

# Social Security Education in Early Childhood to Promote Conscious Citizenship

Diana Vaz de Lima

<https://orcid.org/0000-0002-4477-445X>

Jady Wane Rodrigues Cardoso

<https://orcid.org/0000-0003-3819-7155>

Álvaro Borba Modernell

<https://orcid.org/0000-0002-0042-1919>

Rosa Maria Costa Cavalcante

<https://orcid.org/0000-0003-0738-6754>

## Abstract

**Objective:** To develop actions to disseminate social security education in early childhood and understand how children can be motivated to develop conscious citizenship regarding social security. Early childhood is a phase seldom explored to address social security issues. The conception of the Life Cycle Theory, which is frequently invoked to explain the motivations for people to heed the long-term demands concerning retirement and financial behaviors as they age (Neri, 2007), includes the assumption that, in general, people have a more or less defined pattern in the accumulation of wealth (Modigliani, 1986).

**Method:** After the Institutional Review Board at the University of Brasília approved the project (CEP/CHS/UnB), four face-to-face pedagogical workshops were held in April and May 2021, including 12 children aged five and six enrolled in kindergarten. The book *O Tesouro do Vovô* [Grandpa's Treasure] by Álvaro Borba Modernell was adopted to support and enhance the children's creative ability and learning. The workshops were held on Thursdays, the day reserved for art classes. The workshops were held at the classes' final 40 minutes and were distributed into four meetings of 50 minutes each (on April 8<sup>th</sup>, 22<sup>nd</sup>, 29<sup>th</sup>, and May 6<sup>th</sup>, 2021).

**Results:** The workshops enabled the creation of a collective knowledge field as the children understood the topic in a controlled environment with the support of adults.

**Contributions:** This study showed the importance of introducing the learning phase in the Life Cycle Theory.

**Keywords:** Retirement, Social Security Education, Pedagogical Workshops, Social Security, Early Childhood.

## 1. Introduction

Identifying the factors that determine the sustainability of social security systems in Brazil and worldwide is a challenge researchers have faced. Recommendations include reforming social security systems to mitigate the effects of the demographic dynamics and their impact on governments (Grech, 2013; Lima & Matias-Pereira, 2014; Zhao & Mi, 2019), in addition to providing financial and social security education (D'Aquino & Cerbasi, 2008; Souza, 2016; Silva, Reis, Martins & Fornari, 2019).

According to the Organization for Economic Cooperation and Development (OCDE), financial education sensitizes individuals to the opportunities and risks of financial concepts and products, consistently promoting responsible societies committed to the future (OECD, 2005). Financial education has been a growing concern in various countries, encouraging a more in-depth focus on this subject (Savoia, Saito & Santana, 2007; Vieira & Pessoa, 2020).

Aiming to understand how individuals plan their spending and saving behavior throughout life, Modigliani and Brumberg developed the Life Cycle Theory, according to which people make intelligent choices of how much they want to spend according to the resources they have in each stage of life (Modigliani & Brumberg, 1954). Researchers agree that people adapt their consumption patterns to their needs in different stages, regardless of their income, giving up a portion of consumption during their earning years to stabilize their consumption patterns later in life. A time when, in general, an individual's job performance declines (Modigliani & Brumberg, 1954; Neri, Carvalho & Nascimento, 1999; Deaton, 2005; Neri, 2007; Melo, Texeira, Ferreira & Silva, 2018).

Silva (2012) and Silva (2019) argue that the life cycle can be divided into three phases: (a) pre-work; (b) job, and (c) post-work. Hence, individuals spend more than what they earn in phases (a) and (c) while they earn more than they spend in phase (b). Furthermore, researchers note that the duration of each phase differs among individuals as several aspects influence it: biological factors, society's economic structure, educational opportunities, family needs and expectations, and health, among others.

There is a consensus in the literature that financial education enables individuals to acquire knowledge to make better decisions regarding their financial lives and prepare for different moments in life (Souza, 2016; Silva, Reis, Martins & Fornari, 2019). D'Aquino and Cerbasi (2008) believe that providing financial education during childhood help children build the basis to manage money well during adulthood.

Financial education applied to social security favors a long-term savings culture and facilitates understanding retirement-related issues. Bassil (2018) reinforces the notion that social security education is an aspect of financial education, and the population must learn about the need to be included in the social security system, besides the actual dimension of the social security system and its relevance to workers and their families.

Note that social security education in the context of financial education is also vital for individual and collective decisions concerning spending and saving. It is an aspect addressed in the Brazilian Federal Constitution in its 6th article "Education, health, job, housing, leisure, safety, social security, mother and child protection, assistance to the homeless are social rights." Ejdelsberg and Ribeiro (2009) state that social security education is the most specific financial education literacy related to pension funds and their respective effects on individual wealth.

In 2003, the Ministry of Social Security implemented the *Programa de Educação Previdenciária (PEP)* [Social Security Education Program] to sensitize and educate society about its rights and duties toward social security. However, studies show a low level of financial education, especially among youths (Lusardi, Mitchell & Curto, 2010; Atkinson & Messy, 2012; Vieira, Kunkel, Campara & Paraboni, 2016).

Therefore, understanding that life is a succession of intertemporal choices and only intelligent choices enable individuals to deal with the challenges and opportunities throughout the different stages of life (Modigliani & Brumberg, 1954; Giannetti, 2005) and that a consistent social pact is needed to protect life and promote engaged citizenship, mobilizing a national effort to make the social security system to face future challenges (Magalhães & Alves, 2019), this study's objective was to devise actions to disseminate social security education in early childhood and understand how such actions can be disseminated to promote increased awareness of the topic.

For this study's purposes, early childhood is considered the period covering the first six complete years or 72 months of a child, according to article 2<sup>nd</sup> of Law No. 13.257, from March 8<sup>th</sup>, 2016, which establishes public policies for early childhood in Brazil.

## 2. Literature Review

### 2.1 Early Childhood and the Life Cycle Theory

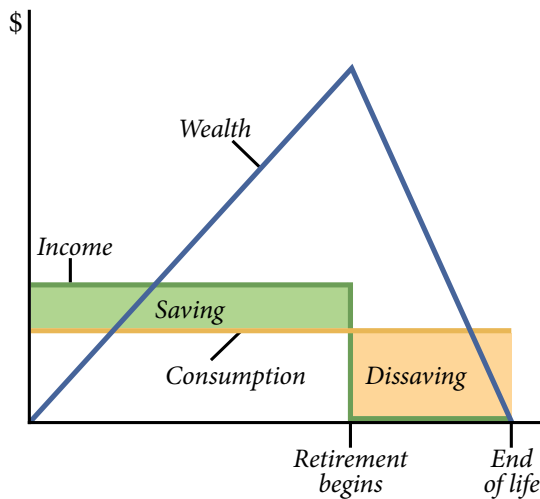
According to Oliveira Lima and Nóbile (2020), there is a consensus in the literature about the importance of the early years of life in human development, given the abundant number of synapses and neural connections taking place. For this reason, there are more efficient responses to stimuli provided to children during this phase, influencing an individual's life cycle. One of the conclusions is that critical and reflective awareness, inherent to scientific thinking, is based on the elementary logical structures of a child's thinking. Moreover, in this phase, intelligence and logic are connected with other cognitive functions such as memory, language, and perception (Piaget, 1993; Montangero et al., 1998; Oliveira Lima & Nóbile, 2020).

According to Papalia and Feldman (2013) and Gonçalves (2016), the characteristics of childhood differ according to age, presenting some specificities: (i) from birth to 3 years old, in this phase, in addition to rapid growth, the child acquires two skills that are critical for survival, the ability to walk and speak; (ii) from 3 to 6 is a phase when children rapidly acquire gross and fine motor skills, developing more complex action systems; and (iii) from 6 to 11 is a phase in which children are less egocentric and more competent to perform tasks that require logical reasoning such as establishing spatial relationships, causality, categorization, inductive and deductive thinking, and conservation. Piaget (1986) notes that acquisitions during childhood are essential for children to know themselves better, distinguish themselves from others, and interact socially.

As for social security, early childhood is usually a phase of life that is seldom explored. According to the Life Cycle Theory, which is often invoked to explain individuals' motivations for heeding long-term demands such as retirement and financial behavior as they age (Neri, 2007), people, in general, have a more or less defined pattern of wealth accumulation throughout their life cycle (Modigliani, 1986).

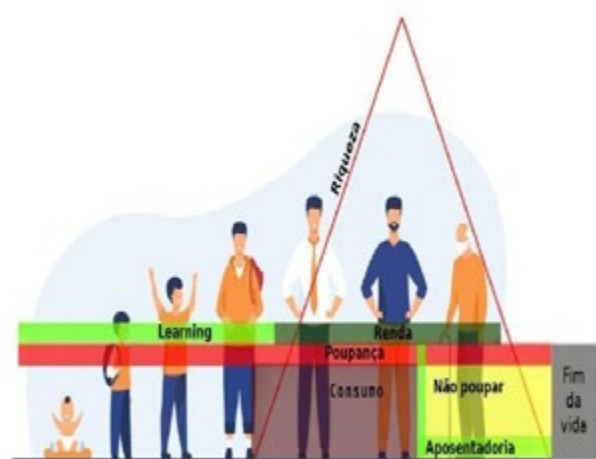
For the financial planner Levy (2019), an individual's involvement with finances can gradually start at the age of three, according to his/her understanding of money. The literature shows that the ideal age for developing a conscious spending mentality and financial education is between five to eight years old, as this is when cognitive relationships are formed, providing the basis for a child's development (Kassardjian, 2013).

Therefore, from this perspective, this study considers that the Life Cycle Theory can be revisited to address financial education even before an individual enters the “Income” phase (Income), a phase that can be called “Learning” (Figures 1 and 2).



**Figure 1.** Life Cycle Theory

Source: Modigliani (1986).



**Figure 2.** Life Cycle Theory adapted from Modigliani (1986)

Source: developed by the authors based on Modigliani (1986).

Godfrey (2013) suggests that a strategy to involve children with finances is considering the four main learning age groups: from 5 to 8; 9 to 12; 13 to 15; and from 16 to 18 years old, based on what is called “10 basic principles of money”, such as: (1) how to save; (2) how to keep money under control; (3) how to be rewarded what you deserve; (4) how to spend wisely; (5) how to talk about money; (6) how to deal with a limited budget; (7) how to invest; (8) how to exercise an entrepreneurial spirit; (9) how to deal with credit; and (10) how to use the money to change the world.

Godfrey (2013) and Kassardjian (2013) consider that one has to see whether teachings are appropriate to a child’s age, noting that 5 to 8-year-old children are usually extremely curious, literal, and energetic, while they may occasionally fail to pay attention and even show egocentrism. Kassardjian (2013) considers that the primary financial skills that should be encouraged at this age include counting coins and bills, understanding the purposes of money, learning the differences between wants and needs, and developing a sense of ethics and justice.

The literature is clear about the notion that learning starts with the beginning of life (Piaget, 1993; Montangero et al., 1998) and financial education should also begin at this stage (Godfrey, 2013; Kassardjian, 2013; Levy, 2019; Oliveira Lima & Nóbile, 2020). Thus, early childhood can be propitious to provide social security education in the context of children and at school.

Thus, early childhood is a good opportunity to encourage saving and planning behavior. The literature shows that a lack of financial education in the teaching environment may be one of the factors for youths to think excessively about the present, relegating the future to later. Such behavior results in a generation of millions of people who do not save, do not invest, and do not think about retirement as much as they should (Borges, 2014; Gallo, 2018).

## 2.2 Conscious Citizenship: financial and social security education

Financial education is a learning process associated with personal finances, in which society has the opportunity to gain a critical view of the use of money, enabling consumers to budget and manage their income, saving and investing (Cordeiro, Costa & Silva, 2018; Cordeiro, Maia & Silva, 2019). Gallery, Gallery, Brown, and Palm (2011, p.288) note that financial education concerns “the ability to make intelligent judgments and efficient decisions regarding money use and management.”

Pena (2008) and Silva (2012) define financial education as the individuals’ ability to make proper choices when managing their finances throughout the life cycle, seeking society’s material well-being. In practice, it comprises a large set of guidelines and clarifications on the proper behaviors and attitudes when planning and using personal financial resources.

According to the Organization for Economic Cooperation and Development (OCDE), financial education enables individuals and societies to improve their understanding of financial concepts and products, develop values and competencies to make well-informed choices, know where to seek help, and implement other actions to improve their well-being. Hence, financial education can more consistently contribute to responsible individuals and societies committed to the future (OECD, 2005).

One aspect of financial education concerns issues related to long-term savings and retirement, already in the final stages of the life cycle. According to information from the booklet, “*Educação Previdenciária: planeje seu futuro*” [Social Security Education: plan your future] prepared by *Programa de Educação Financeira e Previdenciária do Sebrae Previdência* [Sebrae Previdência’s Financial and Social Security Education Program], conscious and responsible spending throughout the life cycle favors enjoying pleasures in the present and ensuring security for the future. Therefore, knowing how to determine how much should be spent currently and how much should be saved and invested in pensions, ensuring a balance between these needs, is one of the most significant demonstrations of financial education that a person can give (Sebrae, 2012).

The Brazilian Federal Constitution from 1988, article 6<sup>th</sup>, determines that “Social rights include education, health, employment, housing, leisure, safety, social security, maternity and childhood protection, assistance to the needy, in the form of this Constitution,” showing the importance of the topic for the Brazilian society. Therefore, people must be educated regarding their rights and the purpose of the social security system, which demands monetary contributions from those who have paid jobs (Matos, 2012).

According to Magalhães and Alves (2019), social security protects citizens from the social risks faced throughout life. However, a portion of the population is unaware of such protection mechanisms and remains on the margins of social security coverage due to misinformation. Such misinformation undermines the social guarantees offered by the State, an essential step in building a more engaged society. Therefore, according to the authors above, promoting active citizenship toward social security issues represents a milestone to be achieved by all governmental spheres.

Ejdelsberg and Ribeiro (2009) note that the “financial education” term is used to refer to the knowledge an individual uses to make decisions concerning investments, while “social security education” implies more specific financial knowledge related to the functioning of pension funds and their impact on an individual’s wealth.

One of the initiatives developed to provide social security education to the Brazilian population is the *Programa de Educação Previdenciária (PEP)* [Social Security Education Program] developed by the Federal Government in 2000 to expand, disseminate, and propagate social security protection. The program consists of courses, individual guidance, and radio and TV programs, with the primary objective of informing and sensitizing about social security rights and duties (Magalhães & Alves, 2019).

As for its origin and legal basis, up to 2003, the PEP was called *Programa de Estabilidade Social* [Social Stability Program]. However, with the organizational structure of the *Instituto Nacional do Seguro Social* [National Institute of Social Security] approved by Decree No. 5,870, from August 8<sup>th</sup>, 2006, PEP ceased to be part of the Ministry of Social Security and became part of the INSS Board (Magalhães & Alves, 2019). Sales (2014) notes that this change was intended to promote awareness, foster debate, and create a “culture of transparency,” making Brazilians finally understand that the social security administration is theirs and everyone’s, making their participation more interesting, using a language and format that better reach the target audience.

The information provided on the INSS website shows that PEP seeks to include workers in the social service system, disseminate public policies, and promote engaged citizenship, among others, expanding the level of social security coverage and enabling citizens to understand and exercise their rights. Among the PEP actions, the individual assistance provided to citizens stands out. Such assistance is provided in public squares, fairs, exhibitions, collective actions, and efforts in rural areas or together with the assistance provided by Mobile Units (PREVBarco and PREVMóvel) (INSS, 2020).

Another initiative of the Brazilian government was the *Estratégia Nacional de Educação Financeira* (ENEF) [National Strategy for Financial Education], which integrates social security education to promote financial and social security education and promote active citizenship, the efficiency and dependability of the Brazilian financial system, and consumers’ conscious decision-making. Information provided on its website shows that ENEF is a mobilization around promoting actions concerning financial, insurance, social security, and tax education in Brazil. ENEF was created by Federal Decree No. 10,393/2020, the expectation of which is to promote active citizenship by providing and supporting actions that enable the population to make autonomous and conscious financial decisions.

Despite the measures implemented by PEP and other initiatives such as ENEF, people usually are not prepared to specifically plan their retirement. The level of financial education and knowledge among young people is low. Hence, social security planning is essential for young individuals, as they may need this resource in the future or even in the present.

### 2.3 Learning cycle: awakening learning in early childhood

Encouraging children to explore the world, whether through their senses or arts, by using colors, sounds, or pictures, is necessary to boost their creative potential and learning (Fröebel apud Cambi, 1999; Siufi, 2018). The previous authors note that playing is the first path toward learning, as it enables one to represent and understand the world better.

Fröebel (apud Cambi, 1999) and Siufi (2018) argue that kindergartens are not merely places to welcome children during early childhood but are places developed and structured with playful tasks, group activities (such as games) to sharpen the children’s interests for varied activities.

According to the previous authors, educators should give children opportunities to express spontaneous initiatives, showing that education is a process in which individuals develop their thinking, connecting the inner world to the outer world. Based on this notion, the more active a child’s mind, the more receptive s/he is to new knowledge (Fröebel apud Cambi, 1999; Siufi, 2018).

Siufi (2018) notes that for Piaget, each phase highlights certain forms of mental organization that suggest a relationship with games. Piaget argued that playful activities were the cradle of a child's intellectual activities; hence, they are an indispensable practice in the educational process. "[...] by engaging in types of play, children reflect their level of cognitive development and build up knowledge" (Piaget apud Kishimoto, 2011, p. 36). Therefore, as members of the social milieu, children need experiences and learning to build collective knowledge and social relationships (Siufi, 2018). Therefore, from the author's perspective, ludic culture enables experiences to be accumulated from the beginning of a child's life in which social interaction, in general, takes place.

According to Coelho (2000), one of the mechanisms used to materialize the learning process in early childhood is literature; considered an essential task to serve as a training agent, be it experienced in the spontaneous interaction between reader/book or in the dialogue between reader/text promoted at school. According to the author above, children's literature is the ideal agent to form a new and pressing mentality. However, transforming children's mentality is only possible if the adults who surround children (e.g., parents, educators, and teachers) are conscious of their responsibility, reorganize their knowledge, and assume the task (Machado, 2002; Tavares, 2010).

Machado (2002) argues that "[...] listening or reading stories initiates a child in the process of constructing language, ideas, values, and feelings, which help the child to develop his/her cultural background as an individual and citizen". Therefore, for children's literature to support the education of children, it needs to be adapted to the children's social and cultural context as well as that of the adults with whom they interact in the educational process and respect the stages of child development (Tavares, 2010).

From the learning cycle perspective, in which teaching is ordered in a sequence of annual grades (or levels), such a subject can be introduced in early childhood and addressed again in subsequent years. That is, teaching is applied over annual periods, which can be organized in cycles of two, three, four, or more years, considering the students' different paces (Perrenoud; 2004; Silva, 2017).

### 3. Methodological Procedures

The sequential mixed methods approach (Terrell, 2012; Mele & Belardinelli, 2019) was adopted to develop actions to disseminate social security education in early childhood, intending to promote citizens who are aware of the topic. This approach comprises five stages:

- i. The project was submitted to the Institutional Review Board at the University of Brasília (CEP/CHS- UnB);
- ii. An early childhood school was selected for the project after contacting the principal and pedagogical coordinator and establishing the conditions under which the workshops would take place;
- iii. The workshops were planned, establishing how the study would be applied, selecting the classes, and determining which resources would be used;
- iv. The author of the book chosen to be the main resource was contacted to adapt the book to the study's phenomenon (social security education in early education); and
- v. Workshops were performed and the information collected was systematized.

Because the study involved children's participation, the project was submitted to the Institutional Review Board at the University of Brasília (CEP/CHS-UnB). The research team met in mid-November 2020 to arrange the documents necessary for the project submission. As a result, the following documents were submitted on December 4<sup>th</sup>, 2020:

- a. Declaration of acknowledgment and agreement of the participant institution;
- b. Data use commitment statement;
- c. Confidentiality agreement;
- d. Consent term to use the minors' voices;
- e. Free and informed consent form to be signed by the parents or legal guardians;
- f. Cover page; and
- g. Detailed project.

On December 10<sup>th</sup>, 2020, the Institutional Review Board released the first opinion report, listing the following pending documents:

- h. Referral letter;
- i. Updated Schedule dd/mm/yyyy;
- j. Ethics review letter;
- k. CVs of all researchers involved;
- l. Assent form or justification for not sending it;
- m. Free and informed consent form including the e-mail and telephone of CEP/CHS, in addition to the first author's telephone;
- n. Data collection instrument or justification for not sending it;
- o. Cover page signed by the proposing institution; and
- p. Institutional Acceptance.

Additional information was submitted on February 4<sup>th</sup>, 2021, and the second opinion report made new recommendations:

- q. Free and informed consent form aimed at the underage participants; and
- r. Clarification of the methodological procedures and respective explanations.

After meeting all recommendations, the Institutional Review Board emitted its final opinion report on March 17<sup>th</sup>, 2021. Hence, the research team resumed the activities regarding the planning of the workshops. Note that the choice of the workshop as a methodological strategy was based on the literature. Accordingly, workshops are adopted among different populations to work with social movements (especially among younger individuals). Workshops are also used in other contexts where a participatory approach is intended to promote social transformation (Spink, Menegon, & Medrado, 2014).

In general terms, Spink, Menegon, and Medrado (2014) show that workshops are privileged ethical-political tools, as they facilitate the creation of dialogical spaces for symbolic exchanges and the co-construction of other possibilities of meanings concerning the topics discussed. Moreover, these authors consider that the effects of workshops are not limited to the uses researchers can make of them. However, there are also potential transformations in the discursive practices generated in such a context, in an inseparable fusion between what is conventionally called "collection of information and production of information."



### 3.1 The school object of this case study

Initially, the project provided that the workshops would be held in a child education unit of the Government of the Federal District (GDF) public education network. The objective was to analyze the children's skills involving financial and social security education, which would be addressed later, and understand how these children would be motivated to develop conscious citizenship. However, due to the Covid-19 pandemic, the GDF issued Decree No. 40,509 on March 11<sup>th</sup>, 2020, suspending educational activities in all public and private schools, universities, and colleges, among others. Decree No. 40,939, on July 2<sup>nd</sup>, 2020, authorized that face-to-face classes be resumed from July 27<sup>th</sup>, 2020, among private schools only. Thus, public schools in the Federal District remained closed until the completion of this study.

For this reason, we opted to conduct the workshops in a private school in the Federal District, addressing students of the same age group. Furthermore, because the project's conception involves the development of conscious citizenship among children and the age group determined in the original project would be addressed, the research team considered that the results would not be compromised. Hence, a child education school in Brasília was contacted via telephone, and a face-to-face meeting was held with the pedagogical coordinator in November 2020, when the project was presented.

Considering the possibility of using children's literature addressing the topic, the book *O Tesouro do Vovô* [Grandpa's Treasure] by Álvaro Borba Modernell, published by Mais Ativos, was chosen because it had already been launched in 2011 in the official program of the main supplementary pension plan event in Brazil, the Annual Congress of the Brazilian Association of Private Pension Funds (Abrapp).

To achieve this study's objectives, the pedagogical coordinator of the school, the object of this case study, determined that the workshop would be held in a studio already used for art classes. The research team verified that the space was adequate for the workshops. As the discussions on the implementation of the workshops advanced, it was established that the art teacher responsible for the studio would help conduct the workshop. Thus, she received training and was accompanied by the research team, and the approach previously planned was implemented together with resources defined for this study. Such resources included the book adapted to the research phenomenon (social security education in early childhood) and the systematization of the information collected.

### 3.2 Planning and Implementing the Workshops

Silveira Kroeff, Silva, and Maraschin (2016) consider workshops important research tools. The reason is that workshops create an interesting collective field to enhance a shared creative space and enable monitoring processes from a participatory perspective. For Siqueira and Siqueira (2020), workshops constitute a methodological device that enables the collective construction of knowledge and analysis of real life, implying the exercise of listening, which deconstructs the hierarchy of relationships and knowledge.

Hence, workshops in research addressing children consider them to be individuals in development, who play, fantasize, imagine, opine, criticize, suggest, and therefore assume language that is adequate to their specificities, according to their age, interests, and conditions for them to feel safe and welcome (Kroeff, Silva, & Maraschin, 2016; Siqueira & Siqueira, 2020).

In this movement, the literature states that a literary book is an object that potentially mediates conversations, the exchange of ideas and experiences, and may expand “the possibilities of knowing oneself, and others and a little more of the world beyond what is already know, to organize experiences, imagine and create, think, be moved, and appreciate the aesthetics of verbal and visual texts and their interrelationships” (Corsino, 2017; Siqueira & Siqueira, 2020).

Based on this perspective, the workshops were planned together with the team at the participating school. Thus, a face-to-face meeting was held on February 25<sup>th</sup>, 2021, to determine how the study would be applied, which classes would be selected, and what resources would be used, including the adaptation of the book *O Tesouro do Vovô* [Grandpa's Treasure] to the age range selected for the workshops.

Regarding which classes to select, the school, the object of this case study, separates early childhood education according to four age groups: (a) phase I, up to 3 years old; (b) phase II, between three and four; (c) phase III, between four and five; and (d) phase IV, between five and six. Based on the literature and the time restrictions, the workshop focused on a single phase IV group (five and six years old) composed of 12 children.

The children's verbal and non-verbal behaviors were recorded in all the workshops' first minutes, and we assessed how the children's understanding of the subject progressed before and after the workshops. The workshops were held on Thursdays, the day of the week reserved for art classes in that class. The workshops were held in the final 40 minutes of the class and were divided into four meetings of 50 minutes each (April 8<sup>th</sup>, 22<sup>nd</sup>, 29<sup>th</sup>, and May 6<sup>th</sup>, 2021), according to the dynamics shown in Table 1.

Table 1

**Workshop dynamics**

Date	Guidelines and Bases of Education	Theme Introduced	Resources Used
Workshop 1: 8/April/2021	EI03EF01) Express ideas, desires, and feelings regarding their experiences through oral and written language (spontaneous writing), photos, drawing, and other forms of expression.	Children's perception regarding the subject of social security based on the keywords: job, retirement contribution, government, past time, elderly, retirement, etc.  Life Cycle Theory: introduction of the concept of elderly using FaceAPP.	- A4 sheets; -printed photos; -voice recorder (mobile); -permanent markers; -watercolor or ink; and - FaceAPP.
Workshop 2: 22/April/2021	(EI03EO03) Expand interpersonal relationships, and develop participation and cooperation attitudes.  (EI03EO06) Express interest and respect toward different cultures and ways of life.	Retirement concept and a government's box (social security): reading the book and presenting three trees representing retirement.	-1 tree; -printed adapted book; -3 sheets of brown paper; - Álvaro's box (covered with brown paper); -permanent marker; e - video call with the author, Álvaro Borba Modernell, or a recorded video.
Workshop 3: 29/April/2021	(EI03EO04) Communicate ideas and feelings toward people and diverse groups.  (EI03EO07) Use strategies based on mutual respect to deal with conflicts in interactions with children and adults.	Relationship between work and retirement: the children would "work" for the school and get "paid" for the services provided.	-box; -play money; and -a camera (mobile).
Workshop 4: 6/May/2021	(EI03CG01) Create with the body diverse forms of expression of feelings, sensations, and emotions in everyday situations, games, dance, theater, and music.	Enjoying retirement: the children characterized as elderly are allowed to open the box, take the amount collected, and exchange it for benefits (games or snacks available).	-15 m of <i>chita</i> fabric; -Baby powder; -fruits and popcorn.

Source: developed by the authors.

*Workshops' commands.* Specific commands were established for each workshop. Teacher Gabriela helped us to implement the dynamics. In Workshop 1, the students were asked to sit in a circle to introduce themselves and discuss social security and their perception of it. This presentation revealed their level of understanding regarding the topic. In Workshop 2, the students received clarification regarding the introductory concepts concerning social security, read the book *O Tesouro do Vovô* [Grandpa's Treasure], and immediately after reading the book, a video call was held with the book's author for the children to learn more and clarify doubts. Workshop 3 dynamically addressed the relationship between work and retirement, after which the students were gathered, and "jobs" were distributed among them. At the end of this task, the children were "paid" for the jobs performed and left a portion of their pay in the "government's box." Finally, in Workshop 4, we gathered the children and characterized them as elderly, so they could get their pensions from the government's box and enjoy the benefit.

*Regarding the book's message.* The story unfolds in a family context in which the main character is Grandpa João. Through his grandson's lens, Grandpa has an inexhaustible treasure, conquered in adventures in his youth, because, unlike his grandson's parents, Grandpa does not work but always has some money to meet his needs. At this point, the concepts and fundamentals of social and complementary security, the sources of retirees' income, are presented. According to the book's author, *O Tesouro do Vovô* [Grandpa's Treasure] is recommended, among others, to introduce and support financial education at home and schools, highlighting social security education issues. In its original conception, the book is suggested for early childhood education, suitable for children from 7 years old. Hence, we contacted the writer and asked him about the possibility of adapting it to children between 4 and 6, according to the age range adopted by the participant school. Additionally, the author was asked about including concepts specific to social security, such as passive income, social security contribution, and retirement age, among others, to which Álvaro Borba Modernell readily accepted and responded.

*Involvement of teachers/researchers.* During the workshops, the school's art teacher and the researchers observed the children to assess their level of knowledge on the subject. With this knowledge, the remaining resources were implemented to encourage a reflection based on the knowledge provided, preserving the children's autonomy. At this stage, we understood that the children needed to appropriate the concepts addressed to be able to establish reasoning and an active posture according to their natural curiosity at this stage of life.

*Data Recording.* All the steps implemented in the workshops were duly recorded by the teacher and the researchers, highlighting details about the children's verbal and non-verbal behavior during the discussions. The findings at this point were compared to those recorded before the workshops. The objective was to verify whether the children's understanding of the subject had improved. Each workshop was recorded using the resources previously selected by the research team: drawings, audio recordings, and photos of the drawings were taken using the research team's mobiles, following the recommendations provided in the opinion report by the Institutional Review Board at the University of Brasília (CEP/CHS-UnB).

## 4. Results

Some keywords were introduced in the **first workshop** (i.e., retirement, bank, life cycle, money, old age) to identify the children's previous knowledge about the topic. The children were quite receptive, revealing favorable conditions to advance with the planned stages. Next, the children were asked to draw what they understood of these keywords; they were very excited, and Figure 3 presents the resulting images.



**Figure 3.** Images taken at Workshop 1

Source: material collected by the research team.

In this workshop, while the children were drawing, they would say: “I’m drawing my grandpa,” “look at my bank,” or “is it pretty?” In general, they became involved with the tasks proposed in Workshop 1, though a few were shy.

The **second workshop** started by reading the book *O Tesouro do Vovô* [Grandpa’s Treasure], properly adapted by Álvaro Borba Modernell, to the age range of the children participating in the workshop. The children were fascinated by the story of the little grandchild who believed that his grandpa had an inexhaustible treasure conquered in youthful adventures. They would become increasingly interested and excited with each page and when they commented on the book outcome. Next, the research team made a video call with the book’s author, and the children were allowed to ask questions. At this point, the children’s involvement and excitement with the story and the interaction with the book’s author became apparent (Figure 4).



**Figure 4.** Images taken at Workshop 2

Source: material collected by the research team.

The author kindly lent a mascot representing money (Figure 5), and the children could touch and see it. In the second workshop, the children also had contact with a blackberry sapling to understand how the cycle of life works, in which we are born, grow, age, and die. Again, the children were excited, played with the sapling branches, and wanted to see the plant up close.



**Figure 5.** Images collected in Workshop 2

Source: material collected by the research team.

The **third workshop** was reserved for showing the relationship between work and retirement. The children were “hired” to work in activities such as separating lids, folding pieces of fabric, and working on a make-believe office (Figure 6) and were duly remunerated. They interacted among them during the entire workshop, and we noted that they were committed to doing their jobs well because they knew that their “salary” depended on it.



**Figura 6.** Images collected in Workshop 3

Source: material collected by the research team.

In this workshop, the children were taken to the schoolyard to ask about the profession of the people there. They earned a bonus for asking about these people’s professions. When they returned to the classroom, they helped create the “government’s box – social security” and put part of the money they had received in this box. Most children were aware of the purpose of the money they were depositing and were curious about when they would receive the money back (Figure 7).



**Figure 7.** Images collected in Workshop 3

Source: material collected by the research team.

At this point, the children realized that the money they currently have is on account of their parents and know that they will have to work in the future; again, they were very receptive to the activity and became involved in each proposed task. The children also became excited with the idea of being able to retire someday, realizing that they needed to work before retiring.

We initiated the **fourth workshop** by reviewing the teachings and concepts learned in the previous three workshops: “what did we talk about in the previous meetings? What did we talk about?” Next, the children were asked, “What do you have to do to retire?” One of the children answered, “we have to get old,” and another mentioned, “work for many, many, many years.” Then, to make the moment more believable, the children were “transformed” into elderly individuals using baby powder and scarves made of *chita* fabric (Figure 8).



**Figure 8.** Images collected in Workshop 4

Source: material collected by the research team.

After being characterized as the elderly, the children opened the “government’s box,” and the retirement money was distributed. Then, the children were asked to organize in line while we brought them the snacks they could “buy” with the money they had just received. They were very excited about this workshop from the time they were characterized as elderly to the moment when they could enjoy their pensions. The snacks available for them to “buy” were popcorn and grape, which were chosen by the school to not interfere with their diets (Figure 9).



**Figure 9.** Imagens colhidas na Oficina 4

Source: maternal collected by the research team.

At the end of the workshops, the research team verified that the methodological strategy chosen with the workshops and the book *O Tesouro do Vovô* [Grandpa's Treasure] chosen as supporting literature corroborated the findings of previous studies, revealing that this experience can be an alternative to develop a public policy directed to teach social security education during early childhood.

#### 4.1 Developing conscious citizenship

During the workshops, we could observe the children's awakening to the topic and about being active citizens. For example, after the **first workshop**, when the children learned the keywords, precisely the word "elderly," the children started to refer to older individuals as the elderly because they were sensitized to the fact that calling them old was disrespectful.

In the **second** and **third workshops**, the children realized they would need to work to get a retirement pension. They also understood the concepts and keywords provided in the first and second workshops. For example, they reproduced what they learned in the third workshop and other conversations and dialogues. Such knowledge was perceived at the beginning of the workshop when the research team informed them what they would do at the time and asked, "what do you need to do to retire?" the children answered, "have money," "work," "save money in the bank," all of them talking at the same time.

In the **fourth workshop**, we recalled the teachings of the three previous meetings, reviewing the concepts learned: "what did we talk about in the last meetings? What did we chat about?" One of the children answered, "retirement," and we asked, "what is it?" They answered: "put money in a bank," "get money in the bank." To which we replied: "get your money when?" and one of the children answered: "when we become elderly." They also commented, "we were working in the INSS" (note that we explained a little about the INSS in the first workshop). Hence, we noticed that the content provided in the first workshop remained until the last workshop. The children mentioned that "INSS is where you keep money," another child said, "when we get older, we will work in a bank." These comments show that the children memorized the subject addressed during the workshops. We asked them what was meant by government, which was one of the keywords mentioned in the first workshop, and one of the children answered, "it is where we work."



For Piaget (1986), among the essential characteristics of the phase between 3 to 6 years old, which is the object of this study, is the ability of children to use their imagination and play make-believe when they show that they have appropriate much of knowledge that integrates their physical and social contexts. Furthermore, Piaget understands that what children acquire during this phase is essential to learn about themselves, distinguishing themselves from others, and interacting socially.

## 5. Final Considerations

This study's objective was to develop actions to disseminate social security education in early childhood and understand how children can be motivated to develop an awareness of social security. Thus, four pedagogical workshops were held between April and May 2021 with 12 children aged 5 and 6 enrolled in a kindergarten located in Brasília, Brazil.

Initially, the project determined that the workshops would be organized in a child education school that belonged to the public network of the Government of Federal District (GDF). The objective was to analyze the children's financial and social security education skills and understand how they could be motivated to develop an awareness about the topic. Due to the Covid-19 pandemic, the GDF issued Decree No. 40,509 on March 11<sup>th</sup>, 2020, suspending the educational activities of all public and private schools, universities, and colleges in the Federal District. Decree No. 40,939, on July 2<sup>nd</sup>, 2020, authorized that only the schools from the private network resumed their activities from July 27<sup>th</sup>; the public schools remained closed up to the conclusion of this study.

For this reason, as for the methodological choice, we opted for implementing the workshops in a private school, addressing the same age group. Considering that the project involves the development of conscious citizenship and that the children's age would be the same as proposed in the original model, we expected that the results would not be compromised, which in fact proved to be true.

To boost the children's creative ability and learn about the topic, we used the book *O Tesouro do Vovô* [Grandpa's Treasure] by Álvaro Borba Modernell, published by Mais Ativos, which the author himself correctly adapted to the age range addressed here. For this study's purposes, early childhood comprises the first complete six years or 72 months of a child's life, as provided by article 2<sup>nd</sup> of Law No. 13,257, from March 8<sup>th</sup>, 2016, which established the public policies for early childhood in Brazil.

The literature review showed a need to adapt the Life Cycle Theory to accommodate the "learning" phase based on the observation that the involvement of children with finances can start during early childhood. Experts consider this phase ideal for developing a conscious spending mentality and financial education because, in this period, cognitive relationships are developed and lay down the basis for a child's future development.

The literature review also showed that to promote children's creative abilities and learning, they need to be encouraged to learn about the world through their senses and arts, which can be explored through colors, shapes, sounds, or pictures. In addition, one of the mechanisms used to materialize the learning process in early childhood is literature; a fundamental task to serve as a training agent, whether in a spontaneous reader/book interaction or a reader/text dialogue encouraged at school. However, this task must be carried out by the adults who take care of children (i.e., parents, educators, and teachers), who, aware of their responsibility, reorganize their knowledge about the subject to do so.

At the end of the four workshops, we verified that this environment, used as the methodological choice, enabled the creation of a field of collective knowledge as children understood the topic of social security in a controlled environment with the due support of adults. Furthermore, this experience revealed an alternative to developing a public policy directed at social security education in early childhood.

Future studies are recommended to apply this methodology to age groups different from the one addressed here, considering each age specificity, in public schools to verify whether the findings corroborate the results presented here.

## References

- Atkinson, A., & Messy, F. A. (2012). Measuring financial literacy: Results of the OECD/International Network on Financial Education (INFE) pilot study.
- Bassil, R. L. (2018). Reformar não é suficiente. É preciso fomentar a cultura previdenciária. Disponível em: <https://www.capecf.com.br/site/noticias/reformar-nao-e-suficiente-e-preciso-fomentar-a-cultura-previdenciaria/> Acessado em abril de 2021.
- Borges, B.S. (2014). Juventude, trabalho e educação superior: a Geração Y em análise. 154 f. Tese (Doutorado em Ciências Humanas) - Universidade Federal de Uberlândia, Uberlândia, 2014. DOI <https://doi.org/10.14393/ufu.te.2014.3>
- Cambi, F. (1999). História da Pedagogia. (Trad) LORENCINI, Álvaro. São Paulo: Fundação Editora UNESP (FEU).
- Coelho, N. N. (2000). *Literatura infantil: teoria, análise, didática*. Moderna.
- Cohen, S., & Xiao, J. J. (1992). For parents particularly: Consumer socialization—children and money. *Childhood Education*, 69(1), 43-44.
- Cordeiro, N. J. N., Costa, M. G. V., & da Silva, M. N. (2018). Educação Financeira no Brasil: uma perspectiva panorâmica. *Ensino da Matemática em Debate*, 5(1), 69-84.
- Cordeiro, N. J. N., Maia, M. G. B., & Silva, C. B. P. (2019). O uso de histórias em quadrinhos para o ensino de Educação Financeira no ciclo de alfabetização. *TANGRAM-Revista de Educação Matemática*, 2(1), 03-20.
- Corsino, P. (2017). Infância e literatura: entre conceitos, palavras e imagens1. *Literatura, leitura e educação*, 207.
- D'Aquino, C., & Cerbasi, G. (2008). *Educação Financeira: como educar seus filhos*. Elsevier.
- Deaton, A. (2005). Franco Modigliani e a Teoria do Consumo do Ciclo de Vida. Programa de Pesquisa em Estudos de Desenvolvimento e Centro de Saúde e Bem-estar. Princeton University.
- Ejdelsberg, F. & Ribeiro, A. P. A. (2009). A Importância da Educação Previdenciária na Aposentadoria da População Brasileira.
- Gallery, N., Gallery, G., Brown, K., Furneaux, C., & Palm, C. (2011). Financial literacy and pension investment decisions. *Financial Accountability & Management*, 27(3), 286-307.
- Gallo, F. (2018). Millennials: geração imediatista que não liga para a aposentadoria. O Globo Economia [Entrevista com Bruno Dutra e Pollyana Brêtas]. Disponível em: <https://oglobo.globo.com/economia/millennials-geracao-imediatista-que-nao-liga-para-aposentadoria-23074915>. Acessado em agosto de 2020.

- Giannetti, E. (2005). O valor do amanhã: ensaio sobre a natureza dos juros. São Paulo, SP: Companhia das Letras.
- Godfrey, J. (2013). *Raising Financially Fit Kids, Revised*. Ten Speed Press.
- Gonçalves, J. P. (2016). Ciclo vital: início, desenvolvimento e fim da vida humana possíveis contribuições para educadores. *Revista Contexto & Educação*, 31(98), 79-110.
- Goyenko, R. Y., Holden, C. W., & Trzcinka, C. A. (2009). Do liquidity measures measure liquidity? *Journal of Financial Economics*, 92(2), 153-181.
- Grech, A. G. (2013). Assessing the sustainability of pension reforms in Europe. *Journal of International and Comparative Social Policy*, 29(2), 143-162.
- Levy, F. (2019). Educação financeira para crianças pode começar aos três anos. Disponível em: <https://noticias.r7.com/economia/economize/educacao-financeira-para-criancas-pode-comecar-aos-tres-anos-28122019>. Acessado em 08/04/2021.
- Lima, D. V., & Matias-Pereira, J. (2014). A dinâmica demográfica e a sustentabilidade do regime geral de previdência social brasileiro. *Revista de Administração Pública*, 48(4), 847- 868.
- Lusardi, A., Mitchell, O. S., & Curto, V. (2010). Financial literacy among the young. *Journal of consumer affairs*, 44(2), 358-380.
- Machado, A. M. (2002). *Como e por que ler os clássicos universais desde cedo*. Objetiva.
- Matos, M. A. (2012). Educação previdenciária como exercício de cidadania.
- Magalhaes, G. F., & Alves, W. M. (2019). Cidadania e políticas públicas no contexto do programa de educação previdenciária-PEP. *Revista do Direito Público*, 14(1), 10-25.
- McCormick, M. H., & Godsted, D. (2006). *Learning your monetary ABCs: The link between emergent literacy and early childhood financial literacy* (No. 2006-NFI-03). Indiana State University, Scott College of Business, Networks Financial Institute.
- Mele, V., & Belardinelli, P. (2019). Mixed methods in public administration research: Selecting, sequencing, and connecting. *Journal of Public Administration Research and Theory*, 29(2), 334-347.
- Melo, N. C. V., Teixeira, K. M. D., Ferreira, M. A. M., & Silva, N. M. (2018). Consumo de bens e serviços por idosos nos arranjos domiciliares unipessoal e residindo com o cônjuge. *SER Social: Revista do Programa de Pós-Graduação em Política Social da Universidade de Brasília*, v. 20, n. 42.
- Modigliani, F. (1986). Life cycle, individual thrift, and the wealth of nations. *Science*, 234(4777), 704-712.
- Modigliani, F., & Brumberg, R. (1954). Utility analysis and the consumption function: An interpretation of cross-section data. *Franco Modigliani*, 1(1), 388-436.
- Montangero, J., Maurice-Naville, D., Marques, T. B. I., & Becker, F. (1998). *Piaget, ou, A inteligência em evolução: sinopse cronológica e vocabulário*. Editora ArtMed.
- Neri, M. C. (2007). Renda, consumo e aposentadoria: evidências, atitudes e percepções.
- Neri, M. C., Carvalho, K. C., & Nascimento, M. (1999). Ciclo da vida e motivações financeiras (com especial atenção aos idosos brasileiros).
- Oliveira Lima, C. S., & Nóbile, M. F. (2020). A Primeira Infância e a construção das estruturas lógicas elementares: um olhar a partir da Neurociência e da Epistemologia Genética. *Revista Cocar*, 14(30).
- Papalia, D. E., & Feldman, R. D. (2013). Desenvolvimento humano. Artmed editora. Pena, R. P. (2008). Educação Financeira e previdenciária. SÃO PAULO: SP.
- Perrenoud, P. Os ciclos de aprendizagem. (2004). *Um caminho para combater o fracasso escolar*. Porto Alegre: Artmed Editora.

- Piaget, J. (1986). O nascimento da inteligência na criança *mental*, 258, 259.
- Piaget, J., & Inhelder, B. (1993). *A psicologia da criança*. Lisboa: Edições Asa, 1993.
- Sales, R. G. (2014). O direito de acesso à informação pública administrativa. *Rio de Janeiro: Lumen Juris*, 440.
- Savoia, J. R. F., Saito, A. T., & Santana, F. D. A. (2007). Paradigmas da educação financeira no Brasil. *Revista de Administração pública*, 41(6), 1121-1141.
- Sebrae. (2012) Educação Previdenciária: planeje seu futuro. Disponível em: [https://www.sebraeprevidencia.com.br/wp-content/uploads/2014/01/Cartilha-Educacao\\_Previdenciaria.pdf](https://www.sebraeprevidencia.com.br/wp-content/uploads/2014/01/Cartilha-Educacao_Previdenciaria.pdf). Acessado em 20/03/2021.
- Silva, E. A. S. R. G. (2019). A imprevidência da previdência : como o ciclo de vida afeta as escolhas de aposentadoria. Dissertação (Mestrado em Ciências Contábeis)— Universidade de Brasília, Brasília.
- Silva, G., Reis, D., Martins, E., & Fornari, M. (2019). Educação financeira para o planejamento da aposentadoria. *Revista Calafiori*, 3(2), 94-104.
- Silva, S. F. (2012). Escolha intertemporal em previdência privada: um estudo de caso num plano de contribuição variável. 75 f., il. Dissertação (Mestrado em Economia)— Universidade de Brasília, Brasília.
- Silveira Kroeff, R. F. S., da Silva, C. A. B., & Maraschin, C. (2016). Oficinas como estratégia metodológica de pesquisa-intervenção em processos envolvendo videogames. *Mnemosine*, 12(1).
- Siqueira, R. B., & Siqueira, R. B. A. (2020). Oficinas: estratégia metodológica para a pesquisa dialógica com crianças. *Revista Brasileira de Pesquisa (Auto) biográfica*, 5(15), 1212-1228.
- Silva, A. A. S. (2017). *A política do ciclo de aprendizagem nos anos iniciais do ensino fundamental: uma análise a partir do ciclo de políticas*. Tese (Doutorado). Universidade Federal de Pernambuco (UFPE). Programa de Pós Graduação em Educação. 256 f.
- Siufi, C. J. D. S. (2018). *A ludicidade e a inquiribilidade no processo da educação musical na primeira infância* (Doctoral dissertation, Universidade de São Paulo).
- Souza, C. C. Z. D. (2016). O ensino da matemática financeira na escola numa perspectiva de educação para vida.
- Spink, M. J., Menegon, V. M., & Medrado, B. (2014). Oficinas como estratégia de pesquisa: articulações teórico-metodológicas e aplicações ético-políticas. *Psicologia & Sociedade*, 26(1), 32-43.
- Suiter, M., & Meszaros, B. (2005). Teaching about saving and investing in the elementary and middle school grades. *Social Education*, 69(2), 92-95.
- Tavares, J. D. C. F. (2010). *A importância da literatura infantil na educação de infância* (Bachelor's thesis).
- Terrell, S. R. (2012). Mixed-methods research methodologies. *Qualitative report*, 17(1), 254-280.
- Vieira, K. M., Kunkel, F. R., Campara, J. P., & Paraboni, A. L. (2016). Alfabetização financeira dos jovens universitários rio-grandenses. *Desenvolve Revista de Gestão do Unilasalle*, 5(1), 107-133.
- Vieira, G. S., & Pessoa, C. A. (2020). Educação Financeira pelo mundo: Como se organizam as Estratégias Nacionais? Financial education around the world: how are national strategies organized? *Educação Matemática Pesquisa: Revista do Programa de Estudos Pós-Graduados em Educação Matemática*, 22(2), 658-688.
- Zhao, Q., & Mi, H. (2019). Evaluation on the sustainability of urban public pension system in China. *Sustainability*, 11(5), 1418.