96 municipalities in the states of Tocantins, Minas Gerais, Paraíba and Rio Grande do Sul. Over 310 teachers from the public Primary and High School Education network were trained, with 1,052 hours administered by 61 teachers from four federal universities.

The coming chapters present the experiences of the four states that host the teacher training hubs.



Chapter 5

The experience of the financial education hub in the state of Paraíba

Bruno F. Frascaroli¹⁵

Financial education is one of the most recent themes in the scope of public policies, given its elevated capacity to generate positive external effects (LUSARDI, 2006). The challenge created with its integration into the National Common Curricular Base (BNCC) in 2020 hints at this relevance. It became the apex among several areas of knowledge, by becoming part of a series of subjects included in the Primary and High School Education curriculum. The idea is that this movement leads to a reformulation of the Basic Education curriculum through the efforts of all subnational entities, aimed at preparing pedagogical projects at schools that include financial education (BANCO CENTRAL DO BRASIL, 2013).

The inclusion of this content in the BNCC makes it one of the most important transversal and integrating themes of our time. These expertise are seen as essential to leveraging citizenship, while bolstering the comprehensive development of children, youths and adults (BRAUNSTEIN and WELCH, 2002). To understand financial education within the Brazilian context, one must consider historic facts and economic transformations, especially those related to the monetary reform of the *Plano Real* (Real Plan). A shift in paradigm in the period following hyperinflation and the innovations provided with the advent and dissemination of Internet access, also triggered profound changes in the national financial culture.

Other characteristics make Brazil a unique case, such as, for example, being home to one of the highest banking spreads and interest rates in the world (FRASCAROLI, PAES and RAMOS, 2010), especially in the credit card and overdraft modalities. Structural aspects are also evident, like the elevated rate of de-banking in the country, at close to 25 million families, or almost 30%

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of Brazilians, and the ‘plasticization’ of the economy with payment cards (MELO, FRASCAROLI and ALMEIDA, 2013), which represent some 150 million cards issued (ABECS, 2019). This all means that Brazil faces an uphill battle in generating long-term savings volumes.

As if the reduction in the average propensity to save income was not enough, this was coupled with a drastic rise in default in Brazil as from the early 2000s. According to the Credit Protection Service (SPC), 63 million Brazilians are

It is within this scenario – with their CPFs listed as restricted from contracting credit or making installment purchased – that families find themselves when attempting to manage debts and significant liabilities

characterized as having one or other account in arrears for over three months (SPC BRASIL, 2018). According to Serasa Experian and the CNDL (National Confederation of Retail Managers), 60% of these debts have been in arrears for over six months. That means approximately 40% of the country’s adult population, more than 50% of the economically active individuals.

It is within this scenario – with their CPFs (Individual Taxpayer Numbers) listed as restricted from contracting credit or making installment purchased – that families find themselves when attempting to manage debts and significant liabilities (BRUSKY and MAGALHÃES, 2015). As such, it is vital that this vicious cycle be broken so as to increase social well-being through financial education (CONSUMER FINANCIAL PROTECTION BUREAU, 2015). Despite all of Brazil’s efforts, the literature shows an absence of knowledge and basic competencies among the population, elements necessary to effectively deal with personal finances and financial innovations.

Financial education is intricately linked to social and demographic traits and the financial smarts of the family, making this fundamental amongst youths (LUSARDI, MITCHELL and CURTO, 2010; BROWN et al. 2016). As a consequence, to revert negative situations arising from the unsuitable access to financial service, instruments are required to minimize their complexity and the mitigate misinformation. This makes it important for nations to identify needs and gaps in the offer of financial education so as to develop national policies or strategies (ACCETTURO and BLASIO, 2012) simultaneously to the efforts towards financial market regulation.

Thus, it is essential to recognize the dimension of active citizenship fostered through financial education, that is, actively contributing to its development with attention to reducing social inequality. An example provided by Lusardi

and Mitchel (2011a) shows that women are financial less educated than men; that youths and the elderly are less educated than middle-aged individuals; and individuals with a higher level of education possess more financial expertise. To this end, financial education should be introduced at all levels of school (SAVOIA et al., 2007; LIGOCKI, 2015). Integrating it into the education of children and youths so as to leverage more autonomous and conscientious decision-making is an important step towards inclusive development (ATKINSON and MESSY, 2013).

From an empirical points of view, there are there is evidence of the effect of financial education on increasing family income (JACOB et al., 2000), on planning and well-being during retirement (LUSARDI and MITCHELL, 2006a; 2006b; 2011b), on investments in shares (VAN ROOIJ et al., 2011), and in the accumulation of wealth (BEHRMAN et al., 2012), among other financial decisions. This evidence include those who separate the causal impact of financial literacy in making economic decisions from other factors such as level of education and cognitive capacity (LUSARDI and MITCHELL, 2014).

Providing knowledge and abilities during the early stages of children’s development, that is, in the early years of school life, helps build the competencies necessary to later, as an adult, face social and economic challenges (HECKMAN, 2008). Therefore, the series of factors with the potential to improve financial education in Brazil, as well as the formation of a favorable savings profile, involves designs that generate incentives for a self-discipline among market agents. This is the only way to build a country that is less subject to crimes against the popular economy arising in financial markets, as laid out in the best practices recommended in the Basel Accords¹⁶.

16. These accords are considered the most important international regulatory milestone in steering and regulating global financial markets. There have been three editions thus far, with the first in 1988, the second in 2004 and the third version in 2010, motivated chiefly by the severe consequences of the 2008 subprime mortgage crisis.

PARAÍBA STATE FINANCIAL EDUCATION HUB

HISTORY

The establishment of the Paraíba State Financial Education Hub in 2017 is the result of a partnership with the Federal University of Paraíba (UFPB), the Association of Financial Education in Brazil (AEF-Brasil), the Paraíba State Department of Education, Science and Technology (SEECT/PB) and the Paraíba Technology Park Foundation (PacTqPB). Established in the Department of Economics, and concentrated in the Financial Education Specialization Course (CEEf), is an initiative of the Applied Economics Center (NEA), a research group registered in the research directory of the National Council for Scientific and Technological Development (CNPq). The UFPB thus took on the task to help develop financial education in the state, with a focus on schools, as per the four branches of the actions: teaching, research, extension and innovation.

Best practices on financial education in the most recent literature from national and international publications were our compass. Reports from institutions like the Organisation for Economic Co-operation and Development (OECD), the United Nations (UN and the World Bank), regulatory changes defined by the Bank for International Settlements (BIS), discussions within the World Economic Forum, among others of the world's most important repositories of knowledge were used for our purpose. However, it is important to reiterate that financial education is a subject with problems similar to those within education as a whole. For this reason, it must be in line with the successful proposals that consider education from a transdisciplinary point of view.

In this sense, the relevance of the Hub is enhanced by the need to introduce concepts related to financial education to the society of Paraíba, especially those members in public schools. This subject, strategically introduced into this privileged environment, is an important complementary tool in reducing social inequality. Considering the rapid growth and development of financial innovations, also called fintechs¹⁷, efforts geared towards public schools will help create generations less susceptible to uncontrolled debt, fraud and dangerous situations that jeopardize their quality of life and that of their social surroundings.

Focused on Primary School and High School Education and Youth and Adult Education (EJA), the Hub seeks to contribute to changing behaviors related to consumption by improving the use of money and financial instruments. Hence, it will be possible to build a culture of prevention, planning, savings and correct use of credit. The intent behind the Hub is to decentralize this type of qualification from the Rio-São Paulo-Brasília axis, in the sense of expanding possibilities for professional development for teachers acting as multipliers on a local and regional level.

This program, the first among specialization courses offer by Brazilian public higher education institutions in a distance learning offered by, particularly important to the state of Paraíba and the Northeast region of Brazil. Paraíba's performance in the Basic Education Development Index (IDEB) within a federative¹⁸ context, also reflects this lack in the formation of qualified human capital and opportunities for specialization in important subjects. Nevertheless, it provides opportunities for primary education teachers, who are at once so important and yet so unassisted by the public authority.

PLANNING, STRUCTURE, OPERATION AND ASSESSMENT

As mentioned, there is a significant need to build the capacities of teachers in the state public school network in Paraíba and other states in the region. Faced with the requirement to welcome a heterogeneous teaching public, efforts were made to introduce transdisciplinarity into the center of attentions, in the sense of tying in with other public policies on education, such as tax education, environmental education and instruction on entrepreneurship. Transdisciplinarity is present equally in the relationships among activities, the program modules and the areas of knowledge of the teaching staff involved, which encompasses economics, education, administration, accounting, psychology, mathematics and computer sciences, among others.

18. Paraíba State's performance in the IDEB in 2019 was 4 points, placed 16th among the states and Federal District. It was higher than average for 1st to 5th grades, and below the goal established for grades 6 to 9, with honorable exceptions among which were many schools part of the Paraíba State Financial Education Hub, including the school with the highest score in the city of João Pessoa, namely *Escola Cidadã em Tempo Integral Francisca Ascensão Cunha*, which also surpassed the national average.

17. Read on in Frascaroli (2020).

Course actions are also guided through a social interactionist approach, characterized by the involvement of individuals in the construction of concepts and their respective meanings

The first stage involved planning activities based on information garnered from teachers. With this diagnosis in hand, together with a map of the literature, a reverse induction mechanism was applied to develop the pedagogical framework for CEEF. The focus lay on training teachers as multipliers geared towards introducing financial education into the classrooms of state public schools in Paraíba. The marginal contribution for each module was observed to reach this objective.

Furthermore, the modules were designed in order to draft an article like a Final Paper, along with the preparation of a class plan, which details how the teacher intends to introduce financial education into their area of knowledge at the school. Being a distance learning module, the course was heavily reliant on information and communication technology. Classes apply didactic resources such as texts, videos, news, games and applications. To minimize the limitations of the distance learning modality, activities were organized to favor the collective and participatory construction of knowledge, whenever possible.

Course actions are also guided through a social interactionist approach, characterized by the involvement of individuals in the construction of concepts and their respective meanings. This is also a factor on the quest for partnerships between teachers on the staff of Federal University of Paraíba (UFPB) and institutions in an attempt to develop this value from within. CEEF teachers take on the role of organizer and encouraging agent for the process with a focus on learning (WEISZ, 1999), to establish a relationship by introducing concepts on financial education into the daily life routines of the scholar community

The course was designed to operate on the Moodle Pex platform. It is combined with SIGAA (Integrated Academic Activity Management System), so that students are equipped to manage their academic lives. In turn, these systems have the support of the SEAD (Superintendence of Distance Education) and the STI (Superintendence of Information Technology), respectively. In addition to the aforementioned systems, UFPB hosts a course website with other tools. Necessary infrastructure is also provided in the scope of Internet access and computers at four hubs: João Pessoa, Campina Grande, Pombal and Alagoa Grande.

It is worth noting that Distance Education involves a major challenge in motivating teachers, and students to actively participate in the virtual learning environment. Within this context, information and communication technologies play a vital role. The course relies on a team of qualified teachers from the leading graduate programs from the UFPB Center for Applied Social Sciences, in addition to teachers from other partner institutions, like the Federal University of Campina Grande (UFCG) and the Chico Mendes Institute for Biodiversity Conservation (ICMBio). Besides the teachers, the course includes a team of assistant professors, who oversee the students, along with school offices, and support from the PacTcPB Foundation, all exceptionally important to improving the development of academic activities.

To support the modular disciplines, textbooks are used in the classroom in state public schools. The aim is to consider the characteristics and reality of each school. Additional material like videos, documentaries, news, websites of institutions like AEF-Brasil, the Central Bank of Brazil, the Securities and Exchange Commission of Brazil (CVM), B3 S.A. and other entities are used as a source for research and reading material for students.

Furthermore, teachers present students with a study plan at the beginning of each subject, establishing objectives, course content and evaluation criteria. As the courses are offered in the Distance Education format, subject guidelines are available to students on Moodle Pex, specifically to steer them through the asynchronous activities, using several didactic resources. The table below is based on the Resolution N° 07/2018 of the UFPB's Senior Board of Education, Research and Extension (CONSEPE), which regulates the structure for CEEF, with modular disciplines from the curricular pedagogical project:

It is worth noting that Distance Education involves a major challenge in motivating teachers, and students to actively participate in the virtual learning environment

**MODULAR DISCIPLINES FROM THE CEEF
CURRICULAR PEDAGOGICAL PROJECT**

Operational Matrix			
	Disciplines/Modules	Modality	Course Hours
1)	Seminar I	In-Person	5
2)	Distance Education	Distance Education	30
3)	Financial Education I	Distance Education	30
4)	Financial Education Workshop I	Distance Education	30
5)	Financial Education II	Distance Education	20
6)	Financial Education Workshop II	Distance Education	30
7)	Seminar II	In-Person	5
8)	Financial Education in Primary School	Distance Education	30
9)	Financial Education in Primary School Workshop	Distance Education	30
10)	Financial Planning and Family Budget	Distance Education	30
11)	Financial Education and Pedagogical Resources	Distance Education	30
12)	Mathematic for Financial Education	Distance Education	30
13)	Banks and Access to Financial Services	Distance Education	15
14)	Seminar III	In-Person	5
15)	Orientation on Final Paper		
Total Class Hours			360

Source: prepared based on CONSEPE/UFPB Resolution 07/2018.

The modules, which are currently being adjusted, seek to offer theories, didactic activities, practices and other activities in a way that allows teachers from the public-school network to introduce financial education to their students in a variety of contexts. The practice of placing greater value on discussion and group work, and encouraging intellectual autonomy among students through planned activities to promote the use of several resources, are among the Hub's values.

The selection process for Class I candidates was a crucial part of the course success rate, in the sense of focusing more accurately on teachers truly interested in the challenge of introducing financial education in schools. The selection was according to the standards established by UFPB resolutions, under the guidance of the Attorney General's Office of the AGU/MPF/UFPB (Federal Attorney General's Office/Federal Public Prosecutor/Federal University of Paraíba), entailing a calendar with stages from the enrollment period, place, times, contacts, notice of enrollment approval, results, deadlines for appeals for each step and the widely promote selection criteria.

The process was conducted entirely through SIGAA, with 83 candidates selected. As such, from the outset, teachers from around 60 public schools in 25 municipalities became qualified through CEEF and eligible to participate in extension activities with their students. It was thus possible to cater to a significant number of students, considering that each teacher instructs at least three classes, with an average 30 class hours. As presented in the table, in addition to the modular disciplines, there are also in-person meetings.

Aimed at integration between teachers and students, the 1st CEEF Financial Education Meeting took place during the 5th ENEF Week at the UFPB, Campus I – João Pessoa. The event included a presentation of the creation of the Paraíba State Financial Education Hub, its participating institutions, the team of teachers, the main UFPB projects related to the hub, as well as regulations and criteria for assessing the modules. The course was developed based on a diagnosis, previously mentioned, and presented to the students at the event. This helped them to get to know one another, revealing the elevated degree of diversity among their origins, education and profiles, reiterating the transdisciplinary nature of the challenge ahead.

From the outset, teacher from around 60 public schools in 25 municipalities became qualified through CEEF and eligible to participate in extension activities with their students.

The 2nd CEEF Financial Education Meeting was hosted during the 6th ENEF Week, at the facilities of the Paraíba State Educator Training Center. The event was aimed at aligning course execution points, exploring its collaborative nature with the other education objectives in the state, bolstered by hosting the event at the facilities of the Paraíba State Department of Education, Science and Technology (SEECT/PB). Information was shared on the preparation of Final Papers, consisting of a scientific article, and the Class Plan that the teach will apply throughout the course. It also drew students' attention to the need to complete an assessment of each module, the course coordination, the secretariat and the advisors.

The 3rd CEEF Financial Education Meeting included the graduation of Class I, with the presentation of several Final Papers and class plans, as a result of course activities. The same occurred during the 7th ENEF Week, hosted online due to the Covid-19 pandemic. It is important to mention that the in-person meetings allow for an exchange of experiences and reflection with regards to the course proposal. They are fundamental to establishing trust among participants, as this is a Distance Education pilot project.

The operationalization and running of the course seek to articulate with the daily routine of the teachers and prioritize practical situations that allow them to work on the subject of financial education in schools, most often in a full-time modality, as an instrument. Thus, it is possible to still meet the other needs and priorities of schools, which generally end up falling largely in the laps of their teachers. Information about the assessments during the modules are presented with the teaching plan, with the criteria determined by each teacher. They are based on the teacher's perception and the development of judgment, seeking to provoke reflection among students, namely the teachers at the state public school network, about the impact of the module on their training and in their work.

Teachers propose activities and monitor the regular access to Moodle by students, prioritizing interaction among participants, while also meeting deadlines, fundamental to ensuring the linear functioning of the course. Additionally, access is provided to reading material and the best references in financial education through the CEEF Library. Modules must be completed in order to progress in the course, through it is not a criterion for certification. This will only be obtained through the assessment of the Final Paper and the class plans, integral parts of the course research activities.

The assessments possess three dimensions, one implemented by means of a questionnaire applied to students using the Google Forms tool. It serves to measure student perceptions of course teachers, counselors, coordination, the role of assistant professors and school office. It is applied at the end of each of the modules. This dimension is part of the assessment of service provision, guided by performance indicators for staff and student learning. The two other dimensions are the institutional appraisal of the UFPB, largely conducted by means of the General Coordinator for Monitoring and Assessment of master's, and Doctoral and Specialization Courses (CAAPG), and an evaluation of the social impact, detailed as follows. Thus, these

evaluations are important in generating a critical reflection about the course and its results.

DIAGNOSIS THROUGH THE FINANCIAL EDUCATION RADAR

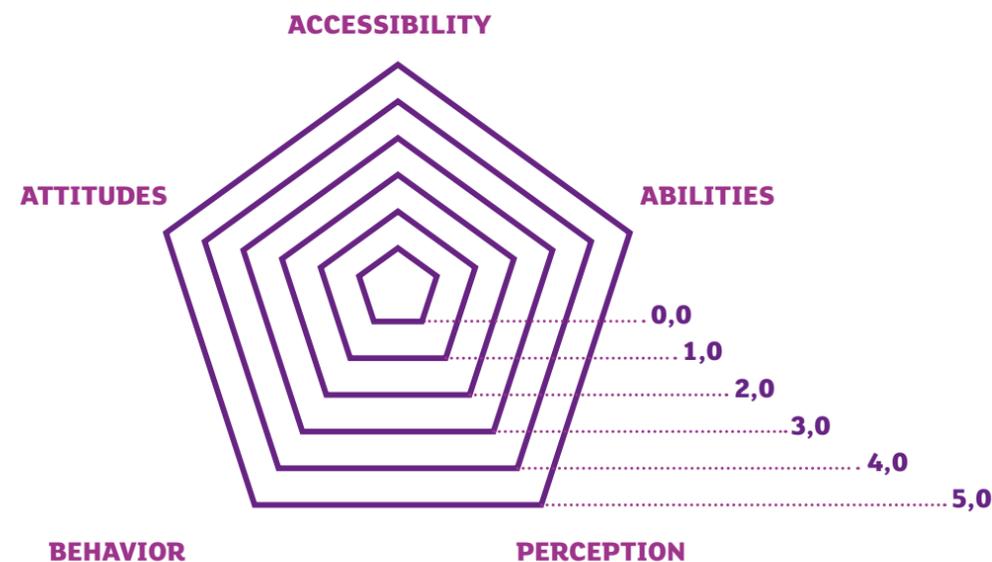
During the implementation of the Paraíba State Financial Education Hub, the Financial Education Radar was developed through the combination of certain contributions from the literature on innovations and financial education. The idea was to gain an initial impressionist view of the reality of teachers, so as to better design the qualification offered by CEEF, and their influence on the students at state public schools.

Financial Education Radar

The Financial Education Radar (REF) consist of a means to measure the development of individuals in this subject. Its dimensions were selected based on literature on the field and reports by the OECD. It was based on the Innovation Radar framework proposed by Bachmann and Destefani (2008). It consists of an instrument employed by the OECD to assess the degree of innovation in small companies, comprising 13 dimensions of innovation: offer, platform, brand, clients, solutions, relationship, adding value, processes, organization, supply chain, presence, network and innovative ambiance.

The REF, however, is aimed at facilitating understanding of the degree of financial education development based on five dimensions, with scores varying from 1 to 5. It is vital to portray the financial knowledge of individuals with the most varying types of education and customs (HUSTON, 2010; ATKINSON and MESSY, 2012). These authors show that financial knowledge is a combination of awareness, knowledge, abilities, attitudes and behaviors necessary to make healthy decisions and attain social well-being. Thus, the aforementioned radar dimensions are: accessibility, abilities, perception, behaviors and attitudes.

The method consist of using data obtained through the application of the agreement instrument with certain weights to calculate the scores for each dimension. The radar in question is represented in the following figure:

FINANCIAL EDUCATION RADAR

Source: Frascaroli (2018).

To follow is a presentation of the questionnaire used to collect data for the diagnosis study. This data was inserted in the REF score calculation for Class I.

DATA COLLECTION FOR THE DIAGNOSIS STUDY

The logic behind the construction of the questionnaire for the diagnosis study, with details to be captured through the questions is described next. The first group of questions is aimed at identifying the social and economic profile of teachers from the public-school network. The table which follows presents these questions.

QUESTIONS TO ELABORATE THE SOCIAL AND ECONOMIC PROFILE

N°	Question
1)	What is your marital status?
2)	How many people aged under 18 live with you? (Multiple choice)
3)	Do you live in an urban area? (Binary)
4)	Is the school where you work in an urban area? (Binary)
5)	How many schools do you currently work for? (Multiple choice)
6)	Time, in years, teaching in the classroom:
7)	Besides teaching activities, do you have another source of personal income?
8)	What is the approximate education level of your father? (Multiple choice)
9)	What is the approximate education level of your mother? (Multiple choice)
10)	What is the highest level of education you completed? (Multiple choice)
11)	Indicate the type of institution where you earned your higher education diploma (Multiple choice)

Source: Frascaroli (2018).

Questions that refer to the REF dimensions are presented next. The dimension called *accessibility* represents the degree and type of access afforded to participants to different information media, such as radio and television, social networks, websites, computer software and printed material, among others questions. They correspond to questions 12 to 16, presented in the following table.

ACCESSIBILITY DIMENSION QUESTIONS

N°	Questions
12)	Approximately how many times in the last week have you accessed instant chat applications and social networks? (Enter 100 if very often)
13)	Approximately how many times in the last week have you accessed computer software, websites, online newspapers and web games (Enter 100 if very often)
14)	Approximately how many times in the last week have you accessed communications media like radio, TV and films (Enter 100 if very often)
15)	Approximately how many times in the last week have you accessed service centers, seminar/conferences and workshops (Enter 100 if very often)
16)	Approximately how many times in the last week have you accessed printed material, like books, newspapers and magazines, CDs and handbills (Enter 100 if very often)

Source: Frascaroli (2018).

The *ability* dimension reveals the level of knowledge of simple mathematical calculations, and those involving notions of percentages, fractions, notions of time and decisions made with information on interest rates and discounts. The table below features questions 17 to 20, representing this dimension.

ABILITIES DIMENSION QUESTIONS

N°	Questions
17)	Do you have any experience in financial education? (Binary)
18)	A store is selling mobile phones according to the following offer: "Buy one mobile phone and pay next month, or pay today and earn a 25% discount". Those buying the mobile phone today and opting to pay in a month's time will actually pay an interest rate of: (Multiple choice)
19)	A vendor sell pamonhas (a traditional Brazilian food made of corn) at the street market and has an initial cost of BRL 250.00, as well as an average production cost of BRL 3.20 for each "pamonha". The total cost for a day at the street market was BRL 973.20 Considering these conditions, how many "pamonhas" did she make? (Multiple choice)
20)	With regards to the financial products I currently possess, it is correct to affirm that: (Multiple choice)

Source: Frascaroli (2018).

The *perception* dimension indicates the notion that responders have about financial decisions, including their own knowledge of finances, in addition to the national economic changes in their lives. The following table shows the questions from this dimension, which correspond to questions 21 to 23 of the questionnaire.

PERCEPTION DIMENSION QUESTIONS

N°	Questions
21)	How would you assess your general knowledge about financial issues compared to other adults in Brazil? (Multiple choice)
22)	To what degree have you noticed that the economic crisis has worsened your financial control? (Multiple choice)
23)	What percentage rise in your available income would satisfy you, considering no additional workload? (Multiple choice)

Source: Frascaroli (2018).

Extracted using questions 24 to 27, the *behavior* dimension reveals aspects about individual behavior, how finances are administered

and planning for retirement, for example. The table below presents questions from this dimension:

BEHAVIOR DIMENSION QUESTIONS

N°	Questions
24)	Who makes budget decision in the daily routine of your home? (Multiple choice)
25)	Have you previously created a personal or domestic budget for your expenses? (Multiple choice)
26)	Have you used an app or another systematic instrument to plan a personal budget? (Multiple choice)
27)	Have you thought about your retirement or planned for this stage of your life? (Multiple choice)

Source: Frascaroli (2018).

Lastly, there is the *attitude* dimension, expressing decisions in situations involving the acquisition of goods, taking out loans and investments. It is represented by questions 28 to 30, as shown below.

ATTITUDE DIMENSION QUESTIONS

N°	Questions
28)	When you decide to buy something, do you analyze the real need for the purchase? (Multiple choice)
29)	To avoid short-term financial problems, you are obliged to take out a loan. In this situation: (Multiple choice)
30)	After paying the monthly bills, you notice money left over. In this situation: (Multiple choice)

Source: Frascaroli (2018).

CEEF SOCIAL IMPACT ASSESSMENT

The social impact assessment is the leading investigation in terms of hub research activities in the state. The approach proposed combines aspects found in Accetturo and Blasio (2012) and Lusardi and Mitchell (2014). The idea is that gauging financial education provides deeper insight into the limitations of working with the subject based on the established and commonly accepted standardized instruments (HUSTON, 2020).

There will be a direct effect on the teachers and an indirect on the students, arising from CEEF qualification, given that various activities were prepared for teachers from the state public school to use with their students. Initially, based on state school data, a sample will be constructed of teachers and students, considering the state's original population. This randomization will allow the use of a control group to estimate the probability of receiving treatment, that is, the qualification given through CEEF.

Three instruments were created in the form of questionnaires with around 30 questions to assess impact. The first carries question aimed at state network teachers (direct effect), while the other two are geared towards students (indirect effect – one for 5th grade students and the other for 9th grade students). They will be applied before and after the qualification of CEEF on teachers and their students, as well as students and teachers from the control group. Besides the information obtained through the questionnaires, the idea is to use data on teachers and students provided by the SEECT/PB's Sistema Saber (Knowledge System).

It will thus be possible to randomize the experiments necessary to the impact assessment to compare and control the effect generate specifically through the qualification offered by CEEF. The model proposed features two stages to discover the effects on teachers and students (Y), in comparison with the period prior to qualification through the course (Y0) and after the course (Y1). As such, the goal will be to build a counterfactual condition, which consists of a model estimate to compare similar individuals in terms of their observable characteristics.

Propensity Score Matching (PSM)

The idea is to combine Propensity Score Matching (PSM) with Difference in Difference (DD) (ROSENBAUM; RUBIN, 1983) based on common compatibility, when dependent variables are weighted by the propensity score initially estimated. It will be possible to estimate the effects of CEEF on qualified teachers, establishing a control for other teachers from the school network that did not receive the qualification.

Cameron and Trivedi (2005) show that the main function of PSM is to generate a score equal to the probability of receiving treatment, considering both those impacted and not impacted, based on a specific set of predetermined covariates (Xi), which can identify eligibility to participate in the experiment.

In this particular case, the goal is to compare an individual in the presence of treatment (qualification offered by CEEF) [D=1] simultaneously to its absence [D=0], with the result presented through the following:

$$Y_i = DY_i(1) + (1-D) Y_i(0) \quad (1)$$

Subsequently, the impact on the individual *i*, is given by $Y_i = Y_i(1) - Y_i(0)$, whereby adding the X_i vector of covariates common amongst themselves reveals the average conditional impact of the treatment effect (ATE):

$$ATE = E[Y_{1i}|X, D=1] - E[Y_{0i}|X, D=0] \quad (2)$$

However, the two situations obviously cannot coexist, due to the fact that an individual cannot be simultaneously impacted and “not impacted”. The average results in (2) has a selection bias, failing to correctly capture the average effect of the control group on the average result of the counterfactual conditions of those impacted in the absence of impact. Duflo et al. (2008) use the addition and subtraction of the term in (2) to show that how selection bias can contaminate the result of the impact, as follows:

$$ATE = E[Y_{1i}|X, D=1] - E[Y_{0i}|X, D=1] - E[Y_{0i}|X, D=0] + E[Y_{0i}|X, D=1] = E[Y_{1i} - Y_{0i}|X, D=1] + E[Y_{0i}|X, D=1] - E[Y_{0i}|X, D=0] \quad (3)$$

The first term in (3) is the effect of the average impact on the group of individuals impacted (ATT), with the other terms corresponding to the selection bias, which highlights possible differences among the groups analyzed. Thus, the estimation of ATE corresponding to (3) possessed biased estimated, not responding to the true impact of the treatment. In the absence of a pure random experiment, in order to measure it a new quasi-experiment sample method is used, estimating only the ATT, thereby eliminating the selection bias (RAVALLION, 2008).

Despite this effort, the results continue not being observed simultaneously, calling for the formation of propensity scores, to be used for eligibility of the control group, made up of individuals that did not qualify through CEEF, though who possess traits similar to those treated, making them comparable. Becker and Ichino (2002) underscore that truncated regression models can be used to identify the likelihood of an individual being treated, with logistic regression the most often indicated. However, to validate the PSM approach,

it is necessary to respect two conditions related to the treatment groups. Firstly, Rosenbaum and Rubin (1983) refer to the hypothesis of conditional independence (HIC), which implies that potential results in Y are independent of the treatment of D , given a series of observable variables. Whether through the following equation:

$$E(Y(0)|X,D=1)=E(Y(0)|X,D=0) \quad (4)$$

This way, with the selected variables conditioned, randomness is guaranteed for the groups. Alternatively, the authors also show that the X vector can be replaced by a propensity score $P(X)$:

$$E(Y(0)|P(X),D=1)=E(Y(0)|P(X),D=0) \quad (5)$$

The use of a propensity score is an instrument that can avoid dimensioning problems in matching operationalization (CAMERON and TRIVEDI, 2005). The second hypothesis calls for the imposition of common support, that is:

$$0 < \Pr(D=1|X=x) < 1 \quad (6)$$

Comparability between the treatment and control groups, reveals that conditioning to the covariates or the propensity score $P(X)$ ensures that the group of individuals impacted and those from the control group meet at the same interval, which facilitates matching between them. After estimating the probability model including the participants and non-participants, and assuming that the two conditions presented above are respected, it is possible to match the groups.

Comparability between the treatment and control groups is given through the conditioning of covariates. It ensures that propensity scores $P(X)$ of the groups of individuals impacted through the course and the control group meet at the same interval, which facilitates facilitate matching between them (HECKMAN et al., 1998). Among the types of matching that consider propensity score estimates are stratification matching, nearest neighbor matching, radius matching and Kernel matching.

The goal is to test matching between treatment and control groups according to nearest neighbor matching, radius matching and Kernel matching estimates, selecting those which present the best match. After

following all the steps and requirements described, the ATT resulting from the direct matching of values between treatment and control groups can be expressed as follows:

$$ATT = E[Y_{1i} - Y_{0i} | D_i = 1] = E\{E[Y_i | P(X_i), D_i = 1] - E[Y_i | P(X_i), D_i = 0] | D_i = 1\} \quad (7)$$

Difference in Difference Estimator

In a comparison between the results from periods Y_0 and Y_1 , treatment was expected to be biased due to time trends in the result variable, or due to the effect of the impact of qualification provided through CEEF. When looking at only part of the sample, a control group can be used to identify the time variance in the result that is not due to exposure to treatment (ABADIE, 2003). Within this context, the DD method consist of comparing between a group qualified through CEEF and another control group before (first difference) and after qualification (second difference).

Some conditions are necessary to estimate the DD model. Firstly, the existence of two comparable periods, that is, prior to the implementation of the CEED ($t=0$) and after the implementation of the course ($t=1$). Additionally, the availability of two groups of individuals i , with teachers qualified through CEEF ($Z_i=1$) and a control group comprised of unqualified individuals ($Z_i=0$). Furthermore, the absence of any intervention must be respected in the pre-treatment in both groups ($D_{it=0} = 0 / Z_i = 1, 0$), as with the effect of qualification for the interest group in the periods after qualification ($D_{it=1} / Z_i = 1$). The effect of the treatment of the DD sample is given by the difference in the outcome variable for the units treated and control before and after qualification, as shown below:

$$DD = \{E(Y_{it=1} | D_{it=1} = 1, Z_i = 1) - E(Y_{it=1} | D_{it=1} = 0, Z_i = 0)\} - \{E(Y_{it=0} | D_{it=0} = 0, Z_i = 1) - E(Y_{it=0} | D_{it=0} = 0, Z_i = 0)\} \quad (8)$$

The simplicity of the DD estimation offers important advantages, like the capacity to avoid endogeneity problems, which may occur when making comparisons between heterogeneous individuals. However, for greater accuracy and more robust results, control is necessary using other characteristics that are likely compatible. The effect of all other variables must be discovered and isolated, to learn what is causing the changes in the studied variable. Thus, more specific measures are necessary to specify the

model. It is then possible to obtain the impact common to all of the qualified individuals, guaranteeing estimator exogeneity. The effect on the variable under examination is given by:

$$D = \{E(Y_{it=1} | D_{it=1}=1, Z_i=1, X_i) - E(Y_{it=1} | D_{it=1}=0, Z_i=0, X_i)\} - \{E(Y_{it=0} | D_{it=0}=0, Z_i=1, X_i) - E(Y_{it=0} | D_{it=0}=0, Z_i=0, X_i)\} \quad (9)$$

Matching Difference in Difference Estimator

A robust assessment of a treatment requires that the characteristics of the control group be well matched with those of the interest group. Although matching can eliminate or considerably reduce bias resulting from observed characteristics, it is possible that other biases of individuals' characteristics arise that are time invariant and not observed, whether teachers (direct effect) or students (indirect effect) (GETLER et al., 2011). Thus, it is necessary to estimate the DD described in (8), through the combination of the ATT estimator and the propensity scores, contained in (7), incorporating the Kernel weight in the propensity score. The average effect of treatment on those impacted, using the DD together with the PSM, can be expressed as:

$$DD = \{E(Y_{it=1} | D_{it=1}=1, Z_i=1) - w_i \times E(Y_{it=1} | D_{it=1}=0, Z_i=0) - E(Y_{it=0} | D_{it=0}=0, Z_i=1) - w_i \times E(Y_{it=0} | D_{it=0}=0, Z_i=0)\} \quad (10)$$

wherein w_i is the weight of the Kernel, by incorporating the control variables, matching the qualified individuals with the control individuals, in accordance with their propensity scores. Each treated observation is matched with the whole control sample, not limited to the nearest neighbor matching. Estimation consist of obtaining the propensity score corresponding to $p_i = E(Z_i=1 | X_i)$ for both groups. The weight of the Kernel can be described by:

$$w_i = \frac{K\left(\frac{p_i - p_k}{h_n}\right)}{\sum K\left(\frac{p_i - p_k}{h_n}\right)} \quad (11)$$

in which K is the Kernel function and h_n is the so-called bandwidth selection.

According to this methodology, it is possible to correctly estimate the difference between the result expected from the treatment and control groups during the reference period, and the difference in the result between

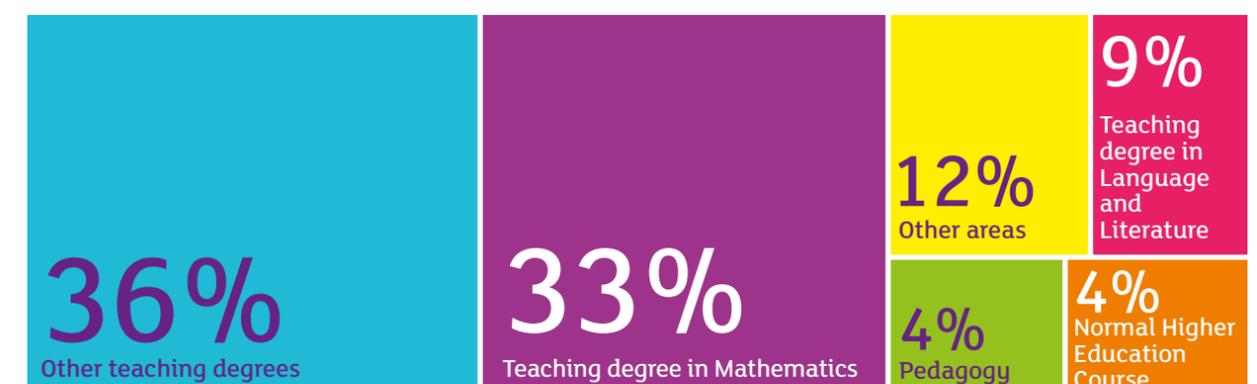
the treatment and control groups at the end of the qualification provided by CEEF. The incorporation of PSM into the DD regression reduces possible biases towards the covariates not observed through the DD method, allowing PSM to attain a more homogeneous sample, which results in minimization of bias resulting from the distribution of observable characteristics and the absence of common support for observing the analyzed individuals.

EXPERIENCES, AGENDA AND COLLABORATIONS

The experience of Class I of CEEF offered significant lessons. As reported, it served as the basis for the development of diagnostic tools and the methodological procedures to assess the social impact along the branch of research. This information was crucial to better understand teachers from the public-school network and their students. The diagnostic study showed that 56% of the teachers from the state public school network had no experience in financial education. Some potentially negative preexisting conditions were also revealed, such as the fact that around 30% of the teachers having a second activity to complement their income, and that 8% of the schools attended are located in rural areas with difficult access

It was possible to analyze which of the five dimensions – accessibility, abilities, perception, behaviors and attitudes – were most affected by the combination of interventions offered at the project. Furthermore, information also included the type of institution and the area of teach training. The next figure shows the degree areas for those teachers part of Class I.

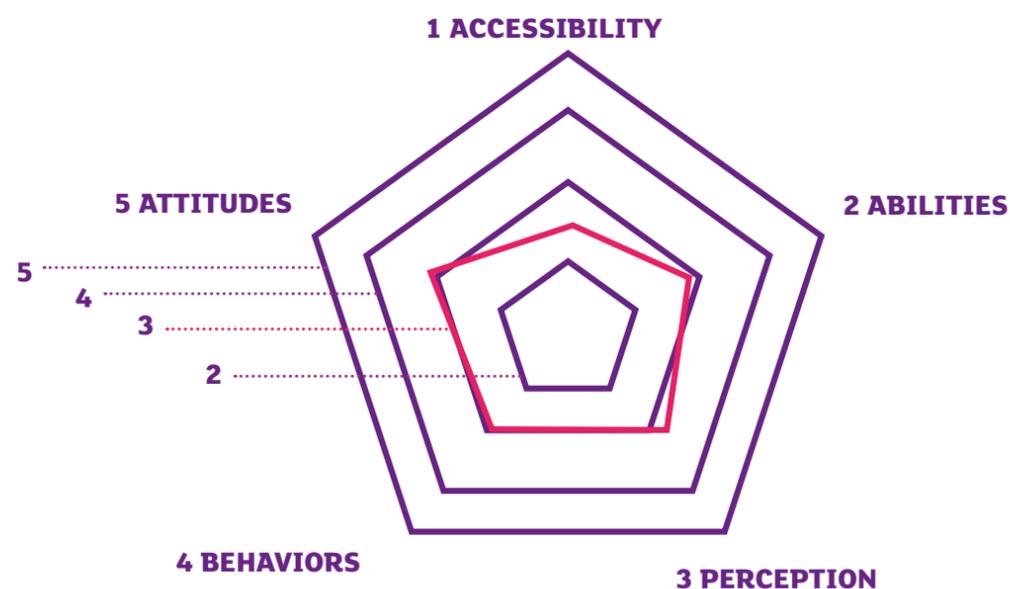
AREAS AND TRAINING FOR CLASS I TEACHERS



Source: Frascaroli (2018).

The figure clearly reveals the importance of transdisciplinarity followed by a pedagogical project geared towards financial education. Despite a propensity for self-selection of teachers from the area of mathematics for the subject of financial education, a third of the teachers from Class I hold a degree in the area. In addition, several teachers from the state public school network and students of the course hold master's degrees and PhDs, which reveals even more scarcity of this type of qualification offered through CEEF. The following figure shows the diagnosis calculated for the class in question.

CLASS I REF DIAGNOSIS



Source: Frascaroli (2018).

The radar showed that the worst score was the *accessibility* dimension. The strongest correlation noted among the dimensions was *abilities* and *behaviors*. Despite requiring greater scale to validate the questionnaire, early evidence shows that access to information and pedagogical material is the main barrier in disseminating financial education in the state of Paraíba. Due to the Covid-19 pandemic in 2020, research from student Final Papers and social impact assessment saw their respective calendars expanded.

Specifically, in the case of the Final Papers, largely due to professors from UFPB and teachers from the public-school network were forced to change to a remote

working scheme as a result of social distancing measures. Both within the sphere of state public schools and at UFPB, the technological transitions due to the pandemic occurred extremely rapidly, which called for adaptations to some of the course completion activities for Class I. Thirty Final Papers had been presented through video conference. The papers suggested interesting subjects and methods of introducing financial education into schools and the community. The table below presents some examples:

SOME CONTRIBUTIONS TO FINANCIAL EDUCATION FROM CEEF FINAL PAPERS

Title	Contribution
Financial education incentives in a full-time public school in Campina Grande, Paraíba	Pedagogical practices developed and teachers mobilized within several areas of the school around the subject of financial education, focused on Life Projects.
The promotion of financial education among public employees in the municipality of Cajazeiras, Paraíba	A study was conducted on the behavior of local public employees, while demystifying subjects related to financial education and income security.
Financial education as part of full-time education in the municipality of Conde, Paraíba: practicing concepts through a school vegetable garden	Working with financial education within the context of the environment, using school vegetable gardens.
Financial and environmental education in public school: a case study based on the implementation of a sustainable vegetable garden in the municipality of Lagoa, Paraíba	Working with financial education within the context of the environment, using school vegetable gardens.
Financial education in preparation for life: an insertion of students from a public school in the municipality of Itapororoca, Paraíba	Encourage students to plan their financial future from a collective point of view, providing incentive for them to raise funds to safeguard their culture, by means of a visit to certain public institutions, among the Jackson do Pandeiro Memorial, in Alagoa Grande, Paraíba.
Financial education in the classroom: a report on the experience	Appreciation of the development of collective experiences and relationships among students within the classroom environment, by means of financial education workshops during mathematics classes, content usually difficult for students to grasp due to its abstract characteristics at times.
Financial education in the school environment: report on a pedagogical project in the municipality of Lucena, Paraíba.	Preparation of didactic-pedagogical material, based on daily situations, to serve as a tool to disseminate financial education.

Source: prepared by authors using information from SIGAA/UFPB.

In the field of extension programs, activities were headed by the project *Café com Educação Financeira nas Escolas* (Coffee with Financial Education in Schools), which, despite the limited number of benefited schools, provided on-site contact and also helps to support the research. Towards this end, in 2018 and 2019, workshops were hosted in partnership with Serasa Experian and AEF-Brasil, at schools in João Pessoa and Campina Grande. Additionally, the difficulty of material and accessibility to information led to mobilization and the planning of actions for the donation of AEF-Brasil books to schools.

Approximately twelve schools were selected among those without ENEF books, receiving books for grades 6 through 9. This is hoped to reduce the cost of providing material for students to work with, which is very often assumed by teachers working in public school. The aim of this action is to provide on-site information and help in the sense of teachers and students from state public schools know how to find reliable and scientifically based financial education content.

Innovation actions, a more recent branch, has sought to accelerate the dissemination of financial education and tie it in more closely with the daily routines of children and youths part of the ‘millennial’ generation, highly prone to using technologies (CUNHA et al., 2014). This branch is stimulated through the approximation between NEA (Applied Economics Center), the Graduate Program in Mathematical and Computer Modeling (PPGMMC) offered by the UFPB Informatics Center, UFPB laboratories and development agencies. The goal is to study and help develop personal spending control applications, as well as pedagogical games, for smartphones. Furthermore, Internet channels like websites¹⁹ and social networks²⁰, have shown increasing use, especially in partnership with schools that have adopted a strategy to strengthen ties with students.

19. For more information on CEEF, such as the staff of teachers, documents, regulations, etc., visit: <http://www.ccsa.ufpb.br/ceef>.

20. Facebook and Instagram profiles can be accessed via: <https://www.facebook.com/ceefufpb> e <https://www.instagram.com/ceefufpb/>. Through them, you can access news on activities developed at the Hub.

To also attain the recognition of teachers from public schools qualified through CEEF, several search mechanisms were used to encourage the elaboration of projects involving research, interventions, teaching, etc., along with enrollment in public tenders and awards. Among the mechanisms most used is *Finance System*, in a partnership between UFPB and Federal University of Viçosa (UFV) and Federal University of Minas Gerais (UFMG). These opportunities seek to simulate an entrepreneurial behavior in teachers, in the sense of shifting from being passive citizens to becoming active citizens in the project’s actions, working in collaboration to reach both personal and collective objectives.

Several teachers from the course were recognized in 2019 with the Master of Education award, granted by SEECT/PB. Two were selected through a request for proposals entitled “Education for Consumption and Financial Education in Schools – 2019-2021 Training”, promoted by BCB and implemented through the Center for Public Policies and Education Assessment (CAEd) of Federal University of Juiz de Fora (UFJF). Additionally, a teacher was approved in Request for Proposals No. 002/2019 for “Support to the Organization and Realization of Scientific, Technological and Innovation Events”, released by the Paraíba State Research Support Foundation (FAPESQ), in partnership with SEECT/PB.

Some teachers from the public-school network were encouraged by CEEF instructors to successfully apply for positions in master’s and doctoral programs. They are thus able to continue their investigations into financial education in master and doctoral programs. The goal is to help teachers with qualifications of excellence in schools, to improve basic education development index indicators in the state of Paraíba, even if only marginally. Some schools have presented satisfactory grades for 1st to 5th grade assessment, as well as for 6th to 9th grades, respectively: ECI Professor Itan Pereira (5.8)²¹, ECI Francisca Ascensão Cunha (5.2), ECIT Alice Carneiro (5.1), EMIEF Matias Duarte Rolim (4.8), ECI Nenzinha Cunha Lima (4.1), ECIT Doutor Elpídio de Almeida (4.7), EMEIEF José Antônio Dias (4.3), among others.

21. The highest grades from each state school appear in the parentheses. Initially of note is that, among them, the best performances were attained by through the *Escolas Cidadãs em Tempo Integral* – ECI (Full-time Citizen Schools), and the *Escolas Cidadãs em Tempo Integral* – ECIT (Full-time Technical Citizen School), implemented in the state of Paraíba in March 2016.

FINAL CONSIDERATIONS

In order to work with financial education, it is necessary to adapt to the rhythm of change caused by new cultures, technological innovations and fintechs, in the context of the millennial generation, which holds unique characteristics that should be used. The difference of the Paraíba State Financial Education Hub in seeking technological means and the realization of social impact assessments to understand which actions are more and less effective, also based on *in loco* observation, seems to be in line with the OECD indications and the best public policy practices related to financial education around the world.

It is hoped that with the return of in-person activities, randomized experiments may be conducted to define which teachers and schools will participate in the control group and advance with the social impact assessment. Thus, there is an effort to adopt public policies that begin with higher education institutions, leaning towards public school networks, while also assisting in the construction of a legacy through the diffusion of information, culture, practices and actions that transform the relationship between public school students and financial services and innovations. The belief is that, like in other countries, financial education policies must be developed on a solid base of evidence and diagnoses, principles, best practices and recommendation.

Lastly, though of the utmost importance, there must be coordinated effort between the government and society to monitor the quality of the programs developed. It seems that these programs are in strong alignment with the principles of transdisciplinarity, support for other dimensions of citizenship, such as tax education, environmental education and entrepreneurial education and, above all, they help subnational entities to bolster the results of local agendas. As with any public policy, the continuity of actions by the Paraíba State Financial Education Hub is fundamental to safeguarding its spaces for public debate and to continue seeking new ways to attain the multiplying effect and the positive external impact promoted through financial education.

REFERENCES

- ABADIE, A. *Semiparametric instrumental variable estimation of treatment response models*. Journal of Econometrics, n. 113, p. 231–226, 2003.
- ASSOCIAÇÃO DE EMPRESAS DE CARTÕES DE CRÉDITO DO BRASIL – ABECS. *Balço do setor 1º trimestre de 2019*. Disponível em: <https://www.abecs.org.br/app/webroot/files/media/3/6/d/a7a281667ecccbae5e63ed559b62e.pdf>.
- ATKINSON, A.; MESSY F. *Measuring financial literacy: Results of the OECD / International Network on Financial Education (INFE) pilot study*. OECD Working Papers on Finance, Insurance and Private Pensions, Paris, n. 15, 2012. DOI: <http://dx.doi.org/10.1787/5k9csfs90fr4-en>.
- ATKINSON, A.; F. MESSY. *Promoting financial inclusion through financial education: OECD/INFE evidence, policies and practice*. OECD Working Papers on Finance, Insurance and Private Pensions, Paris, n. 34, OECD 2013. DOI: <http://dx.doi.org/10.1787/5k3xz6m88smp-en>.
- ACCETTURO A; BLASIO, G. *Policies for local development: An evaluation of Italy's "Patti Territoriali"*. Regional Science and Urban Economics, v. 42, n. 1-2, p. 15-26, 2012.
- ASSOCIAÇÃO DE EDUCAÇÃO FINANCEIRA DO BRASIL – AEF-BRASIL. *Relatório anual 2018*. Disponível em: http://www.vidaedinheiro.gov.br/wp-content/uploads/2018/08/RA-AEF-Brasil_07082018_Vers%C3%A3oFinal.pdf.
- BANCO CENTRAL DO BRASIL. *Caderno de educação financeira e gestão de finanças pessoais*. Brasília-DF, 2013, 72 p.
- BACHMANN, D. L.; DESTEFANI, J. H. *Metodologia para estimar o grau das inovações nas MPE*. Curitiba: SEBRAE, 2008. Disponível em: <http://www.bachmann.com.br/website/documents/ArtigoGraudeInovacaonasMPE.pdf>.
- BECKER, S.; ICHINO, A. *Estimation of average treatment effects based on propensity scores*. Stata Journal, v. 2, n. 4, 358-37, 2002.
- BEHRMAN, J. R.; MITCHELL, O. S.; SOO, C. K.; BRAVO, D. *How financial literacy affects household wealth accumulation*. American Economic Review, v. 102, n. 3, p. 300-304, 2012. DOI: <http://dx.doi.org/10.1257/aer.102.3.300>.
- BRAUNSTEIN, S.; WELCH, C. *Financial literacy: an overview of practice, research, and policy*. Federal Reserve Bulletin, Estados Unidos, p. 445-457, 2002. Disponível em: <https://www.federalreserve.gov/pubs/bulletin/2002/1102lead.pdf>.
- BROWN, M.; GRIGSBY, J.; KLAAUW, W. van der; WEN, J.; ZAFAR, B. *Financial education and the debt behavior of the young*. The Review of Financial Studies, v. 29, p. 2490-2522, 2016. <https://doi.org/10.1093/rfs/hhw006>
- BRUSKY, B.; MAGALHÃES, R. *Assessing indebtedness: results from pilot survey among steelworkers in São Paulo*. International Labour Office, 2006. Recuperado em 8 fevereiro, 2015. Disponível em: http://www.ilo.int/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_117961.pdf.
- CAMERON, A. C.; TRIVEDI, P. K. *Microeconometrics: Methods and Applications*, 2005.
- CONSUMER FINANCIAL PROTECTION BUREAU (CFPB). *Financial well-being: The goal of financial education*. Washington, DC: Consumer Financial Protection Bureau, 2015.
- CUNHA, L. A. S.; SILVA, J. G.; PRADO, R. A. D. P.; SILVA, M. A. *Fatores de prontidão e aceitação do consumidor para tecnologia em telefonia celular*. International Journal of Innovation, v. 2, n. 1, p. 77-91, 2014.

DUFLO E., KREMER M., GLENNERSTER R. *Using randomization in development economics research: A toolkit*. Handbook of Development Economics, v. 4, ed. Schultz, T. e Strauss, J. Amsterdam: Elsevier. North Holl, 2008.

FRASCAROLI, B. F. *Estudo de diagnóstico do Curso de Especialização em Educação Financeira*. I Encontro de Educação Financeira CEEF. João Pessoa-PB, 2018.

FRASCAROLI, B. F.; PAES, N. L.; RAMOS, F. S. *A indústria brasileira e o racionamento de crédito: uma análise do comportamento dos bancos sob informações assimétricas*. Revista Economia da ANPEC, v. 11, p. 403-433, 2010.

FRASCAROLI, B. F. *Bitcoin's innovative aspects, return volatility and uncertainty shocks*. International Journal of Financial Markets and Derivatives, v. 7 n. 3, p. 224-245, 2020. DOI: <https://doi.org/10.1504/IJFMD.2020.109177>.

GERTLER, P.; MARTINEZ, J. S.; PREMAND, P.; RAWLINGS, L. B.; VERMEERSCH, C. M. J. *Impact evaluation in practice*. World Bank, 2011.

HECKMAN, J. J. *Schools, skills, and synapses*. Economic Inquiry, v. 46 n. 3, p. 289-324, 2008.

HECKMAN, J. J.; ICHIMURA, H.; SMITH, J.; TODD, P. 1998. *Characterizing selection bias using experimental data*. Econometrica, v. 66 n. 5, p. 1017-1098.

HUSTON, S. *Measuring financial literacy*. The Journal of Consumer Affairs, v. 44, n. 2, p. 296-316, 2010. DOI: <https://doi.org/10.1111/j.1745-6606.2010.01170.x>

JACOB, K.; SHARYL, H.; MALCOLM, B. *Tools for survival: An analysis of financial literacy programs follower income families*. Chicago: Woodstok Institute, 2000. Disponível em: <https://www.aecf.org/m/pdf/woodstockinstitute-toolsforsurvivalfinancialliteracy-2000.pdf>.

KLAPPER, L.; LUSARDI, A. *Financial literacy and financial resilience: Evidence from around the world*. Financial Management, p. 1-26, 2019. DOI: <https://doi.org/10.1111/fima.12283>.

LIGOCKI, C. S. L. *Educação financeira na escola: com empreendedorismo, ética, sustentabilidade e cidadania*. 6ª ed. Brasília: Oficina, 2015.

LUSARDI, A. *Financial literacy and financial education: Review and policy implications*. NFI Policy Brief N° 2006-PB-11, 2006. Disponível em: <http://dx.doi.org/10.2139/ssrn.923437>.

LUSARDI, A.; MITCHELL, O. S. *Financial literacy around the world: An overview*. Journal of Pension Economics & Finance, v. 10, n. 4, p. 497-508, 2011a. DOI: <https://doi.org/10.1017/S1474747211000448>.

LUSARDI, A.; MITCHELL, O. S. *Financial literacy and planning: Implications for retirement wellbeing*. NBER Working Paper N°. 17078, 2011b. Disponível em: <https://www.nber.org/papers/w17078>.

LUSARDI, A.; MITCHELL, O. S. *Financial literacy and retirement preparedness: Evidence and implications for financial education*. 2006a. URL: https://www.dartmouth.edu/~alusardi/Papers/Financial_Literacy.pdf.

LUSARDI, A.; MITCHELL, O. *Baby Boomer retirement security: The role of planning, financial literacy, and housing wealth*. NBER Working Paper N°. 12585, 2006b. Disponível em: <https://www.nber.org/papers/w12585>.

LUSARDI, A.; MITCHELL, O. S. *The economic importance of financial literacy: Theory and evidence*. Journal of Economic Literature, v. 52, n. 1, p. 5-44, 2014. DOI: <https://doi.org/10.1257/jel.52.1.5>.

LUSARDI, A.; MITCHELL, O. S.; CURTO, V. *Financial literacy among the young*. The Journal of Consumer Affairs, v. 44, n. 2, p. 358-380, 2010. DOI: <https://doi.org/10.1111/j.1745-6606.2010.01173.x>.

MELO, D. I. R.; FRASCAROLI, B. F.; ALMEIDA, A. T. C. *Efeitos de transmissão da taxa de juros sobre operações no mercado de cartões no Brasil*. Revista Desenharia, v. 10, p. 39-74, 2013.

ORGANIZAÇÃO PARA A COOPERAÇÃO E DESENVOLVIMENTO ECONÔMICO – OCDE. *Improving financial literacy: Analysis of issues and policies*. Financial Market Trends, v. 2005/2, n. 89, p. 111-118, 2005. Disponível em: https://read.oecd-ilibrary.org/finance-and-investment/financial-market-trends/volume-2005/issue-2_fmt-v2005-2-en#page4.

RAVALLION, M. *Evaluation in the practice of development*. World Bank Policy Research Working Paper N° 4547, 2016.

ROSENBAUM, P. R.; RUBIN, D. B. *The central role of the propensity score in observational studies for causal effects*. Biometrika, v. 70, n. 1, p. 41-55, 1983.

SAVOIA, R. F.; SAITO, A. T.; SANTANA, F. A. *Paradigmas da educação financeira no Brasil*. Revista de Administração Pública. Rio de Janeiro, v. 41, n. 6, p. 1121-1141, 2007. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-76122007000600006&lng=en&nrm=iso.

SERVIÇO DE PROTEÇÃO AO CRÉDITO – SPC. *Crédito fácil levou 59% dos brasileiros à compra impulsiva, revela estudo do SPC Brasil e CNDL*, 2018. Disponível em: <https://www.spcbrasil.org.br/pesquisas/pesquisa/4616>.

VAN ROOIJ, M.; LUSARDI, A.; ALESSIE, R. *Financial literacy and stock market participation*. Journal of Financial Economics, v. 101, n. 2, p. 449-472, 2011. DOI: <https://doi.org/10.1016/j.jfineco.2011.03.006>.

WEISZ, T. *O diálogo entre o ensino e a aprendizagem*. São Paulo: Ática, 1999.



Chapter 6

The trajectory of financial education in schools in the state of Tocantins: from the pilot project to the establishment of a teacher education hub at the Federal University of Tocantins

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This chapter is aimed at describing the process for the universalization of financial education in schools in the state of Tocantins, including articulations, teacher and multiplier training, deployment experiences and results attained in terms of spreading knowledge and its appropriation by the community.

The Program for Financial Education in Schools commenced in the state in 2010, following a pilot project involving 34 High Schools, aimed at disseminating the subject with institutional guidelines; operational support; teacher training and the distribution of didactic-pedagogical material supplied by the Association of Financial Education in Brazil (AEF-Brasil). Positive results saw the program replicated and expanded in 2014, this time involving 76 High Schools.

In 2015, the program was institutionalized in the state through Law 2,977, of June 8, 2015, which included the topic in the Tocantins State Education Plan (PPE-TO) and in the Pedagogical Proposal of the Tocantins State Department of Education, Youth and Sports (SEDUC-TO) in 2016, extending the reach to include Primary Schools. The program was expanded a second time, a milestone in the universalization of the subject in state schools.

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Several courses and training sessions were offered throughout the process, including Enhancement in Financial Education, in 2017, through Federal University of Tocantins (UFT), with the formation of a Financial Education Hub in the state, the first in Brazil. From 2018 to 2019, the topic was already included in many of the school Pedagogical Policy Projects (PPPs), leading to greater autonomy in executing actions, activities and projects, with an ample array of meaningful experiences within the community, involving processes to appropriate content and routines at school that reiterate the maintenance of actions, even within the context of the pandemic in 2020.

The methodology used is of an explanatory nature, with a bibliographical review, especially SEDUC-TO documents, as well as a semi-structured interview with two SEDUC-TO²⁶ public employees and a questionnaire that included the participation of ten educational technicians from the state's Regional Board of Education (DRE), applied in August 2020.

Several courses and training sessions were offered throughout the process, including Enhancement in Financial Education, in 2017, through Federal University of Tocantins (UFT)

This chapter is comprised of this introduction and four sections: section 1 briefly discusses the history of the program in Brazil and specifically the history in Tocantins, which culminated with its universalization in 2017, complemented by quantitative information in section 2. Section 3 describes the courses and training implemented during the period, while section 4 presents some of the lessons learned, best practices and future outlook for the program in Tocantins.

Thus, we hope to continue to the dissemination of the subject, acting as a source of inspiration and learning for governments, teachers and others interested in the topic. May the case of Tocantins serve as an example to other states seeking to universalize the subjects in all of the nation's schools, as laid out in the National Common Curricular Base (BNCC).

26. Interview granted to the authors on August 26, 2020, via Google Meet, by the coordinator of the Tocantins Program for Financial Education, Maurício Carneiro, and by the director of SEDUC, Leandro de Souza Vieira.

HISTORY OF FINANCIAL EDUCATION IN TOCANTINS

Financial education in Tocantins first arose in 2009, as a result of the growing debate about the topic in Brazil, following the creation of the National Strategy for Financial Education (ENEF), by the National Financial Education Committee (CONEF) and AEF-Brasil, as presented in Chapter 1. The first step in the state was SEDUC-TO joining the Program for Financial Education in Schools by signing the Technical Cooperation Agreement with AEF-Brasil, for the implementation of a pilot version of the project. The goal of the program was to disseminate the subject within the Tocantins state public school network, offering institutional guidelines, operational support to DREs²⁷, continued training for teachers and educational technicians, and the distribution of didactic-pedagogical material.

One of the first activities developed in Tocantins, back in 2010, was participation in the pilot project for Financial Education in Schools²⁸, the goal of which was to assess and validate the methodology and the textbooks provided in support of activities to include the subject in schools, based on technical and pedagogical support from AEF-Brasil. A step was taken in 2009 which included preparation for the pilot project, building the capacities of teachers and multipliers, definition of a Work Plan, selection of a technical team and participating schools, and monitoring of students as per the methodology for assessing the impact of the project by the World Bank.

According to a previously established methodology, 34 schools were selected and split into two groups: one for treatment and another for control. The pilot program lasted two years, remaining active in the treatment group schools until 2013. Several activities occurred during this period, among them interdisciplinary projects, meetings with students' parents, workshops,

27. This is a state management structure by region that contemplates the primary and high schools in municipalities, which vary from 6 to 17 in each DRE (Regional Board of Education). To be detailed in section 2.

28. At the time four other states, besides Tocantins, initiated the implementation of the Pilot Project for Financial Education in High Schools (Ceará, Rio de Janeiro, São Paulo and Minas Gerais).

participation in events and contests, which actually resulted in awards²⁹. Within an institutional scope, the SEDUC-TO Strategic Action Plan was prepared, linked to the Annual Guidance Document³⁰, aimed at planning and monitoring actions conducted in schools each year and to organize the distribution of textbooks, among other curricular purposes.

The effective implementation of the program in schools was articulated within school routines, including unique activities during class hours, adjusted to this end, and offered in certain extracurricular activities. Screening of films, gymkhanas, recreational games, production of texts with reports on the organization of financial life and changes in habits after receiving guidelines are but a few of the examples.

The validation of the methodology, textbooks and positive results in terms of adhesions, student engagement and appropriation by participants of the pilot project were fundamental to spreading and building on the Program for Financial Education in Schools in Tocantins. As such, in 2014, the program expanded to 59 state high schools, totaling 76. The activities previously executed as part of the pilot project were continued, replicated and complemented by the schools joining. New programs were offered, in addition to the distribution of textbooks.

In parallel, SEDUC-TO initiated the preparation of the Tocantins State Education Plan (PEE-TO, 2015/2025), approved under State Law 2,9777 of June 8, 2015, which guaranteed the expansion of tax and financial education in the state defined in Goal 11, Strategy 11.6 and in Goal 23, Strategy 23.27, namely:

11.6 [...] tackling practices related to waste, degradation and consumerism, while bolstering the practice and dissemination of financial education in schools; (TOCANTINS, 2015, pg. 20).

23.27 Guarantee the expansion of tax and financial education, environmental education, traffic education, education on human rights, by means of transversality in the basic education curriculum, at all stages and in all modalities, in partnership with different sectors of the government, private institutions and non-governmental organizations, in order to leverage the social and integral formation of citizens (TOCANTINS, 2015, pg. 47).

In 2015, a new teacher education course was offered, along with activities developed in schools being presented at external events, contributing to the promotion and expansion of the program, such as the inclusion of the subject in the International Literary Festival of Tocantins (FLIT) and participation in the 2nd National Financial Education Week (SENEF).

With the introduction of financial education into state legislation, the experiences previously undertaken and the debates around the BNCC, in which financial education is included in the Primary Education learning objectives, effort was made in Tocantins to organize the school curriculum in a way to include the subject, with financial education introduced into the SEDUC-TO Pedagogical Plan in 2016. In this document, the Program for Financial Education in Schools was extended to cover State Primary Education, based on the results of four pilot projects in this modality in two municipal school networks in the state of Amazonas and the city of Joinville, in Santa Catarina. Thus, the Technical Cooperation Agreement reached between SEDUC-TO and AEF-Brasil was adjusted so as to also feature in Primary Education from grade 1 to grade 9.

As such, the program was expanded once again, considered a milestone in the universalization of the subject in the State, which, in fact, gained national and international renown with promotion on *TV Escola* and participation at events in other nations. New perspective and challenges arose – among them the need for continued training of teachers – and culminated in the partnership between SEDUC-TO, AEF-Brasil and Federal University of Tocantins (UFT) in 2016, which, among other activities and partnerships, offered the Financial Education Enhancement Course in 2017 to teachers and multipliers from

29. Four schools were awarded at the International Seminar on the ENEF Impact Analysis in 2011, within the performance and regularity categories. Participation in events, congresses, trade fairs and contests over the ten-year period of the implementation of the Program for Financial Education in Schools are listed in section 1.1.1.

30. This is an institutional document issued by the department to guide Regional Boards of Education, containing operational and pedagogical guidelines, the attributes of each of the institutions (SEDUC-TO, DRE and schools), use of textbooks, the training of teachers and the schedule for undertaking activities.

the state and municipal school network of Tocantins. Still in 2017, themed contests³¹ were staged with awards granted to the winning students and commemorating the inclusion of the subject in the BNCC, which triggered fresh debates about the state’s internal curriculum. In 2018, the 6th National Financial Education Week (SENEF) was staged in Tocantins, mobilizing program participants in the state and culminating in the registration of 300 initiatives, of which 20 earned the ENEF Seal³². The very first title of Ambassador of Financial Education in Brazil was also granted to Professor Alessandra Camargo, state coordinator of the program, for her work within the public network.

The program implementation process in the state generated an array of actions, activities, projects and several experiences that became routine in schools and SEDUC-TO. Financial education was included in most of the Pedagogical Policy Projects (PPPs) for schools, generating greater autonomy in the execution of activities, and in several SEDUC-TO actions, such as the debate about New High School Education, as detailed in Chapter 4 of this book.

In 2019, the curriculum for Basic Education in Tocantins was revamped, with financial education maintained transversally. Nevertheless, according to a survey of DREs in August 2020, there was a reduction in activities and actions pertaining to financial education in schools between 2018 and 2020. Interview participants affirmed that 50% of the schools maintained between 90% and 60% of the activities related to the subject, while the remaining schools reduced activities by more than 50%.

There is, however, greater institutionalization of the subject in curricular frameworks, manifested in processes of appropriation and routines in schools and which reinforce the maintenance of activities, even within the context of the pandemic in 2020.

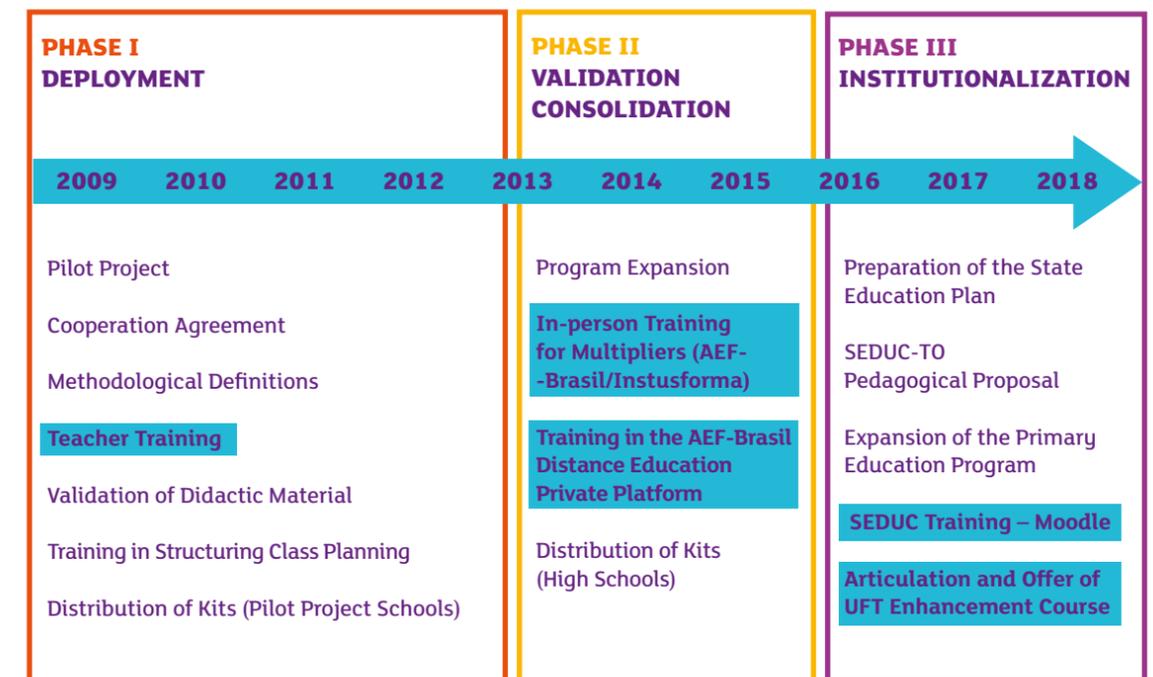
31. Illustrated Story Writing Contests and Amateur Video Contests, at separate editions, each with their own regulations and awards for winning students by category.s

32. This is recognition from the National Financial Education Committee (CONEF) of institutions that bolster the objectives of the National Strategy for Financial Education.

School activities were put on pause in March of 2020, with still no forecast for return by September 2020. However, given the appropriation of financial education by students and teachers, some financial education actions were maintained during this period. According to the DREs, even without in-person classes, 30% of those interviewed stated that they possessed technical information on the application of financial education for students, while, for teachers, the number was 50%.

The figure below offers a brief description of the program deployment process in Tocantins, highlighting certain milestones that are split into three moments: Phase I – Deployment. Initiation of first steps towards sustaining the program over time, in partnership with AEF-Brasil, further including the validation of didactic-pedagogical material and the motivation and adherence of SEDUC-TO to the program. Phase II – Expansion. A rise in the number of participating schools and consolidation of results. Phase III: – Institutionalization. Publication of PEE-TO (2015/2025) under State Law

TIMELINE FOR THE PROGRAM FOR FINANCIAL EDUCATION IN SCHOOLS IN TOCANTINS



Source: prepared by the authors, 2020.

2,977 of June 8, 2015, coupled with the expansion to Primary Education and a partnership with UFT and the creation of the Financial Education Hub³³.

a) Events and awards

During the deployment of the program in the state, the results attained were widely promoted, with some gaining national recognition. Participation in the SENEFs was a determining factor in the expansion of the program, due to the expertise acquired, incentive provided for students, teachers and educational technicians involved, based on the recognition of actions and activities undertaken, and for bolstering relationships and partnerships.

According to AEF-Brasil (2017), National Financial Education Week (SENEF) is geared towards disseminating the subject and contributing to the strengthening and autonomy of society. Tocantins has been participating since the second edition, heading several initiatives, actions and projects, organized and steered by SEDUC-TO and which culminated in the registration of 400 initiatives in 2018, when the state hosted the week-long event. The table below describes participation at SENEFs and other relevant events³⁴.

Events	Year	Location	Results
Workshop - "Impact Assessment of the Financial Education in Schools Project"	2011	BM&Ibovespa Rio de Janeiro	Award for teachers part of the Tocantins state education network.
2 nd National Financial Education Week (SENEF)	2015	Brasília	278 initiatives registered. Invitation to the talk show – Breakdown of the experience in Tocantins.
International Literary Festival of Tocantins (FLIT)	2011 and 2015	Palmas	Talk Vera Rita Melo Ferreira Gincana – Ana Pregardier.
CONSED (National Council of State Secretaries of Education) Workshop	2015	Brasília	Talk to encourage new members to join the program.
3 rd National Financial Education Week (SENEF)	2016	Brasília and São Paulo	120 initiatives registered. Panel on the experiences in schools in Tocantins.

33. A project called "Training Hubs", which institutionally builds on local partnerships, including universities. Tocantins was the first state to host a hub, which occurred through a Cooperation Agreement between AEF-Brasil, SEDUC-TO and UFT.

34. The last three events described in the table are related to developments in the Financial Education Enhancement Course offered at UFT.

Events	Year	Location	Results
Participation at an international CVM-RJ event.	2016	Rio de Janeiro – 40 th anniversary of CVM	Panel – Financial Education in Schools.
4 th National Financial Education Week (SENEF)	2017	Palmas, DREs and schools	80 initiatives registered ³⁵ and three contests.
5 th National Financial Education Week (SENEF)	2018	Palmas, DREs and schools	400 initiatives registered and 20 schools earned the ENEF Seal.
Participation at the 1st Co-Creation Meeting about Financial Education in Schools	2018	São Paulo	Creative Group for Financial Education in Schools, coordinated by AEF-Brasil.
6 th National Financial Education Week (SENEF)	2019	Palmas, DREs and school in Rio de Janeiro and Rio Grande do Sul	6 th SENEF hosted. 428 initiatives registered. Awards presented to contest winners and a visit to the Central Bank.
Participation in the launch of the UFT Enhancement Course	2017	Palmas	Records and report on best practices, talk show with multipliers.
Participation in the launch of the Specialization course	2019	Paraíba	Lecture on financial education practices in schools and about how SEDUC runs the program.
UFT Best Extension Project Award	2019	Palmas	Impact Assessment of the "Me and My Retirement" program, implemented at the UFT University of Maturity and the North and Taquaruçu Social Welfare Boards.
Master's Dissertation	2019	Palmas	Dissertation by Rafael Aires – Impact Assessment of the "Me and My Retirement" Program.
Febraban Award	2019	São Paulo	Category C – Financial Education.
11 th UNDIME State Forum: "Collaboration regime: the responsibility of states with respect to municipal education development"	2019	Palmas	Presentation of the Financial Education in Schools Program.

Source: Prepared by the authors, 2020

35. There was a drop in the number of initiatives registered at the 4th National Financial Education Week (SENEF), due to the teachers' strike within the Tocantins state school network during the period.

SEDUC-TO DIDACTIC MATERIAL AND ORGANIZATIONAL STRUCTURE

Didactic and pedagogical material was provided by AEF-Brasil and the Ministry of Education (MEC). Said material contained the proposal for the development of competencies and abilities in financial education, using the methodology of organizing content according to didactic situations³⁶, into three blocks (books) for students and teachers.

The pilot project saw these books distributed among teachers and students from the schools involved. After the expansion of the program in 2014 – and due to the vast number of new students –, there were insufficient volumes for individual distribution among students. As such, 150 kits were distributed and left under the responsibility of the schools, which introduced the material into their library collections for use by teachers and students. The introduction of Primary Education into the program, in 2016, generated a demand for didactic material specific to this level. AEF-Brasil provided the content in digital format and the SEDUC-TO team printed and distributed the material to schools for their libraries, so that it could be used over the following years. It was only in 2020 that a fresh lot of material was shipped out to schools, to replace older copies. However, according to the education department, all the schools have sufficient material.

Of noted importance is the organizational structure and work of SEDUC-TO educational technicians throughout the deployment and dissemination process for financial education in Tocantins. Technical operationalization of the program relied on state coordination, a technician³⁷ (multiplier) responsible for the program in the DRE, and an average of five teachers per school to administer the program's transversal classes. In High School and Primary School in later years, there is also the involvement of a pedagogical coordinator, who decides along with teachers which didactic situation or pedagogical model each can develop according to the subject they teach. In primary and preschool education, the material is administered by the homeroom teacher.

36. A Didactic Situation (DS) is a set of actions and activities that develop competencies in students that allow them to garner the knowledge necessary to deal with the multiple and varied financial situations that occur in the daily routine (CONEF, 2010).

37. Depending on the size of the DRE, there may be more than one supervising technician. This is the case of the regional education boards of Araguaína, Palmas and Gurupi.

Information from the DREs is constantly submitted to the program coordinator, which even includes an online communication channel for sending in reports twice a year from the DRE to SEDUC-TO, this being one of the ways to monitor the program. This information is combined and used to draft Annual Program reports, based on structured data and material that permits an analysis of the advances made in term of developing transversal classes, the use of textbooks, the existence of interdisciplinary projects, articulation with the community, training new teachers, awards, contests, publication of results in local, regional and state media, among others.

Throughout the entire period, even with constant changes to the government, the program remained active, with reduced deployment during the teachers' strike and the Covid-19 pandemic. Nevertheless, the organizational structure was maintained, along with the educational technicians involved in their functions, which contributed largely to the continuity of the program.

UNIVERSALIZATION OF FINANCIAL EDUCATION IN SCHOOLS IN TOCANTINS

Since the outset of the deployment of the Program for Education in Schools in Tocantins, there has been widespread engagement and adhesion amongst the majority of those involved – program coordination, SEDUC-TO educational technicians, teachers and students³⁸. This commitment, along with the other partnerships formed throughout the process, contributed to its universalization in 2017.

“Universalize” according to Michaelis (2020), is the act of making something universal, general, spread out, to make common and accessible to many people. This concept as to the Program Financial Education in Schools in



38. Some resistance was presented by school directors, due to the feeling that the number of proposed themed projects to be implemented was excessive, possibly jeopardizing the fulfillment of the curricular matrix, though this was unfounded, in view largely due to the method of transversality deployed. Many projects already exist, such as community vegetable gardens and projects built around the school, which, however, were not identified as pertaining to financial education. SEDUC-TO was responsible for clarifying doubts among teachers and classifying these projects.

Tocantins is conducive with its results in several aspects. The first is related to institutionalization of the theme in the PEE (2015/2025) and in State Law of 2015, it thus an inherent part of the curricular teaching framework, and in the PPPs of schools in the state. As such, financial education shifts from merely being a theme to a public policy, instead. Another aspect of universalization can be seen in the distribution of didactic-pedagogical material that encompasses the entire state school network, in such a way that, since 2017, all schools have material available and all students have access to said material. Nevertheless, institutionalization of a public policy and universalization of textbooks does not necessarily imply in the implementation of the subject in all schools.

According to SEDUC-TO, financial education is approached in all state Primary and High Schools in one way or another. The perception of DRE educational technicians indicates that 70% believe that the program is partially universalized among schools, while 30% do not share the same perception.

Some schools work with projects, others with actions and activities that transform into routines and propagate outside of the school. According to SEDUC-TO (2018), 48% of the subject is taught in an interdisciplinary manner, 31% as a subject, 26% in a transdisciplinary form and 31% in the form of projects³⁹. Many of the activities undertaken are not identified as financial education, chiefly due to the transversality of the theme. Notably, the program in the state is implemented in accordance with BNCC guidelines, developing abilities that generate new knowledge, opportunities, habits and behaviors, so that citizens are able to administer their resources conscientiously and sustainably.

EVOLUTION OF THE PROGRAM IN TOCANTINS

The state of Tocantins has 139 municipalities and 499 schools (SEDUC-TO, 2020), offering basic education, spread throughout 13 Regional Boards of Education (DREs). Each regional board of education covers between 6 and 17 municipalities, with schools offering Primary Education (1st 9th grade), High School (basic, integrated and professional), Education for Youths and Adults

39. Some activities are developed using more than one methodology, thus the percentage passes 100%.

(1st, 2nd and 3rd segments), Education for Indigenous Peoples, special needs education, rural education and quilombola education. The following figure presents the State’s DRE administrative map.

DISTRIBUTION OF REGIONAL BOARDS OF EDUCATION – SEDUC-TO

Regional Boards of Education

- PALMAS - SEDE
- D.R.E. DE ARAGUATINS
- D.R.E. DE TOCANTINÓPOLIS
- D.R.E. DE ARAGUAÍNA
- D.R.E. DE COLINAS
- D.R.E. DE GUARAJÁ
- D.R.E. DE MIRACEMA
- D.R.E. DE PARAÍSO
- D.R.E. DE PEDRO AFONSO
- D.R.E. DE PORTO NACIONAL
- D.R.E. DE DIANÓPOLIS
- D.R.E. DE GURUPI
- D.R.E. DE ARRAIAS



Source: Ascom/SEDUC-TO, 2015

Initially, the pilot project involved 34 schools, 675 students, 65 teachers and 20 multipliers. Between 2014 and 2015, with the expansion of the program, the number of participating schools rose to 76, involving 33,056 students (SEDUC-TO, 2018).

In 2016, with the inclusion of Primary Education in the program, the total number of participating schools rose to 425, with 150,000 students and 600 teachers involved. In 2017, the number remained the same and, in 2018, with the municipalization of certain schools, there was a reduction in school and student numbers in the program, dropping to 408 school and 136,365 students, though there was a rise in the number of teachers involved – 777 –, as shown below.

DISSEMINATION OF FINANCIAL EDUCATION IN SCHOOLS IN TOCANTINS

Variables	2010-2013	2014-2015	2016-2017	2018	2019-2020
Events	Pilot Project	Expansion 1	Expansion 2 Inclusion of Primary Education – Universalization	Municipalization	Continuity
Schools	34 (17/17)	76	425	408	499*
Students	675	33.056	150.000	136.365	143.384 *
Teachers	65	304	150.000	777	**

Source: SEDUC-TO (2018) and SEDUC-TO 2020.

* These values include all the schools and students in the state in Basic education, thus it is overestimated, as it does not exclude other modalities, such as indigenous people and quilombola communities

** Information not available.

According to SEDUC-TO (2020), the Tocantins state basic education network is comprised of 499 schools and 143,384 students, including education for youths and adults, Indigenous education, special needs education, rural and quilombola community education. The program was made universal in the state for Primary and High School Education; thus, a portion of the students have not had contact with the subject yet⁴⁰.

⁴⁰ These data were not made available. However, some students from this category of youths, indigenous, special needs, quilombola and rural education take part in the program as they are enrolled in one of the state's 79 full-time schools.

Despite the availability of accurate data for 2019 and 2020, one may infer that the program was actually universalized in 2017 in Primary and High Schools in the state with the expansion to other modalities, this being one of the major challenges for the years to come, that is, maintaining and leveraging the program in participating schools and expanding to include others, something already underway. 90% of those interviewed affirm that the subject is being disseminated to youths and adults, while 10% cited prison education.

Financial education has also been included in some schools for special needs children, such as the Association of Parents and Friends of Special Needs Individuals (APAE), in the municipality of Aliança do Tocantins, with the **Playing with Mathematics Project**. The project involved activities separated into classes, among them: bingo, a shopping game that simulates the sale and purchase of products, as well as games, all produced from recycled material. The program also included explanations about mathematics in the daily routine of children. According to the supervising teacher, “working with the correct material, in a fun manner, helps students to understand the learning process, which is highly significant in teaching mathematics to students with special needs” (SEDUC-TO, 2016).



TRAINING COURSES: DIFFERENT APPROACHES

The teacher education courses implemented in Tocantins were conducted according to strict formats and approaches, contributing along the way to the creation of an ample network of teachers and multipliers equipped to tackle the subject and oversee practical actions and experiences in the state school network.

The table below describes these training courses and refers to those that were institutionalized, totaling eight courses from 2009 to 2019. Other courses and training occurred during the period (verbal information), as part of the school routine. However, due to reduced class hours, there is no accurate information about them and, as such, they were not listed on the following page.

There were 393 teachers and educational technicians directly trained in all the DREs. However, once again, these numbers are underestimated, given the incapacity to tally many of the non-institutionalized courses. Nor was it possible to count the number trained per area of knowledge. Nevertheless,

COURSE OFFERED IN TOCANTINS TO TRAIN TEACHERS

Courses and Training	Year	Offered by	Modality	Number of teachers trained
Pilot	2009	Central Bank	In-Person	15
Pilot	2009	SEDUC	In-Person	34
Instructor Training	2014	AEF-Brasil	In-Person	17
Instructor Training	2015	AEF-Brasil	Distance Education	–
Instructor Training	2016	AEF-Brasil	Distance Education	55
Instructor Training	2017	UFT	Distance Education	31
Instructor Training	2018	AEF-Brasil	Distance Education	55
Introduction of Primary Education material to Multipliers of the Program	2019	SEDUC – Moodle	Distance Education Moodle – SEDUC	34
Instructor Training	2019	AEF-Brasil	In-Person –UNDIME	152

Source: Prepared by authors based on information from SEDUC-TO, AEF-Brasil and UFT.

reports and experiences in schools show that the program is being applied by teachers in several areas besides Mathematics, such as Art, Physical Education and Sciences. The following subsections detail the courses and training provided.

a) AEF-Brasil Capacity Building

Over the program's ten years in Tocantins, AEF-Brasil has organized a series of four training courses that took place at specific times in Phases I and II, building the capacities of several teachers and educational technicians to work within the DREs as knowledge multipliers. These, in turn, spread the concepts and methods to other teachers and educational technicians.

The first course, at the end of 2009, was aimed at educational technicians and teachers from the state education network, acting as multipliers in the pilot project. The course was offered in an in-person format and was aimed at introducing the Program for Financial Education in Schools, along with its content and the methodologies for developing the subject.

This was a first stage that developed into a new training course organized by SEDUC-TO and administered by the public employees/multipliers to 34 teachers from schools part of the pilot project, including the participation of pedagogical coordinators.

In 2014, with the goal of training new multipliers that would be references in the DREs, another in-person training course was organized for 17 public employees. The training was offered by AEF-Brasil and totaled 17 hours.

In 2015, AEF-Brasil offered fresh training with a 40-hour class load in a distance education modality, offering a comprehensive format, involving teachers and educational technicians from other states interested in the subject, with or without experience in the field. The participation of teachers from Tocantins was highly expressive, despite there being no actual record of the number of participants.

In 2016, AEF-Brasil organized a new distance education course using the YouKnowLab platform, which allowed the planning of a more interactive, didactic and pedagogical course. On this platform, teachers were able to follow all the stages and complete the course alone, which made it attractive due to easy access, despite being grounded on an introductory base.

In 2019, with the goal of adding the municipal education network of Tocantins, the Program for Financial Education in Schools was organized as part of the program for the 11th **UNDIME** State Forum, entitled "Collaboration regime: the responsibility of states with respect to municipal education development". A talk was presented at the event to introduce the concepts, objectives and positive results in the state of Tocantins, as a means to inspire municipalities to join the program. The forum included the participation of approximately 300 professionals from 139 municipalities.

Still in 2019, AEF-Brasil, in partnership with UNDIME, offered an 8-hour capacity building course to teachers part of the municipal education network, aimed at providing methods to insert financial education into subject contents in a transversal manner, in line with the guidelines of the BNCC. The municipalities were strategically selected from within the four regions of the state and included Araguaína, Araguatins, Gurupi and Palmas. According to UNDIME, voluntary participation in workshops covered all the state municipalities, with an expected impact on 6,099 teachers, 700 schools and 136,000 students in 2020, thanks to the efforts of 152 multiplier teachers.



b) SEDUC-TO Capacity Building

SEDUC-TO undertook major effort to guarantee the multiplication of knowledge in financial education in the State. For each training course offered by AEF-Brasil to a strict number of public employees, given the lack of resources and infrastructure, providing parallel and complementary training organized by the department at the DREs. According to reports from a meeting, the training process was uninterrupted, though the diversity of courses with fewer class hours complicated SEDUC-TO control, like planning actions and that made use by public employees in their progressions inviable.

To this end, SEDUC-TO is working on a proposal to reformulate the structure of courses and training, including for other areas not related to financial education, so that all may be combined in an organization framework.

SEDUC-TO institutionalized two courses, one in 2009 and another in 2019. The first training course was aimed at spreading the knowledge of multipliers to

The first training course was aimed at spreading the knowledge of multipliers to teachers from the DREs in the 34 schools participating in the pilot project in 2009

the teachers from the DREs in the 34 schools participating in the pilot project in 2009. This training, in which the transversality of the subject was a prerogative, was hosted in the form of practical workshops for teachers that, according to SEDUC-TO (2018), demonstrate the excellent acceptance given the quality and attractiveness of the material. In the second course, in 2019, SEDUC-TO organized an introductory course in a distance education modality on the platform Moodle-Seduc, under state coordination of the program with

40 class hours and certification. The course included the participation of teachers, instructors, who were state coordinators, from AEF-Brasil and the most active multiplier in the program.

The fact is that the structure of courses with reduced class hours and very often aimed at specific activities and actions does not offer teachers a solid base of content that readies them principally for the preparation of classes and the use of the textbooks. There is, as such, a growing demand among teachers for this type of training, which is corroborated by SEDUC-TO (2018) and by AEF-Brasil, which was already assessing this demand in other states. Thus, in 2017, the Tocantins Financial Education Hub was formed, culminating in the deployment of the Financial Education Enhancement Course for Teachers and Multipliers in the State Education Network, offered by UFT.

c) Enhancement course coordinated by UFT

The Enhancement Course offered by UFT, which began with articulation between SEDUC-TO, AEF-Brasil and Federal University of Tocantins, took place at a time when the course was becoming consolidated in the state, whether due to the adherence of schools, or due to institutionalization with the preparation of PEE-TO (2015/2025) and the SEDUC-TO Pedagogical Proposal. The course proposal, drafted jointly by the partners⁴¹, laid out a more robust plan with class hours sufficient to fulfill the educational needs expressed by teachers, especially in terms of appropriating concepts covered in the textbooks.

The course lasted six months, totaling 194 class hours, offering eight modular disciplines, two in-person meetings and a guidance module to prepare the final paper. Nine teachers from areas including Economic Sciences, Administration and Accounting Sciences were involved, along with a psychologist and a teacher from SEDUC-TO. There were 100 places in the course, with 50 going to teachers from the public network, 40 reserved for public network multipliers and 10 students from undergraduate courses at UFT, the main goal of which was to establish the hub to offer courses in Financial Education in the North Region. The selection process included admission criteria like the experience of teachers and multipliers in financial education actions and participation in capacity building. The call for proposals was published on the university website and as well as that of SEDUC-TO, while also having been sent to the DREs. Activities involved: a) the preparation of course descriptions, workbooks and tutorials; b) production of video classes; c) development and customization of a virtual learning environment; d) offer modular disciplines in the Distance Education modality; e) preparation of workshops and in-person meetings; f) availability of content to SEDUC-TO for reproduction and dissemination.

The reproduction of the Enhancement Course, its structure and materials produced would be, in the medium term, used by SEDUC-TO as a basis for new training, with the offer of a permanent course with a total of 40 class hours.

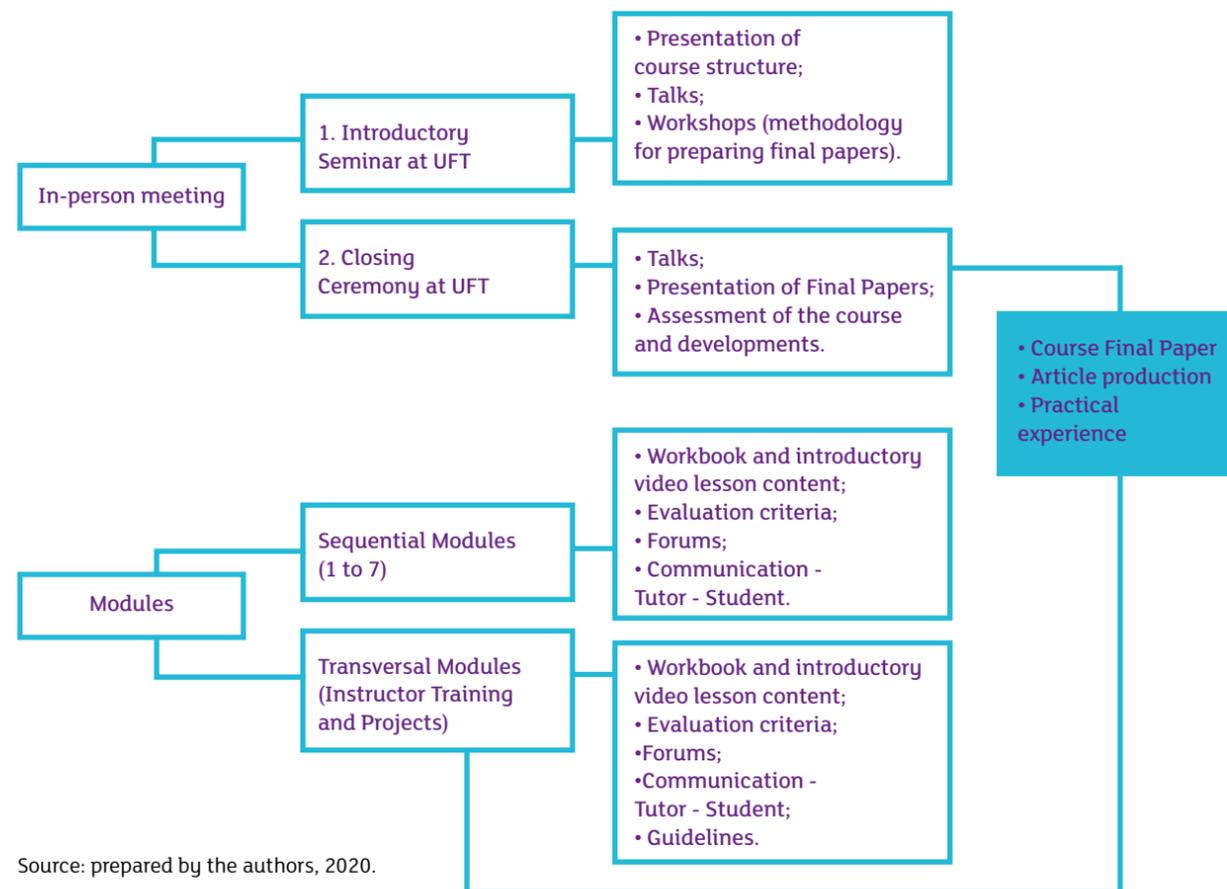
⁴¹. Items on the agenda included class hours, methodological aspects, positive and negative points with respect to using the Moodle platform, in-person meetings, the subject of each module, use of the AEF-Brasil platform as an introductory module, format of the Enhancement Course or specialization course, final paper format.

However, this objective was not obtained, given the political context at the time and also due to the financial restrictions that resulted in certain course activities not coming to fruition.

The course was structured into three stages: planning of preliminary activities, course implementation and assessment. Preliminary planning involved issues such as infrastructure, project team, entry notice, virtual learning environment, planning of disciplines – descriptions and workbooks – and in-person meetings. The course was overseen by a general coordinator and a support team split into functions that involved designing workbooks; production of video classes; and technical support for the education technology department (DTE), and teacher and students to prepare the workbooks; oversee modules, tutorials; advisory on course final papers.

The guidelines for planning modules were adjusted by partner institutions and are structured as follows:

ENHANCEMENT COURSE STRUCTURE



Source: prepared by the authors, 2020.

The course was organized in two ways: in-person meetings, by means of an introductory seminar and a closing seminar, and seven modular and sequential disciplines, with the introductory section offered by AEF-Brasil and the rest by UFT through the Moodle platform. In-person meetings were geared towards integration, the exchange of experiences, advisory and course assessment. The modular disciplines were all administered exclusively through an online learning environment, with an introductory class lesson posted along with didactic and support material, questions for forums and activities for instilling the content. The table below presents the subjects and programs approached in each of the modules during the course.

LIST OF MODULES AND PROGRAM CONTENT

Module	Hours	Content
1. Introduction to Financial Education	40h	AEF-BRASIL private platform
2. Behavioral and Financial Psychology	10h	Introduction to behavioral and financial psychology/ epistemology and finances/of desires, needs and incentives/ decision-making/external factors that influence financial decision-making/internal factors that influence financial decision-making/from action to unconscious/mass behavior and self-realization/the problem with change/techniques for changes in habit
3. Didactic mapping	10h	Conceptual model and objectives/general presentation on implementation/pedagogical principles of Primary Education/pedagogical principles of High School Education
4. Financial Planning and Family Budget	10h	Introduction to Mathematics/interest/capitalization systems/series/on payments/financial planning/family financial planning/savings and investment strategies/ family budget/budget plan
5. Behavioral Economics and Finances	10h	Concepts/agents/savings/investments/currency/economic system/income and spending/bounded rationality/effects of context/effects of anchoring/excessive options/marketing/ constructed preferences/uncertainty/the law of small numbers/loss aversion/time/several links
6. Conscientious Consumption and Behavioral Tips	12h	Concepts of conscientious consumption/consumption and social and environmental responsibility/water/trash/ recycling/food for life/biological value of food/eat on a small budget

Module	Hours	Content
7. Entrepreneurism	8h	Entrepreneurism/the role of entrepreneurs in society/ characteristics of entrepreneurial behavior/identifying market opportunities/environment analysis/business model/business plan
Instructor Training	10h	Goal of the themed units/Me, an Instructor?/knowledge and practices in adult learning, training programs and projects/ work methods and techniques for instructors

Source: prepared by the authors, 2020. *Preparation of intervention projects (60 hours). Inaugural seminar (12 hours) and Closing seminar (12 hours). The last item was canceled.

The proposal, in its entirety, was to build the capacities of teachers so as to apply the subjects and concepts in the didactic material provided by AEF-Brasil, while also encouraging them to practice these concepts through intervention projects at their schools. This strategy was deployed in the format of final paper presentations, where teachers could opt to present either a scientific article or an intervention project. The latter would approach the theme through “practices” within the school environment.

RESULTS OF TRAINING COURSES

The strategy for disseminating knowledge through training conducted and organized by public employee created a vital synergy, through which the instructors assume joint responsibility for training other teachers in their regions so as to multiply the expertise. AEF-Brasil administered courses that encouraged SEDUC-TO public employee to continue with the actions. An example of this is the training conducted by the department to propagate knowledge through the multipliers.

In general, the Enhancement Course was well assessed by participants and partners, despite a few setbacks that resulted in certain planned activities being canceled. Of a total 100 places offered, there were 84 enrollments and 31 final-year students spread throughout 8 DREs, with a truancy rate of 63%, partially due to factors linked to the platform used⁴².

⁴². A study of Module 2 showed that 26% of the enrollments did not have access to the platform during the entire course, following failed attempts at reinsertion.

Assessment documents demonstrate that the issues related to content and about the possibility of conciliating the modules with other school practices presented an elevated level of satisfaction among students, who manifested interest in integrating the Network of Financial Education Instructors, with 55% feeling fully prepared to act in the field.

The course operating framework, the sequence of modules, the didactic material and the interaction with teachers and assistant professors were all assessed positively. However, some suggestions provided by students led us to consider that adjustments are necessary for future editions. Some students complained of a lack of interaction with teachers and assistant professors in certain modules, suggesting the use of a more interactive and user-friendly platform. They also felt there were too few in-person meetings and they felt there should have been an in-person meeting to bring the course to a close and hand out certificates. Furthermore, they questioned the volume of the didactic material content and the time required to complete the modules, as it was difficult to make time considering all the other school activities and the aforementioned training. This is an important issue and corroborates with the assessment of teachers that the participation of students at forums and in project activities was extremely low.

At the end of the course, 31 final papers were presented in two formats: a report on the practices experienced and scientific articles, to be presented through videos or simply submitted and corrected by the advisor. This was not the most suitable format and generated frustration among students, teachers and partner organizations, though, given the political and financial conditions, no other format was viable.

It is important to note that the truancy rate was high, though certain considerations are necessary with regards to this issue. Teachers and multipliers argued that the workload, associated with the training processes for other subjects, created an excessive amount of work that jeopardized their dedication to the Enhancement Course. Furthermore, the course was designed for a short period, with a high number of class hours, which ended up contributing to the high truancy rate. Other factors, like the format with only two in-person meetings and difficult access to internet in the state interior, also contributed.

It is worth mentioning that the UFT actions with the Enhancement Course developed into the implementation of the “Me and My Retirement” program, which benefited 80 elderly people in situations of social vulnerability. Some

of them were selected for the University of Maturity Program (UMA-Federal University of Tocantins), with the remaining numbers recruited from the North and Taquaruçu Social Welfare Boards. Four workshops were organized, three of which were according to the program proposed by AEF-Brasil and the other about home economics, conceived and organized by the university. Besides the public benefiting from the program, there were 5 teachers and 12 students involved from the Economic Sciences course, along with 2 master students from the Graduate Program in Regional Development. The actions in this program resulted in two awards and one master's dissertation.

LESSONS LEARNED, BEST PRACTICES AND FUTURE OUTLOOK

The implementation of the Program for Financial Education in Schools in Tocantins was an adaptive process, based on articulation among entities, culminating in partnerships, with SEDUC-TO prioritizing the subject and, most importantly, its acceptance in schools. Nowadays, the subject is institutionalized in the state and approached with specific outlooks in schools, in accordance with their realities. Over the course of ten years, the diversity of possible activities defined as financial education, adapted to each local context, fostered an infinite number of actions and projects, some with lesser impact, while others becoming national benchmarks. Thus, this section presents some of the financial education activities, actions and projects conducted in schools in the state of Tocantins, and lessons learned. It ends off highlighting the challenges and outlook for the program in the state.

Some of the most relevant projects are listed below: Project to Study the Price of Items in the Staple Food Hamper, Financial Encyclopedia Project, Financial Trails Project and ArquiPet Project.

The Project to Study the Price of Items in the Staple Food Hamper, initially executed as part of the pilot project, is an example of the scope and direct impact in the lives of students, their families and communities. In the countryside of the north of the State – in the municipality of Tocantinópolis –, one teacher's initiative was to encourage students to study the prices in local grocery stores with the aim of informing their families where the lowest prices were to be found. However, as the municipality only has two grocery stores, the owners were unwilling to share this information. This led to an articulated action involving the teacher and her students, who mobilized and organized a collective purchase in an establishment in a

larger neighboring municipality, some 90 km away. The result was the purchase of items at better prices and a consequent reduction in prices among local grocers. Thus, certain lessons were learned and capacities developed, such as bolstering active citizenship, training multipliers, saving financial resources, the debate between consumer rights and duties, proactivity, unity and a sense of belonging.

Another successful experience was implemented in 2017 in the central north region of the state, in the municipality of Colinas, with the **Price**, conducted by a Portuguese language teacher and integrated into Biology, Mathematic and Sciences. The project also included the collection of price information among local stores by students, who organized the information and distributed it among family and the community in general. This led to the internalization of certain principles of financial education within the community, which began to benefit from better expense planning, using tools to make decisions and to organize home budgets.

The **Financial Trail Project** is one of the most successful in Tocantins, featured on the national television series *TV Escola – Your School, Our School Program*, in 2018. Organized in the municipality of Araguaína, one of the state's leading economic hubs, it involved several teachers of subjects including Physical Education, Mathematic and Chemistry, and was aimed at organizing content from these areas into board games. Each discipline provided content to be presented on the school board, which turned into a giant board game, simulating the daily activities of students, who traveled the board responding to didactic situations in terms of whether to spend or earn money. The goal of the project was to raise awareness among school communities and their families with respect to balanced spending with work that involved reflections about installment or cash purchases, opening a fictitious micro enterprise, sustainability and the environment.

Another notable proposal, promoted on the same TV Escola series, was the **ArquiPet Project**, developed at a school in Palmas, the state capital. It consisted of the construction of a grandstand using plastic bottles at the school multi-sport court, aimed at reuse and recycling material considered trash. The initiative began with a Physical Education teacher, who included Biology and Chemistry teachers and, with some students, saw 9,000 bottles collected and used to build the grandstand measuring 60 meters,



The Financial Trail Project is one of the most successful in Tocantins, featured on the national television series TV Escola – Your School, Our School Program, in 2018



with the capacity to seat 240 people. The entire construction was based on the principles of financial education, involving themes like economics, sustainability and cooperation.

Other activities and projects can be cited, like the *GinCalculando* Project, in the municipality of Arraias, the Intelligent Consumption Project implemented by SEDUC-TO along with students associations, the Life Project subject, geared towards post high school students, the teachers that analyzed the water and electricity accounts with their students, soap production using recycled oil, community vegetable gardens, reuse of air-conditioning water in schools, and the presentation and explanation of school expenses, an incentive that resulted in cost reduction.

These are just a few examples of initiatives in schools in Tocantins, in addition to the many not identified or classified as financial education,

Other activities and projects can be cited, like the *GinCalculando* Project, in the municipality of Arraias, the Intelligent Consumption Project implemented by SEDUC-TO along with students associations, the Life Project subject, geared towards post high school students

which, nevertheless, present common principles and fundamentals in providing knowledge and tools to students and the community, leveraging their leadership in altering their own realities. As such, it is clear that the program in Tocantins has been fulfilling the general objective defined by the ENEF (2010), which is to contribute to the development of a culture of planning, prevention, savings, investment, conscientious consumption and the construction of competencies necessary for students to face the social and economic challenges of society, as well as the exercise of active citizenship.

Despite several obstacles, many challenges were overcome until the universalization of the program in Tocantins.

Among other contributing factors were the articulation efforts among partner entities, especially AEF-Brasil, SEDUC-TO and UFT, the maintenance of the organizational structure at SEDUC-TO, which fostered efficient management of the program in partnerships with DREs, schools, teachers and educational technicians, the offer of training courses, permanent motivation of teachers and multipliers, the promotion and participation of those involved in events, very often with restricted resources.

In 2020, one of the major challenges of the program is the maintenance of actions and projects in schools considering the pandemic, with remote schooling; the inclusion of the subject in the new High School education

structure; the framework of a SEDUC-TO center that offers all the training courses, improving management and encouraging greater participation among teachers through progressions; maintenance of the organizational structure of SEDUC-TO and, if possible, the educational technicians involved, the universalization of the program to include Primary and High School Education, including education for youths and adults, education for indigenous peoples, special needs education, rural and quilombola education; and the creation of a research group at UFT for improved articulation between the hub in Tocantins and the other members of the National Network.

REFERENCES

ASSOCIAÇÃO BRASILEIRA DE EDUCAÇÃO FINANCEIRA (AEF-Brasil). Semana ENEF 2017. Disponível em: <https://www.vidaedineiro.gov.br/semana-enef-2017/>. Acesso em: 25 ago. 2020.

BRASIL. Decreto nº 7.397, de 22 de dezembro de 2010. Institui a Estratégia Nacional de Educação Financeira – ENEF, dispõe sobre a sua gestão e dá outras providências. Diário Oficial [da] República Federativa do Brasil, Poder Executivo, Brasília, DF, 23 dez. 2010. Seção 1, p. 7-8.

ENEF – Estratégia Nacional de Educação Financeira. Relatório Anual, 2016. Disponível em: <https://www.vidaedineiro.gov.br/wp-content/uploads/2017/04/Relat%C3%B3rio-Anual-2016.pdf>. Acesso em: 20 ago. 2020.

SEDUC-TO. Secretaria de Estado da Educação, Juventude e Esportes do Tocantins. Alunos da Apae de Aliança aprendem matemática com brincadeiras, 2016. Disponível em: <https://seduc.to.gov.br/noticia/2016/11/10/alunos-da-apae-de-alianca-aprendem-matematica-com-brincadeiras-/>. Acesso em: 16 set. 2020.

SEDUC-TO. Secretaria de Estado da Educação, Juventude e Esportes do Tocantins. Escola de Araguaína desenvolve práticas interdisciplinares em educação financeira, 2017a. Disponível em: <https://seduc.to.gov.br/noticia/2017/4/3/escola-de-araguaina-desenvolve-praticas-interdisciplinares-em-educacao-financeira/>. Acesso em: 16 set. 2020.

SEDUC-TO. Secretaria de Estado da Educação, Juventude e Esportes do Tocantins. CEM Castro Alves reinaugura quadra esportiva com arquibancadas de garrafas PET, 2017b. Disponível em: <https://seduc.to.gov.br/noticia/2017/9/4/cem-castro-alves-reinaugura-quadra-esportiva-com-arquibancadas-de-garrafas-pet/>. Acesso em: 16 set. 2020.

SEDUC-TO. Secretaria de Estado da Educação, Juventude e Esportes do Tocantins. Relatório do Programa de Educação Financeira nas Escolas: trajetória, resultados e proposições – Gerência de Formação e Desenvolvimento de Pessoas. Palmas, 2015.

SEDUC-TO. Relatório de desenvolvimento do Programa de Educação Financeira nas Escolas do Tocantins: da experiência piloto à universalização do tema nas escolas (2010 a 2018). Palmas, 2018.

TOCANTINS. Lei nº 2.977, de 8 de julho de 2015. PEE/TO (2015-2025). Palmas, 2015.

SEDUC-TO. Secretaria de Estado da Educação, Juventude e Esportes do Tocantins. Disciplinas eletivas no ensino fundamental promovem aprendizado com atividades lúdicas, 2019. Disponível em: <https://secom.to.gov.br/noticias/disciplinas-eletivas-no-ensino-fundamental-promovem-aprendizado-com-atividades-ludicas-444288/>. Acesso em: 16 set. 2020.

SEDUC-TO. Informações obtidas por meio eletrônico, e-mail. 2020. Recebida em 27 de ago. de 2020.



Chapter 7

The experience of training teachers in financial education in the State of Rio Grande do Sul

Larissa de Lima Trindade⁴³

Élsio José Corá⁴⁴

The Ministry of Education (MEC) included financial education in the National Common Curricular Base (BNCC) as a contemporary theme that will integrate the Basic Education curriculum. Thus, based on minimum content, laid out in the BNCC, and a transversal proposal, the pilot and pedagogical projects of both public and private Brazilian schools, must include content that helps improve student abilities and competencies relative to personal finances and the use of money, whether in a personal sphere or within the family.

The financial education of individuals is currently considered by world governments as one of the critical skills for the 21st century and they have called for effort from governmental bodies to make financial literacy a part of Basic Education (MESSY; MONTICONE, 2016). Thus, through Decree 10,393 of June 2020, Brazil instituted the National Strategy for Financial Education (ENEF) and the Brazilian Financial Education Forum (FBEF⁴⁵). According to this legislation, this forum is charged with promoting financial, insurance, pension and tax education in the country.

According to the Organisation for Economic Co-operation and Development (OECD), financial education can be seen as a process whereby consumers improve their understanding of financial concepts and products, through clear and objective guidelines. These guidelines should bolster their confidence in relation to the subject and awareness of the financial risks and effects of

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45. Up to May of this year, proposed by former Decree 7,397 of December 22, 2010.

poor money management may cause to an individual's well-being. As such, schools, the curriculum and teachers play a vital role in education, in raising awareness and, chiefly, in financial literacy.

In Brazil, financial education has been gaining ground in the preparation of public actions, especially through the ENEF and BNCC

Considering the lead role adopted by schools and the government, in 2019, Federal University of Fronteira Sul (UFFS), in partnership with the Association of Financial Education in Brazil (AEF-Brasil) and the Rio Grande do Sul State Education Department (SEDUC-RS) offered a Financial Education Enhancement Course to 120 professionals from the State Basic Education Network, with the goal of turning them into multipliers of this knowledge in school environments.

This chapter presents the historical process of creating the pedagogical proposal to train teachers on the subject of financial literacy and the development of the pedagogical proposal and methodology used throughout the course. Reports are also provided on contributions to the training of course attendees and, lastly, the lessons learned and the room for improvement in this education practice. May this material provide enjoyable reading and may other experiences be replicated based on its content.

COURSE TRAJECTORY

In Brazil, financial education has been gaining ground in the preparation of public actions, especially through the ENEF and BNCC. And it has mobilized public institutions – universities, for example –, as well as organized civil society entities, like AEF-Brasil, which has been fostering institutional relations and developing the subject in the curriculum of Brazilian schools for over ten years.

AEF-Brasil is an 'OSCIP' (Civil Society Organization of Public Interest), contributing to the ENEF through the development of social and education technologies that can be replicated by anyone or any interested organization. The transversal programs, which encompass the Program for Financial Education in Schools, fall under the coordination of AEF-Brasil and were the genesis of the partnership between UFFS, AEF-Brasil and SEDUC-RS.

The Program for Financial Education in Schools proposes to introduce financial education into the school context, especially for Primary and High

School. The goal is to contribute to the development of a culture of planning, prevention, savings, investment and conscientious consumption in future generations of Brazil. It is felt that teaching financial education in the formative years contributes to the construction of abilities and competencies necessary for students to face social and economic challenges of society and to exercise active citizenship (AEF-Brasil, 2020).

Thus, to deploy the Program for Financial Education in Schools, a means to align financial education and its formalized content with the curriculum for Basic Education was proposed, grounded on the Law of Guidelines and Bases of National Education and its regulatory statutes. The program features a strategic dissemination project, in addition to social technology kits, including a set of books and video documentaries, split into learning levels, offering both teachers and professors education activities that allow the subject to be introduced into school life.

The program dissemination proposal involved the federal government, state governments and AEF-Brasil. In 2010 and 2011, a financial education pilot project was organized, involving five Brazilian states: Tocantins, Rio de Janeiro, Minas Gerais, São Paulo and Ceará, as well as the Federal District. In all, there were 891 public schools, 27,000 students and 1,800 teachers. The project was monitored and assessed by the World Bank, with the aim of gauging the comprehension of the material prepared and the suitability of the pedagogical proposal. The assessment showed a rise in financial expertise for students and that their attitudes as to financial matters had advanced. This represents a change in the students' financial behavior. Due to the program, they are specifically more likely to save and manage their spending, to speak with their parents about financial issues and to help organize the family budget. Furthermore, the effects were maintained in the short- and long-terms, which signals the sustainability and lasting impact of the training received by students (AEF-Brasil, 2020).

Within this context and aimed at assisting the implementation of the National Financial Education Program in the State of Rio Grande do Sul, the course was hosted through an agreement reached between the Federal University of Fronteira Sul (UFFS), AEF-Brasil and SEDUC-RS. The course was proposed in partnership with the institutions involved and was conducted completely online, using the Moodle platform. The main goal was to build the capacities

In 2010 and 2011, a financial education pilot project was organized, involving five Brazilian states: Tocantins, Rio de Janeiro, Minas Gerais, São Paulo and Ceará, as well as the Federal District

of teachers and educational technicians to become multipliers of financial education in their schools and coordinating committees, specifically through active involvement methodologies. For this to occur, all course attendees had to propose an intervention project (research-action) in each module. This was one of the high points of the course, as it provided a moment for educational interaction among participants. The following section provides a better understanding of how the course works, along with the intervention project.

THE COURSE AND INTERVENTIONS IMPLEMENTED

Training for teachers began in early May 2019, with an inaugural class in Porto Alegre, which included the presence of all 120 course attendees. They were joined by the president of AEF-Brasil, Professor Claudia Forte, PhD, the Rio Grande do Sul State Secretary of Education, Faisal Karam, the dean of Federal University of Fronteira Sul, Professor Jaime Giolo, PhD, and the general course coordinator, Professor Larissa de Lima Trindade, PhD, public servant Clark Balbuena Sarmento, the general course coordinator, Professor Larissa de Lima Trindade, PhD, and the team of professionals – educational technicians and teachers – involved in the course.

At the inaugural class, besides the presentation of explanations on how the course works and the methodology behind the proposed training, cultural activities were offered alongside a welcoming message from the coordinators and teachers. The class also included two panels relative to financial education: one about financial education practices in schools in Rio Grande do Sul, administered by teachers Denise Kern and Nicanor Kieling; while the other dealt with financial education and its impacts in the classroom, administered by Professor Alessandra Camargo, who has been developing important experiences in this area in the State of Tocantins.

The proposal behind the training was comprised of seven modules offered by UFFS through the Moodle platform. With 24 total class hours, each module was developed over four months. As the modules occurred concurrently, two each month, the course was concluded in November 2019.

UFFS FORMATION MODULES, CLASS HOURS AND METHODOLOGIES FOR ASSESSING TRAINER TEACHERS

Modules	Hours	Evaluative methodologies
1. Introduction to Financial Education	24h	Three assessments conducted: 1. Family budget planning: reflecting in the family; 2. Family spending report; 3. Intervention project.
2. Fundamentals of Neuroscience Applied to Education and Consumption	24h	Four assessments conducted: 1. Questionnaire about the fundamentals of neuroscience applied to consumer decisions; 2. Identification of arguments geared to excessive consumption; 3. Tools used in neuromarketing; 4. Intervention project.
3. Interface between Financial Education and the BNCC	24h	Two assessments conducted: 1. Forum about interaction and pedagogical and social practices; 2. Intervention project.
4. Mathematic and Financial Education	24h	Two assessments conducted: 1. Construction of financial spreadsheets; 2. Intervention project.
5. Behavioral Economic and Finances	24h	Three assessments conducted: 1. Discussion forum on inflation and economic blocs 2. Questionnaire about behavioral psychology; 3. Intervention project.
6. Budget and Family Planning	24h	Two assessments conducted: 1. Spending diagnosis; 2. Intervention project.
7. Integral Human Formation	24h	Two assessments conducted: 1. Discussion forum on human and integral formation; 2. "The Integral Curriculum" Panel.

Source: authors.

Note that the initial module was entitled "Introduction to Financial Education" and was aimed at introducing the financial concepts to education professionals, providing them with a more generalized overview of the theme. Module 2 – "Financial Education in School" – was overseen by AEF-Brasil and administered within the institution's private platform *Vida e Dinheiro*. This allowed teachers to learn more about the activities and the platform that AEF-Brasil has been developing in the Program for Financial Education in Schools. In this module, the course attendees took up to 40 hours of remote activities throughout the entire period of the course, which ended in November 2019.

The third and fourth modules, with specific characteristics, focused on “Fundamentals of Neuroscience Applied to Financial Education and Consumption and Interfaces between Financial Education and the BNCC”. They were geared towards exploring the relationship between the BNCC and financial literacy. The fifth and sixth modules, respectively, were aimed at discussing the relationship between mathematics, financial education, behavioral economics and finances. Of note is that truancy among course attendees rose by 15% during these two modules. Coordination attributed this largely to the state public servant strikes, which began precisely during this period, and also to the fact that these modules are more geared towards calculus, which may have generated some extra difficulty for teachers, especially those who did not graduate from the exact sciences.

Lastly, the other two specific modules were conducted (Budget and Family Planning and Integral Human Formation, respectively): one aimed at planning and the family budget, which provided a practical how-to approach; and the other aimed at integral and human formation, as financial education is understood as necessary to this more ample idea of education.

The teachers organized video lessons and debate forums with course attendees about the content in each module. Furthermore, course attendees had to develop at least one practical activity within each module and, at the end, propose an intervention project with students from their schools.

Towards this end, each teacher under instruction, based on their intentions and understanding of the modules, had to prepare a research-action proposals – a class plan that contained the following key elements: i) theme to be worked on and relation to the module; ii) class objectives; iii) description of program content, like the literature used; iv) methodological procedures, that is, tools and materials that teachers would use in the classroom, as well as the path towards reaching the objectives and, lastly, a proposal for the assessment of the class by students to check their level of understanding about the class subject.

Of note is that, in total, 89 public employees completed the training and more than 500 intervention projects were prepared, which comprised the possible experiences of applying financial education in the classroom. The table alongside shows some of the more than 500 projects prepared by course attendees.

**INTERVENTION PROJECT PREPARED BY A COURSE PARTICIPANT
ON THE TOPIC “PERSONAL BUDGET MANAGEMENT”**

INTERVENTION PROJECT - LESSON PLAN	
1) SCHOOL:	Guararapes State High School
2) SUBJECT:	Geography
3) COURSE MODULE ON WHICH THE LESSON PLAN IS BASED:	Understanding Costs
4) TARGET AUDIENCE:	3rd Year of High School
5) TEACHER:	Ândrea Regina Scheid
6) HOURS INVOLVED FOR THE ACTIVITY:	10 lessons
7) LESSON TOPICS:	<ul style="list-style-type: none"> Ø Understanding and Managing Family Expenditure. Ø Organizing a Family Budget using instructive and educational practices.
8) LESSON OBJECTIVES:	<ul style="list-style-type: none"> Ø Show students the importance of being financially organized Ø Identify the main family expenditure. Ø Show and analyze the financial situation of the students' families. Ø Examine and understand the unnecessary costs.
9) CONTENT:	<ul style="list-style-type: none"> Ø Family Budget Guide. (https://www.crcpr.org.br/new/content/download/2016_12_14_cartilha_orcamento) Ø Spreadsheets - IBGE (https://www.ibge.gov.br/estatisticas/sociais/rendimento-despesa-e-consumo/9050-pesquisa-de-orcamentos-familiares.html?=&t=downloads). Ø Researching information Ø Report on information Ø Video - Camtasia Studio 9.0, to develop an instructive and educational video.

Source: authors.

The table shows that all the plans described the objectives of the activities and the desired impacts following application. Note that in this example the activity was conceived by a Geography teacher. This reveals that it is perfectly possible for other curricular components to assist in developing financial literacy among students. That is because it allows each curricular components from specific areas to use concepts and themes that link that specific knowledge to financial education, as proposed by the Philosophy teacher. By means of a class plan, as presented in the table below, it integrates content surrounding themes geared towards “freedom and autonomy”, coupled with concepts on “waste and ambition”.

AN INTERVENTION PROJECT THAT ASSOCIATES FINANCIAL EDUCATION WITH CONTENT FROM PHILOSOPHY

INTERVENTION PROJECT - LESSON PLAN	
1) SCHOOL:	Conde de Afonso Celso Elementary State School
2) COURSE:	Philosophy
3) COURSE MODULE ON WHICH THE LESSON PLAN IS BASED:	Module 1, Activity 3
4) TARGET AUDIENCE:	Students in the 9th year
5) TEACHER:	Susi Mara Vieira Araujo
6) HOURS INVOLVED FOR THE ACTIVITY:	135 minutes (3 periods of 45 minutes each)
7) LESSON TOPICS:	The topic that will be worked on in the Intervention Plan is Waste and Ambition
8) LESSON OBJECTIVES:	<ul style="list-style-type: none"> ü Ensure the students understand that ambition can often lead to waste; ü That sometimes we don't know how to use our freedom rationally and we allow ourselves to be lead by our emotions; ü That we are easily influenced by media and fads.
9) CONTENT:	Values, such as Freedom and Autonomy
10) METHOD:	The students will go to the Video Room to introduce the subject by watching the video of the song, "Admirável Chip Novo", by the singer Pitty from Bahia: We will then discuss the lyrics; highlighting the themes "ambition and waste" and this will lead on to various activities.

Source: authors.

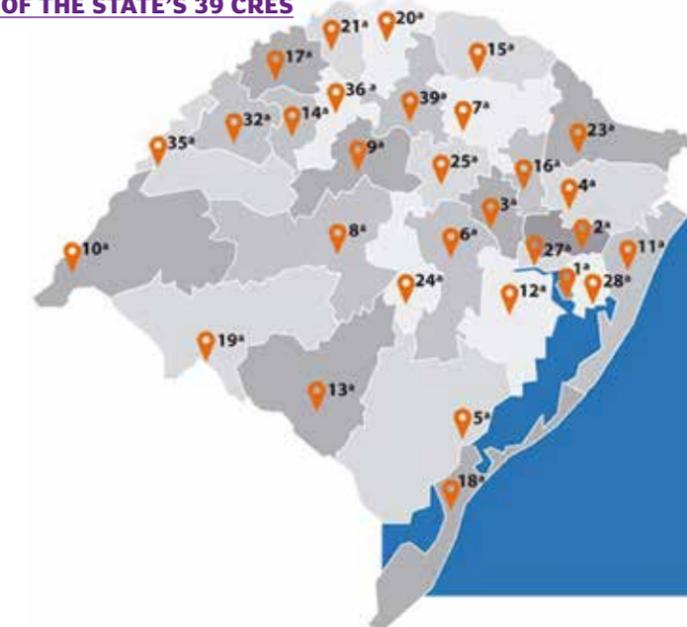
Further of note is that the projects, besides describing the target public, had to propose a number of class hours compatible with the suggested activity, very often through two or more in-person meeting between teachers and students. In many case, the methodologies were interactive, easily accessed by students and were able to trigger real interest in the subjects. The following section takes a closer look at the profile of these course attendees, along with their perception about the training and the proposed interventions.

THE TEACHERS UNDER INSTRUCTION, THE INTERVENTIONS AND THE DEGREE OF SATISFACTION IN TERMS OF THE TRAINING

The course was initially aimed at building the capacities of 120 participants, including teachers and educational technicians. However, considering the list of applicants, the likelihood of truancy and the structure of technological and human resources available, an additional 24 people were enrolled, totaling 144 course attendees. To identify the profile of students, a questionnaire was applied,

called the "Profile and financial knowledge of course attendees prior to the course". According to the responses, of the 144 enrollees, 17 (11.8%) had not answered the questionnaire. Of the 127 that did respond, 9 (7%) were educational technicians and 118 (93%) were teachers. Of the 118 teachers, 6 (5%) taught the early years of Primary Education, 32 (27%) taught the final years of Primary Education and 80 (68%) taught at a High School Education level. Of note is that the course included the presence of at least one teacher from each Regional Education Coordination Office (CRE) of Rio Grande do Sul, distributed as follows.

SPATIAL DISTRIBUTION OF THE STATE'S 39 CRES



Source: SEDUC/RS, 2020.

At the end of the course, those who finished (89 attendees) responded a final questionnaire to assess their evolution in terms of financial expertise and their perception and satisfaction in relation to the pedagogical experience. The results of the survey revealed that: 11 attendees that completed the course (12%) do not work as teachers, while all the rest teach in the classroom (88%). Of these, 2 (2%) taught the early years of Primary Education, 24 (27%) taught the final years of Primary Education and 53 (59%) taught at a High School Education level. With regards to the subjects they teach: 58 teach the Exact Sciences, 11 teach the Human Sciences and 10 teach Languages – Portuguese language, English, Art and Physical Education.

The initial and final questionnaires allowed for the characterization of the course attendee profiles and their level of knowledge about financial education, as

well as the effect of the course. Note that 80% of the attendees that completed course are women; 43% of them are married and 88% declared themselves as white. The average age of the course attendees was 43 years old, and 92% of them worked as teachers, with 59% teaching at a high school level. Also notable was that 47% of the attendees that completed the course teach Mathematics or Physics, showing that interest in the theme is still predominantly among exact sciences teachers, despite the BNCC suggesting the theme be incorporated into other subjects.

The average family income of course attendees ranged from approximately US\$ 300 to US\$ 2000, and many stated they had problems dealing with money, showing that capacity building, besides necessary for students, was also highly significant to the educators. Another highlight was that the course was the first opportunity for instruction on financial education for 92% of the course attendees.

At the start of the course, 81% of the attendees stated they felt 'not very secure' or 'reasonably secure' in dealing with their finances. After the course, the percentage of attendees that stated they felt 'very secure' rose from 5% to 21% and those who felt reasonably secure rose from 35% to 76% of the course attendees. Furthermore, to 83% of them, the knowledge acquired in the course helped them to learn more about financial education. And the intervention projects proved 'extremely useful' or 'very useful' to 90% of them, according to the final survey.

PARTICIPATION OF COURSE ATTENDEES IN CONDUCTING ACTIVITIES IN EACH MODULE

Module I

Enrollees **144**

Did not complete any module activity **21**

Participated in activities, but did not submit the intervention project **11**

Did not participate in activities, but submitted the intervention project **1**

Zero for the intervention project **1**

Grade ≥ 5 for the intervention project **108**

Completed 100% of the activities **89**

Passed the module (FA ≥ 60) **108**

Failed due to grade **15**

Module III

Enrollees **142**

Did not complete any module activity **23**

Participated in activities, but did not submit the intervention project **14**

Did not participate in activities, but submitted the intervention project **0**

Zero for the intervention project **3**

Grade ≥ 5 for the intervention project **97**

Completed 100% of the activities **48**

Passed the module (FA ≥ 60) **97**

Failed due to grade **22**

Module IV

Enrollees **142**

Did not complete any module activity **38**

Participated in activities, but did not submit the intervention project **6**

Did not participate in activities, but submitted the intervention project **58**

Zero for the intervention project **3**

Grade ≥ 5 for the intervention project **97**

Completed 100% of the activities 54 Passed the module (FA ≥ 60) **98**

Failed due to grade **6**

Module V

Enrollees **141**

Did not complete any module activity **35**

Participated in activities, but did not submit the intervention project **11**

Did not participate in activities, but submitted the intervention project **5**

Zero for the intervention project **1**

Grade ≥ 5 for the intervention project **88**

Completed 100% of the activities **74**

Passed the module (FA ≥ 60) **93**

Failed due to grade **13**

Module VIEnrollees **141**Did not complete any module activity **44**Participated in activities, but did not submit the intervention project **10**Did not participate in activities, but submitted the intervention project **9**Zero for the intervention project **0**Grade ≥ 5 for the intervention project **80**Completed 100% of the activities **65**Passed the module (FA ≥ 60) **83**Failed due to grade **14****Module VII**Enrollees **141**Did not complete any module activity **43**Participated in activities, but did not submit the intervention project **5**Did not participate in activities, but submitted the intervention project **15**Zero for the intervention project **0**Grade ≥ 5 for the intervention project **88**Completed 100% of the activities **74**Passed the module (FA ≥ 60) **87**Failed due to grade **11****Module VIII**Enrollees **141**Did not complete any module activity **33**Participated in activities, but did not submit the intervention project **3**Did not participate in activities, but submitted the intervention project **3**Zero for the intervention project **0**Grade ≥ 5 for the intervention project **10**Completed 100% of the activities **64**Passed the module (FA ≥ 60) **105**Failed due to grade **3**

The table below lists the information relative to participation and the performance of course attendees in conducting activities in each module. The data in the table shows good involvement and/or good participation among the group in conducting activities proposed in each module. It is also important to point out that the failure rate due to poor grades did not reach 16% and that the pass rate constantly surpassed 58% in each module. Considering the general involvement of the group and the final pass rate, this result is both expressive and significant, with 89 attendees completing the course and several interesting proposals offered for intervention in the area.

Notably, despite the truancy, partly justified by the education modality and the work routine of teachers, the course was considered a success and built the capacities of 72% of those actively involved. In the final assessment questionnaire, there was a marked improvement in participants' financial literacy, especially with regards to concepts on savings, investing and investments. A general evaluation of the course was conducted based on the perception of the course attendees and reflects a positive degree of satisfaction, with scores ranging from 3.8 to 4.3 (on a scale of 1 to 5).

Further, to 83% of the course attendees, the course helped them acquire new expertise about financial education; to 81 of the 89 people that completed the course, the knowledge acquired in the modules assisted daily practices in the classroom or school management. With regards to the results not obtained, the dropout rate (around 30%) and failure rate (around 8%) are considered within the normal limit, as the course was for enhancement, free, conducted through distance education and outside of teachers working times, which requires extra time for studying.

With respect to the work group and the setting, the course coordination pointed out several problems encountered and which need to be remedied for future editions, especially in terms of approximating the school curriculum, the BNCC and Financial Education. Moodle as the course environment also proved challenging, as certain tools must be adapted, leading to delays in correction and, consequentially, in the delivery of assessments. Due to the calendar and the structure of the course, it was not possible to administer the final class; however, around 20 course attendees are applying their intervention projects and reporting the experience in a book, which will be available for free online for consultation on the AEF-Brasil website, on the Paco Editora website and the UFFS channels.

As to the quantification of intellectual production, it is worth noting that a virtual learning environment was created based on this experience, along with 17 video lessons and more than 500 class plans produced by the course attendees. A book was also produced based on the practical experiences fostered through interventions.

A FEW CLOSING REFLECTIONS

In the recent past, more precisely the 1990s, Brazil was struck by dizzying inflation rates, considerable economic fluctuation, a steep drop in the value of the Brazilian Real, a lack of investment system and other such economic woes. Within this scenario, Brazilians lacked the instrument and the expertise to effectively deal with their personal finances, nor did the government provide action and public policies to educate Brazilian society (FERNANDES; CÂNDIDO, 2014).

We are currently seeing a similar panorama, with the Brazilian real continuing to fall in value, for example. However, in the middle of the past decade, programs and public policies were launched to mitigate the effects of a lack of financial education and its impact on the national economy, such as high rates of default and indebtedness, a stagnated economy, negligible savings rates and low investments in economic assets. Consequentially, this led to lower personal economic development among individuals, which contributed to an increase in social inequality and even problems related to sanitation.

In this perspective, the problems arising from poor financial planning have a generalized effect on the economy (SAVAIA; SAITO; SANTANA, 2007), the individual and even the environment in which they are inserted. Purchasing power decreases, and the State needs to intervene even more in compensatory taxation policies, in order to balance the “deficient budgets of individuals that are not necessarily poor”, increase interest rates to contain consumption, “in addition to complete dependency on systems like the Unified Health System (SUS) and the National Institute of Social Security (INSS)” (LUCCI et al., 2006, pg. 4).

It is a known fact that the individuals most likely to suffer the consequences of a lack of financial education and, possibly, indebtedness, are those with a lower education level (VIEIRA; FLORES; CAMPARA, 2010). In this sense, the Brazilian state began working on education alternatives, among which the ENEF stands out, aimed particularly at “contributing to bolstering active citizenship by providing support actions which help the population to make

more autonomous and conscientious financial decisions” (ENEF, 2020, pg.1) and the new BNCC, which also proposed so-called transversal/contemporary themes, which seeks to discuss in the classroom the “set of expertise seen as essential to leveraging citizenship and aimed at helping the population to make more autonomous and conscientious financial decisions” (MINISTRY OF EDUCATION, 2018).

Based on these elements, the lack of financial education in Brazil is easily noted; thus, adopting effective measures and policies is urgent and necessary

Based on these elements, the lack of financial education in the context of Brazilian society is clear; thus, adopting effective measures and policies is urgent and necessary (POTRICH; VIEIRA; CERETTA, 2013). However, public administrators, when elaborating these policies, must be aware of the fact that decisions that involve the financial behavior of individuals go far beyond a simple relation between consumption and income: there are other behavioral variables in this equation that must be considered by educators and administrators, among them the meaning that individuals attribute to money and their level of materialism (TRINIDADE; RIGHI; VIEIRA, 2012).

Because of all this, this formation generated several important lessons: i) financial education is essential not only to the student body at schools, but also to the teachers, who learn a lot through teaching their students; ii) financial education must be experienced through practice so that its concepts are truly understood and, as such, intervention projects are considered an excellent path for research-action at schools; iii) state and municipal governments must foment continued education for teachers with respect to this theme, so that better financial literacy results are guaranteed for the future. It is worth noting that financial education is an expertise that, when correctly applied, can reflect positively in both the lives of students and their families.

To consolidate financial education as a public education policy, besides including it in the curriculum, the Federal Government must continue to dialog with civil society entities, universities, schools and state government, which have been deploying education strategies along this line for a long time already. It would be a major step backwards if investments and the education of teachers with respect to this and other themes were forgotten or left to stagnate in the country. Investment in continued education means investing in schools and, consequentially, in the individuals – namely the students.

Thus, to guarantee a better future for a State and the people who live in it, it is essential to leverage financial education among the population, seeing that people with better financial education are better able to manage their resources, plan their spending and maximize their purchasing power.

Lastly, this experience entails a list of strategies that have been transforming the lives of students, especially with the objective of raising their awareness about consumption, life and finances. The resulting reflections will certainly impact the future of the country, especially in people's personal lives and their interpersonal relationships.

REFERENCES

- ASSOCIAÇÃO BRASILEIRA DE EDUCAÇÃO FINANCEIRA (AEF-BRASIL). *Programa Nacional de Educação Financeira*. Disponível em: <https://www.vidaedinheiro.gov.br/programas-transversais>. Acesso em: 24 ago. 2020.
- BRASIL. Casa Civil. Decreto nº 10.393, de 9 de junho de 2020. Brasília, 9 jun. 2020. Disponível em: http://www.planalto.gov.br/ccivil_03/_Ato2019-2022/2020/Decreto/D10393.htm. Acesso em: 14 ago. 2020.
- BRASIL. Ministério da Educação. *Base Nacional Comum Curricular: Educação é a base*. Brasília: Ministério da Educação, 2018. Disponível em: http://basenacionalcomum.mec.gov.br/wp-content/uploads/2018/04/BNCC_Ensino_Medio_embaixa_site.pdf. Acesso em: 14 ago. 2020.
- FERNANDES, André Henrique de Souza; CANDIDO, João Gremmel Maier. Educação financeira e nível do endividamento: relato de pesquisa entre os estudantes de uma instituição de ensino da cidade de São Paulo. *Revista Eletrônica Gestão e Serviços*, v. 5, n. 2, p. 894-913, 2014. Disponível em: <https://www.metodista.br/revistas/revistasims/index.php/REGS/article/view/4868>. Acesso em: 29 abr. 2020.
- LUCCI, Cintia Retzet. al. A influência da educação financeira nas decisões de consumo e investimento dos indivíduos. In: SEMINÁRIOS EM ADMINISTRAÇÃO, 9, 2006, São Paulo. *Anais dos Seminários em Administração – SemeAd*. Disponível em: http://sistema.semead.com.br/9semead/resultado_semead/trabalhosPDF/266.pdf. Acesso em: 29 abr. 2020.
- MESSY, F.; MONTICONE, C. Financial Education Policies in Asia and the Pacific. *OECD Working Papers on Finance, Insurance and Private Pensions*, Paris, n. 40, 2016. Disponível em: <http://dx.doi.org/10.1787/5jm5b32v5vvc-en>. Acesso em: 23 fev. 2016.
- ORGANIZAÇÃO PARA A COOPERAÇÃO E DESENVOLVIMENTO ECONÔMICO (OCDE). *Improving Financial Literacy: Analysis of issues and policies*. Paris, 2005. Tradução dos autores. Disponível em: <http://www.oecd.org/>. Acesso em: 14 ago. 2015.
- ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (OECD). PISA 2015. *Results in Focus*. OECD Publishing, 2018. Disponível em: <http://www.oecd.org/pisa/pisa-2015-results-in-focus.pdf>. Acesso em: 14 ago. 2020.

POTRICH, Ani Caroline Grigion; VIEIRA, Kelmara Mendes; CERETTA, Paulo Sergio. Nível de alfabetização financeira dos estudantes universitários: afinal, o que é relevante? *Revista Eletrônica de Ciência Administrativa*, v. 12, n. 3, p. 314-333, 2013.

SAVOIA, José Roberto Ferreira; SAITO, André Taue; SANTANA, Flávia de Angelis. *Paradigmas da educação financeira no Brasil*. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-76122007000600006.76122007000600006&lang=pt-. Acesso em: 23 ago. 2017.

SECRETARIA DE EDUCAÇÃO DO ESTADO DO RIO GRANDE DO SUL (Seduc/RS). SEDUC dá início ao Curso de Aperfeiçoamento em Educação Financeira, notícia 23 de maio de 2019. Disponível em: <https://educacao.rs.gov.br/seduc-da-inicio-ao-curso-de-aperfeiçoamento-em-educacao-financeira>. Acesso em: 31 ago. 2020.

SECRETARIA DE EDUCAÇÃO DO ESTADO DO RIO GRANDE DO SUL (SEDUC/RS). Coordenadoria Regional de Educação do Estado do Rio Grande do Sul – CRE, 2002. Disponível em: <https://servicos.educacao.rs.gov.br/pse/srv/cre.jsp?ACAO=acao1&CRE=0>. Acesso em: 31 ago. 2020.

TRINDADE, Larissa de Lima; RIGHI, Marcelo Brutti; VIEIRA, Kelmara Mendes. de Onde Vem o Endividamento Feminino? Construção E Validação De Um Modelo PLS-PM. *Revista Eletrônica de Administração*, Porto Alegre, RS, v. 18, n. 3, p. 718-746, nov. 2012. ISSN 1413-2311. Disponível em: <https://seer.ufrgs.br/read/article/view/35451>. Acesso em: 6 set. 2020.

VIEIRA, Kelmara Mendes; FLORES, Sílvia Amélia Mendonça; CAMPARA, Jéssica Pulino. *Propensão ao Endividamento no Município de Santa Maria (RS): verificando diferenças em variáveis demográficas e culturais*. TPA-Teoria e Prática em Administração, v. 4, n. 2, p. 180-205, 2015. Disponível em: <http://www.biblionline.ufpb.br/ojs2/index.php/tpa/article/view/19582/12540>. Acesso em: 30 abr. 2020.

Chapter 8

Financial Education in Schools: The experience of training teachers in the state of Minas Gerais

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As from 1994, with the insertion of new clients in the financial system and the early days of financial stability, the Brazilian market has undergone profound changes (SAITO; SAVOIA; PETRONI, 2006). This context allowed financial institutions to expand the offer of products and services to a public that was previously neglected. However, a major roadblock lay ahead, as, despite a high demand for available products and services, these new consumers faced difficulties in terms of financial issues.

This lack of expertise was likely to lead to undesirable consequences, both for the market and the people and these consequences would prevent them from attaining their objectives (SANTOS, 2009). Financial education thus revealed itself to be a necessary instrument in preparing the population, especially future consumers of these products and services, for the challenges of the new financial context.

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50. Administrative Technician of Education at Federal University of Itajubá (UNIFEI), Itajubá Campus, Minas Gerais (MG). Researcher and assistant professor for the Financial Education Research and Development Center (DENARIUS).

Introducing financial education to the highest number of people possible may help them resolve their difficulties, while also allowing them to better plan their lives and attain the conditions to reach their dreams. In an attempt to meet this demand, schools can make a significant contribution by financially educating their students who will, in turn, introduce these expertise into their families.

To this end, schools feature as privileged spaces for undertaking this project. However, it is not enough to merely transfer this function without the necessary training of teachers to undertake said task. This constituted a major challenge for education institutions, as it requires constant upkeep. Besides governmental public policies, investments in the area of education and professional development for teachers will be necessary (SEVERINO and PIMENTA, 2002).

Studies and educational surveys show that teachers are indispensable professionals in the process to change society, which makes it necessary to invest in their professional development. This process of increasing the perceived value of teachers involves initial and continued professional training. By remaining up to date, they enrich the practice of pedagogy and leverage student learning, thereby contributing to the formation of active citizens.

Within a new perspective of teacher education, a proposal geared towards continued training while working is of the utmost importance, as the idea is not to separate training from work.

This, however, revealed the following problem: how will teachers perform their role as instructors, connecting students to real and challenging issues related to finance in their daily routines, if the teacher education program lacks the technical expertise necessary to meet this expectation? How can continued training be developed with a new outlook?

Considering this problem, Federal University of Itajubá (UNIFEI), through its Financial Education Research and Development Center (DENARIUS), along with the Association of Financial Education in Brazil (AEF-Brasil) proposed a capacity building course for teachers from the Minas Gerais State Education Network, with the objectives detailed as follows.

General Objective

Foster in-depth training on the theoretical and practical approaches of teaching financial education within learning spaces, in view of the training of teachers able to assist students to attain their individual and collective dreams.

Specific objectives

- Develop competencies and abilities necessary to promote financial education through theoretical and practical activities.
- Promote the exchange of experiences and the creation of new possibilities for teaching-learning financial education in institutes of learning.
- Leverage the theoretical-practical knowledge of financial education geared towards the financial literacy process.
- Teach people to be autonomous in relation to their finances.

Considering the questions presented, the course, by introducing financial education into Basic Education, should prioritize the continued training of working teachers. In theory, “education professionals” know all too well what to do and how to do it. However, in practice, not all are actually capable of meeting this requirement with this confidence. As such, the main challenge lay not in affirming the portion of competencies that go beyond the constituted scientific knowledge, but rather to establish an explicit and voluntary link with the reflexive paradigm, as the idea was to simultaneously expand the scientific bases of practice where they already existed.

In theory, “education professionals” know all too well what to do and how to do it. However, in practice, not all are actually capable of meeting this requirement with this confidence

Teachers were encouraged to make the best choices in this process; define priorities from the point of view of students; use analysis as a basis for common and problematic situations and their desirable resolution; not ignore the anxiety and lack of experience among students in relation to the proposed subjects. Training good teachers implies, over and above all, in the formation of people able to evolve, to learn through experience, reflecting about what they would like to do, about what they have actually done and about the results reached.

Besides this general aspect, the financial education capacity building course is justified by two other aspects. The first is related to a context which basic education teachers were not – and are still not – prepared to deal with, namely financial issues in daily routines. To illustrate this point, according to the National Consumer Indebtedness and Default Survey (PEIC⁵¹),

conducted by the National Confederation of Trade Goods, Services and Tourism (CNC), the percentage of families that reported debts reached 67.5% in August 2020, once again the highest number on record. Further to the same survey, the percentage of families in debt or bills in arrears increased from 26.3% in July to 26.7% in August, the highest rate since March 2010.

The second aspect is linked to the interdisciplinary nature of financial education. Due to this trait, as from 2016, it became part of the current themes in the National Common Curricular Base (BNCC) in a transversal and integrated manner. As such, this is a set of expertise seen as essential to leveraging citizenship and aimed at helping the population to make more autonomous and conscientious financial decisions. The theme of financial education gained international attention with the onset of the 2008 global economic crisis. Specialists from international organizations like the Organisation for Economic Co-operation and Development (OECD) have turned their attention to the importance of issues associated with financial education around the world.

Considering the objective and the justifications of the course proposed for Minas Gerais, a fundamental step lay in characterizing a capacity building course that, besides constituting all the transversal and integrating elements of financial education, also manage to encompass all the diversity of the state's more than 853 municipalities. The following item describes the course characteristics.

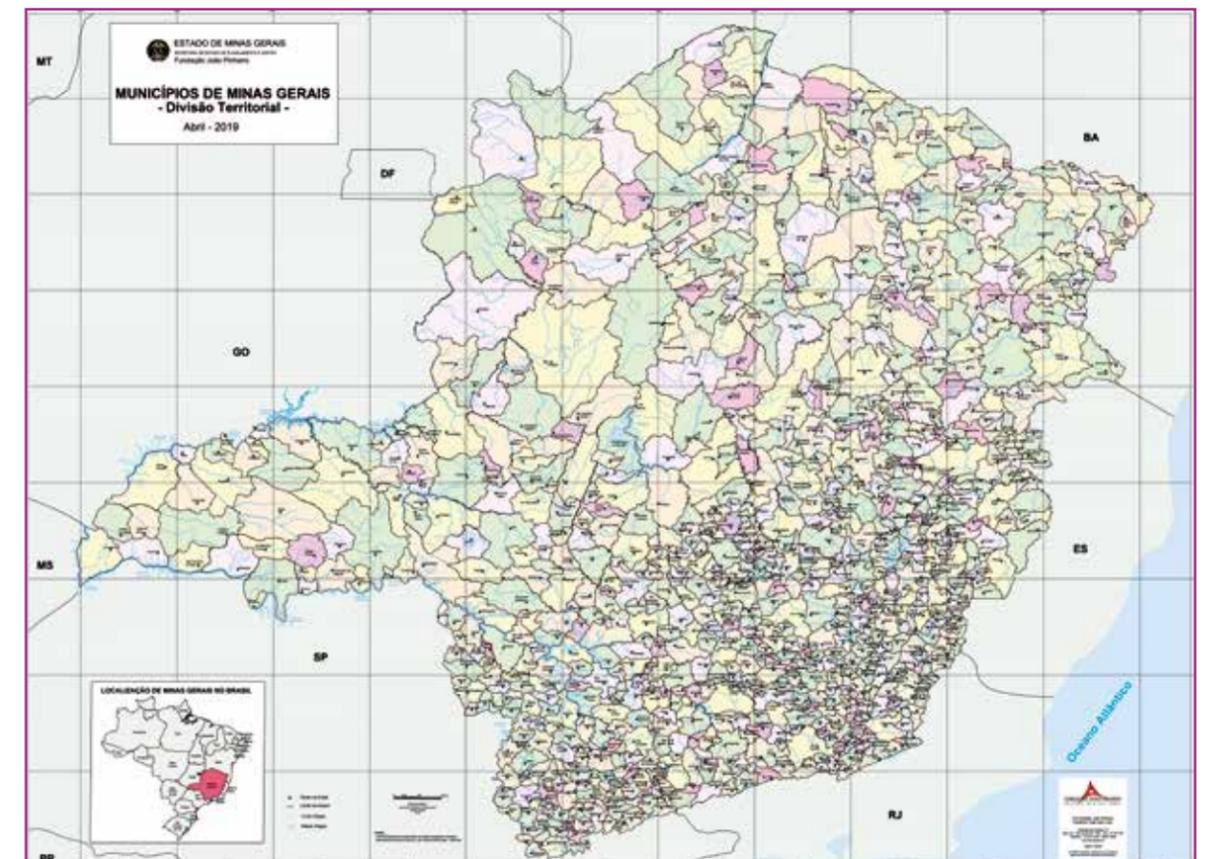
COURSE CHARACTERISTICS

The essence of the course proposed by UNIFEI/DENARIUS for teachers from the Minas Gerais Stated Education Department (SEE/MG) was to provide in-depth training on the theoretical and practical approaches to teach financial education in learning spaces, in view of the formation of teachers, so they are able to directly impact High School learners.

51. PEIC. *Indebtedness continues to rise among lower income families.*

National Confederation of Trade Goods, Services and Tourism (CNC). August 2020 Available at: <http://www.cnc.org.br/editorias/economia/pesquisas/pesquisa-de-endividamento-e-inadimplencia-do-consumidor-peic-agosto-0>. Acesso em: 10 set. 2020.

This was a major challenge for researchers from UNIFEI/DENARIUS. Minas Gerais is the Brazilian state with the highest number of municipalities (853), corresponding to more than 15% of the nation's total municipalities, as shown in the map below.



Official map of the municipal division of Minas Gerais, updated in April 2019.

Source: João Pinheiro Foundation.



For this to become concrete, basic technical and individual competencies were defined. Among the technical competencies, the following must be developed:

- a) build the capacities of Basic Education teachers from the state education network to use the material from the Program for Financial Education in Schools in the classroom;

b) develop a culture of prevention by correctly using savings options, insurance, investment and social security plans for retirement.

Among individuals, the follow was determined:

- a)** highlight the exercise of responsible citizenship through the practical demonstration of the fundamentals of financial education;
- b)** present conscientiousness and responsibility in the use of money and financial practices;
- c)** correctly use the tools for decision-making related to financial issues;
- d)** ensure short, medium and long-term financial planning;
- e)** improve personal social and economic conditions, seeking to overcome and avoid economic difficulties and making long-term plans.

Based on this set of established competencies, course alumni should have the following profile: teaching professionals able to exercise the function critically and creatively, striving to uphold the necessary ethical and democratic values, in a way to help youths to attain their individual and collective dreams.

Guarantee that alumni terminated the course with this profile was also a major challenge. In the stage to define the places available to course attendees, AEF-Brasil, UNIFEI/DENARIUS and the Minas Gerais State Education Board (SEE/MG) decided that at least three teachers from each of the state's 47 Regional Education Superintendencies (SRE⁵²), regardless of the area of expertise (Portuguese, Mathematics, English, History, Geography, Biology, etc.). As such,

52. SRE Almenara; SRE Araçuaí; SRE Barbacena; SRE Campo Belo; SRE Carangola; SRE Caratinga; SRE Caxambu; SRE Conselheiro Lafaiete; SRE Coronel Fabriciano; SRE Curvelo; SRE Diamantina; SRE Divinópolis; SRE Governador Valadares; SRE Guanhães; SRE Itajubá; SRE Ituiutaba; SRE Janaúba; SRE Januária; SRE Juiz de Fora; SRE Leopoldina; SRE Manhuaçu; SRE Metropolitana A; SRE Metropolitana B; SRE Metropolitana C; SRE Monte Carmelo; SRE Montes Claros; SRE Muriaé; SRE Nova Era; SRE Ouro Preto; SRE Pará de Minas; SRE Paracatu; SRE Passos; SRE Patos de Minas; SRE Patrocínio; SRE Pirapora; SRE Poços de Caldas; SRE Ponte Nova; SRE Pouso Alegre; SRE São João Del Rei; SRE São Sebastião do Paraíso; SRE Sete Lagoas; SRE Teófilo Otoni; SRE Ubá; SRE Uberaba; SRE Uberlândia; SRE Unaí; SRE Varginha.

a total of 150 places were offered while the Metropolitan A, Metropolitan B and Metropolitan C SREs each received four places, due to the number of teachers. Following the definition of the basic course characteristics and the number of places to be offered, the next step involved the construction of the course itself. The framework designed is presented in the next item.

COURSE FRAMEWORK

In the process for structuring the course, the UNIFEI/DENARIUS team, in partnership with AEF-Brasil, established that the Program for Financial Education in Schools would be used as a basic reference. Disseminated through the National Strategy for Financial Education (ENEF), the program was aimed at introducing financial education into the entire learning process for children and youths, inserting these expertise into Basic Education, even before the subject was mentioned in the BNCC.

The program was recognized internationally, upon receiving the 2014 Country Award in the Americas and Caribbean regional category, granted by Child and Youth Finance International (CYFI). Besides the vital recognition of the program, another important factor positioning it as a benchmark was the wealth of didactic material produced for students and teachers.

Besides accessible on the open platform, with all the content available to download for free, the didactic material is organized into one set of textbooks for students and another for teachers. The student's book is comprised of several didactic situations that contextualize the financial education applied in daily routines. This facilitates the comprehension of the concepts, provides information and conditions for students to transform knowledge into healthy financial behaviors. The teacher's book, mirrored on that student's book, provides guidelines on steering the discussion and application of didactic situations.

Thus, using the Program for Financial Education in Schools as a reference, the group of teachers/researchers from UNIFEI/DENARIUS implemented several adaptations to the content and proposed a course for Capacity Building in Financial Education for Basic Education Teachers, with a total 258 (two hundred fifty-eight) class hours, split over a period of ten months, as presented in the table below.

**STRUCTURE OF THE COURSE FOR CAPACITY BUILDING
IN FINANCIAL EDUCATION FOR BASIC EDUCATION TEACHERS,
MINAS GERAIS HUB, CONTENT/MODULES**

Content/modules	Hours
1. Introduction to Financial Education	28h
2. Behavioral factors and financial education	28h
3. Financial literacy	28h
4. Financial education in schools (Course by AEF-Brasil: Didactic material)	40h
5. Personal and social life	42h
6. Entrepreneurism and major projects	42h
7. Economics and public goods	42h
Module class hours (online disciplines)	250h
Closing Seminar: Course assessment and presentation of projects	8h
Total Class Hours:	258h

Source: pedagogical project for the capacity building course.

The capacity building course for teachers from SEE/MG (course attendees), the teachers/researchers from UNIFEI/DENARIUS (educators) had to take on the role of study councilor, calling on course attendees to take a lead role in their own learning. As such, the goal was to establish a partnership between educators and course attendees on the quest to build expertise. In other words, educators must take on the role of organizer and encourage the process, with a focus on course attendee learning, so that the attendees are able to actively establish a relationship with their professional practice, based on the theoretical reading and proposed activities, involving all the concepts of financial education studied.

To guarantee the success of this proposal, course activities were organized to prioritize the collective and participatory construction of knowledge. The methodology was grounded on the social interactionist approach, characterized by dynamism and the involvement of individuals in the construction of concepts and their respective meanings. The entire UNIFEI/DENARIUS team (coordinator, specialists, educators and assistant professors) had to be in line with the practice of appreciating the value of debate, group work and constructive criticism of the texts produced. Thus, the focus was to

encourage intellectual autonomy among students through planned activities, promoting the use of a wide range of thinking skills.

Considering the difficulty of staging in-person classes due to the geographical distance between the Regional Education Superintendencies of the State of Minas Gerais, the course was structured using a virtual learning environment (VLE) called *Moodle* that was adopted by UNIFEI and on which the financial education capacity building course was fully customized, as shown in the table below.



Financial Education Capacity Building Course for Basic Education Teachers, customized on UNIFEI's VLE *Moodle* (continues...).

Source: UNIFEI Open and Online Education Center.

Course modules were offered in accordance with the didactic calendar established between UNIFEI and SEE/MG, considering holidays, breaks and vacation periods. As such, all the theoretical and practical activities from the modules were made available and developed in UNIFEI's virtual learning environment *Moodle*, which was also used as a means of official communication between educators, assistant professors and course attendees.

According to the established calendar, each module features a series of theoretical and practical activities, with a weekly program. Theoretical activities were aimed at presenting the minimum and necessary content from each module and, as such, included the support of didactic resources like online material (available to print), hypertext, links to pages on the Internet, audiovisual material, resources for video and web conferences, among others. The didactic material remained available in the virtual learning environment throughout the course, with the aim of providing support for future consultations.

As the theory was introduced by educators, practical activities were staged with course attendees to leverage experiences involving the content during study. These activities, which could be conducted simultaneously or not, were duly planned to be executed through tools that emphasized interactive methods and procedures in groups, like forums, chats, news, videos and surveys.

The development and monitoring of virtual activities was overseen by the educators (assistant professors and teachers/researchers). The assistant professors cater to the course attendees, with the initial ratio between attendee/assistant professor set at 50 to one, that is 50 course attendees for every assistant professor.

All doubts regarding activities (theoretical or practical) were resolved individually within a maximum 24 hours from placing the request via the virtual learning environment. With regards to deadlines for implementing activities, the course coordinators applied the right to extend deadlines in the event of interrupted access due to technical problems with the UNIFEI server, or due to other problems not directly related to the course.

Lastly, the Closing Seminar was meant to be a gathering of course attendees and educators (assistant professor and teachers/researchers) responsible for the subjects, with the specific objective of exchanging experiences, at which time the final assessment activity would take place.

In general, progress in the course was flexible in terms of time and space for implementing activities (theoretical and practical), while considering the deadlines established by the general calendar and each module.

As important as presenting the framework to be adopted in the course, is presenting the results obtained, which are described in the item below.

RESULTS OBTAINED

The course was effectively initiated following its joint development and approval by the Minas Gerais State Education Department (SEE/MG), the Association of Financial Education in Brazil (AEF-Brasil), the team from the Federal University of Itajubá (UNIFEI), by means of the Financial Education Research and Development center (DENARIUS). This item offers a brief recap of the results obtained in each of the seven course modules, reporting both positive and negative points and the advances made in terms of the education process.

Before presenting the results, it is worth noting that SEE/MG made a commitment to AEF-Brasil and the UNIFEI/DENARIUS team that it would oversee the process for mobilizing and recruiting course attendees, by means of the School for the Professional Training and Development of Educators. The Training School (as it is commonly known) is an entity linked to SEE/MG with the “primary objective of coordinating the training process at a macro level, offering logistic, operational, physical and/or virtual support for courses, seminars and other training strategies for education professionals, in their professional, cultural and ethical dimension”⁵³.

In support of the process to promote the course among candidates, AEF-Brasil and the UNIFEI/DENARIUS team hosted an event to launch the course with the help of the SEE/MG Training School. The focus of the event was to present the course objectives and promote the importance of the theme, as the date chosen was May 15, 2018, during the 5th National Financial Education Week. The event was hosted at the Training School headquarters, in Belo Horizonte, Minas Gerais, and was streamed live via Facebook⁵⁴ to the audience.

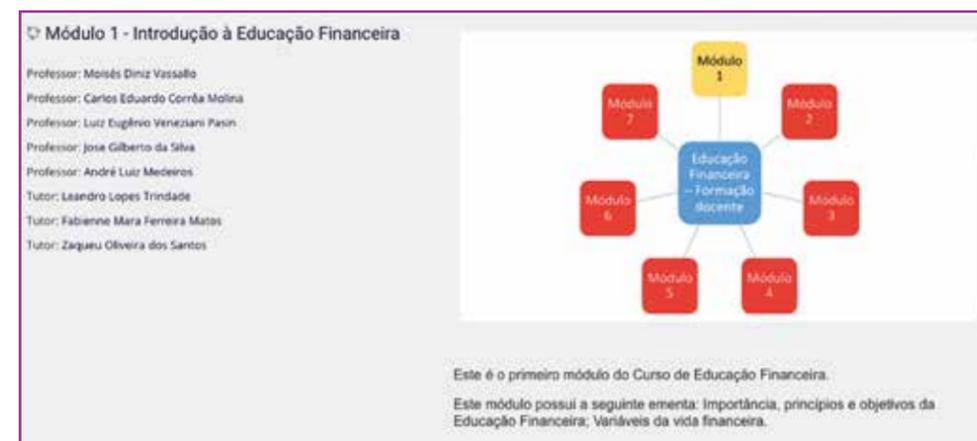
53. The Minas Gerais School for the Professional Training and Development of Educators was created under Law 180, of January 20, 2011. For more information, visit: <https://escoladeformacao.educacao.mg.gov.br/>.

54. The videos featuring the launch of the Financial Education Capacity Building Course can be access through the following links: <https://www.facebook.com/watch/?v=894587047390622&extid=SPi476qWOPYETLA5;> [https://www.facebook.com/watch/?v=894626370720023&extid=0xWrJq4Gx6QjxQxE.](https://www.facebook.com/watch/?v=894626370720023&extid=0xWrJq4Gx6QjxQxE)

In line with the agreement, SEE/MG provided the list of selected course attendees, who were automatically enrolled into the capacity building course. The results obtained in each of the modules will be presented in the following topics.

MODULE 1 – INTRODUCTION TO FINANCIAL EDUCATION

The objective of this module was to present the importance, principles and objectives of financial education, introducing the variables of people’s financial lives into the initial discussion (table below). Furthermore, the first module provided course attendees with their first contact with UNIFEI, by means of institutional images and videos.



Module 1: Introduction to Financial Education
Source: UNIFEI Open and Online Education Center.

To attain the objectives of the module, the content was organized into three topics, each lasting a week and covering a series of pre-established theoretical and practical activities.

Among the module activities, the most notable asked course attendees to draft a small text in response to the question: “What is your dream and how much is it worth?” This activity employed the Padlet canvas tool, as shown in the table below.



Use of the Padlet tool to answer the question: What is your dream?

Source: Financial Education Capacity Building Course.

This activity stood out not only for the use of a unique tool, but due to the content of course attendee responses. Many declared that they had dreams, though they had never stopped to think about what they were really worth. Others argued that dreams were subjective and difficult to place a price on. Thus, considering the responses by course attendees, the UNIFEI/DENARIUS team reached the conclusion that the activity had reached its objective. The hope was to generate a sincere reflection about their dreams, so as to prepare them to draft a plan to attain them.

In the first module, a survey was conducted with the course attendees, with the objective of learning how they used their money. This survey was conducted through a self-applied form that course attendees responded, with a series of questions on credit, savings, insurance, social security and investments. In the evaluation of the replies, course attendee expertise was also assessed with respect to interest rates, inflation and risk.

In the case of interest rates, more than 40% of respondents do not adequately grasp the concept. That is a concerning situation, given the vital nature of the concept in daily financial operations. With respect to inflation, course attendees presented greater awareness: 73% of the respondents applied the concept correctly in their replies. In terms of risk, the result was again concerning. Of the total respondents, only 38% fully grasped the concept, while 19% stated they were unfamiliar with the concept.

With regards to credit, the responses from course attendees also caused surprise. A little more than 60% of the respondents affirmed they controlled their money with a certain regularity, while 57.9% stated they often make installment purchases, with almost 20% spending more than 50% of their budget on installment payments, charged to credit cards (69.6%). This can be a dangerous combination, considering that more than 40% of the respondents did not adequately grasp the concept of interest.

This situation in relation to credit also directly jeopardizes the savings capacities of course attendees. According to responses, almost 60% of them are unable to save part of their income for unforeseen circumstances. An even more alarming result is the relation to social security, as 83% of respondents stated that they only contribute to the official social security fund to which they are associated.

The lack of resources due to excessive use of credit also jeopardizes other items, like insurance and investments. In addition to the majority of respondents (77.2%) being unaware of the concept of insurance, only around 37% of those interviewed said they had some form of insurance. In the case of investments, 66% of interviewees stated they possessed no investments. And the few that do invest (10.5%) stated that capital investment bond were the most common form. These results highlight the financial fragility of the course attendees (teachers from public schools) and the urgent need to leverage their financial expertise so that they can pass this knowledge on to their students.

Another important result obtained at the end of the module was the course attendee assessment of the actual course. This assessment gauged the following items: self-assessment among course attendees, module content, assistant professor, educator and the module as a whole. In general, 45% of the course attendees that responded assessment stated that this was not their first distance education course. This result may have influenced other self-assessment questions, as more than 60% of the course attendees managed to organize themselves efficiently to undertake course activities.

With regards to the module content, more than 95% of the course attendees stated that the course was well structured, coherent with the pedagogical proposal and offered activities suited to the content. Assistant professors and educators were also well assessed by more than 80% of the respondents. Thus, in general, the module was assessed with a score of 5 and 6 by more than 85% of the responding course attendees, on a scale that ranged from 1 to 6, with 1 the lowest score and 6 the highest.

Another point worth highlighting is that 21 (14%) of the 150 course attendees indicated by SEE/MG never activated their enrollments and never accessed the course (none of the seven modules). Additionally, 13 course attendees (8.66%) failed to participate (they accessed the course, but did not complete any of the activities), 26 (17.33%) failed (did not attain a minimum grade of 60% in the activities) and 90 (60%) passed.

Considering the results presented, the UNIFEI/DENARIUS team considered that module 1 of the course fully met its objectives. However, at the time the course was underway, public employees of the state of Minas Gerais were struck by calamity. Almost all the teachers from the state education network (which included the course attendees) had not been receiving their salaries. The situation impacted the access to the course due to strike actions. As such, the course calendar had to be adjusted.

MODULE 2 – FINANCIAL EDUCATION IN PUBLIC SCHOOLS

Module 2 was aimed at building the capacities of teachers through a distance education program created by ENEF and made available on the *Vida e Dinheiro* website. To attain the objectives of the module, course attendees had to enroll through a *link* and complete the activities proposed in the course. It is worth noting that the course produced by ENEF was in the self-learning format, with no in-person contact between assistant professors and course attendees.

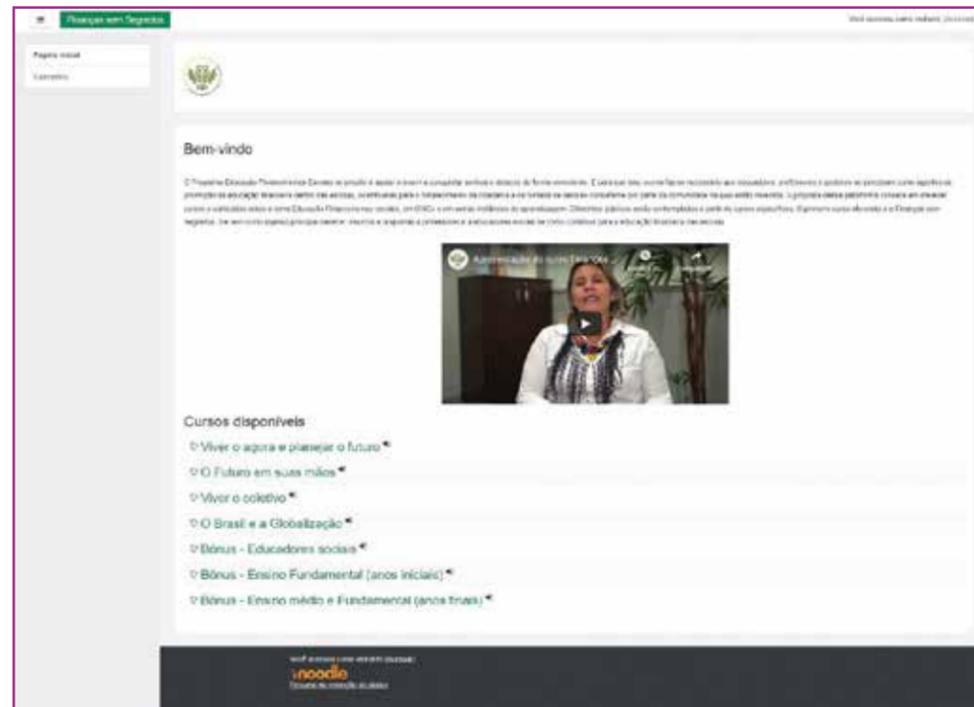


To promote interaction between the ENEF course and the UNIFEI/DENARIUS capacity building course, activities were proposed throughout a period of four weeks. Furthermore, whenever possible, the UNIFEI/DENARIUS assistant professors provided advisory to course attendees.

Assessing the results attained in the module, one may affirm that swapping between the UNIFEI/DENARIUS virtual learning environment and the *Finanças Sem Segredos* (Finance without Secrets) course did not generate positive results. Of the total course attendees, 22 (14.66%) failed to access this and the other course modules, totaling 43 (28.66%) course attendees in the second module. Besides those who no longer accessed the course, 25 attendees (16.66%) failed to attend, 33 (22%) failed the course and 43 (28.66%) passed.

In an attempt to resolve problems with course dropouts and truancy for the module, UNIFEI/DENARIUS assistant professors collected relevant information.

According to the course attendees, many were unable to advance in the Finance without Secrets course for the following reasons: the ENF course was exceedingly long and included activities with complex guidelines, complicating progression. Another point highlighted was the difficulty course attendees faced in obtaining certificates. This is due to the fact that, according to them, some activities that had already been completed were shown as pending, creating the need to redo the activity to earn the certificate.



Module 2: Financial education in schools (Finance without Secrets).

Source: UNIFEI Open and Online Education Center.

MODULE 3 – BEHAVIORAL FACTORS AND FINANCIAL EDUCATION

The goal of this module was to study how personal, social, cultural, psychological and market factors influence consumer behavior in relation to available products, brands and offers. Thus, this module had the fundamental function of showing course attendees which behaviors to avoid, thereby improving their relationship with credit in some manner, for example.

This 3rd module was structured to be conducted over three weeks, covering 12 activities (four of which were assessed).

As with the first module, course attendees also assessed the module in terms of the following items: self-assessment of the course attendees, module content, the assistant professor, the educator and the module as a whole. Despite more than 90% dedicating themselves in a satisfactory manner to the course, fewer than 57% of the respondents stated they were able to complete the activities within the given deadlines.

With regards to the module content, more than 95% of the course attendees stated that the course was well structured, coherent with the pedagogical proposal and offered activities suited to the content. Assistant professors and educators were also well assessed by more than 85% of the respondents. Thus, in general, the module was assessed with a score of 5 and 6 by more than 90% of the responding course attendees (with 1 being the lowest score and 6 the highest).

Despite the positive assessment among course attendees, many people dropped out of the course. In this module, of the total course attendees, 22 (18.66%) failed to access this and the other course modules, totaling 71 (47.33%) course attendees. Besides those who no longer accessed the course, 7 attendees (4.66%) failed to attend, 10 (6.66%) failed the course and 62 (41.33%) passed. This result, when compared to module 2, demonstrates the importance of assistant professors' work in distance education courses. Assistant professors were able to increase the pass rate and reduce the fail rate among course attendees.

During the module 3, the course was also severely impacted by several external factors. In a survey applied by the assistant professors, many stated they were facing financial difficulties worsened by the fact they had not received their salaries on time. On the occasion, public employees in the state of Minas Gerais (with 100% of the course attendees from this portion of the public) did not receive their government salaries and, when they did, the amount was paid in up to three installments. According to some course attendees, this situation led to a deep impact on being able to continue the course, as many were in default due to not having received their payment. Some were only able to use school computers to access the course.

Despite these obstacles, and considering the assessment among course attendees, the UNIFEI/DENARIUS team considered the objective of module 3 met.



MODULE 4 – FINANCIAL LITERACY



The goal of the module 4 was to present concepts considered fundamental by the state and to foster a discussion on financial literacy.

Specifically, this module approached competencies and abilities to recognize, rationalize, represent and communicate the fundamental elements of financial education, as well as debate these issues; the capacity to employ these concepts, procedures and facts; and actual financial education tools in a variety of contexts. To encompass the entirety of these subjects, the module was structured to run over three weeks, with eight activities available (five evaluative).

One point of extreme importance in the module and which must be highlighted was the way the activities were conducted. At the end of the module, course attendees were able to draft and apply their own financial literacy and education concepts. These concepts were built on the presentation of applicability in daily situations.

With regards to the module content, more than 90% of the course attendees stated that the course was well structured, coherent with the pedagogical proposal and offered suitable activities. Assistant professors and educators were also well assessed by more than 90% of the respondents. Thus, in general, the module was assessed with a score of 5 and 6 by more than 92% of the responding course attendees (with 1 being the lowest score and 6 the highest).

Despite positive evaluations this module suffered similar obstacles to those encountered previously. Another 9 course attendees (6%) dropped out of the course, totaling 80 course attendees (53.33%). Besides those who no longer accessed the course, 4 attendees (2.66%) failed to attend, 12 (8%) failed the course and 53 (35.33%) passed.

During the course of module 4, the situation faced by course attendees in relation to financial difficulties caused by the lack of payment remained much the same. This situation had a major impact on the performance of capacity building course attendees. Despite this fact, the UNIFEI/DENARIUS concluded that the module attained the proposed objective, considering the assessment of course attendees and the results obtained in the activities.

MODULE 5 – PERSONAL AND SOCIAL LIFE



Module 5 marked the start of using the didactic material produced by the Program for Financial Education in Schools and provided on the *Vida e Dinheiro* website.



As such, the main objective of this module was to introduce course attendees to short-term situations that indicated the need for a budget, planning and expense control. Specifically, the following elements were approached: mechanisms that assist in the administration and acquisition of goods, products and services; budget: notions and analyses; and concepts related to financial mathematics (such as interest, credit and savings). The content of the module was structured to be conducted over three weeks, covering 17 activities (9 of which were assessed).

In general, the proposed activities had a practical character, using tools like the discussion forum, permitting interaction among course attendees when discussing the situations presented in proposed videos, like those from the web series *R\$100Neuras*, available on the ENEF portal. Another activity that deserves note was the approach to “planned dreams”, similar to the first activity in module 1, when course attendees had to write about their dream and place a price on it. This was vital to encouraging course attendees to undertake financial planning in order to make the dream possible.



This assessment gauged the following items: self-assessment among course attendees, module content, assistant professor, educator and the module as a whole. Upon evaluations, 85% of the respondents stated they dedicated themselves adequately to the course, despite 35% not managing to complete the activities within the established deadline. Around 90% of the course attendees stated that the course was well structured, coherent with the pedagogical proposal and offered activities suited to the content studied. Assistant professors and educators were also well assessed by more than 90% of the respondents. Thus, in general, the module was assessed with a score of 5 and 6 by almost 80% of the responding course attendees (with 1 being the lowest score and 6 the highest), and more than 90% recommended the module to other people.

Once again, the course saw a number of attendees drop out. In this module, 2 additional course attendees (1.33%) stopped accessing this and the other course modules, totaling 82 course attendees (54.66%). Besides those who no longer accessed the course, 8 attendees (5.33%) failed to attend, 15 (10%) failed the course and 45 (30%) passed.

As reported in previous modules, the financial situation of the course attendees due to the lack of payment from the government, merely worsened during this period. Several actions by the UNIFEI/DENARIUS team were conducted in an attempt to maintain course attendees, such as regular and direct contact, increasing deadlines for activities and adjusting the calendar.

Despite this complex situation, beyond the control of the course, the UNIFEI/DENARIUS concluded that the module attained the proposed objective, considering the assessment of course attendees and the results obtained in the module activities.

MODULE 6 – ENTREPRENEURISM, MAJOR PROJECTS AND WORK

The goal of the penultimate module of the capacity building course was to discuss situation involving medium and long-term planning, considering greater volumes than those from module 5. Specifically, **module 6** approached concepts like: outlooks on work, entrepreneurship and planning major projects; sustainability and achieving dreams; and the concepts of insurance and social security (again linking back to the first module).

To tackle all the planned elements, the content of the module was structured to be conducted over five weeks, covering 18 activities (10 of which were assessed).

As in the previous module, the activities were chiefly characterized as practical, using tools like discussion forums, permitting interaction among course attendees. Another often used tool was text production, to foster the comprehension and assimilation of class content. In this module, further of note is the work undertaken by educators to integrate financial education with entrepreneurial education in the youth training process.

As with the earlier module, course attendees also assessed the module in terms of the following items: self-assessment of the course attendees, module content, the assistant professor, the educator and the module as a whole.

According to the results, 90% of the course attendees stated they dedicated themselves adequately to the course, despite almost 50% failing to deliver the activities within the established deadlines. Over 95% of the course attendees stated that the course was well structured, coherent with the pedagogical

proposal and offered activities suited to the content studied. Assistant professors and educators were also well assessed by more than 90% of the respondents. Thus, in general, the module was assessed with a score of 5 and 6 by more than 95% of the responding course attendees (with 1 being the lowest score and 6 the highest).

As was the case with earlier modules, the financial situation among course attendees (due to the lack of salary payment) and the end of the state school academic year negatively impacted course attendee participation. In this module, 5 other course attendees (3.33%) never accessed the module, bring the total up to 87 attendees (58%) failing to access the course. Furthermore, 7 attendees (4.66%) failed to attend, 17 (11.33%) failed the course and 39 (26%) passed.

MODULE 7 – ECONOMICS AND PUBLIC GOODS

The **last course** was aimed at presenting and promoting understanding about public goods, the nation's economy and world economy, relating these concepts to the country's economic actions.

The specific subjects approached in this module were challenging to the UNIFEI/DENARIUS team, as it involved technical subjects (economics) of the utmost importance to people's daily lives, which had to be covered in just four weeks. One of the main topics was the consumer theory, aimed at presenting fundamental concepts and reflecting on and debating how they influence people's lives. This topic created a bridge with the subjects studied in module 2.

Despite the complexity of the subjects, the educators once again turned to videos and interactive activities, which facilitated understanding and assimilation of content among course attendees. This results was shown in the course attendee assessment at the end of the module. According to the responses, over 90% stated that the module was well structured, coherent with the pedagogical proposal and offered activities suited to the content studied. Assistant professors and educators were also well assessed by more than 80% of the respondents.

Upon evaluations, over 85% of course attendees stated they were adequately dedicated to the course. Thus, in general, the module was assessed with a score of 5 and 6 by more than 90% of the responding course attendees (with 1 being the lowest score and 6 the highest).



The numbers from the closing of module 7 don't stray far from those of the previous module. In relation to access to the module, a further 8 course attendees (5.33%) stopped accessing the course, totaling 95 course attendees (63.33%). Furthermore, 17 attendees (11.33%) failed to attend, and the same 39 attendees (26%) as module 6 passed. Note that no one failed this module.

The financial situation of course attendees (resulting from delayed government salaries), the end of the state school academic year and other outside factors (such as the trucker strike and presidential elections) restricted the participation of course attendees in the modules. That means that, at the end of module 7, we only had 39 course attendees able to actively participate in the last course activity, the Closing Seminar.

In an attempt to effectively increase the course attendee return rate, a joint agreement was reached between SEE/MG, AEF-Brasil and UNIFEI/DENARIUS to establish a special calendar for course attendees to extend their deadlines for all those who had initiated at least one module. This action generated a positive result, with many course attendees who had dropped out returning to complete the activities.

CLOSING SEMINAR

As laid out in the course pedagogical project, the Closing Seminar was a mandatory component for its conclusion, with the aim of ending the activities with presentations, reflections and assessments of the theoretical and practical study activities developed in the online learning environment. As such, the seminar was the final pedagogical activity of the course.

Considering the difficulties faced throughout the course, especially in relation to the deadlines established, the Closing Seminar was hosted on May 21, 2019 at the SEBRAE Minas, in Belo Horizonte. The seminar was organized jointly by the partners involved (AEF-Brasil, SEE/MG and UNIFEI/DENARIUS), in addition to the support of SEBRAE Minas. The promotional folder (shown below) was the first item on the program at the 6th National Financial Education Week. Thus, the course was launched and ended within the official programs of the national financial education weeks.

EDUCAÇÃO FINANCEIRA E EMPREENDEDORA NAS ESCOLAS DE ENSINO FUNDAMENTAL	
10:00 – 12:00	AULA DE ENCERRAMENTO DO CURSO DE CAPACITAÇÃO EM EXTENSÃO DE EDUCAÇÃO FINANCEIRA <i>Para professores da educação básica do Estado de Minas Gerais e apresentação dos projetos finais dos cursistas.</i>
12:00 – 13:30	ALMOÇO
13:30 – 14:00	CREDENCIAMENTO E CAFÉ DE BOAS-VINDAS
14:00 – 14:30	MESA DE ABERTURA Sebrae-MG Diretoria Executiva Secretaria de Estado de Educação de Minas Gerais Lúcia Sant'anna, Secretária de Estado Banco Central do Brasil Luís Mansur, Chefe do Departamento de Promoção da Cidadania Financeira
14:30 – 15:00	PROJETO EDUCAÇÃO FINANCEIRA NAS ESCOLAS Contexto e histórico da ENEF Luís Mansur (Banco Central do Brasil) Apresentação do Projeto Paulo Dias (Banco Central do Brasil)
15:00 – 16:30	PAINEL: EDUCAÇÃO FINANCEIRA E EMPREENDEDORA – PERSPECTIVAS E BOAS PRÁTICAS Cultura Empreendedora no Ensino Fundamental – Transversalidade e conexões com Educação Financeira Augusto Togni Abreu / Fabiana Pinho (Sebrae-PA/MG) Educação Financeira e Empreendedora – Boas práticas em prol do território Experiência e aprendizados de São Roque de Minas/MG Educação Ambiental – Como esta disciplina se conecta e potencializa o aprendizado dos alunos Experiência e aprendizados de Lajinha/MG Moderador: Alessandro Flávio Barbosa Chaves (Sebrae-MG)
16:30 – 17:00	MOMENTO PARA PERGUNTAS E ENCERRAMENTO

Promotional folder for the Closing Seminar, part of the program for the 6th National Financial Education Week.

Source: SEBRAE Minas, AEF-Brasil.

Only those course attendees that had completed and passed the activities from all the modalities were eligible for the seminar. Following the recovery seminar, 49 course attendees were eligible to participate in the Closing Seminar. Being a final evaluation stage, course attendees were asked to provide a complete financial education activity plan. This plan had to contain: data identifying the course attendee, the Regional Education Superintendence to which the teacher was associated, the state school where the teacher taught and the discipline in which the plan would be deployed. Ten class hours were suggested for the plan activities. To facilitate the development of the plan, the UNIFEI/DENARIUS team provided a model to be used by course attendees, as demonstrated in the table below.

Model of the Financial Education Activity Plan to be used by course attendees.
Source: Financial Education Capacity Building Course.

UNIFEI Universidade Federal de Itajubá			
			
PLANO DE ATIVIDADE DE EDUCAÇÃO FINANCEIRA			
Superintendência (SRE):		Escola:	
Disciplina:		Professor(a):	
Carga horária: (h):		Período da atividade:	
Tema e Objetivo Geral (1):			
Aulas ⁽¹⁾	Conteúdo ⁽²⁾	Objetivos Específicos ⁽³⁾	Estratégias Pedagógicas (Atividades) ⁽⁴⁾
AULA 1			
AULA 2			
AULA PRÁTICA			
AULA PRÁTICA			
AULA 3 AVALIAÇÃO ⁽⁵⁾			Avaliação da Atividade de Educação Financeira (com os alunos)

Despite all the effort by the teams from AEF-Brasil, UNIFEI/DENARIUS and SEE/MG, not all the course attendees were able to participate in the seminar and the final event was attended by 35. Each presented a project to put into practice in the classroom, involving concepts on financial education studied throughout the course. They were divided into work groups and each one had 10 minutes to present and discuss the proposed projects.



Closing Seminar: presentation and discussion of projects.



Closing Seminar: presentation and discussion of projects.



In the photo, Dr André Medeiros receives the title of Ambassador of Financial Education in Minas Gerais from Professor Claudia Forte.



Closing Seminar: presentation and discussion of projects.

Considering the seminar was a mandatory activity to complete the course and the fact that, unfortunately, not all course attendees were able to be present, an alternative was created to allow video project presentations to be submitted. Only those course attendees who had participated in the seminar or submitted a video presentation of their projects (similar to what took place in the seminar) actually passed the course.

Projects developed by course attendees approached different themes discussed throughout the course, as listed below:

- Entrepreneurism and major employment positions.
- Financial education and educational development.
- Financial guidance and conscientious consumption.
- Entrepreneurism in sport.
- Economics and public goods.
- Learning to plan daily spendings.
- Conscientious consumption and consumerism.
- Behavioral factors and financial education.
- Daily family life: per capita income = IDH.
- Life now and plan for the future.
- Daily diet and health.
- Financial education and sustainability.
- Consumerism x family budget.
- Basic financial education.
- Economic in our lives: how to buy and the necessity of buying.

Besides the diversity of proposed themes, the Activity Plans were aimed at several disciplines part of the High School curricular matrix.

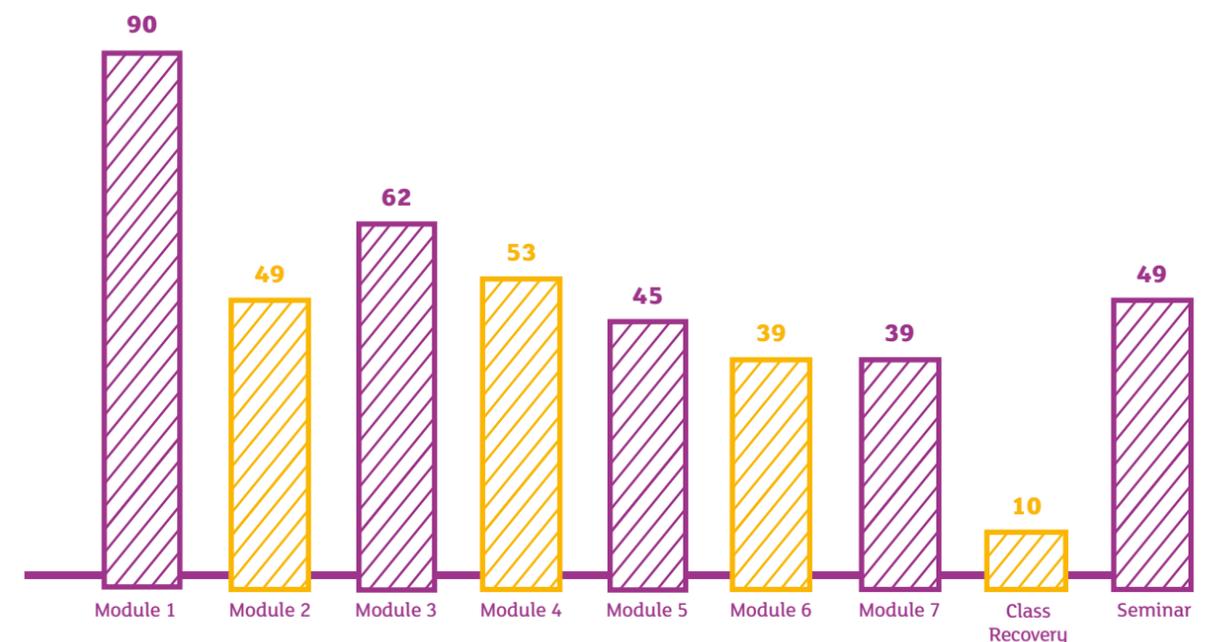
Considering the teachers that participated in the seminar, the following disciplines were included in the activity plans: 1) Biology: 3 plans; 2) History: 3 plans; 3) Portuguese language: 5 plans; 4) Chemistry: 3 plans; 5) Physics: 3 plans; 6) Economic System: 3 plans; 7) Geography: 5 plans; 8) Mathematics: 19 plans; 9) Physical Education: 1 plan; 10) Youth and Adult Education: 1 plan.

Assessing the event as a whole, one may affirm that the proposed objective was reached. Course attendees, educators, assistant professors and members of the work team (AEF-Brasil and SEE/MG) were able to discuss and debate financial education actions in schools, establishing strategies to improve the reality of each community.

FINAL CONSIDERATIONS

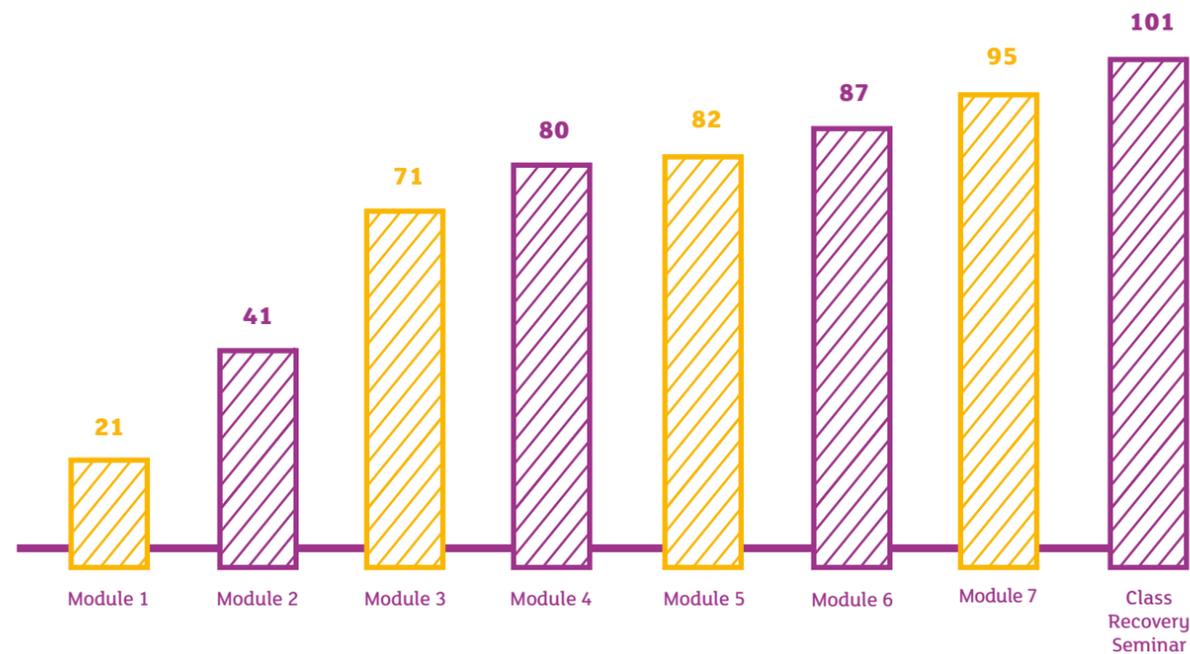
Assessing the results obtained through the course, one may affirm that the objectives were attained and it was an overall success. In all, 49 course attendees of a total 150 enrollees concluded all the proposed activities, which represents a retention rate of approximately 33%. This number fell below the expectations of the entire team, as, when accompanying the number of course attendees conducting activities, the number was around 61 course attendees (following the end of all the modules), as can be seen in the graph below.

COURSE ATTENDEES PASSED PER MODULE



Another figure that caught the attention of the UNIFEI/DENARIUS team was the number of dropouts during the course. The graph below shows the results compiled at the end of the modules.

COURSE ATTENDEES THAT DID NOT COMPLETE ANY MODULE ACTIVITY



The total number of course attendees that dropped out of the modules throughout the course was much higher than expected by the UNIFEI/DENARIUS team. Nevertheless, the dropout rate was similar to the national average for distance education courses. Despite the dropout rate, the course attendees that completed the course took full advantage, with average pass rates featuring score higher than 90 points out of 100.

As described in each module, distance education programs are often severely impacted by outside influences. Specifically, in this case, the financial problems faced by course attendees, caused by a delay in receiving government wages, the truckers' strike and the 2018 elections all had a negative impact on course attendance.

It is precisely due to these difficulties that the Minas Gerais State Education department (SEE/MG) should continue to invest in public servant capacity building, especially so for teachers. Teachers are the link between the present and the future of our country. And financial education is the bridge to a financially structured future.

Thus, the course was considered a success, as all the proposed objectives were met. It is worth noting that financial education is similar to environmental or entrepreneurial education, as they should be continuous so that results may be observed in the long-term.

REFERENCES

- SAVOIA, J. R.; SAITO, A. T.; SANTANA, F. A. *Paradigmas da Educação financeira no Brasil*. RAP. v.41, n.6, p.1121-1141.
- SANTOS, L. R. *Educação financeira na Agenda da Responsabilidade Social Empresarial*. Boletim Responsabilidade Social e Ambiental do Sistema Financeiro. Banco Central do Brasil, a.4, n. 39. fev/2009.
- SEVERINO, A. J.; PIMENTA, S. G. *Apresentação*. In: PIMENTA, S. G.;
- ANASTASIOU, L. das G. C. *Docência no ensino superior*. São Paulo: Cortez, 2002. v. 1.

Chapter 9

Financial Education and Economic Psychology: a brief discussion and some recommendations

Vera Rita de Mello Ferreira⁵⁵

Claudia M. J. Forte⁵⁶

This chapter examines an intersection between the areas of financial education and economic psychology. The objective is to discuss the importance of dialogue between them, based on material produced by organizations and countries considered benchmarks in financial education, such as the OECD – Organization for Economic Co-operation and Development, the United Kingdom, Australia and others, along with data collected over a 27-year trajectory in the area of economic psychology and, over the past 15 years, in efforts and analyses dedicated to financial education.

As it becomes increasingly relevant, this combination receives growing attention from policy makers in the field, developers and executors of financial education programs, as well as society in general. As initiatives of this nature can favorably impact the decisions of citizens and the country as a whole when successful, recent years have seen an increase in literature on financial education and, though to a lesser extent, publications focused on the axis that includes financial education and employment of psychological insights (OECD, 2019⁵⁷; IOSCO OECD, 2018⁵⁸;

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56. Doctor of Latin American Integration, professor, research fellow and consultant. Executive Manager of the Association of Financial Education in Brazil

57. Available at: <http://www.oecd.org/financial/education/smarter-financial-education-behavioural-insights.pdf>. Accessed on: 10 Jan 2021.

58. Available at: <http://www.oecd.org/finance/The-Application-of-Behavioural-Insights-to-Financial-Literacy-and-Investor-Education-Programmes-and-Initiatives.pdf>. Accessed on: 10 Jan 2021.

OECD, 2017⁵⁹; Australian Government⁶⁰, 2015; World Bank⁶¹, 2015; OECD and Russia⁶² Trust Fund, 2013; FERREIRA, 2012; FERREIRA et al, 2012; INSTITUTE FOR GOVERNMENT, 2010; VAN RAAIJ ET AL, 2008, to name a few).

According to the OECD (and recognized by the G20), *financial literacy* is a combination of awareness, knowledge, skill, attitude and behavior necessary to make sound financial decisions and ultimately achieve individual financial well-being (ATKINSON and MESSY, 2012), while *financial education* is one of the processes used by policy makers to try to improve levels of financial literacy (OECD, 2019). A former definition of financial education stated it to be “the process by which financial consumers, investors and micro/small entrepreneurs improve their understanding of financial products, concepts and risks and, through information, instruction and/or objective general advice, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being” (...).(OECD, 2005).

In essence, however, financial education, in its subtle nuances, encompasses money management in contexts such as savings, using credit, investing, planning, budgeting, preparing for old age and retirement, etc. According to the OECD (2013), the objectives of financial education programs are therefore: to improve the education of consumers, their knowledge of financial services and related transparency; helping consumers make better-informed decisions about their finances and increasing their ability to do so; make financial topics understandable to the public; develop the ability of ordinary people to make decisions while aware of the risk involved.



The programs also appear to respond to a gap identified by governments, managers, and other authorities in the financial and economic system: in general, populations or “consumers” – an expression commonly found in the literature on the subject –, feel more confident in their own ability to make economic and financial decisions than their actual knowledge on the subject would lead one to believe. Therefore, one of the primary objectives of financial education programs would be to increase the target audiences’ perception of their needs, so that they can then look for ways to increase their information on the subject. (Australian Government, 2008).

Among the reasons justifying the concern of governments, financial institutions and other organizations as to the theme is the fact that financial markets have become increasingly complex in recent decades, along with a rise in greater autonomy and responsibility “imposed” on individuals in terms of their economic and financial decisions.

With the advent of the 2008 crisis, financial education programs began gaining visibility around the world, with two specific points becoming evident:

- 1.** Offering only technical information might not be enough to prevent similar crises, with enormous potential to destabilize the finance and economies of much of the world, either directly, as was the case with developed economies, or indirectly, which may not always be immediate, though the effects may be equally detrimental in emerging economies and poor nations, reflecting the impact on wealthier nations. Simply providing information may help change beliefs, values, mental attitudes and intentions, however, it does little in the way of ensuring such guidelines are followed at the time of action;
- 2.** Programs and strategies are required that adequately responded to the need to prepare individuals and groups to navigate increasingly complex economies, reducing their exposure to systemic and personal risks, in terms of finances (as well as in terms of other scarce resources, besides money, in many instances).

Following the euphoria prior to the crisis, the panic that struck financial markets as a result of these profound changes, which caught even experienced brokers by surprise, undeniably revealed psychological factors at play and clearly showed how the feelings, thoughts and behaviors of groups and individuals can have a significant and lasting impact on economic events (FERREIRA, 2011, 2008; TUCKETT, 2011).

59. Available at: <https://dx.doi.org/10.1787/9789264270480-en>

60. Available at: <http://www.apsc.gov.au/publications-and-media/archive/publications-archive/changing-behaviour>. Accessed on: 10 Jan. 2021.

61. Available at: <http://documents1.worldbank.org/curated/en/645741468339541646/pdf/928630WDR0978100Box385358B00PUBLIC0.pdf>. Accessed on: 10 Jan 2021.

62. Available at: http://www.oecd.org/daf/fin/financial-education/TrustFund2013_OECDImproving_



However, an analysis carried out by Ferreira and Lima in 2009 did not identify initiatives that integrated tools of a psychological nature in these programs until that moment, resulting in a major challenge: how to help people execute the guidelines received, and maintain them over time, that is, change habits and behaviors. In Brazil, as with other countries, this challenge has been identified, though it is one amongst many dependent on financial education initiatives, as shown below.

1. THE BRAZILIAN SCENARIO

The concern with personal finance (FRANKENBERG, 1999) and financial education began to emerge in Brazil with greater clarity after the Real Plan, which stabilized the currency following decades of high inflation. More specifically, initiatives were staged, including by the federal government, in the last half of the 2000s, when work began on the National Strategy for Financial Education. There has been a rise in the number of programs in Brazil, though it is far from enough. The subject has never been quite as popular, still gaining coverage in the specialized media (in areas like general finance, personal finances, economics, consumer protection and entrepreneurship), nor have as many initiatives been launched as in recent years – some of them are described in this book –, nevertheless, significant problems with the way people managed their finance in practice are quickly identifiable.



Despite the lack of sufficient financial education indexes in stable and developed economies, in Brazil, which suffers from it too, other peculiarities also deserve consideration when drafting and formulating public policies or other related initiatives.

Historically, obstacles to the development of financial empowerment refer to the inflationary past that, over decades, has discouraged any attempt at financial organization on the part of the population, especially regarding medium and long-term planning and savings. The period from 1985-1994 was the peak of the inflationary phenomenon, accompanied by spiraling indexation and monetary correction, with different currencies in force, one after another, often for incredibly short periods (FERREIRA, 2000; 2008). This national experience eroded the notion of personal financial care, as the population was solely concerned with protecting their money from the daily threat of inflation, which, by blunting purchasing power at alarming levels (2,477% per year, in 1993, for example) induced immediate consumption – the transformation of income into goods reduced the loss

that would be incurred if the transaction occurred later, when the money would be worth even less.

Considering that 27 years have passed since the currency stabilized in 1994, only a single generation of young adults escaped this influence, endured by their parents and relatives. This means that financial planning and savings are still relatively new concepts in most Brazilian homes. A lack of familiarity with investments – not only the more sophisticated, but also those that involve investing regularly as part of the repertoire of personal financial organization – is also typical of most Brazilians, who, in the rare occasion of investing their money, lean towards traditional savings account, which currently offer a negative return, below the inflation rate.

At the same time, the country is also characterized by one of the highest interest rates in the world, charged by credit cards companies and for overdraft facilities, which directly impact the use of credit by the population, resulting in increasing levels of personal and family indebtedness, accompanied by default in many cases.



The situation was amplified by a culture of excessive consumption, characteristic of the contemporary world, in line with the *programmed obsolescence strategy*, one of the pillars of modern capitalism. Since a national economic crisis started in 2014-15, consumption has dropped due to lost income and a drop in credit availability. This scenario worsened due to the Covid-19 pandemic, which struck in early 2020. In any case, the potential benefits afforded to citizens through the acquisition of goods are sometimes neutralized in broader terms by sustainability issues (inadequate extraction of raw materials and final disposal), or more directly in the form of indebtedness, when credit is used for purchases.



To top it off, despite a rise in longevity in all segments of the population, the culture of social security is still in its infancy in the country, with most people dividing themselves between a sense of helplessness and the insufficient cover offered by public pensions, currently generating serious doubts as to their ability to remain sustainable over the coming decades. Thus, what could have represented an important demographic window of opportunity, when most of the population is still of a working age, and the elderly are not yet the majority, now runs the risk of falling short by not being properly, urgently and duly used. However, a culture unaccustomed to saving, planning or preparing properly for the future, and with no

knowledge of the consequences of such behavior, is a cause for concern regarding the use of this opportunity, which is not likely to occur again, at least not within the foreseeable future. And, faced with the economic crisis that began in 2014, extended and worsened with the Covid-19 pandemic, the situation seems truly disheartening.

These factors call for solid financial education initiatives, in addition to public policies and consistent efforts towards sustainability by the private sector, to prepare the country to face many of its socioeconomic problems and to be able to develop with the veritable inclusion of all segments of society, and not to the detriment of those most vulnerable (FERREIRA, 2010).



However, the low educational indexes among the population further aggravate the scenario, as shown by the Pisa data: in the mathematics test, the OECD average is 489, while Brazilian students scored 384, placing Brazil between 69th and the 72nd position in a ranking of 78 countries. When difficulties arise in expressing and understanding language, and in basic mathematical calculations, access to any other information and the learning process itself encounter important obstacles, creating the need for financial education programs capable of satisfactorily circumventing said issues, while simultaneously pursuing advances in the field of education in its broadest sense. However, in addition to the considerations listed above, it is necessary to analyze what lies at the core of this discussion: the implications of the psychology of decisions in financial education programs, as outlined in the next section.

2. THE CRITICAL CHALLENGE

Understanding what goes on in the mind during the decision-making process equips financial education programs in two ways:

1. It provides deeper insight into the reasons that often lead people to make erroneous financial choices;
2. It identifies strategies to better reach the selected target audience, so that their behavior can, in fact, shift towards increased capacities in the area.

Authors of economic psychology, behavioral economics, behavioral finance, decision or behavioral science, disciplines in which these issues are studied, propose a general designation to explain the psychic mechanisms that govern the processes of data perception and evaluation, which precede the actual decisions. According to these authors, there are **two major types of cognitive functioning**, operating constantly as the mind processes information:

System 1, like an automatic pilot, is always ready to react instantly. It is thus called 'intuitive', as it involves rapid impulses, which do not require further analysis; and **System 2**, which is slower, but capable of more detailed examinations of situations, that is, of deliberating and thinking in a more complete and careful way (KAHNEMAN, 2002, 2011).



Some authors bring them closer, respectively, to *hot-self* and *cold-self* concepts (THALER and SUNSTEIN, 2008).

System 1 and **System 2** are not associated with brain regions and are simply a didactic resource to facilitate the understanding of their dynamics, selected precisely because *System 1* is attracted to stories with "characters" or active agents, with personalities, habits, and skills, offering meaning more readily and facilitating the understanding of these concepts (KAHNEMAN, 2011).

System 1 is attributed to a fast, automatic, effortless operation, based primarily on uninterrupted associations generated by the mind and making it impossible for the individual to control or turn off the flow. It is thus resistant to learning, to making changes, although it can be trained through repetition to perform certain activities and functions automatically. These so-called instinctive or intuitive reactions occur almost instantly and are difficult to

control without effort. They are generated by *System 1* and include elements like perception, association, emotion and evaluation, which come to mind naturally. It is the most frequent form of mental operation. It is also the most primitive and has been present in the human mind since its beginnings.

Over time, it has been developed to respond to more urgent stimuli, with the primary objective of immediate survival, which was necessary to our ancestors, who owed their lives to the rapid identification of threats and resources. Modern humans are no longer subject to such extreme conditions, but their survival in the medium and long-term, involving increasingly complex demands, must now be included on their radar, due to the significant rise in longevity. However, *System 1* has not fully evolved according to these changes and remains linked to short-term assessments, guided primarily by the search for coherence and cognitive comfort, that is, conditions that constantly relieve the feeling of tension and provide immediate impulsive gratification whenever possible. Since inner comfort is considered the chief requirement, the mind can be satisfied with illusions and appearances, as long as they reduce the discomfort caused by unanswered questions, contradictions, inconsistencies, lack of standards and meaning, and frustrations.

Once relieved of its internal tension, the mind no longer finds it necessary to continue pondering and analyzing data to better understand the situation being deliberated and which, at some point, must be decided. Seeking more information, delving deeper and analyzing that already possessed, reviewing past situations, testing alternatives, seeking answers to questions that remain unknown – in other words, thinking, which requires some degree of deliberation and conscious effort, is something certainly not governed by the automatic pilot represented by *System 1*. To the contrary, it gains speed and agility through loss of rigor and precision, based on the repetition of patterns and actions that, for the most part, have been successful, though they may no longer apply to new situations and problems. Thus, being fast, partial, and inaccurate, it is vulnerable to several misinterpretations of perception, memory and data evaluation, whether pertaining to external scenarios, the internal condition (psychological), or considerations that include the long term.

Nevertheless, despite its limitations, *System 1* is responsible for carrying out actions, which can explain numerous errors in analysis, evaluation and, consequently, in choices and actions. Commonly encountered, these so-called systematic errors are the result of relying on heuristics or mental

shortcuts that generate biases, as identified by researchers in the field (there is ample literature on this subject, with emphasis on TVERSKY and KAHNEMAN, 1974; KAHNEMAN and TVERSKY, 1979; in addition to EARL, 2005; and, in Portuguese, FERREIRA, 2007a, 2008, 2011a, 2014, ÁVILA and BIANCHI, 2015; among others).

At the same time, teaching *System 1* has proven to be a major challenge – and this is the biggest hurdle for financial education. As the executor of the choices, it should demand recommendations to ensure success. But how is this goal achieved if actions are more automatic and focused on the quick execution of activities in favor of immediate cognitive comfort, without greater consideration of the consequences?

With slower operations, in a logical sequence and taking time into account, *System 2*, more recent in the human mind, is responsible for operations that involve greater deliberation. To perform its functions, it must exercise control over the associations generated continuously by *System 1* and the impulses that constantly present themselves to the mind. The effort and concentration required for self-control, all finite resources, can generate an overload and deplete *System 2*, so that, when focused on examining and solving a problem, it is nearly impossible to manage another situation at the same time. For this reason, and because the human mind is less used to operating in this way, compared to *System 1*, the activities associated with *System 2* occur less frequently. However, they are more sophisticated, entailing elements like reasoning, conceptual representations, language, and the ability to be flexible under certain circumstances, reflection, maintaining focus, attention, memory and judicious judgment of data, with less biases, and the ability to integrate the long term into these considerations. Therefore, it is responsible for planning actions, expressing intentions, and looking for the most appropriate solutions.

This is the major challenge of financial education: despite *System 2* being the most suitable for evaluating perspectives and making choices, the moment of action is actually up to *System 1*, the *hot-self* that performs these tasks within its limitations, while subject to numerous misunderstandings. *System 1* is capable of satisfactorily managing the basic activities of daily life, as many are performed almost automatically, such as driving a car or undertaking other routine actions. But if a more complex situation requires resolution, mistakes can be made, since, among other problems, it tends to respond to questions that are easier to answer, ignoring statistics, and demonstrating

little understanding of logic. Additionally, it cannot be “turned off”, which can generate conflicts between automatic reaction and attempted control by *System 2*. This increases *System 1*'s vulnerability to illusions, since *System 2* is more skeptical of first impressions that automatically come to mind, and takes action to increase analysis efforts and contain the impulse.

On the other hand, *System 2* is not immune to error either. If a mistake is about to be made and this fact goes unnoticed, the mistake won't be avoided. Or, even if signs of errors are recognized, preventing them depends on attentive and careful monitoring, which requires an effortful activity for *System 2*, implying in energy expenditure that the organism generally seeks to avoid (from the perspective of privileging its own immediate survival).

In any case, permanent surveillance would not only be impractical, it would make little sense or prove vastly inefficient in a normal life, since *System 2* is too slow to satisfactorily replace *System 1* in routine decisions. Thus, the ideal scenario would be a commitment solution: learn to recognize situations in which errors are more likely – as in the case of systematic errors – and try to prevent them from occurring when the consequences are more serious. In this case, activating *System 2* would make the most sense, while *System 1* ceases its constant search for quick answers, which can slow the effort to think – the convenience of having found an answer, despite being illusory, incomplete, or wrong-, building a barrier to any further thinking. Other studies have also established a connection between the ability to think and self-control, as in the case of the *marshmallow test* performed with children of different ages.



TWO FORMS OF MENTAL PROCESSING

	SYSTEM 1 fast	vs.	SYSTEM 2 slow	
	impulses	vs.	deliberation	
	associations	vs.	reasoning	
	automatic (short sighted)	vs.	pondering (integrates)	
	short term	vs.	long term	
	do	vs.	plan	
	execution	vs.	intention	
	“trainable” hot-self	vs.	“teachable” cold-self	
	PSYCHOLOGY	and	EDUCATION	

Trying to bridge the gap between intention and action, between what is planned and what is carried out is the task to which economic psychology and its sibling disciplines are called in financial education programs. Understanding the decision-making process is the first step in designing such programs. Considering the cognitive and emotional limitations in the processes of perception, recollection and evaluation of data, which lead to the use of heuristics and, consequently, to bias in the analysis of perspectives and systematic errors in the choices, can result in more precise recommendations for the program design and implementation.

3. CONTRIBUTIONS OF ECONOMIC PSYCHOLOGY TO FINANCIAL EDUCATION INITIATIVES

There are many variables to consider from this axis. For example, the psychological meanings of money: as it is never neutral, must be addressed in its cultural, social, family, and subjective dimensions, both for the people who will participate in financial education programs and for those who will teach or prepare the required material.

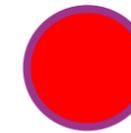
The fact that self-control is an exclusively present function – there is no “future self control”, as it is either there at the required moment, or it is only an abstraction, surrounded by uncertainty as to its future execution – it is necessary to properly develop this kind of control for it to be actually employed when needed.

Similarly, other biases, previously mentioned and which can be grouped under the heading of an almost permanent attempt to reduce internal tension through short-term cognitive comfort and emotional relief, should also be examined, as they point to behaviors that indicate a preference for compatibility with personal beliefs, expectations and desires, even if these are only illusions (“for example, the strong appeal to pyramids or Ponzi schemes); enjoying the comfort of the company, with a sense of belonging (the popular *herding behavior*, present in everything from consumption to investments); everything that presents itself as simple, easy and quick to understand, regardless of its consistency or benefit (applications in savings accounts in times of high inflation, and avoiding more complex financial products, but which offer better performance, or contracts signed without full knowledge of their content).

Further to the wider objective of “sparing itself”, that is, being guided by the **emotional traffic light** (FERREIRA, 1993, 2007a, 2008, 2011a), which, allows pleasant stimuli to arise in consciousness, while denying access to agents of discomfort or feelings associated with frustration. This is so even when legitimate and worthy of attention measures, revealing that the mind seeks to avoid experiences of loss, even if this implies thus taking greater risks than usual (like holding on to investments, to the point of becoming unsustainable and resulting in greater loss), situations of uncertainty and ambiguity (almost the rule, in the financial market and, in particular, investments that involve the long term, invisible on the present horizon), feelings of exclusion (again, herding behavior) ignorance and anxiety (which can lead people to act with the sole objective of ending this discomfort, like choosing financial products incompatible with their situation or buying more than they can afford, using credit without the means or conditions to honor it) and, finally, the actual decision-making behavior, which is usually feared and a distressing, leading to attempts to “outsource” their own choices, which has an important consequence – if removed from the decision-making process, people face difficulty learning from their experiences, which are the most important source of real learning available, because they also reach the emotional level of the psyche.

THE EMOTIONAL LIGHT

**FIRST COME THE IMPULSES THE EMOTIONS,
THE AUTOMATIC REACTIONS!**



displeasure = goodbye!
(disregarding consequences)



pleasure = welcome!
(even when illusory.)

**All the operations only consider the short-term –
and may remain at an unconscious level!**

Considering this scenario of vast challenges, the question remains: what changes behavior? And what could be done to favor these changes, from a financial education perspective?

Some experts, including some governments, have been addressing these issues, and provide some basic guidelines:

A. BEHAVIOR CHANGES – CHALLENGES AND STRATEGIES

a1. The Institute for Government, in the United Kingdom, is a non-governmental organization aimed at increasing government efficiency. In 2010, they launched MINDSPACE Behavioural Economics, with psychological insights to support policy-making in areas such as reducing crime and obesity, or environmental sustainability, through joint publications with the British government, for example, *MINDSPACE – The Practical Guide – Influencing behavior* through public policy. This guide provides brief explanations on psychological components, accompanied by suggestions on how use them as tools for behavior change. Below, nine of these elements are presented:



Elements that influence us	How do they influence us?	How to use this “influence”?
Messenger	We are heavily influenced by who communicates information.	Thus, use the best person or channel to provide education / information.
Incentives	Our responses to incentives are shaped by predictable mental	Offer incentives to change behavior, which consider these short cuts.
Norms	We are strongly influenced by what others do.	Therefore, offer information related to peers, that is, people like you.
Defaults	We “go with the flow” of pre-set options.	Therefore, use a desired a default option to encourage the desired action.
Salience	Our attention is drawn to what is novel and seems relevant to us.	Therefore, offer feedback to encourage financial management.
<i>Priming</i>	Our acts are often influenced by sub-conscious cues.	Use images that influence behavior in the desired direction.
Affect	Our emotional associations can powerfully shape our actions.	Therefore, present results to invoke certain feelings or influence behavior (including relevance and affection).
Commitments	We seek to be consistent with our public promises, and reciprocate acts.	Therefore, commit to an action or behavior, and set realistic goals and objectives.
Ego	We act in ways that make us feel better about ourselves.	Get financial health check-ups that challenge your own negative beliefs and standards.

The identification and inclusion of elements of this nature can represent a significant advance in the design of financial education programs specially formatted for its target audience, as should be the case.

a2. Another example comes from the Australian government (AUSTRALIAN GOVERNMENT, 2014), which also provides an interesting guide to behavior change. It focuses on financial decisions and is based on psychological and other insights taken from social marketing and based on research findings. The following are some of these examples, accompanied by their justifications:



a) Promoting single-step, action-oriented behaviours: These are most likely to engage people who are contemplating change or ready to make a decision.

b) Addressing known barriers to decisionmaking: This is particularly significant when considering the needs of target groups.

c) Providing immediate benefits to consumers: Immediate benefits are easier to relate to than more abstract long term benefits.

d) Providing information at the point of decision-making: There is greater potential for learning at this time and new behaviour is more likely to be put into practice.

These elements allow for the adoption of a tailor-made approach, or one suited to the life cycle, to influence financial decision-making, that is, efforts are undertaken to provide information and support at the right time, when it is possible to benefit citizens by solving an immediate problem or clarifying doubts regarding a financial choice. Over time, these interactions, or “teachable moments”, can open doors to new learning and the development of skills, building strengths and individual decision-making experiences, and expand knowledge and capability, which, in turn, increases personal resilience, better preparing people to avoid financial crises and stress and to satisfactorily resolve financial problems.

Other guidelines (AUSTRALIAN GOVERNMENT, 2007) have been added, which can be used in financial education programs or in other sectors:



e) take advantage of existing and successful previous campaigns, that is, do not waste resources such as time, money and people trying to reinvent the wheel;

f) start with the target audiences that are ready to act, although this raises the issue whether, unlike the more advanced, stable and egalitarian Australian economy, in the case of Brazil, this strategy still makes sense or whether it would be better actually focus on the most vulnerable;

g) promote one behavior at a time, to be performed, one at a time;

h) highlight the costs of alternative behaviors to those that are targets of change (how much it would cost not to change a current behavior);

i) promote a tangible object or service to help the target audience perform the behavior; also, consider non-monetary incentives as a means of recognition and acknowledgement; add some fun and/or humor to the messages; use media channels when making decisions; encourage adherence, commitment and use reminders to maintain behavior.

Adapting the above guidelines to concrete programs requires careful analysis of the various elements that are expected to be addressed through them. Some are discussed below.

B) A FEW CONSIDERATIONS FOR PROGRAM DESIGNING

Designing financial education programs is a challenge, as numerous factors must be considered in the effort to provide adequate information and, more importantly, so that this information is actually used by and benefits the target audience. Below are a few initial points of consideration when designing financial education programs:

- population size, its identity, segmentation, and target audience, through a survey compatible with such purposes; particular attention should be given to financial inclusion initiatives, which must be accompanied by financial education (due to the combination of problems, such as functional illiteracy, ignorance of the financial system and unprecedented access to income), and microfinance in general;
- setting objectives, which will guide the methods to be used and, next, the indicators, in line with the goals, to fine tune future evaluations;
- analysis of the implications of having money seen as a taboo and, if so, how to address them, as this aspect can jeopardize the work of trainers and multipliers, not to mention the actual target audience;

- selection and use of strategies and how to achieve mass scale, when applicable;
- selection (among peers, preferably) and training of trainers or multipliers, which must go beyond technical aspects to also include attitudes like with one's own finances, a sense of ethics and citizenship, the ability to relate with the target audience without judging its behavior, among others;
- establish productive partnerships with entities that will be able to provide content, strategies, contacts, and credibility, among other important elements;
- planned and judicious distribution of resources (human and material), geared towards sustainability, that is, the maintenance of the program over time;
- preferably, design and execution of a pilot project for initial testing, allowing for a comparison between the control group and intervention group, and/or meticulously monitor the impact, followed by the definition of parameters, which will guide the formulation of the final program;
- pace of delivery, paying attention to the risk of obsolescence, since the content must be based on current issues to make sense to the target audience (using online strategies can reduce this risk, to some extent);
- "Naturalize" the theme, disseminating it as much as possible, so that it becomes part of daily conversation, as automatically as personal care and hygiene, for example;
- monitoring and evaluation, despite the latter being a huge challenge, given the problems represented by subjective responses, the present state of mind at the time of evaluation, difficulty in identifying influence of the relevant variable to be evaluated, clarity and suitability of indicators, and to undertake longitudinal studies, which would foster insight into the impact and maintenance of new behaviors in the long term.

As a result of the financial education-economic psychology dialogue and other insights pertaining to the mental world, certain factors are vital to ensuring the construction of either a national strategy for financial education or other programs within this scope. Firstly, a multidisciplinary team, with sufficient numbers, should form the *dream team* responsible for these initiatives, featuring specialists in education, finance, economics, psychology, public, consumer protection, communication, design, neuroscience, marketing, anthropology, law and social work as part of the staff.

For programs, the first step should be a complete survey of what the target audience wants, needs and how they prefer to have it delivered.

As for the preferred target audience, almost unanimously, **there is an important weight for programs developed in schools, with children and young people, as creating new habits is incomparably easier than trying to change them.** On the other hand, investing exclusively in this age group can leave relevant segments of the population unattended, since the beneficial effects of the programs require a generational perspective, that is, around ten years are needed to consolidate and favorably impact the country. Thus, it would be reasonable to divide the resources to serve schools and adults simultaneously, obviously using different strategies for each, though experts recommend information and programs should always be formatted to suit the mind of an eleven-year-old child, regardless of the actual age of the intended recipients.

This recommendation is in full accord with the opinions of specialists in the theme and endorsed in this book: *keep it simple* is the primary piece of advice for all programs, contents, strategies, and age groups.

As seen above, *System 1*, the chief target of financial education, for being the real executor of choices and actions, automatically selecting everything that is simpler, while discarding anything seemingly difficult and complex. **Likewise, it will be easier to absorb information that is closer to the experienced reality** and directly relevant to life itself and/or associated with specific moments.

Since people learn in different ways, different channels should be used, such as radio, television, social media, websites, applications for mobile phones and tablets, short videos, messages for mobile phones, board games, role-playing or electronics, quizzes and printed media. Videos containing personal experiences and testimonials, or that use characters to tell a short story, with a script and context close to the reality of the target audience, would be especially important as vehicles for the intended message. **At the same time, special care must be given to the way messages are composed, formatted, and transmitted.** Attention must be paid to the amount of information provided, which needs to be dosed so that it can be absorbed while maintaining interest and concentration. Large amounts of information tend to be discarded, as it generates a cognitive overload, when the mind is unable to decode and make sense of it properly, relegating it to

the background, where it is unlikely to undergo further examination. In any case, learning must be active, through repetitions, with the target audience involved throughout the process. **In this case, it makes it easier to address a specific topic at a time, rather than trying to convey all the finance content at once.**

Instruments that may prove useful are: a) the format of soap operas (an example widely used by Ministério do Desenvolvimento Social e da Economia for the economic vulnerable adult population can be seen in the soap opera and radio soap opera, both produced by AEF-Brasil), produced specifically for this purpose – or insertions in ordinary soap operas; b) jingles on the radio or on the web, and catchy slogans, which summarize the idea you want to convey; c) in addition to so-called “edutainment” in general, which is the combination of education with entertainment, as in the case of games, comic books, videos and others; and d) celebrities delivering messages or talking about their experience managing their own finances, all constitute powerful strategies, due to the power of example and imitation in changing behavior.

In summary, **it is important to identify learning opportunities**, with a view to reaching as many people as possible – through subway screens, buses and public service locations, or events that bring together many people, such as Children’s Day (a popular holiday in Brazil), or on days for vaccinating children or enrollment in schools. In Brazil, occasions for *Bolsa Família* (an income transference) program registration renewal, for example, would facilitate access to this public. Furthermore, the workplace also serves this function, along with all the other existing networks – organizations and institutions, schools, cooperatives, unions, in addition to social networks and the media.

The **collaboration of key people in communities to be reached is another important ally.** Furthermore, *crowdsourcing* – a cooperation system that allows for collecting insights upon voluntary participation among the target audience representatives, would be extremely useful to avoid the feared mistake of “coming from top down”, that is, presenting information from the position of “truth holders”, while the real specialists in their own reality, with resources and limitations, are those who live it daily. Instead of trying to teach those who do not know, the crowdsourcing method fosters voluntary sharing of observations and experiences, which are discussed and later analyzed by experts, to provide subsidies for the development of strategies and the collective construction of tools to foster a context that reduces the chance of systematic errors in economic and financial decisions.



Gather information about successful programs, in Brazil and abroad, along with experiences that have failed, so as to identify pitfalls in advance and avoid them whenever possible, may help save resources and advance more quickly, as there is no attempt to reinvent the wheel each time. In this sense, congresses, and workshops on the subject, with experts from different places sharing their experiences, could be a good strategy, especially at the beginning of programs. Alternatively, the format could provide deeper insight, with fewer people and more time, perhaps for situations where programs are already at a more advanced stage.

Coherence and consistency among proposed programs, adopted policies, stakeholder views on the topic, in this and other situations (for example, offering products that do not contradict financial education initiatives proposed by the same institution), and the information conveyed is fundamental to the credibility of the initiatives. This point deserves careful evaluation, since the topic of financial education still arouses diverse reactions and feelings, which can range from high enthusiasm to distrust, including a lack of familiarity and even some difficulty in capturing its meaning. **Mistrust can arise**, most often, due to three factors:

1. The ineffectiveness of programs when viewed from the perspective of capillarity and dissemination, in addition to some studies showing that existing programs would be useless in increasing the training and quality of the financial decisions of its target audience (FERNANDES et al., 2014).

It should be noted that there are already studies opposing the idea of ineffectiveness, for example in the 2020 article by the group of researchers, Kaiser, Lusardi, Menkhoff and Urban, entitled 'Financial Education Affects Financial Knowledge and Downstream Behaviors'.

2. Opposition to the idea that citizens should be solely responsible for their choices, since they are usually the weakest link in the socioeconomic system, and it should not fall exclusively on their shoulders – or rather, on their minds – the weight of getting their financial decisions right after supposedly being correctly trained through the programs.

3. Fear about the real objectives behind the initiatives, which may present conflicts of interest, whether when offered by the government (in the United Kingdom, this type of discomfort was detected by the then MAS – Money Advice Service [current MAPS – Money and Pensions Service]), by financial institutions, or by people and/or organizations that would be more concerned with the potential financial return by working with financial education than with the effective delivery of financial capability to the target audience.

To uphold the validity of the initiatives, while continuing to investigate their best practices with the help of scientific instruments, new unbiased views on these factors may be very welcome, as is already the case among certain researchers arguing in favor of behavioral context design when discussing educational initiatives in general (SUNSTEIN and THALER, 2003; BENARTZI and THALER, 2004; CHOI et al., 2005; THALER and SUNSTEIN, 2008; LOEWENSTEIN and HAISLEY, 2008; BESHEARS et al., 2008, LOIBL et al., 2012, to name a few).

This most recent line of research within the behavioral sciences, called *choice architecture*, analyzes the effectiveness of exclusively educational, awareness and empowerment programs, claiming that, based on detailed studies, frequent systematic errors, difficulty with learning from experience (on account of having few opportunities for such and/or biases) and even an “apparently self-destructive side in human behavior” (LOEWENSTEIN and HAISLEY, 2008) would undermine the strength of those programs towards effective behavior change.

Based on their research, they propose the formulation of policies that facilitate the occurrence of more favorable choices, through changes in the context that meet the criteria of simplicity, low cost and the possibility of large-scale reproduction, using the so-called *nudges* (THALER and SUNSTEIN, 2008).

Thus, when transforming limitations already studied and identified into advantages, we have strategies contexts that lead more easily towards lead more easily towards correct choices, such as the selection of the the best to build standard options, from the point of view of the decision maker, which are then placed first, because in this position they are more regularly selected. However, choice architecture respects freedom of choice, without compulsory measures, offering instead other alternatives which can be then selected.





Foto: Peter Bi ak



Nudge: At Amsterdam's Schiphol airport, the hygiene of men's restrooms has improved significantly. Why?

Because every urinal has a fly in it and that's what everyone notices!!

A closer look reveals that it is not a real fly, but a design printed on the urinal at a strategic point, forming a "target" at which men take aim.

In any case, **simple and clear language should always be pursued**, with extensive use of examples and narratives, and information that also addresses behavior related to decision-making – often, naming biases can make it easier for people to identify and acknowledge what is going on their minds thus preventing them from being repeated. Ideally, all information that can be organized in the form of checklists would have a greater chance of reaching the target audience and being fully useful, within the perspective of simplicity, combined with the ease of using this resource whenever necessary. The assembly of these checklists can be a considerable challenge in many cases, when complex information must be condensed without losing its essence, beginning with certain exhaustively mapped situations of choice and then assembled in the correct and complete sequence, to respond to the need of the decision maker. However, the advantages of its use can overcome the difficulties, especially when comprised of specialists from different areas – from discourse analysts to mathematicians, including those most directly involved in financial education and economic psychology.

Currently, internet and social networks are enhancing the reach of initiatives, whether to disseminate videos, podcasts, testimonials, sketches, or results obtained by crowdsourcing, discussions on strategies from the choice architecture, or checklists. This use can be further extended, becoming an interactive platform of data and resources, that is, a kind of financial education collection, preferably public and freely accessible, that could function as a rich source of content, resources and exchanges between specialists and the public, while continuously updated.

Finally, to offer a good cost-benefit ratio, which should guide any program, while also geared towards its sustainable maintenance over time, the **pilot projects are always highly recommended**. Testing the project with a limited audience is helpful in revealing feasibility, scope and limitations before making a larger investment to reach the final audience. This cuts out unnecessary costs. The pilot project, of course, will require careful formulation, assessment and analysis to provide parameters and to guide the design of any subsequent adjustments that are necessary.

CONCLUDING REMARKS - FOR NOW

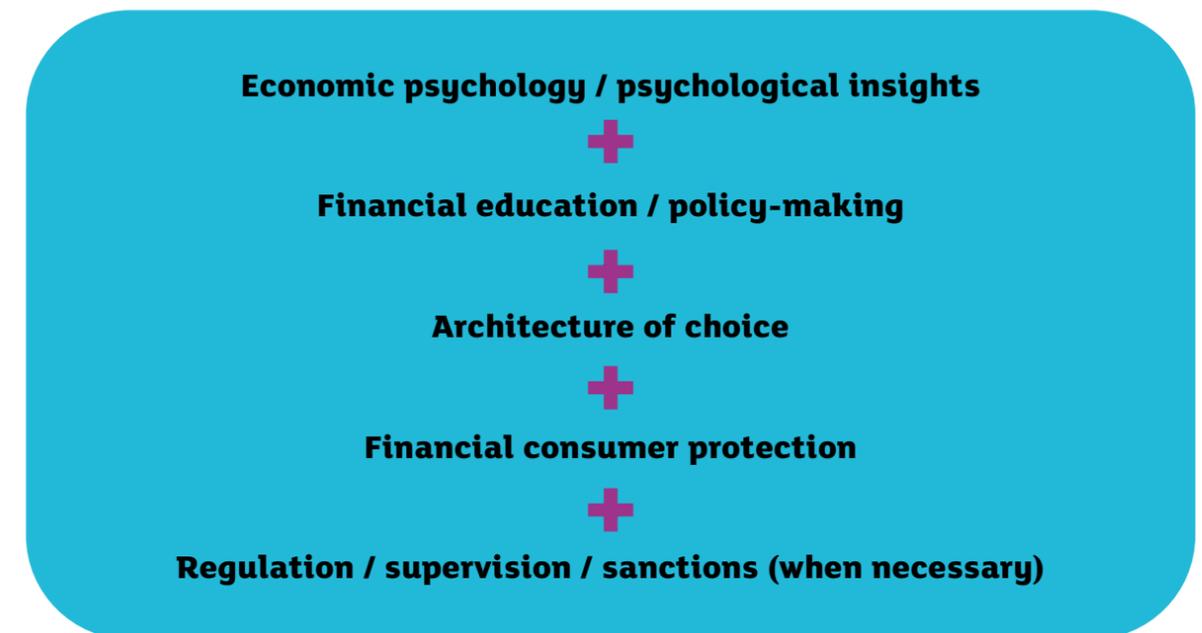
The discussion on financial education and economic psychology could go in several other directions. The aim here was merely to contribute to this promising dialogue with some elements, which, in addition to the choice architecture (briefly mentioned here), should also include consumer protection and regulation, with psychological insights influencing all these dimensions (SUNSTEIN, 2013, SHAFIR, 2013; FERREIRA, 2017), to obtain the best results.

If each of the aspect already plays a relevant role, we can imagine how strong they would be combined, articulated and informed about the real behavior of human beings. We call this combination of financial education, consumer protection and regulation, based on knowledge about mental functioning and what makes behavior change the “Fantastic Five”. It is about joining forces, thinking, investigating and building together, towards a more mature society, capable of learning from experience and continuously monitoring and analysing its improvement process towards more justice, less inequality and exclusion, and more opportunities for sustainable growth.

This combination of forces – psychological studies informing financial education and public policy initiatives, consumer protection, regulation and the choice architecture, which make up the aforementioned “The Fantastic Five”, in other words – aims to provide effective tools to face both the enormous complexity of the contemporary world and its demands for financial and economic decisions, as well as psychological limitations, represented by rationality that is never complete (SIMON, 1978), as it is always subject to the power of impulses and emotions, limitations to information processing, distortions of perception and evaluation, social pressure and the primitive experience of our ancestors.

Managers, regulators, specialists in planning and financial education are urged to consider adding these five elements to their toolboxes, in an increasingly evidence-based and integrated way.

The “Fantastic Five”



Financial education is already on the agenda of a significant number of countries, and its need among populations is indisputable. Consumer protection has also gained ground in recent decades and it seems inconceivable to do without this area in any organized social system, in modern times. Similarly, even when its limits may be debatable, the State must be present to whatever extent; therefore, regulation of financial markets and other contexts of human life must be implemented to correct asymmetries and prevent more evident risks.

In the process of building and developing projects and programs, mistakes and imperfections should be expected in human choices, and the design and delivery of financial education programs must address this. Upon the knowledge about systematic errors, along with strategies to avoid them, as discussed throughout this chapter. In particular, the major gap between intention and action deserves special attention, with programs turning to the automatic cognitive system that executes choices, *System 1*, while recognizing the difficulties for the effective exercise of discipline and self-control.



Brazil is also at the frontline of these movements, not only with ENEF, but also with financial education initiatives combined with psychological insights in the BCB and in CVM. Thus, despite all the difficulties that stand in the way to successful financial education initiatives, this brief discussion can end with a note of discrete optimism – the need to include psychological variables is now clearer than ever, and the first steps, as described in the chapters of this book, have been taken towards establishing how this could be more effectively implemented.

REFERÊNCIAS

- BESHEARS, J.; CHOI, J.J.; LAIBSON, D.; MADRIAN, B.; WELLER, B. Public Policy and Saving for Retirement: The “Autosave” Features of the Pension Protection Act of 2006. Written for the “Better Living Through Economics” sessions at the *American Economics Association meetings*, January 4-7, 2008.
- BENARTZI, S.; THALER, R. Save more tomorrow: Using behavioral economics to increase employee saving. *Journal of Political Economy*, 112 (1):164-187, 2004.
- CHOI, J.J.; LAIBSON, D.; MADRIAN, B. Are Empowerment and Education Enough? Under diversification in 401(k) Plans. *Brookings Papers on Economic Activity*, 2, p.151-213, 2005.
- EARL, P.E. “Behavioral Economics and the Economics of Regulation”. *Briefing paper prepared for the New Zealand Ministry of Economic Development*, 2005.
- FERREIRA, V.R.M. *Decisões econômicas: você já parou para pensar?* São Paulo: Saraiva, 2007.
- FERREIRA, V.R.M. *Psicologia Econômica – estudo do comportamento econômico e da tomada de decisão*. Rio de Janeiro: Campus/Elsevier, 2008.
- FERREIRA, V.R.M. *A Cabeça do Investidor*. São Paulo: Évora, 2011.
- FERREIRA, V.R.M. “Can Economic Psychology and Behavioural Economics Help Improve Financial Education?” In: *OECD-Russia Trust Fund. (Org.). Improving Financial Education Effectiveness Through Behavioural Economics: OECD Key Findings and Way Forward*. Paris: The World Bank, Financial Literacy & Education Russia Trust Fund, OECD, 2013.
- FERREIRA, V.R.M. “Educação Financeira e Psicologia Econômica – uma discussão e algumas recomendações”. Trabalho apresentado no 2º. Encontro Brasileiro de Economia e Finanças Comportamentais, FGV-SP, 2015.
- FERREIRA, V.R.M. Confluência de Fatores em Educação Financeira, Políticas Públicas e Mudança de Comportamento – O “Quinteto Fantástico”. Trabalho apresentado no 4º. Encontro Brasileiro de Economia e Finanças Comportamentais, FGV-SP, e publicado em versão eletrônica, 2017.
- FERREIRA, V. R. M.; LIMA, I. S. Can Economic Psychology contribute to financial education and financial capability programmes? – A discussion on Brazilian projects. *Proceedings of IAREP-SABE Conference – Economic Psychology, Behavioral Economics, Theory and Policy*, Halifax, Canada, 2009.
- FERREIRA, V. R. M.; LIMA, I. S.; COUTINHO, L.; KLIMICK, C. E.; PADILHA, H.; AYOUN, N.; GAZEL, M. A.; PEREIRA, V. L. R. “Can we be de-biased? How economic psychology can inform financial education programs”. In: A. Gasiorowska e T. Zaleskiewicz (Eds.), *Microcosm of Economic Psychology – Proceedings of the IAREP Conference Wrocław 2012*. p. 98-107, 2012.
- FRANKENBERG, L. *Seu Futuro Financeiro – você é o maior responsável – como planejar suas finanças pessoais por toda a vida*. Rio de Janeiro: Campus, 1999.
- KAHNEMAN, D.; TVERSKY, A. Prospect Theory: an analysis of decision under risk. *Econometrica*, 47 (2), 1979.
- KAHNEMAN, D., *Thinking, Fast and Slow*. New York: Farrar, Straus and Giroux, 2011.
- KAISER, T.; LUSARDI, A.; MENKHOFF, L.; URBAN, C. Financial Education Affects Financial Knowledge and Downstream Behaviors. *GFLEC Working Paper Series WP 2020-3*, 2020.
- LOEWENSTEIN, G.; HAISLEY, E. The Economist as Therapist: Methodological Ramifications of ‘Light’ Paternalism. In A. Caplin and A. Schotter (Eds.), *Perspectives on the Future of Economics: Positive and Normative Foundations*, vol. 1 in the *Handbook of Economic Methodologies*, Oxford, England: Oxford University Press, 2008.
- LOIBL, C., HAISLEY, E., JONES, L. & LOEWENSTEIN, G. “Testing strategies to increase saving in low-income families”. In: A. Gasiorowska e T. Zaleskiewicz (Eds.), *Microcosm of Economic Psychology – Proceedings of the IAREP Conference Wrocław 2012*. p.167-168, 2012.
- SIMON, H. A. Rational decision-making in business organizations. Nobel Memorial Lecture. *Economic Science* 343-371, 1978.
- SHAFIR, E. (Ed.) *The Behavioral Foundations of Public Policy*. Princeton: Princeton Univ. Press, 2013.
- SUNSTEIN, C.; THALER, R. Libertarian paternalism is not an oxymoron. *Working Paper No. 03-2*, The University of Chicago Law School, 2003.
- SUNSTEIN, C. *Simpler – The Future of Government*. New York: Simon & Schuster, 2013.
- THE WORLD BANK GROUP. *Impact Evaluation of Brazil’s School Based Financial Education Program: an overview*, 2011.
- THALER, R.; SUNSTEIN, C. *Nudge – Improving Decisions about Health, Wealth and Happiness*. New Haven & London: Yale University Press, 2008.
- TUCKETT, D. *Minding the Markets – an emotional finance view of financial instability*. Hampshire: Palgrave MacMillan, 2011.
- TVERSKY, A.; KAHNEMAN, D. Judgment under uncertainty: heuristics and biases. *Science*, 185: 1124-1131, 1974.
- VAN RAAIJ, W. F.; ANTONIDES, G.; DE GROOT, I. M. “Financial Capability, Motivation and Behaviour”. *Proceedings of the 33rd IAREP/SABE World Meeting*, Roma, Itália. Wageningen University. *Symposium on Financial Capability*. Netherlands, 2008.

Chapter 10

Map of research sources on Financial Education in Brazil

Claudia M. J. Forte⁵⁷

This chapter is aimed at presenting Brazilian production about financial education and related themes. It is divided into two parts: the first is in reference to the academic efforts; the second refers to content production on social media and in books available for free.

While researching the book, which covered a period from 1999 to 2020, almost 500 academic-scientific papers were found, including doctoral theses, master's dissertations, final course papers and course conclusion projects for specialization and undergraduate programs, as well as chapters in books and magazine articles, congresses and journals. The qualification of the publications using national and international indicators was not used to classify these papers.

The abstract was read for each of the papers listed herein. The terms used for the search included financial education, personal finance, financial literacy, financial behavior and economic psychology. The title of the papers are provided along with a QR Code. Simply point your mobile phone at the code and you will be directed to the paper on the indicated platform.

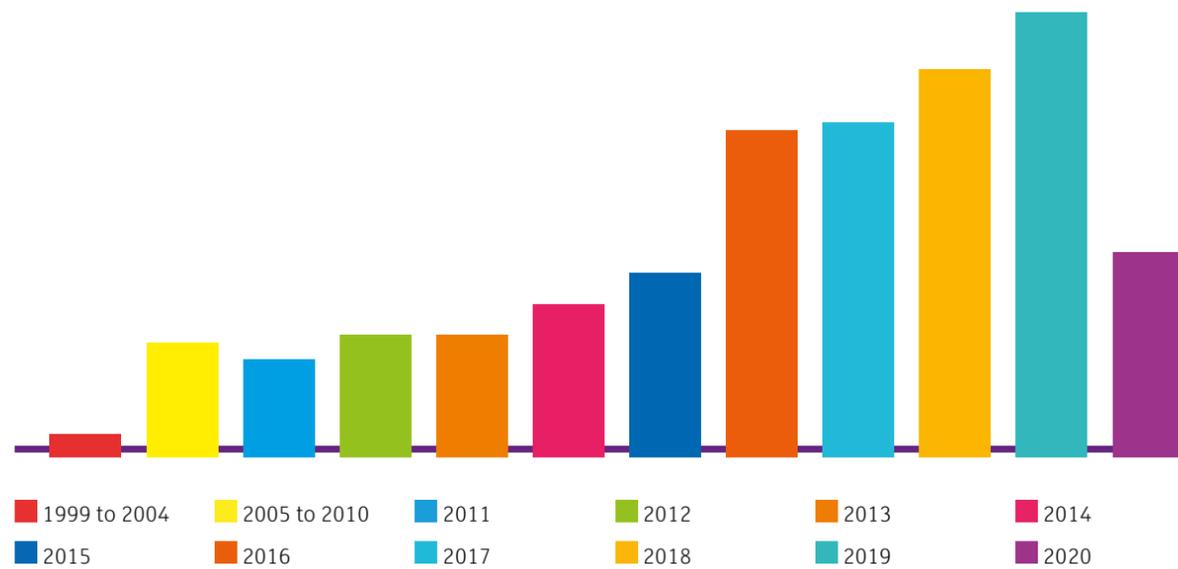
Some objectives deserve to be highlighted in this chapter:

- Evidence the growing academic interest in the area, without assessing the quality of the publications.
- Provide visibility for national authors. The research was restricted to academic production by Brazilian researchers.

The graph below shows the rise in academic publication numbers per year.

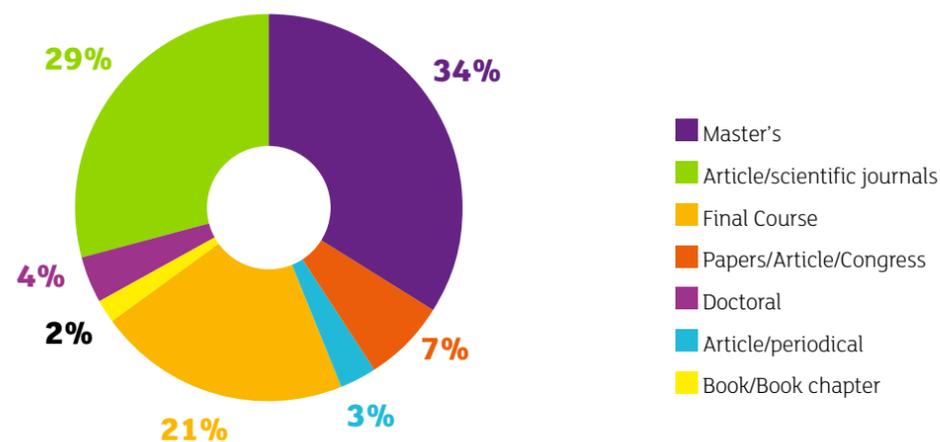
57. PhD in Latin American Integration, professor and consultant. Superintendent of AEF-Brasil since December 2015.

PUBLICATIONS ABOUT THE SUBJECT OVER THE YEARS



Almost 200 academic articles, occupy the majority of the surveyed sample and are split into articles in scientific journals, journals and congresses. In second place in terms of work volume, titles obtained in master’s programs and the consequent publication of dissertations totaled 129 papers. For doctoral titles, 17 theses were identified. With the dissemination of the theme in mind, it is of the utmost importance to have master’s and doctoral programs dedicated to the study, the application of methodologies and deeper understanding of financial education and its array of facets, as it is within the master’s and doctoral studies environment that Brazilian scientific production on the theme begins.

TOTAL PRODUCTIONS BY TYPE



There is also evident growth in the production of graduate and undergraduate specialization courses. There were 91 final undergraduate course papers encountered. Among the papers listed are the first 12 final papers by specialists that graduated and earned their titles for the subject at a federal university. All of the articles are fruit of the efforts to complete the specialization course at the Education Hub developed in partnership with the Federal University of Paraíba, described in detail in Chapter 5. Efforts in network help leverage and empower, and the new specialists in financial education in Paraíba provide proof that this action model fosters results, demonstrating a significant impact. However, in education, our hopes should aim for the future and build it through long-term sustainable and engaging actions.

The following table shows the total number of papers registered through the survey

Type	Number
Doctoral thesis	17
Master’s thesis	129
Articles in scientific journals	150
Articles at congresses	29
Articles in periodicals	15
Undergraduate and graduate final course papers	91
Books/book chapters	8

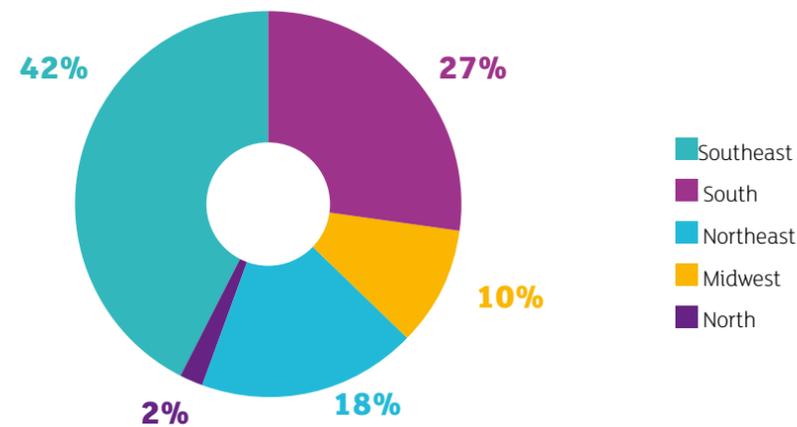
The region of the country with the highest academic production was the Southeast, with 160 papers, followed by the South with 118 publications. The Northeast region produced 72 publications. There were 16 publications from universities from the North, while the Midwest region saw 42 publications from universities.

With regards to national magazine publications, it is worth noting that articles were published in 90 scientific magazines, most of which are linked to university research centers, which makes the academic production and research into the area highly significant, clearly demonstrating that there is space for publications and recognition from the scientific community with regards to this type of production. The magazines with the highest number of articles published on the theme of financial education were: Tangram – Mathematics Education Journal, Federal University of Grande Dourados – UFGD ; Education Mathematics Research

– *EMP*, Pontifical Catholic University of São Paulo – PUCSP; Brazilian Journal of Education in Sciences and Mathematical Education, Western Paraná State University – Unioeste, RECM; Education, Sciences and Mathematic Journal, University of Grande Rio – Unigranrio; and Ibero-American Journal of Mathematical and Technological Education, Federal University of Pernambuco – UFPE.

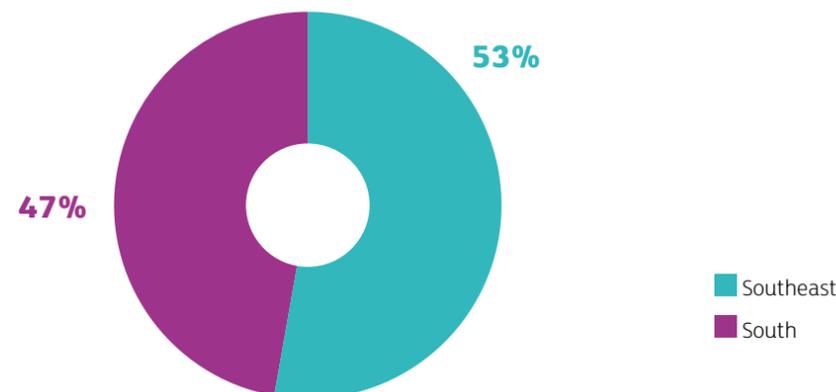
Seeking to shed light on the rise in master’s titles, the graph below shows the number of dissertations presented in Brazil. The Southeast region presented 54 master’s dissertations, followed by the Southern Region, with 34, while the Northeast of Brazil recorded 23, the Midwest 13 and the North, 4.

MASTER’S TITLES IN THE REGIONS



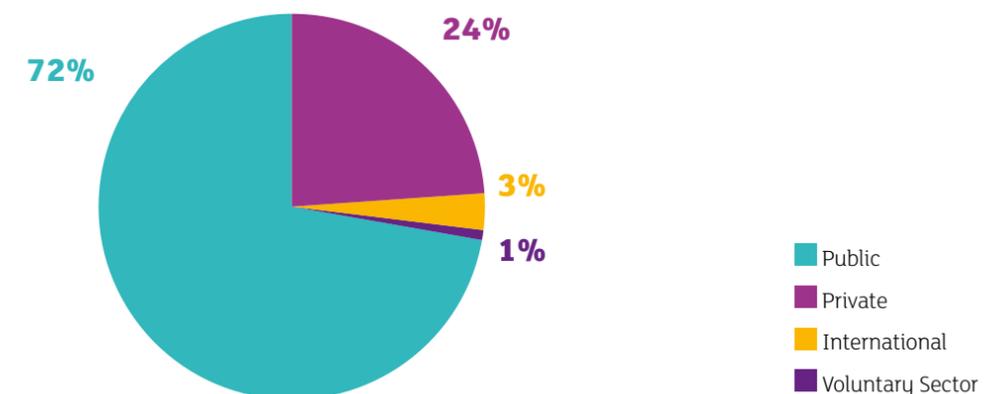
With regards to obtaining doctoral titles, there were no theses found in the North, Northeast and Midwest regions of Brazil. In the Southeast, 9 theses were registered, the majority from universities in São Paulo; while in the Southern region there were 8 theses, most from universities in Rio Grande do Sul.

DOCTORAL TITLES IN THE REGIONS



Publications were gathered by different research institutions. The vast majority deal with public institutions, among the federal and state universities and federal institutes. Private institutions were mostly led by the Pontifical Catholic University in the states of São Paulo, Minas Gerais and Rio de Janeiro, and also the Getúlio Vargas Foundation, in São Paulo. The graph also shows participation from the “voluntary sector”, which encompasses associations, foundations, state departments, trade associations with magazines or journals. The international category covers international journals or congresses where papers were presented on the theme of financial education. The following graph demonstrates the institutional distribution of publications:

PUBLICATIONS BY SECTOR



FINANCIAL EDUCATION AND SOCIAL MEDIA

Technology and the access to information it provides has been a major ally in the dissemination and demystification of financial education among an array of stakeholders.

In line with the same research rigor and data credibility provided in this book, we turned to the Internet to find channels available for free access to the subject.

To the pleasant surprise of the community involved in the construction of this book, a major boom was noted in websites, Instagram pages, etc., which attests to the appeal of issues related to financial education and also the interest of several portions of the public in finding solutions, advice and inspiration in

relation to their financial problems, as it is well known that something only exists efficiently on the Internet when there is someone searching through the content. There are 157 websites, 68 Instagram accounts, 31 YouTube channels, 18 Facebook accounts and 23 channels on other media (podcasts, Twitter and non-commercial games).

There is a lot of content being made available at no charge, in a way that seems to truly highlight financial education, something that has never happened before.

Many organizations and initiatives from the voluntary sector – which includes non-profit organizations and foundations – are also listed.

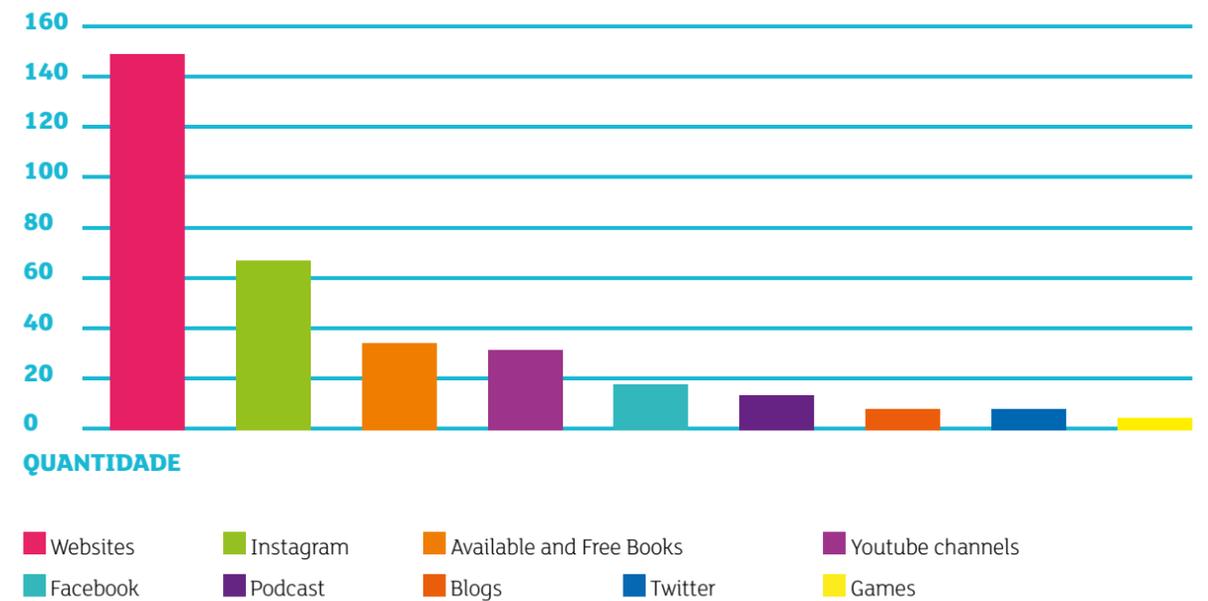
There are 29 books online, available in PDF format. We know there is vast academic production among Brazilian authors, though these books are often only available in stores or through e-commerce platforms. This book, however, was based on the criteria that it would be available at no cost on a platform or institutional archive with free access. This is shown in the table below.

Number	Platforms
157	Websites and Blogs
68	Instagram
29	Books available for free
31	YouTube channels
18	Facebook
13	Podcast
7	Twitter
3	Games

NEXT STEPS

The recent approval of the BNCC and the insertion of financial education as a transversal theme, in addition to the significant number of academic publications and the vast number of websites and other media channels providing free knowledge, learning and experiences, has led an increasing number of people to take interest in acquiring autonomy and awareness regarding the relationship with money and related aspects: indebtedness, savings, investment

COMMUNICATION OUTLETS/ NUMBER



Furthermore, the school community is expected to appropriate the theme. The crisis caused by the Covid-19 pandemic has impacted everyone and the poor relationship between Brazilians and items such as money, informality and savings, among others, have fallen under the spotlight, whether due to the government support provided to the 30 million invisible, or due to the increase in unemployment all over the country. Despite not constituting the most didactic and pedagogical path towards learning, in some cases, it seems many have been able to learn important lessons when subject to painful experiences, finding themselves obliged to make certain necessary changes and to awaken from the state of lethargy that has stricken so many.

There are several fronts of mobilization, within a special conjecture, which have been reiterating the importance of research and the quest for knowledge to build a fairer and more equal society, creating paths and conditions for a quality life.

REFERENCES

ARAÚJO, C.A. Bibliometria: evolução história e questões atuais. Em *Questão*, Porto Alegre, 12(1): 11-32, jan-jun. 2006.

CORDEIRO, A.M.; OLIVEIRA, G.M. de. Revisão sistemática: uma revisão narrativa. *Rev Col Bras Cir*, Rio de Janeiro, 34(6): 428-431, nov-dez. 2007.

Academic publications in 2020



Financial literacy in the Federal District: an analysis of social, economic and demographic variables



Accounting as an Auxiliary Tool in Personal Finances: The Outlook of Accounting Sciences Students



The spread of financial education amongst public servants in the Municipality of Cajazeiras, Paraíba



Financial education and financial sustainability



Financial education in schools: a case study of 3rd grade students at in the municipality of Sousa-Paraíba



Mathematic Education and its role in building financial education



The importance of financial education in the sustainability of home budgets: a case study in Sousa-Paraíba



Financial Mathematics for beyond school



Suitability of financial products for low-income consumers: the challenge of financial inclusion



Agenda in public policies: the strategy of financial education in Brazil in light of the model of multiple flows



The strategies of a million



How can financial mathematics change life within the school community?



Concepts for primary education II teachers regarding financial education



Financial education of students from the Federal Technological University of Paraná



Financial and Environmental Education in Public School: Case study based on the implementation of a Sustainable Vegetable Garden in Lagoa-Paraíba



Financial education and cooperative efforts in a project-based approach



Financial Education in Didactic Mathematics Books for the Final Years of Primary Education: Analysis of a Collection



Financial education in the school environment: Report on a pedagogical project in the city of Lucema-Paraíba



Financial education in high school: unveiling the traps of capital



Financial Education on YouTube: an analysis of content based on machine learning with models on



Financial Education topics: The Importance of Financial Stability in the lives of University Students



Consigned loans within the scope of the Federal District State Education Department: characteristics and challenges of financial education



Remote teaching during the Covid-19 pandemic: Concepts on economic and finances for high school teachers from the Paraíba state education network



The influence of financial education on financial behavior: a study with students and graduated students from courses on Accounting Sciences, Economic and Administration



Financial Education initiatives in a Full-time Public School in Campina Grande-Paraíba and its impact on Family Economics



Level of financial literacy among university students at Niterói's Federal University of Fluminense: Assessment of the financial attitude dimensions, financial behavior and financial expertise



The Financial Market in the Classroom: Financial Education as a Public Policy in Brazil



Are young military personnel financially literate? Study of an organization on the border of Rio Grande do Sul



The Perceptions of High School students on Consumption, Consumerism, and their Impacts on the Environment: Between Concepts and Practice



The perception of students on the insertion of financial education in high school: a case study of the municipality of Sapê-Paraíba



Academic Period, Level of Consumption, Financial Planning: The State of Financial Education among Undergraduate Students at the University of São João Del-Rei



Financial education programs: transversal and longitudinal effects on the behavior of children and adults



Promoting financial education of bilingual students with hearing disabilities grounded on the ethnomathematic perspective and the hearing disability culture



Time, the most finite resource of all



A discussion about financial education in decision-making within Brazilian society

Academic publications in 2019



Financial education as an educational tool in the face of consumerism fed by financial agencies



Financial education of students to the Federal University of Uberlândia, according to individual, demographic and socialization aspects



A Financial Education as Schools: The impact of this education on the Insertion of Students in University



Financial education in the context of school learning: a study of middle school students in a private school in the state interior of Pernambuco



Financial Education in the School Context of Primary Education



Financial Education in the initial education course for mathematics teachers at public universities in the State of São Paulo



Financial mathematics and financial education: impacts on initial teacher education



Mathematics in financial education: a perception of financial mathematics content as applied in daily situations



The reformulation and resolution of problems using digital technology resources in Financial Mathematics Education



The behavioral branch of financial education



Financial literacy from the perspective of a woman from Tijuca



Analysis of questionnaires for the validation of the “Grana” game: a technological tool to assist in teaching financial management within a rural context



Differing Perspectives of Financial Education



Financial Education activities based on the perspective of Skovsmose Learning Environments



Comparison of variables that influence financial literacy in Administration master’s degree students at the Federal University of Rio Grande do Norte – UFRN and the Teaching and Research Institute (IEPASD) Alberto Santos Dumont



Contributions of technocracy and ethnomathematics in the promotion of financial education among students with hearing disabilities



Investment Decisions. A descriptive analysis of where to allocate our resources



Development of MOOC - Massive Open Online Course - for teaching School Financial Education



Determining Factors of financial literacy: the influence of financial education and social, economic and demographic variables



Home economics and financial education in school: differences based on gender



Financial education: building a dignified future for new generations



Financial Education: a study with public servants from the Federal Institute of Mato Grosso



Financial education as a context for teaching decimal number in primary education



Critical financial education: management of the family budget through pedagogical practices in the education of youths and adults



Financial Education for Youths and Adults: An Intervention Proposal based on the National Common Curricular Base



Financial Education and Buying Behavior of University Students



Financial Education and Financial Mathematics: understanding possibilities based on a study group with High School teachers



Financial education and environmental sustainability: a reflection on high school mathematics classes



Financial Education in Situations of Teaching and Learning: Moments for Reflection



Financial education in basic education school: an experiment with mathematical modeling



Financial education in high school



Financial education in high school: possibilities



Financial education in Mathematics textbooks: Teaching concepts and pedagogical practice



Financial Education on YouTube: an analysis of content based on machine learning with models on



Financial education in mathematics textbook in the final years of Primary Education



Financial education, interaction with parents and other factors related to the use of credit cards by accounting students



Financial Education: analyzing, in light of Critical Mathematics Education, suggestions to teachers present in Mathematics textbooks in the early years of Primary Education



Financial education: an analysis of MEC material for early years



Financial education: contributions of a practical and integrating pedagogical proposal for leveraging integrated high school education



Financial education: the challenges of our time



Financial education: investigation of a class in the 1st grade of high School based on collaborative practices



Financial education: materialism and indebtedness among public servants of Caraguatatuba



Financial education: A comparison between Public and Private School students



Financial education: A study of Administration Course students at an Institute of Higher Learning



Financial education: A study involving students at an institute of higher learning in the city of Divinópolis, Minas Gerais



Financial education: an experience with high school



Financial education: a work proposal for the final years of Primary Education



Critical mathematics education: a didactic sequence to teach mathematics and financial education based on the subject of Inflation



Financial education for Higher Education students



Financial education: understanding inflation in a class of 9th grade Primary Education students



Behavioral finances: herd effect and the movement of the global shares markets between 2008 and 2017



Personal finances, family indebtedness and quality of life for public servants



Financial education in the Educational Context: certain points to consider



GO PISA! Indications for the preparation of public policies on education



The importance of Financial education to the Brazilian population and the level of knowledge as to the theme among academic from an institute of higher learning in Rio Grande do Sul



Financial inclusion: a multi-dimensional exploratory analysis of determining factors, issues and challenges for expansion in Brazil



Financial education indicator: Proposition of an Instrument based on the Item Response Theory



Investor Segmentation: How to Improve Current Techniques by incorporating Behavioral Finance Concepts?



Board Game for Financial Education of Future Entrepreneurs



Financial mathematics: a proposal using the National Common Curricular Base



Teaching Financial Mathematics in mathematical modeling activities



The impact of financial education on the economic vulnerability of low-income elderly people. An assessment for the program "Me and my Retirement - organizing your financial life"



Real Interest in the Context of Critical Financial Education



The role of financial behavior and financial education in indebtedness



The use of Comic Books to teach Financial Education in the Literacy Cycle



The benefits of financial education applied to financial investment for students at the School of Economic, Administration, Actuarial Studies, Accounting and Executive Secretaryship at the Federal University of Ceará



Potential of Blockchain in financial mathematics education



Reflections on the practice of financial education: a case study of 5th grade students in primary education



The relationship between financial education and the entrepreneurial intent: a study of university students



An essay on understanding financial education



A study on the Education and Actions of Mathematics Teachers in Relation to Financial Education in the municipality of Carangola



An evaluation conducted by teaching degree students about investigative-exploratory activities involving financial mathematics



A proposal for teaching Financial Education based on Ethnomathematics: Conscientious consumption based on the context of a Financial Budget



Use of the Moodle platform, a virtual learning environment, to leverage financial education in public primary schools



Consumption vulnerability and financial services: conduct and perceptions of bankers concerning the financial well-being of individuals

Academic publications in 2018



Financial education as a financial and economic development policy in Brazil



Financial education in public basic education in the state of Goiás



Financial education in early years: content, methodologies and context in mathematics textbook collections part of the National Textbook Plan/2016 for municipal schools



The influence of cognitive capacity in the financial literacy learning process: experimental evidence



An analysis of consumer behavior: a report on earnings and spending in the domestic budget



Financial Education Activities in Mathematics textbooks: how do teachers put them in practice?



Scenarios about School Financial Education: links between Mathematics research, the curriculum and the classroom



Deficits in financial literacy induce the use of informal market loans



The challenges of Financial Education



Themed Dossier, Research on Financial Education and Mathematics Education



Behavioral economic and financial literacy in Brazil: impact on social security



Financial education for the elderly supported by digital technologies



Financial education and critical mathematics education in High School



Financial Education and Critical Mathematics Education in High School: reflections based on research



Financial education and consumer behavior: a study with youths from Ituiutaba, Minas Gerais



Financial education and the school context of students in middle school



Financial Education and Retirement Preparation for Young University Students from Rio de Janeiro



Financial education: youth investments



Financial education in the classroom: a methodological proposal for teaching mathematics in High School



Financial Education in the School Mathematics Curriculum: An analysis of the new ENEM (National High School Education Exam) in the period from 2009 to 2017



Financial Education in High School: relations to Financial Mathematics in teaching practice



Financial education for students with hearing disabilities using an ethnomathematics perspective



Financial education: an overview of textbooks and teachers' discourse



Financial education: a realist approach in school



Financial education: an analysis of academic groups



Financial education: a study proposal of ENEM (National High School Education Exam) questions and public entrance exams with a transversal and contextualized approach



Financial education against university programs



Financial Education in 1st Basic Education Cycle: the importance of savings and planning



Financial Education topics: The beliefs of Students in a Mathematics Teaching Degree course



Long-term effects of Financial Education in Brazilian School: evidence and policy suggestions



Effect of behavioral bias on qualitative marketing research: an exploratory study about the perception of companies that use research



Aging, smallholders and consigned credit: the educative role of social movements in relation to financial education strategies with elderly smallholders



Essays on health at birth, financial literacy and educational outcomes



Research study on financial education with the use of technologies



Extension on financial education: results from the 5-year experience in partnership with balance



Determining factors for youths to begin investing



Personal finances: analysis of financial expertise among students of an administration course at the Chapecó Campus



Personal finance: an analysis of the financial education level of young students from Federal Institute of Paraíba – IFPB



Financial Education for Adults – Women beneficiaries of the Bolsa Familia Program (PBF) and Retirees with income of up to two minimum salaries



Financial Education Panorama in Brazil Through the Lens of Professors and Students



Financial Literacy and Gender Issues in Students From the University: Comparative Results From Portugal and Brazil



Mathematics abilities and financial expertise in High School



Inflation from the perspective of school financial education in the final years of primary school



Influence of behavioral factors in the propensity for indebtedness



Investigation of the Subject of Financial Education in High School Cite in Brazilian Legislation



Investigating a didactic sequence about compound interest for training in financial education for High School students



Youth and finances: the participation of Catholic youth groups in the city of Cascavel – Paraná in planning family finances



Financial Literacy: a study with undergraduate students from the Federal University of Rio Grande do Norte – UFRN



Financial Literacy in the International Program for Student Assessment



Level of financial literacy among High School students from the Federal Institute of Education, Science and Technology of Pernambuco: Caruaru Campus



Does individual behavior affect their sensitivity to financial shocks?



The financial behavior and attitudes in low-income families



Teaching Financial Mathematics in Basic Education added to banking and finance knowledge in personal and professional life



The Panorama of School Financial Education in official documents



Perceptions acquired through capacity building in financial education for adults



Perceptions acquired through capacity building in financial education for adults



Social practices (mathematics) for the production of financial planning in training Indigenous educators



Financial Woes Conversing about money in a multi-family group Financial Education Project for families in situations of family vulnerability



Relation between Financial Education and Risk Aversion



Relation between Financial Education activities in Mathematics textbooks for the early years of Primary Education and the teacher's book



Financial responsibility: How do financial education and literacy influence default? An analysis of the Brazilian Class C citizens



Similarities and differences between institutions that offer financial education in Brazil



The Application of Behavioural Insights to Financial Literacy and Investor Education Programmes and Initiatives



Decision-making and learning financial mathematics: an experience with smartphone applications



Personality traits, attitude towards indebtedness and financial knowledge: the case of public servants from the Federal University of Santa Catarina



A study of Ethnomathematics and Financial Education in the Prison System



A study on financial knowledge among students in Paraíba based on the 1st Paraíba Financial Education Olympiad



A financial guidance proposal for High School in the center of Manaus, initiated through the Accounting Sciences Program at the State University of Amazonas

Academic publications in 2017



The construction of cyber-problems by 6th grade students in the context of financial education



Distance education as a tool to approach budget management and financial health



Financial education and bibliometry: An analysis of administration event in Brazil in the 2012-2014 training



The influence of materialism, financial education and the value attributed to money in the propensity for indebtedness among youths



Creating new meaning for the figure of speculator-investor and financial education practices



Analyzing and contributing to financial mathematic education at a basic level



Analysis of the behavior of students and public servants from the Federal University of Bahia – UFBA in relation to financial education



Attitude towards Indebtedness and Financial Expertise: A study with Public Servants from the Federal University of Santa Catarina – UFSC



Didactic Activities Using Jclie Software in Financial Education in Primary Education



Organizational communication for stockbrokers: the use of social networks as a tool for financial education



A Confluence of Factors in Financial education, Public Policies and Behavioral Changes: The “Fantastic Five”



Knowledge and action in the cognitive development of adults: the case of economic-financial education



Developing financial education among students with hearing disabilities that communicate using Libras (Brazilian Portuguese sign language) within an ethnomathematic perspective



Social and demographic determining factor of financial education



Dissertation Financial Education in Mathematics Textbooks for the early years of Primary Education: which activities are suggested in student textbooks and the guidelines present in teachers' books



Financial Education Dissertation in the early years of Primary Education: how has it played out in the classroom?



From exercise to scenarios for investigation: the application of financial education activities by teachers for the early years of primary education in a school in Recife, Pernambuco



Corporate education and distance education training in a financial institute



Financial education as an instrument for integration in a professionalizing institute of learning



Financial education as a method for learning how to use money for high school students in public schools



Financial education of public servants: Consumption habits, investments and perception of risk



Financial education and solidarity finances: conceptual issues; limits and advances in practice



Financial Education Dissertation in Mathematics Textbooks for the early years of Primary Education: which activities are suggested in student textbooks and the guidelines present in teachers' books?



Financial Education in municipal schools: A participatory approach



Financial Education in the early years of Primary Education: how has it played out in the classroom?



Financial education for children: a report on extension project experiences



Financial education: spaces, possibilities and guidelines for the education of Mathematics teachers



Financial education: curricular proposal of ENEF in High School



Financial education: mapping of studies from the last five editions of the national events for mathematics education



Financial education: an introduction through software



Elaboration of an instrument to facilitate the promotion of techno-mathematical literacy: simulations based on PRICE and Customer Service tables with added amortization



Indebtedness of youths and financial education: a study of the municipality of Salvador, Bahia



Excessive confidence, anchoring and financial expertise. The consumption of financial applications



Personal Finances: an analysis of personal finance expertise among students of the business management course at the Federal Institute of Paraíba, Guarabira Campus



Financial Literacy Protocol



Financial management: a study of the influence of formal financial education in personal finance in an administration course at the State University of Ceará



Financial education in Brazil: gauging the importance of credit unions



Investigating the subject of financial education in primary education



Financial literacy and personal indebtedness: a study of students in an business course



Structural model of financial literacy: a study of financial behaviors among Brazilians considering groups with different levels of financial expertise and self-confidence



Nico: an application to assist in the financial education of children in Primary Education



Level of financial education of high school students and their reflections as to economics



Level of financial education in higher education scenarios. An empirical study of students from the area of economics and administration



The Effect of Financial Education on the Relation between Debt Fulfillment and Workers in the city of Manaus



Teaching Financial Mathematics in High School and its Importance to the Financial Education of Students



Level of financial education and personal finances for students from the Federal University of Uberlândia



The other side of the river: a study of Agência Barco and its role in financial inclusion mediated by technology in riparian communities of the Amazon region



The Role of the Central Bank of Brazil in Leveraging Financial Citizenship



The debates surrounding financial education in a context of the financialization of domestic life, inequality and financial exclusion



Indebted people and Financial Education



Perceptions of personal finance expertise for students from the Accounting Sciences Course at the Federal University of Ceará



Perceptions of young students with regards to financial education in a study in Barra do Garças, Mato Grosso



Money directly at school program: reformulation and implications in school and financial management of basic education



Promoting the development of financial education in a ethnomathematic perspective



Proposal of the Structural Model for Financial Well-being based on Cognitive Reflections and Financial Literacy



Semiotic representations mobilized through Mathematic teaching degree students when making decisions concerning economic and financial situations



Resolution of Problems in Financial Mathematics for Dealing with Financial Education Issues in High School



Didactic Sequences for the Insertion of Financial Mathematic Education in Basic Education – The Issue of Financial Literacy



Tasks for financial education: a study

Academic publications in 2016



Financial mathematics and statistics as tools for conscientious financial management



Financial Education in the final years of Primary Education: An overview of Textbooks



The insertion of financial education in a course for financial mathematics services for undergraduate students in an administration course



Mathematics As a Means to Organize Financial Education Phenomena: A Didactic Experience



Financial literacy in the Brazilian army: an analysis in a military organization on the border of Rio Grande do Sul



Financial literacy: a lists of behavioral factors and social, economic and demographic variables



Applying and assessing a learning unit about conscientious consumption in a polytechnic high school class



Enhancing financial inclusion: The path towards a theoretical framework for critical financial education



Beneficiaries of the Family Allowance program: an analysis from a behavioral and financial point of view in municipalities of Rio Grande do Sul



Expertise on Financial Education among undergraduate students at the IPA Methodist University Center



Financial challenges: the role of design in a financial education game



Financial education and the Mathematics Textbook: an analysis of collections approved under the 2015 National Textbook Plan for High School



Financial Education and Social Media



Financial Education in Mathematics Textbooks for the early years of Primary Education: which activities are suggested in student textbooks and the guidelines present in teachers' books?



Financial Education in Schools: Mathematics and pedagogical relations during early student life



Financial Education from the perspective of critical mathematic education - a theoretical reflection in light of the learning environments of Ole Skovsmose



Financial education in high school mathematics textbook



Financial Education for students in a Production Engineering course



Financial Education: financial, savings and investment education



Financial Education: paths towards implementation in private schools



Financial Education: how is it approached in the 4th and 5th grades of Primary Education?



Financial Education: a bibliometric analysis from 2011 to 2015



Financial Education: a proposal developed in primary education



Financial Education: analyzing activities proposed in mathematics textbooks for early years of education



Financial Mathematics Education in High School: building activities involving cost of life calculations



Family Budget Education: a tool that promotes domestic financial control



Family Budget Education: a tool promoting quality of life in the Sertão region of Paraíba



Financial Education as a pedagogical practice in preschool education – article in REPS Magazine, a pedagogical events publication



Preschool Financial Education: playing with money



Financial mathematics education: the importance of using finance organization applications



Financial mathematics education: a diagnosis in public school in the Regional education Center of Guarapuava, Paraná



Individual choices and financial well-being: three essays using Microdata



Personal Finances and Financial Education: the profile of public servants in a municipality in the Midwest region of Brazil



Personal finances: a study of employees from a medical cooperative



Personal finances: a study involving accounting sciences students from an Institute of Higher Learning



Henrique e o Robô Dim: A game book to support the process of teaching and learning preschool financial education



Heuristics and behavioral bias in personal financial decisions: A study with professionals from the Medical Community



Social interaction and learning for adults: a financial education experience in a popular context



Investigation into the contributions of mathematics to the development of financial education in school



Digital game for Financial Education for Adults in Brazil: proposal based on a Bayesian network and Fuzzy Logic



Financial literacy for educators: a study in the public network in the municipality of Sorocaba



Financial mathematics with a Financial Education approach for High School



Financial Mathematics: Financial Education through Games in the 3rd year of High School



Financial education expertise and the profile of business administration students at Fluminense Federal University, in Volta Redonda



Teaching financial mathematics at school from the perspective of education for life



Teaching financial mathematics in high school



The impact of finance disciplined on financial education and the level of student indebtedness



Financial literacy and financial mathematics in Primary Education



The decision-making process for installment purchases: the effects of individual differences, from the type of product to the payment terms



Teachers and textbooks in approaching financial education



The Use of Digital Technologies for Teaching Financial Mathematics: A Systematic Review of the Literature



Consumption and indebtedness profile of university Administration students



Production of Expertise in Graduate Courses in Education in the Northeast of Brazil: reality and possibilities



Didactic-Pedagogical Productions



A study on the level of financial education and the experience using credit operations among young Brazilian adults



A didactic experience in Critical Financial Education



A proposal for Financial Education for Youths-Individuals-Consumers (JIC)



A proposal for Financial Education for Youths-Individuals-Consumers (JIC)
Education for adolescents in situations of social vulnerability

Academic publications in 2015



Financial mathematics and electronic spreadsheets allied in
the quest for the emancipation of financial education



A financial approach in basic education and its importance in assessing teaching
and in the perception of errors in publications



Adoption of Mobile Banking in Brazil: A conceptual approach combining TRI and
TAM models as to generations X and Y in a context of Financial Education



An analysis of the influence of Financial Education on Brazilian
economic development



An analysis of personal financial behavior among high school students
from Vale do Taquari, Rio Grande do Sul



Financial education notebook: live well with the money you have



Determining Factors of Financial Literacy: An analysis of the influence of s
social, economic and demographic variables



Financial Education in Rio Grande do Sul: Proposition of a Measure and the
Relation to the Social, Economic and Demographic Variables



Financial Education and economic psychology: a discussion and several recommendations



Financial Education in Brazil: a study of a case involve the 1st year of High School
at Farroupilha School in Porto Alegre



Financial Education for High School students in Macapá, Amapá



Financial Education: a study of the impact on the lives of public servants from
Federal District Administrative departments



Financial Education: a sample study methodology for checking indicators
in pension funds



Financial Education with the Elderly in a Low-Income Context



Financial and Environmental Education applied to Primary Education
João Goulart School de Malmeiras das Missões, Rio Grande do Sul, Brazil



School Financial Education: the development of an educational product



Financial Education: a pedagogical proposal for student in a polytechnic high school



Teaching Children about Economics: Children's Stories as an instrument for Economic Literacy



Personal finances and quality of life at work for public servant: a study applied to a federal institute of learning



Personal finance management for controlling indebtedness and reducing default



Behavioral and Experiment Economics Guide



Financial Literacy: A Diagnosis of Student Expertise



Notes from a National Plan for Financial Capacity Building



Teaching mathematics in line with financial education



The shift in research into School Financial Mathematics Education from 1999 to 2015



The role of financial education when contracting credit in informal markets



The perspective of financial education: a didactic analysis



Family Allowance Program x Financial Literacy: working towards a model for low-income women



Proposal of financial education indicators



Reflections on Financial Education and its interfaces with Mathematics Education and Critical Education



Regarding the financial education primer and its study among trash pickers from the Acácia cooperative



A comparison among children that received financial Education in school and those without this discipline integrated into their curricula

Academic publications in 2014



The importance of financial education in decision-making: A study involving public servants from the Administrative and Financial Center (CAF) in the municipality of Quixadá, Ceará



The influence of financial education and emotional factors: A study involving accounting and engineering students



Financial literacy: integrating financial expertise, attitude and behavior



An analysis of the perception of financial education for students in the 8th semester of an Accounting Sciences course at Federal University of Ceará – UFC



The contributions of Ethnomathematics and the social and cultural perspective of the history of mathematics for citizen education for students in the 8th grade of primary school, through teaching and learning financial education content



Educational Development Program (PDE) Notebooks



Financial expertise of university students in terms of credit. Article in a magazine



Financial Education for University Students An analysis of influential factors



Financial Education in Brazil A case study



Financial Education: a study of associations between knowledge on personal finance and the characteristics of university students in the Accounting Sciences course



Financial education: a case study on high-income public servants



Financial education: an instrument for economic conscientiousness



Financial education: a perspective of mathematics in high school through problem solving



Financial Mathematics education through Didactic Sequences:
Two Daily Applications



Indebtedness and Financial Literacy in the Perspective of Consumers with Credit Card Debts



Personal Financial Balance: A study on financial reeducation through habit control and change guidelines and methods



Evidencing the financial behavior of FEAAC (School of Economics, Administration, Actuarial Studies and Accounting) students in consumption situations: an applied study of administration, accounting, economics and actuarial studies



Determining factors of indebtedness and default associated with a propensity for individual bankruptcy



Personal finance: a study of Accounting Sciences students at a private institute of higher learning in in Santa Maria



Cash Flow: Financial Education in Mathematics class with High School students at a school in the countryside of Espírito Santos



The influence of financial education on consumption, investment and savings decisions: A study of Accounting Sciences and Administration students at the Pontal School of Integrated Sciences at the Federal University of Uberlândia



Financial mathematics and technology: Spaces for the development of critical capacities for youth and adult education students



Financial mathematics in High School: a simulation game



Profile of public servants from the Federal University of Espírito Santo with consigned loans



Economic psychology: historic trajectory and future paths



Relationship between personal finances and the characteristics of university students in Accounting Sciences courses



Values of money and a propensity for indebtedness: An analysis of students from a federal institute of higher learning

Academic publications in 2013



The importance of financial education in companies in terms of productivity and a reduction in workplace accidents



The relevance of financial education in the education of youths



An analysis of the influence of financial education in behavioral framing bias, mental accounting and loss aversion



Personal finances of teachers from a municipal education network from Campo Formoso, Bahia: a study at the José de Anchieta school



Financial well-being: a multi-factor analysis of the behaviors of people from the state of Maranhão



Financial competencies: an analysis of financial decision among students in terms of personal finances



Financial Education



Financial education for public school students



Financial education and indebtedness: the profile of dental surgeons



Financial education and the savings rate in Brazil



Financial Education in the school curriculum: a comparative analysis of initiatives in England and France



Financial education for children (hyper-vulnerable subjects): information as a solution for conscientious consumption



Financial education: a case study with public servants from the Central Bank of Brazil



Mathematic education and financial education: outlooks for the National Financial Education Strategy (ENEF)



Financial Mathematics Education: Building the concept of currency in the final year of Primary Education



Extension in Financial Education



The impact of different levels of materialism on the attitude towards indebtedness and the level of debt for financing consumption in low-income families in the city of São Paulo



The level of financial literacy among university students: after all, what is relevant?



The financial element and education for responsible consumption



Beyond *homo economicus* to the contributions of behavioral and institutional economics for understanding human economic behavior



Personal financial planning - a reflection on the importance of the private education network in the Federal District

Academic publications in 2012



The Financial Education Chain of Goodness: Are citizens learning what the Central Bank is teaching?



The influence of psychological and behavioral factors in credit risks: an approach in light of economic psychology



Can we be de-biased? How economic psychology can inform financial education programs



Where does female indebtedness stem from? Construction and validation of a PLS-PM model



Gender differences in financial literacy among candidates for the National High School Education Exam



Individual differences in routine product purchasing standards: an economic-behavioral analysis



Financial Education and Problem Solving: Contributions to teaching Mathematics in Youth and Adult Education



Financial education and problem solving: what are the relations?



Financial Education in Preschool: an analysis of activities from the teacher's book



Mathematics Financial Education in Primary School: An analysis of the production of meaning



Financial education: teaching possibilities based on scenarios for investigation



Early indebtedness: An analysis of credit grants and factors that influence indebtedness among young university students at the Metropolitan Union of Education and Culture (UNIME) in the municipality of Lauro de Freitas, Bahia.



Personal finances in Brazil



The importance of preschool financial education



Modeling structural equations applied to the propensity for indebtedness: an analysis of behavioral factors



Implicit unconscious processes in decision-making: the hypothesis of somatic markers



Problem solving and simulations: investigating strengths and limits of a financial education proposal for high school students at a school from the private education network in Belo Horizonte, Minas Gerais



Mathematics tasks triggered by financial education objects and competencies



Using information and communication technologies in financial mathematics education: a study with undergraduate students



A study about the relation between the individual profile and personal finances for students from an institute of higher learning in Santa Catarina

Academic publications in 2011



Financial education and its influence on decision-making



The importance of financial education in managing personal finances: an emphasis on the popularization of the Brazilian capital market



The relevance of financial education in the education of youths



An analysis of financial knowledge among high school students



Financial education and decisions on consumption, investment and savings: an analysis of students from a public university in the north of Paraná



Financial education in schools in Porto Alegre



Financial education: what students and teachers think



Financial Education: perceptions of the target public and preferences in relation to financial education and the formation of a course



Personal finance studies: financial education of University enrollees



Determining factors of a propensity for indebtedness: A study of women in the mesoregion of midwest Rio Grande do Sul



Personal finances: a study of academics from the Unioeste campus of Marechal Cândido Rondon



Generation Z: Understanding consumption habits of emerging generations



Compulsive buying and its relations to obsessive-compulsive disorders and bipolar affective disorder



Psychology of credit risk: an analysis of the contribution of psychological variables in credit scoring models



What is the financial behavior and education of Brazilian consumers in terms of credit concessions?



About the construction of expertise: a financial education experience with elderly women in a low-income context



The Role of Emotion in Risk Tolerance

Academic publications from 2010 to 1999



The influence of financial education on individual consumption and investment decisions



An analysis of consumer behavior from a behavioral perspective: consumption models in a relative closed environment.



Money in Brazil: a comparative study on the meaning of money among Brazilian geographic regions



Financial education for technology-based students through the study and development of statistical and computerized techniques applied to the technical analysis of stock market investments



Financial education for the public High School network: an innovative proposal



Financial education: an interdisciplinary perspective in the construction of student autonomy



Between allowances, safes and school mathematics practices: the constitution of financial pedagogy for early childhood)



Study on the reasons for indebtedness among the low-income population



Personal finances: an analysis of spending and a propensity for indebtedness among administration students



Personal finances: a case study of public servants



Personal finances versus corporate finances



Economic information and illusion: a psychoanalytical contribution to the study of economic phenomena (2007)



PERSONAL FINANCE MANUAL Personal Accounting, financial planning and source of investment used in the management and control of personal finances (2005)



The emotional component: mental function and illusion in light of the economic transformations in Brazil since 1985



Brazilian investors are conservative: a study of Teachers from the Center for Administrative Sciences at the University of Fortaleza



The use of mathematics for financial education as from primary education (2006)



The offer and demand for personal finance information: The Central Bank of Brazil Financial Education Program and university students from the Federal District



Paradigms of financial education in Brazil



Personal finance planning and control with a focus on using accounting tool and services: a study with freelance professionals



Personal Financial Planning for university students entering the job market



Procedures for preparing domestic budget planning and spending and income control for efficient family financial management



Economic psychology: origins, models, proposals



An analysis of intersections between Personal Finances Organizational Finances and Small Retail Performance



A reflection about the importance of including Financial Education in public schools



A contribution to the development of education in personal finance in Brazil

BOOKS PUBLISHED ONLINE



The Dancing Flower: the story of a child's financial planning



Competencies in financial education: a description of research results from the International Network



The Importance of Financial Education



Financial Education for Active Citizenship



The Importance of Developing Financial Competencies



Financial Education and Citizenship



Workbook – Basic Personal Finance



Tax Education in a Social Context



World Currencies



#onceuponatime



Articles about Tax Education



Financial Education in Municipal Schools: A participatory approach



Pedagogical Workbook on Tax Education for Teachers



Financial education for consumption - student workbook



CFP Magazine



Tax Education – Student workbook



Financial Education Collection in High Schools (teacher and student textbooks)



Tax Education - Theoretical-Practical references for Educators



Series on Taking Care of Your Money: personal finance and notebooks Education series for children



Personal Finances: Fundamentals and Tips



Series on Digital Learning Resources – High School



Personal Finances and Enterprising



A Sustainable Idea



Personal finances for beginners



Personal finances for all ages, a practical guide



A guide to behavioral and experimental economics



Personal Finance Planning



Magazines 'Em Busca do Tesouro' (The quest for Treasure)



Financial citizenship Series

WEBSITES, BLOGS, INSTAGRAM, APPS AND RELATED ITEMS

In this section, we sought to identify pages on different platforms that work with the theme of financial education. There are paid and free initiatives and the concern here is not to gauge the number of initiatives, but rather to show how the internet and social media have contributed to specific content on the theme.

WEBSITES & BLOGS



www.abbc.org.br



www.anbc.org.br/o-que-defendemos/educacao-financeira/#.X2lgu2hKg2w



www.abecs.org.br



www.anchor.fm



www.acrefi.org.br



www.andrebona.com.br



www.aefbrasil.org.br



www.assbandf.com.br



www.abracam.com/



www.avamec.mec.gov.br



www.alana.org.br/project/crianca-e-consumo/



www.b3.com.br



www.aliancaempreendedora.org.br/



www.banco.bradesco



www.caixa.gov.br



www.barkus.com.br



www.canaldoensino.com.br



www.bcb.gov.br



www.capesesp.com.br



www.bemgasto.org



www.cbsprev.com.br



www.bemprobolso.com.br



www.clubedovalor.com.br



blubybs2.com



www.clubedospoupadores.com



www.brasildefato.com.br



www.contacomagente.com.br



www.brasilprev.com.br



www.comoinvestir.com.br



www.brasilolidario.org.br/blog/



comoinvestir.anbima.com.br



www.credicomin.coop.br



www.cresol.com.br



www.dinheirocomatitude.com.br



www.cresolsicoper.com.br



www.economistas-rs.com.br



www.conseg.com.br/



www.ecodesenvolvimento.org



www.consumoresponsavel.org.br



www.educacaofinanceiranainfancia.com



www.criancaeconsumo.org.br



www.educacaofinanceira-professorhelio.blogspot.com/2010/10/funcao-do-dinheiro.html



educacaoemseguro.cnseg.org.br



www.educadorfinanceirofranciscorodrigues.wordpress.com/



www.defesadoconsumidor.gov.br



www.educacao-fiscal.webnode.com/



www.dicascurtas.com.br



www.educafinanceira.com.br



www.dicionariofinanceiro.com



www.educandoseubolso.blog.br



www.dinheirama.com



www.educfinpap.com/blog



www.edumoreira.com.br



www.euqueroinvestir.com



edu.b3.com.br



www.ev.org.br



www.efetividade.blog.br



www.fia.com.br



www.elizabetecarvalho.com.br



www.financasfemininas.com.br



embuscadotesouro.tesouro.gov.br



www.financaspraticas.com.br



www.empreenderdinheiro.com.br



www.financials.com.br



www.equilibrioufrgs.com



www.foregon.com



www.escolavirtual.gov.br



www.geekonomics.com.br



www.educacaofiscal.sp.gov.br



www.gestaofinanceiracriativa.com.br



www.escolaclinica.com.br



www.gfai.com.br



www.givanildobispo.blogspot.com



www.institutof.org.br



www.gov.br



www.intusforma.com.br



www.helio.pro.br



www.investidor.gov.br



www.ibemf.org.br



www.itau.com.br



www.idinheiro.com.br



www.jabrazil.org.br



www.infi.com.br



www.joveminvestidor.com.br



www.infocos.org



www.jusprev.org.br



www.infoescola.com



www.legado.justica.gov.br



www.institutomillennium.org.br



www.leticiamargo.com.br



www.institutosicoob.org.br



www.libratta.com.br



www.mag.com.br



www.onze.com.br/blog/



[www.medium.com/
@diegodarochamachado](https://www.medium.com/@diegodarochamachado)



[www.pagoquandopuder.com.br/blogs-
de-financas/](http://www.pagoquandopuder.com.br/blogs-de-financas/)



mepoupenaweb.uol.com.br



pat.educacao.ba.gov.br



www.meubolsoemdia.com.br



www.phi618.com.br



www.meufuturoseguro.gov.br



portalmec.c3sl.ufpr.br



www.minhaseconomias.com.br



www.plan.org.br



www.minhaseconomias.com.br/blog



www.planejar.org.br



www.mulheresageis.com.br



paporetocomfebraban.com.br



www.multiplicandosonhos.org



www.porvir.org



www.oficinadasfinancas.com.br/



www.prefeitura.sp.gov.br



www.previc.gov.br



www.sefaz.pe.gov.br



www.procon.campinas.sp.gov.br



semanadoinvestidor.cvm.gov.br



www.programaprovidencia.org.br



www.serasa.com.br



www.quaestoreducacao.com.br



www.sicoobnossacoop.com.br



www.regius.org.br



www.sicredi.com.br



www.repensekids.com.br



www.sistemafibra.org.br



www.rioprevidencia.rj.gov.br



www.somatematica.com.br



www.salaacoes.blogspot.com



www.somoscooperativismo.coop.br/



www.santander.com.br



www.superrico.com.br



www.sebrae.com.br/sites/PortalSebrae



www.thecashmonster.com.br



www.tudosobreseguros.org.br



vocemaisrico.com



www.unibrad.com.br/cursos



www.xpeedschool.com.br



www.unifei.edu.br



Financial Education Column by
Thiago Godoy na Infomoney



www.valia.com.br



Column 'On Godoy's account'
XP Investments



www.valorsimplificado.wordpress.com



blog.clear.com.br



www.valoresreais.com



www.bussoladoinvestidor.com.br



www.vamosjogareaprender.com.br



blog.cresol.com.br



www.verticepsi.com.br



blog.focalise.com.br



www.vidaedinheiro.gov.br



blog.genialinvestimentos.com.br



www.visa.com.br



focanodinheiro.neon.com.br



queroficarrico.com/blog



www.metlife.com.br/blog/

YOUTUBE CHANNELS



AnbimaBR



Eduardo Moreira - discussions on
several subjects, among them
economics and financial education



Drops of economic psychology
by Dr Vera Rita



AEF-Brasil Financial Education



SPC Consumidor



Psychology and Money



Bruno Gimenes



MyNews Channel



Insurance Channel



Clube do Valor



Me poupe!



CVM Educacional



Nath Finanças



Dinheirama



Rafael Seabra



EconoMirna



Serasa Ensina



Favelado Investidor



Sicredi



FEBRABAN oficial



Planejar Pra Vida



Guia Invest



Sicredi | Turma da Mônica



Gustavo Cerbasi



O Primo Rico



Infi - FEBRABAN Institute of Education



Vida e Dinheiro



'Meu Bolso em Dia'



Tadeu second



Sicredi



Bradesco Prime
videos on financial education
for children and other topics related
to the theme



www.instagram.com/aef_brasil



www.instagram.com/aladiothalita



www.instagram.com/andy.de.santis



www.instagram.com/ateliefinanceiro

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pauloarrudafinancas



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www.instagram.com/psifinanceiro



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www.instagram.com/psi.naocomplica



www.instagram.com/tiagogreis



www.instagram.com/repense_educacao_financeira



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www.instagram.com/victormontilha



www.instagram.com/rapfinanceiro



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www.instagram.com/zeloфинancas



www.instagram.com/rodapirapire



<https://www.instagram.com/ceefufpb/>



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f FACEBOOK



www.facebook.com/groups/economiadevalor



www.facebook.com/associacao.de.educacao.financeira



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www.facebook.com/90SegundosdeFinancas/



www.facebook.com/gefamufpa/

LINKEDIN



Financial education is
the path towards happiness



Laura Coutinho



André Bona, Finances and Investments



Laura Coutinho



Let's dominate! - Master your Finances



Understanding the consumer
confidence index, Lucas Vargas



Educando seu Bolso

PODCAST



focanodineiro.neon.com.br



Bolsa de Valores



www.g1.globo.com/podcast/educacao-
financeira/



CBN Dinheiro



PoupeCast



O Assunto é Dinheiro
Luiz Gustavo Medina



parceiradenegocios.tim.com.br/
artigo/5-podcasts-sobre-financas-
pessoais-e-empresariais-para-se-
inspirar/



Drops de Inteligência Financeira,
Gustavo Cerbasi



PrimoCast

TWITTER



Easy Education



AEF Brasil



FEBRABAN



Practical finance



'Meu bolso em dia'
(My pocket up to date)



Nathalia Arcuri

JOGOS



Tá O\$\$o Game



Financial Education Nine
Men's Morris



Games and activities

LIST OF ABBREVIATIONS AND ACRONYMS

AEF-Brasil – Association of Financial Education in Brazil
 ANBIMA - Brazilian Financial and Capital Markets Association
 ASCOM – Communications Advisory
 BACEN/BCB – Central Bank of Brazil
 IDB – Inter-American Development Bank
 BIS – Bank for International Settlements
 BNCC – National Common Curricular Base
 B3 – Brazilian Stock Exchange (Brasil, Bolsa, Balcão)
 CAF – Monitoring and Inspection Committee
 CCF - Bad Check Database
 CCI – Senior Citizen Social Center
 CEEF - Financial Education Specialization Program
 CNC - National Confederation for the Trade of Goods, Services and Tourism
 CNDL - National Confederation of Retail Managers
 CNE – National Board of Education
 CNSEG - National Confederation of General Insurance, Private Pension and Life, Supplementary Health and Capitalization Companies
 CONEF – National Financial Education Committee
 CONSED - National Board of Education Departments
 COREMEC - Regulation and Inspection Committee for Financial, Capital, Insurance and Capitalization Markets
 CP – Permanent Commission
 CRAS – Welfare Reference Center
 CREAS – Specialized Welfare Reference Center
 CVM - Securities and Exchange Commission
 DREs – Regional Boards of Education
 DENARIUS - Financial Education Research and Development Center
 EJA – Youth and Adult Education
 ENEF – National Strategy for Financial Education
 FBEF - Brazilian Financial Education Forum
 FEBRABAN – Brazilian Federation of Banks
 FLIT – International Literary Festival of Tocantins
 GAP – Pedagogical Support Group
 IAREP - International Association for Research in Economic Psychology
 IDEB – Basic Education Development Index
 IOSCO - International Organization of Securities Commissions
 INFE – International Network for Financial Education
 LDB - Law of Guidelines and Bases of National Education

MAS – Money Advice Service
 MAPS – Money and Pensions Service
 MDS – Ministry of Social Development
 MEC – Ministry of Education
 OCDE - Organisation for Economic Cooperation and Development
 OECD – Organisation for Economic Cooperation and Development
 OSCIP – Civil Society Organization of Public Interest
 SDG – Sustainable Development Goals
 UN – United Nations
 PBF – Bolsa Família (Family Allowance) Program
 PCNs - National Curricular Parameters
 PEIC - Consumer Indebtedness and Default Survey
 GDP – Gross Domestic Product
 PISA – Program for International Student Assessment
 PNE – National Education Plan
 PREVIC – National Superintendence of Pension Funds
 PROCON – Consumer Protection and Defense Program
 PUC-SP – Pontifical Catholic University of São Paulo
 REF – Financial Education Radar
 RSC – Corporate Social Responsibility
 SEDUC – State Education Department
 SEE – State Department of Education
 SEECT/PB - Paraíba State Department of Education, Science and Technology
 SENACON - National Consumer Secretariat
 SENEF – National Financial Education Week
 SPC – Credit Protection Service
 SPREV – State Secretariat for Pension Funds
 SER – Regional Superintendencies of Education
 STN – National Treasury Secretariat
 SUSEP – Superintendence of Private Insurance
 TCTs – Contemporary Transversal Themes
 TCC – Final Paper
 UNIFEI – Federal University of Itajubá
 UFPB – Federal University of Paraíba
 UFFS – Federal University of Fronteira Sul
 UFT – Federal University of Tocantins
 UNDIME – National Union of Municipal Education Directors



$ac^2 + bc^2 = ?$

πr^2

cidadania

planejamento

orçamento

