

# Development of Activity Sheet Based on Executive Function in Financial Attitude Encouragement for Young Children

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**Abstract.** This study aims to improve the quality of learning in early childhood financial literacy courses by developing executive function-based learning activities to stimulate financial attitudes in early childhood. Specifically, this study aims to provide financial literacy activities through executive function-based learning, in addition, this development can complement and enrich teaching materials in financial literacy courses and contribute to increasing learning activities in PAUD related to financial literacy. This study uses the 4-D (Four D) development model, a learning tool development model. This model was developed by S. Thagarajan, Dorothy S. Semmel, and Melvyn I. Semmel. The 4D development model consists of 4 main stages, namely: (1) Define (Limitation), (2) Design (Design), (3) Develop (Development) and Disseminate (Dissemination) Based on the results of the validity test questionnaire, it can be said that the activity sheets is categorized as valid with a validity percentage of 85,5%, this activity sheets as whole has a good validity.

**Keywords:** Financial literacy, financial attitudes, activities, early childhood

## 1 Introduction

Financial literacy is one of the most crucial components of basic literacy, particularly for the Alpha generation (born between 2010 and 2025). Financial literacy is important for the Alpha generation because it allows them to make good financial decisions in the future while also managing money successfully in an increasingly complex and challenging society. Children of the Alpha generation can better prepare for various economic scenarios in their personal and professional lives if they learn financial literacy.

This talent is considered necessary since it contributes to economic growth [7]. Introducing financial literacy at a young age will instill in children the ability to manage their finances properly and correctly in the future. However, financial literacy is more than just understanding the concept; it also includes the ability to analyze needs and priorities, allowing children to make simpler and wiser financial decisions and apply them in everyday life. Financial literacy encompasses information, abilities, and beliefs that are demonstrated via attitudes and behavior.

One of the most important aspects of financial literacy to promote is financial attitude, often known as financial attitude. Financial attitude is a state of mind and unique judgment that guides

people's economic decisions. According to the International Network on Financial Education (OECD, 2020), even if a person has the necessary knowledge and skills to act financially, their attitude will still impact their decision. Arifin [15] was defined as a financial state, or the ability to manage and regulate one's finances. Early childhood and elementary education simplify financial attitudes by educating children to make sound, firm, and responsible decisions, as well as to be critical and innovative, hardworking and thrifty, and non-consumptive [1]. Careful and critical in understanding what is required, not what is desired. Firm and responsible for decisions made, as well as self-control over actions taken [10].

It is critical to develop a financial attitude through meaningful experiences or activities that use mental/cognitive potential. Executive function (EF) is one of the cognitive abilities or skills. This EF involves the ability to organize, monitor, and manage information and behavior, as well as self-regulation to attain goals [2] [8]. Several studies have shown that EF is related to self-control as a form of financial attitude. The activation can be achieved through play-based learning activities that follow the right early childhood learning methodology and technique [3] [13].

The Early Childhood Education Teacher Education Study Program at the Universitas Negeri Medan, as a supplier of potential early childhood educators, should provide students with a variety of learning experiences in the form of knowledge, attitudes, and skills in designing and implementing learning activities for children. This is related to one of the educator competencies listed in Law No 14, 2005, which has pedagogical and professional competence. These qualities relate to educators' ability to implement teaching and learning activities, as well as their ability to manage learning [11]. Educators can produce instructional materials to assist students in learning tasks, which is one aspect of learning management. Nowadays, literacy learning is encouraged in early childhood education, so prospective instructors must understand the most efficient approaches to teaching content, stimulating developmental elements, and influencing children's behavior [9] [14]. One of them is how students might optimize their mental capacity by using executive functions in the learning activities provided.

According to the explanation, the researcher is interested in creating executive function-based learning activities to promote financial attitudes in early childhood. The learning activities that will be developed are expected to enrich the teaching materials in the financial literacy course for early childhood in the PG PAUD Study Program, State University of Medan, as well as to serve as a teaching material for PAUD teachers to improve financial literacy, particularly in the financial attitude element of early childhood aged 5-6 years [4].

## **2 Research Method**

The research that will be done is development-related. Development research aims to produce and develop prototypes, designs, learning materials, media, methodologies, and educational assessment tools for learning. According to specialists, development research is a systematic study targeted at creating products that increase learning outcomes. This research produces a product titled Development of Activity Sheet Based on Executive Function in Financial Attitude Encouragement for Young Children [5].

The development model in this study uses the 4-D (Four D) development model, a learning device development model. This model was developed by S. Thagarajan, Dorothy S. Semmel, and Melvyn I. Semmel (1974). The 4D development model consists of 4 main stages, namely:

(1) Define (Limitation), (2) Design (Design), (3) Develop (Development) and Disseminate (Dissemination), or adapted from the 4-P Model, namely Definition, Design, Development, and Dissemination [12].

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Data for the research were gathered through: a) a documentation study to identify important documents required in early childhood language learning and development, c) a validation questionnaire for experts or expert judgment, and d) a student response questionnaire to measure product effectiveness and evaluate product quality.

There are two stages to analyze data; First, validity analysis. Content validity through interactive media experts using a construct validity approach. Validity analysis through the average score on aspects of teaching materials developed with the formula:

$$R = \frac{\sum_{i=1}^n V_i}{n}$$

Description:

R = the average assessment result

V<sub>i</sub> = the score of the-i validator assessment result

n = number validators

### 3 Results and Discussion

This study's development model is based on the 4D development model. This study creates financial literacy activities, particularly in the development of financial attitudes/financial attitudes that are founded on and incorporate executive function interventions in early childhood (5-6 years).

#### 3.1 Define Stage

This stage is used to identify and define the demands of the product being developed, as well as to collect information about it. This involved conducting a preliminary study and reviewing the literature on financial attitudes. The researcher took anecdotal notes and discourse with the team of lecturers in the PG PAUD FIP UNIMED study program. At this point, the researcher determines what material will be generated through play activities and then changes or selects the material based on the child's developmental milestones or student characteristics. In addition to a review of the feasibility and requirements for product development through questions like (1) does the activity influence the variable to be examined (2) is the activity supported by suitable facilities (3) whether the product is appropriate for usage by instructors,

parents, and students. Several schools have taught students about daily routines or habits. They are more and more programmed to develop children's comprehension and awareness of finance as well as inspire financial attitudes that are part of financial literacy. The following step is to conduct observations on possible users of the activities to be produced. This activity's target audience is early childhood students aged 5-6 years old, who will be directed by teachers. As a result, the activities will be designed with a play approach in mind, considering the peculiarities of AUD. The next stage is to examine the material to be developed. The level of breadth and depth of the subject refers to the learning achievements of the foundation phase as reported in the National Curriculum Information System (SKIN).

### **3.2 Design Stage**

This design stage is intended to be utilized in early childhood education and development lectures. This stage tries to create a prototype for learning activities. Systematic design activities begin with developing the game's concept and content. The concept and material are combined into a storyboard that is subsequently packaged in a guidebook for ease of use.

### **3.3 Content Selection**

According to the concept analysis and learning objective analysis that was carried out in the previous definition stage, the development of this activity will be divided into three (3) basic executive function elements that also contain elements of financial attitude, namely; responsibility, ability to restrain desires (patient), and careful.

Each game has a game title identity, goals, advantages linked with the abilities expected to develop throughout the game, conditioning of the area or environment where the game will take place, tools and media required, and game procedures.

### **3.4 Format Selection**

The learning exercises, which take the form of games, are structured in a guidebook with the dimensions of B5 17.5 cm x 25 cm, which is typically used for educational publications and conforms to ISO 216. The paper orientation is portrait. The fonts used in the guidebook vary based on the area or chapter. Several captions, headings, and subheadings use different font types. To avoid boredom, try a more ornate yet easy-to-read typeface. The cover features a blue sky background with white and green accents, as well as photos of a child and a money jar. On the cover, there is also a writing executive function, which characterizes the handbook, and offers learning exercises in the form of play and habits. According to Gross (2018), the color blue conveys communication and relaxation, and it is a universally popular color. Even some of the world's most recognized brands employ blue to convey dependability, authority, and harmonic quality. Pictures of children and financial topics are included on the front cover to represent and improve the information provided in the guidebook.

### 3.5 Storyboard

**Table 1. Storyboard Guide Book**





Frame	Information
 <p><b>Fig. 1. Cover Frame</b></p>	<p>Figure 1 is the front page of the guidebook.</p> <p>The front cover is designed with a blue sky background combined with white and green and contains a picture of a child and a money storage container. On the cover there is also executive function writing which characterizes the guidebook which contains learning activities</p>
 <p><b>Fig. 2. Introduction</b></p>	<p>In the introduction, general information is provided regarding the guidebook to attract the interest of readers or users.</p>
 <p><b>Fig. 3. Table of Content</b></p>	<p>The table of contents contains sections of the manual accompanied by page numbers arranged sequentially, making it easier for users to find information again without looking at the book page by page.</p>
 <p><b>Fig. 4. Chapter of Executive Function</b></p>	<p>In this section, an explanation is provided regarding the executive function which is the basis of the main activities being developed.</p> <p>This is the central component of the research aims. The play activities are explained sequentially in the guidebook, beginning with the name of the game, followed by an</p>



Fig. 5. Activity Sheets

explanation of the objectives and benefits associated with financial attitude stimulation for early childhood, as well as the setting of the place and conditions to ensure the activities' effectiveness and efficiency, the tools and media used, and the procedures for the activities/play activities.

## 4 Conclusion

Based on the results of the research on the development of executive function-based activities, it was found that; 1. Elements related to executive function that are the basis for determining activities are the ability to remember (working memory), self-control (inhibitory control), and cognitive flexibility (cognitive flexibility). 2. Elements of financial attitude in early childhood in this study are described in the attitude of responsibility, the ability to restrain desires (patient), and careful (careful) focus. 3. This research activity was designed to improve executive function through game activities and habits. Children are facilitated through engaging activities and observed using validated instruments. The value of validity is 85,5%, which means the activity sheets are suitable for use in young children to encourage financial attitudes.

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