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Original Contribution

AN INNOVATIVE MODEL FOR FORMING FINANCIAL LITERACY

Denitsa P. Zagorcheva-Koycheva

DEPARTMENT OF PEDAGOGY AND EDUCATIONAL MANAGEMENT, FACULTY OF PEDAGOGY, KONSTANTIN PRESLAVSKY UNIVERSITY OF SHUMEN, SHUMEN 9712, 115, UNIVERSITETSKA STR., E-MAIL: d.zagorcheva@shu.bg

ABSTRACT: *This scientific article presents an innovative model for the formation of financial literacy. The model is based on cognitive development, focusing on the contact environment with which children/individuals of different age groups interact. The model presents the understanding of money as a personal value, which should be formed in the relevant age range. Financial literacy, through upbringing and training, should be built on the basis of the cognitive development and mental capabilities of children and adults.*

KEY WORDS: *Financial literacy, Early financial literacy, Financial literacy model, Upbringing and training, Importance of money, Educational management, Cognitive development.*

The general understanding of money and finances is that they are a matter for "grown-ups." However, the formation of primary financial literacy should start in early childhood. Financial education for children and students must be tailored to their cognitive development. Today, more than ever, financial literacy is focusing attention on itself, because the quality and standard of living depend on us.

The formation of general financial literacy in children and students has become an increasingly relevant topic in recent years. The development of technologies, the globalization of financial relations, economic development, the mobility of money, and the speed of transactions are just a small part of the reasons provoking a new way of thinking and financial preparation to be adequate to the changes, development, and expansion of the financial sector. The last financial crisis was also an indicator of the "lagging" financial literacy and the lack of an adequate response to dynamic economic changes [5].

The understanding of general financial literacy provokes such behavior among individuals, through which they balance their financial claims and their financial capabilities.

Financial literacy and financial inclusion are important for achieving long-term financial well-being and financial sustainability of the population and households. This in turn contributes to maintaining the financial stability of the financial system as a whole and the country's economy [2].

There is no single definition for „financial literacy“. The European Commission defines it as the ability of consumers and small business owners to understand retail financial products with a view to making an informed decision [1].

The Organization for Economic Co-operation and Development (OECD) defines financial literacy as "a process by which financial consumers/investors improve their understanding of financial products, concepts and risks and, through information, instruction and/or objective advice, develop the skills and confidence to better understand financial risks and opportunities to make informed choices, know where to seek help, and take other effective actions to improve their financial well-being." [4].

Financial literacy is the personal responsibility of every citizen. But it should also be the subject of a targeted state policy. Increasing the level of financial literacy of citizens can be viewed, on the one hand, as an investment in the development of human resources, and on the other, as a factor in increasing public welfare and ensuring sustainable economic and social development [3].

The formation of financial literacy is largely achieved through professional and life experience as individuals grow up. However, self-education and experience present us with a number of difficult decisions, often leading to wrong results and losses. Ensuring good financial literacy in children and students is a foundation for the formation of specific values that will assist them in the future as adults with realization, starting a business, making serious financial decisions, family planning, and more.

The thesis that financial education should start as early as possible to prepare us as adults for various life challenges is becoming increasingly prevalent. In this sense, financial learning is most appropriately implemented as a holistic process that begins in early childhood. Undoubtedly, the family is the basis for the formation of certain financial knowledge and values. However, the family environment alone would limit the child's knowledge to the knowledge of parents and relatives and their actions. This will form a palette of values in different children, which will not always be directed in the right direction. This necessitates that primary financial literacy be implemented through the educational system, using uniform models aimed at building an appropriate foundation of knowledge.

The article presents an original author's model for the formation of financial literacy, applicable to any age.

AGE	CONTACT ENVIRONMENT	FORMATION OF PERSONAL VALUES
up to 7 years	PARENTS KINDERGARTEN SCHOOL	**Money IMPORTANT** (like the toy we fall asleep with)
from 7 to 11 years	PARENTS SCHOOL	**Money "COSTS"** (lollipop, doll, cinema ...)
from 11 to 15 years	PARENTS FRIENDS SCHOOL	**Money is VALUE** according to needs (a bicycle, an electronic game ...)
from 15 to 18 years	PARENTS FRIENDS SCHOOL	**Money is WEALTH** (their real value is assessed)
from 18 to 21 years	PARENTS FRIENDS INDIVIDUALLY	**Money is an OPPORTUNITY** (advantage over friends, the opportunity to choose ...)
over 21 years	INDIVIDUALLY	**Money is a TOOL ...**

Fig. 1. Matrix of the Model for the formation of financial literacy [5]

The first column of the matrix presents the age ranges. Six age groups are proposed, with the first four including children and students, and the last two groups covering individuals over 18 years old. The division of age groups for children and students is aligned with their cognitive development and the stage of education at that corresponding age. For individuals over 18, the groups are divided into those from 18 to 21 years and those over 21 years. The division for individuals in the 18 to 21 age range is made taking into account certain social prerequisites for this period—such as assuming responsibilities as an adult, realizing maturity, entering the labor market, and others. These new challenges for adults require time to be grasped.

The second column defines the contact environment for the respective age. The contact environment is defined in four main groups:

- parents (family environment);
- kindergarten or school (educational environment);
- friends;
- individually.

The educational environment in this case includes the kindergarten or school. For the purposes of the model, the educational environment is limited to kindergartens and schools as educational institutions, in view of the mandatory education. The educational environment as a contact setting appears in the first four groups of the model.

Friends as a contact environment are included as mandatory in three groups of the model, covering the age range from 11 to 21 years.

The individual determination of the contact environment is included only for individuals who have reached the age of majority. Individual determination of the contact environment should be understood as a free choice of a contact environment according to the preferences and interests of the individuals. Here, they may choose to include some of the previous contact environments, such as parents and friends, but they can also include colleagues (work environment), living environment, or an environment formed by participation in groups (sports, dancing, hobbies, etc.).

The third column shows the formation of values. The formation of values is represented through 'money,' as money is the basis for the material association of finance. The definition of money is formulated individually for each age group.

The formation of values for money management should start as early as with children. Despite this, we can only start talking about 'money' to children when they reach 4–5 years old. At this age, children do not appreciate the value of money, nor do they recognize the written number—they choose based on color, picture, and shape (something familiar or convenient for play) [6].

Age group:	**up to 7 years**
Environment:	**parents, kindergarten, school**
Formation of personal value:	**MONEY IS IMPORTANT!**

Initial financial literacy as the first stage should begin at the earliest when the child turns 4 years old. After this age, the child already has a different cognitive development – accepts reality, copies behavior, has emotional associations with objects and activities. It is precisely in the age range from 4 to 7 years that we need to teach children that “money is important”. At this age, children do not yet have a formed understanding of material value. Getting to know that money is a value should be done through a more abstract presentation – comparing it with things that are truly “valuable” to the child. We can compare them with the most expensive thing – the stuffed dog, without which he cannot fall asleep, the favorite doll that he plays with and so on. One exception is important in this case: when deriving money as a value, animate/living beings (mother, grandmother, pet, etc.) should not be used for comparison – let the children accept the money materially.

At this age stage of value formation, children usually have two main groups as a contact environment - parents (family environment) and kindergarten/school (educational environment). Creating the understanding that "money is important" can be carried out in both contact groups. It is more convenient to start in the family environment, where the child's favorite objects and toys are usually present, with which we will liken the value of money.

In the age range from 4 to 7 years, children most often make their first "purchases". Often this process is just handing over the coins/banknotes by the child to the seller. Usually this is an action desired by the child himself when purchasing an object or treat that is his personal need (lollipop, chocolate, etc.). In this process, the child's action has only emotional, but not material understanding.

In parallel with home education at this age, education in the kindergarten or the school should also start. At this age, children are taught to count, recognize colors and shapes. Samples of money can be used as didactic materials in the educational process to stimulate the child's cognitive interest.

The child up to the age of 7 must accept that „MONEY IS IMPORTANT"!

Age group:	**from 7 to 11 years old**
Environment:	**parents, school**
Formation of personal value:	**MONEY "COSTS"!**

In the age range of 7 to 11 years, the financial literacy of students requires them to have a general idea of the origin of money, to handle money, and to link money to their needs.

From 7 to 11 years old, children are already attending school. At this age, they not only start counting but also write and recognize numbers. They acknowledge their magnitude and know which digit is larger or smaller. It is precisely at this age that we must teach children that money 'has value' (or 'is worth something'). How much it 'is worth' will be measured through their needs—chocolate, a snack, a doll, the cinema, etc.

Children in this age range are already handling money. They typically have an amount that covers their needs for the day (their usual necessities). During this period, children begin to make choices when spending money, but these choices are still provoked more emotionally rather than materially.

The formation of financial literacy in this age group can also be carried out by the two contact groups - the family environment and school. In the family environment, habits for using and storing money should be established, spending choices should be encouraged, and needs should be reconciled with available funds.In the educational process, money can be included in mathematics tasks, as well as as didactic material in other subjects.

By the age of 11, children should have acquired the necessary knowledge and experience that will allow them to accept money as material.

Students from 7 to 11 years of age should understand that MONEY „COSTS"!

Age group:	**from 11 to 15 years old**
Environment:	**parents, friends, school**
Formation of personal value:	**MONEY IS VALUE!**

At the age of 11 to 15, students' financial literacy requires them to have an idea of the origin of money and to be able to distribute their available funds according to their needs.

From 11 to 15 years old - children have already developed their mathematical knowledge more broadly and this gives them a basis to assess money as a value. Here, value is already measured by needs - at this age, children already have clear needs - a bicycle, a computer, an electronic game, etc. At this age, the choice when spending money begins to be motivated materially (as a value), in line with opportunities, and this displaces emotional choices.

In this age range, we already have three contact groups that participate in the formation of financial knowledge and literacy - family, school and friends.

At this age, children should have mastered sufficient skills for distributing and storing personal funds. This is a reason for parents to take a new step in financial education by enabling their children to manage their weekly or even monthly means of upkeep funds (allowance). Providing larger amounts (e.g., weekly upkeep funds) allows children to plan and control their spending. In this way, habits for saving money are gradually built. Saving and putting aside funds, even for a short period of time (up to a few days), requires greater responsibility. The child assesses this responsibility as trust in their capabilities and decisions.

In the educational process, the understanding of money, transactions, and prices can now be included as terms, history, and facts in appropriate school subjects.

When we talk about financial literacy in this age group, a third contact group appears—friends. The circle of friends is becoming increasingly important for the emotional and intellectual development of the child. In this contact group, the formation of financial literacy is not achieved through upbringing or instruction. Here, it is formed naturally, through observation, comparison, mistakes, and experience accumulation.

Students aged 11 to 15 years must understand that „MONEY IS VALUE“!

Age group:	**from 15 to 18 years old**
Environment:	**parents, friends, school**
Formation of personal value:	**MONEY IS WEALTH!**

From 15 to 18 years old – children should already accept money as wealth. Now they can assess its real value beyond their needs.

And in this age group, as a bearer of financial literacy, we will include the three contact groups – family, school, friends. In this age group, the role changes in terms of the formation of financial knowledge. The family environment is still an important participant, but the approach is no longer mentoring and educational, but oriented towards the factual knowledge of financial concepts and practical application.

During this period, it is good to open the child's own bank account, which he has the right to manage and use. Let him decide for himself what to use the scholarship received. Offer the performance of household/household activities for a fee, etc.

In the process of studying at school, in this age period, financial literacy can be offered as an independent subject or as part of an existing one. The formation of financial literacy can also be ensured through other subjects in the field of economics and finance. The goal of the training is for students to gain knowledge about both financial concepts and overall financial processes – lending, saving, investing, budgeting, etc.

Friends in this age group have a more significant presence and greater influence in social life. To accept money as wealth, we must value it beyond our personal needs. In this age period, young people compare their needs and opportunities with those of others, deriving criteria for a level of „sufficient“ („enough”). The idea of „sufficient money“ („enough money”) should overlap with the desired standard of living of the person, in this case, the child.[1]

Students aged 15 to 18 years must understand that 'MONEY IS WEALTH'!

Age group:	**from 18 to 21 years old**
Environment:	**parents, friends, individual**
Formation of personal value:	**MONEY IS AN OPPORTUNITY!**

[1] The proposed definition for the term of „sufficient money“ („enough money”) in the article is the author's and does not aim to fully define the term, but only to clarify the context.

From 18 to 21 years old, money should already be perceived as an opportunity. The family environment is still a factor, but with a very weak influence in the formation of financial literacy. If the person works and has his own income, but still lives in the same household as his parents, he can be engaged to participate in the common expenses.

Friends continue to be a factor in the formation of financial literacy during this period. Again, the formation of financial literacy is based on observation, comparison, mistakes and accumulation of experience - advantage in the company, leadership, opportunities for choice, own car, ensuring personal comfort.

The individual contact environment is an environment that the person chooses himself. It can be formed by colleagues at work, people with common interests (sports, hobbies, dancing, etc.)

At the age of 18 to 21, the financial literacy of the participants requires that they have a clear idea of money, understand different financial concepts, and be able to manage their personal funds.

People from 18 to 21 years old need to understand that „MONEY IS AN OPPORTUNITY“!

Age group:	**over 21 years old**
Environment:	**individual**
Formation of personal value:	**MONEY IS A TOOL!**

After 21 years, we must accept money as a tool. In this age group, we are already witnessing purposeful and deliberate actions. Again, the formation of financial literacy is based on observation, comparison, mistakes and accumulation of experience, but already based on personal realization, personal income and personal opportunities.

After 21 years, everyone individually determines their standard of living and the social level at which they want to continue to develop. In this age period, the result of the self-determined level of „sufficient money“ („enough money”) is observed.

Very often, part of the financial knowledge from the previous age group manifests itself after 21 years or is never reached. This is the specificity of the last two levels of the model. In these two levels, we are no longer considering children, but adults, and how, when and whether a higher level of financial literacy will be reached at all depends on the efforts made and the knowledge acquired in the cognitive period of development in the field of finance.

After 21 years, the financial literacy of the participants requires that they be able to manage not only their personal funds, but the funds of the entire household. This requires that they be able to plan their personal finances, prioritize their expenses, assess financial risks, etc.

After 21 years – If we have learned the lessons of previous years – “MONEY IS A TOOL”!

If we start learning "financial literacy" later, the stages will be the same, but it will take longer because we will have to not only learn, but also change the bad habits we have created. This will put us in the role of adults with the financial literacy of children.

The presented model for the formation of financial literacy emphasizes the role of a purposeful and continuous process that should start in early childhood. Although financial literacy is the personal responsibility of every citizen, it also requires an active, coordinated policy of the state. Increasing this level of knowledge is seen as an investment in human resources and is a prerequisite for achieving public welfare, as well as for sustainable economic and social development.

The model is based on the cognitive development of children and the contact environment with which they interact at different ages. Through clearly distinguished stages, the model translates the individual from accepting money as "important" (up to 7 years) and "value" (7–15 years), through understanding it as "wealth" (15–18 years) and "opportunity" (18–21 years), to perceiving it as a "tool" (after 21 years). This gradual upgrade eliminates the risks of wrong decisions and losses that often accompany self-education and personal experience.

The overall model is presented by the author in the book „Model for the Formation of Financial Literacy as a Key Competency for the Development of Education“ [5].

Ensuring good financial literacy among children and students is the basis for the formation of lasting values and skills related to money management. These knowledge and habits are important for successful implementation in adulthood - from starting a business and family planning to making complex financial decisions. Training in "Financial Literacy", through appropriate methods at different ages, is a prerequisite for building a financially stable and responsible society.

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