

THE DEVELOPMENT OF KWARTALINO FINANCIAL EDUCATION PROGRAM FOR KINDERGARTEN LEARNERS

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ABSTRACT

Teaching basic personal financial concepts and principles even among young learners is beneficial not only for the child, but also for the family and the entire society. This study aimed to develop an integrated financial education program for kindergarten learners. The study employed developmental research following three stages (analysis, design, and development) which include document analysis and curriculum mapping of three international financial education standards to the Philippine Kindergarten Curriculum, expert consultations, and teacher interviews. The developed financial education program is entitled “Kwartalino (*kwarta* meaning money and *talino* which means intelligent) Financial Education Program”. It has five essential components; (i) Program Overview; (ii) Matrix of Kwartalino Lessons, Kinder Learning Domains and Competencies for Three International Financial Education Standards; (iii) Teacher’s Instructional Plan; (iv) Learner’s Workbook; and (v) Kwartalino Financial Education Stories. Result show that experts rated the program with high content validity (4.79 out of 5) with high content validity coefficient of 0.95. Expert raters also show moderate agreement on the financial lessons and workbook indicative that the developed financial education program can be utilized for classroom instruction to teach financial literacy among kindergarten learners.

Keywords: financial literacy, financial education, financial education program, financial education program development, kindergarten learners, Kwartalino Financial Education Program

INTRODUCTION

The advent of the 21st century demands children to be equipped with necessary knowledge, skills, and attitude in order to live, thrive, and succeed in the modern society. Educators, specialists, and advocates believe that one of the many essential life skills that children need to acquire and develop is financial literacy (Ali et al., 2016). Financial literacy is a person’s knowledge, understanding, and skills to manage their personal finances (Child and Youth Finance International [CYFI], 2016).

Significant reasons are offered which emphasize the need to enhance the financial literacy of the youth and young children. First, international studies show that there is a low level of financial literacy among young people (Organization for Economic Co-operation and Development [OECD], 2014; Mandell, 2008). Financial illiteracy affects an individual, his or her family, the society in which one lives, and the general economy of a nation (Pang, 2016; Tezel, 2015). Second, young children learn about financial matters early in life in several different sources and whatever they learn in childhood is believed to have a great influence in

their beliefs, values, and attitude towards money (Birbili & Kontopoulou, 2015; Sherraden et al., 2011; McCormick, 2009). Thus, they must be provided with opportunities to explore financial lessons in a manner which is developmentally appropriate for them. Third, with the progress of technology, the internet, and different media platforms, the financial system is continuously evolving and changing, making it increasingly complex to access and navigate without adequate knowledge on financial matters (Fabris & Luburić, 2016; Knoote et al., 2016; Johnston, 2005). Children must be equipped with skills they will need to successfully take charge of their financial and economic future (McCormick, 2009; OECD, n.d.). Lastly, children are considered as economic agents who participate as active consumers of different products and services (Suiter & Meszaros, 2005). They need proper guidance regarding personal finance and correct money-management.

For these reasons, many are promoting the inclusion of financial education programs in schools (Asia-Pacific Economic Cooperation [APEC], 2014). The OECD (2005) recommends that financial education should start at school and that it should start as early as possible. In the international arena, many countries have already developed national strategies and frameworks regarding the inclusion of financial education in schools. Others have already established financial education standards and have already included financial literacy education as part of their curriculum. However, in Asia, financial literacy is still a relatively new area of research and policy discussion and that financial education programs are still lagging in the region (Yoshino et al., 2015).

In the Philippine context, incorporating financial literacy and financial education is still fairly new. In the Republic Act 10922 known as the “Economic and Financial Literacy Act”, it states, “The State recognizes the growth potential of the country through a financially literate people who make sound financial decisions, mobilize savings, and contribute ideas on improving economic and financial policies and programs”. With this law, the National Economic and Development Authority (NEDA) is mandated to take the lead and shall “plan, initiate, execute, and encourage knowledge-expanding activities on economic and financial literacy”. Further, this law also encouraged the Department of Education (DepEd) to take necessary steps in order to make economic and financial education an integral part of formal learning. Though there are few initiatives that push for the advancement of financial literacy and financial education, more effort is needed for its successful inclusion in the national curriculum. Thus, this present study was conducted to develop a financial education program for kindergarten learners aimed to develop young learners’ financial literacy in terms of their financial knowledge, skills, and attitude.

Purpose of the Research Study

This study aimed to develop a financial education program which can be integrated in the Philippine Kindergarten Curriculum. Specifically, the study sought to answer the following objectives:

- i) Design and develop a financial education program for kindergarten learners.
- ii) Establish the content validity of the developed financial education program.
- iii) Test the inter-rater reliability of the developed financial education program.

Conceptual Framework

The study sought to develop a financial education program for kindergarten learners. Depicted in Figure 1 is the conceptual framework that served as the basis and guide in the development of a financial education program.

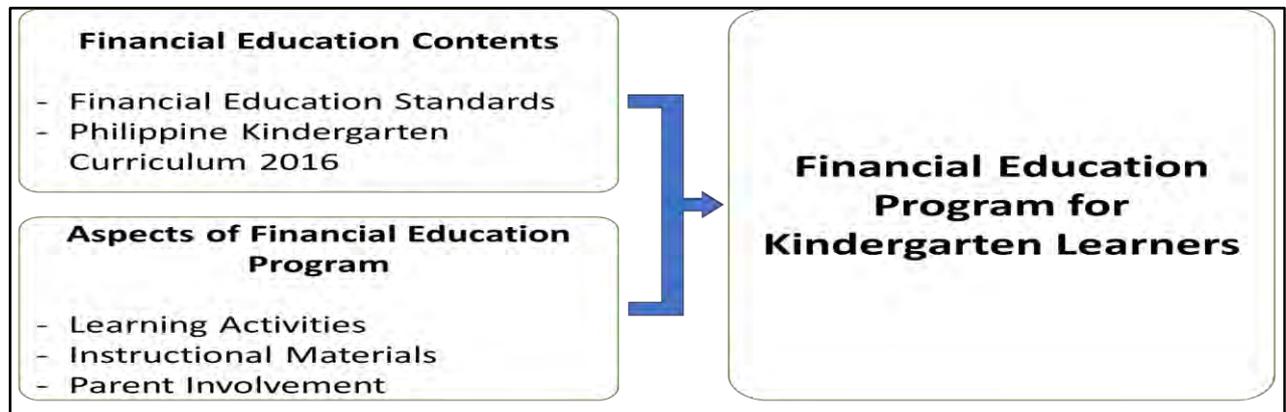


Figure 1. Conceptual Framework

A good financial education program should have a solid curriculum (APEC, 2014). Financial education topics, lessons, concepts, and terms should be developmentally appropriate for kinder learners. It should address their characteristics, capabilities, and interests. In developing a financial education program, available and well-recognized financial education standards must be considered for identifying appropriate financial education lessons for kindergarten learners (Totenhagen et al., 2015; Jump\$Start, 2010).

Three international financial education standards were used as benchmarks in the selection of financial topics included in the program. These are the; (i) Jump\$Start Coalition's National Curriculum in K – 12 Personal Finance Education 2015; (ii) the CYFI Education Learning Framework for Financial Education 2012; and (iii) and the National Financial Literacy Framework & Standards by the National Financial Educators' Council (NFEC). All of these financial education standards include financial topics for the kindergarten level. Moreover, these standards also present themes, categories, learning outcomes, knowledge statements, performance statements, big ideas, essential questions, and skills that are integral in developing a relevant financial education program for kindergarten learners.

The second factor under financial education contents is the Philippine Kindergarten Curriculum 2016. Since the financial education program is intended for Filipino kindergarten learners, it is equally important to take into consideration the content, scope, and sequence of the kindergarten curriculum. This is to be able to map and match the financial lessons with the contents of the curriculum. Likewise, considering the contents of the kinder curriculum enables a seamless integration of the financial topics with the lessons taught in the kinder curriculum. Advocates of financial education suggest that it can be implemented using an integrated curriculum approach (Gold, 2016). Further, Morris (2003) underscores that meaningful and relevant connections of knowledge are made between other areas of learning and in other real-life settings when effective curriculum integration is utilized.

Other aspects of financial education that must be considered are the learning activities, instructional materials, and parent involvement in teaching financial lessons to kinder learners. In teaching financial education lessons, learning activities should be based on effective methods and strategies which include; (i) opportunity to engage with the “real world” financial context; (ii) inquiry-based learning; (iii) critical engagement and discussion; (iv) problem-solving approaches; (v) cross-curricular approaches; (vi) activity-based approaches including the use of role play and simulations; (vii) cooperative learning experiences; (viii) use of children’s literature; (ix) use of children’s pretense/socio-dramatic play; and (x) involving families and the community (Birbili & Kontopoulou, 2015; OECD, n.d.). These and other learner-centered approach can all be utilized to ensure that the learning activities in the financial education program are appropriate for the learners’ abilities, ignites their interest, and motivates them to learn the financial education lessons.

Another aspect in developing a financial education program are the instructional materials that will support its implementation. Available instructional material is an imperative in teaching learners about financial literacy (APEC, 2014; McCormick, 2009). Teachers should be provided with effective financial literacy materials, curricula, and resources (Financial Literacy & Education Commission [FLEC], 2006). The Jump\$tart Coalition (2010) reported best practices for personal financial education and underscores that instructional materials that should be used in teaching:

- i) use plain language;
- ii) technical terms, abbreviation, and acronyms are clearly defined;
- iii) materials require little additional teacher preparation;
- iv) materials include student learning objectives and assessment tools, background information, lesson plans, and activities that stimulate student participation;
- v) materials appeal to contemporary student interests and identify resources for additional information;
- vi) lesson plans and activities address a variety of learning styles, such as visual, auditory, touch and group interaction;
- vii) materials identify target educational settings, such as traditional classrooms, home schooling, after-school or youth clubs, rural and urban settings;
- viii) materials identify the intended user, such as teacher, parent, or student;
- ix) the reading level is appropriate for the target group;
- x) materials reflect diversity in areas such as age, race, gender, and household income; and
- xi) text, illustrations, and learning activities are culturally sensitive and appropriate for the target groups. text is translated if necessary.

These guidelines must be considered in the design and development of instructional materials to support the implementation of the financial education program. Different instructional materials should cater to different users such as the teacher, kindergarten learners, and parents. Further, these instructional materials should complement each other, enrich children’s experiences, kindle their financial awareness and understanding, and enhance the financial literacy of the learners.

Finally, parent involvement in teaching financial education lessons among young children is also considered. The role of the parents and of the entire family in teaching the child financial lessons, personal money management skills, attitudes, and values plays a significant part in teaching financial lessons to children. This is in support to Birbili and Kontopoulou (2015) who believe that in teaching children financial lessons, one should consider a family approach. Parents and other family members are the considered as the primary source of financial knowledge among children (Lusardi et al., 2010; Williams, 2010). According to Kolodziej et al. (2014), children observes and acquires financial knowledge from their parents and other significant people. Financial education programs should include parents and encourage them to take active participation in teaching and imparting financial knowledge, skills, and attitude to their children.

METHODOLOGY

The study aimed to develop a financial education program for kindergarten learners. The study employed developmental research following three major stages; (i) Analysis; (ii) Design; and (iii) Development (Richey et al., 2004). According to Richey and Klein (2005) different research methodologies can be utilized in different phases in developmental research. This study used qualitative method in data gathering with quantitative method in validating the financial education program.

Participants of the Study

Purposive sampling was used to identify appropriate respondents in the development of the financial education program. According to Johnston and Christensen (2014), in purposive sampling, the researcher identifies and sets specific characteristics or criteria of a population of interest. Once the researcher has located individual who possess those set of criteria, the researcher asks the individuals to participate in the study. Additionally, in developmental research, common participants included in the study are designers, developers, and clients (Richey & Klein, 2005).

Experts in the field of early childhood education program as well as in the field of economics teaching were included in the analysis and development stage of the study. The experts have the following profile; (i) more than ten years in the field of expertise; (ii) active members in the academe/university; (iii) have developed a number of instructional materials in their field of expertise; (iv) have evaluated instructional materials in their field of specialization; and (v) have been a consultant in curriculum development and implementation.

Kindergarten teachers were included in the design stage of the study. These teachers have the following professional profile; (i) all of the teachers are teaching at public elementary school in Manila; (ii) they have at least five years of teaching experience; (iii) all of the teachers have graduated with a Bachelor's Degree in Education; and (iv) all of the teachers are also taking their Master's Degree in Early Childhood Education.

Stages of the Development

Analysis

Literature reviews was conducted to identify different financial education programs and standards for young children. Document analysis of the three financial education standards; (i) JumpStart Coalition's National Curriculum in K – 12 Personal Finance Education 2015; (ii) the CYFI Education Learning Framework for Financial Education 2012; and (iii) the National Financial Literacy Framework and Standards by the National Financial Educators' Council (NFEC) were done to identify financial topics, lessons, and concepts which are similar for each standards. After this, experts determined appropriate financial education lessons for kinder learners based on three international financial education standards. The kindergarten curriculum, specifically - its contents, scope, and sequence, was also analyzed in order to determine in which quarter it is appropriate to integrate the financial education lessons. Identified lessons were then mapped in the Philippine Kindergarten Curriculum 2016.

Design

After identifying suitable financial lessons for kindergarten learners, kinder teachers were interviewed to determine other essential components for the financial education program. The interview questions were based on literature reviews which included topics on methods and strategies of delivery of financial education programs; developmentally appropriate learning activities and instructional materials; and parent involvement in teaching financial lessons. The interview question guide was also validated by ECE experts. Answers given by the kindergarten teachers were transcribed and analyzed and became the basis for the elements, design, and structure of the financial education program.

Development

Data gathered from the analysis stage and design stage became the basis for identifying the components of the financial education program. After identifying the financial education lessons based on the analysis stage, a matrix of financial lessons integrated with the kinder learning domains and financial education competencies for three international financial education standards was crafted. Other essential components of the financial education program were also crafted based on the answers of kindergarten teachers which include financial learning activities, instructional materials, and activities with parent involvement.

Content validation of the financial education program was done using the instrument which was adapted from Pineda's (2014) study and was appropriately modified to assess the developed financial education program. This instrument was validated by experts in the field of ECE. The instrument assessed the two components of the program – financial lessons and the learner's workbook. The financial lessons were evaluated in the following areas; (i) contents; (ii) lesson objectives; (iii) instructional materials; (iv) financial story; (v) lesson

procedures; and vi) lesson presentation. The second part of the instrument evaluates the learner's workbook based on the following criteria; (i) financial concepts presented; (ii) learning activities; (iii) lay-out; (iv) illustrations, (v) presentation and organization; and (vi) language used. Arithmetic mean determined the average value of the experts' scores to determine the acceptability for the criteria in each area evaluated. Verbal interpretations of the mean rating were as shown in Table 1 were based on the standards used by Pantig (2013).

Table 1
Verbal Interpretation of the Mean Rating

Range	Verbal Interpretation
4.50 – 5.00	Highly Acceptable
3.50 – 4.49	Acceptable
2.50 – 3.49	Moderately Acceptable
1.50 – 2.49	Slightly Acceptable
1.00 – 1.49	Not Acceptable

Aiken's content validity coefficient was also computed for the developed financial education program. Finally, the inter-rater reliability (Kappa) was computed to determine the degree of agreement among the experts who evaluated the financial education program. Verbal interpretations of the Kappa value as shown in Table 2 were based on the standards presented by Viera and Garrett (2005).

Table 2
Verbal interpretation of Kappa Value

Range	Verbal Interpretation
0.01 - 0.20	Slight Agreement
0.21 - 0.40	Fair Agreement
0.41 - 0.60	Moderate Agreement
0.61 - 0.80	Substantial Agreement
0.81 - 1.00	Almost Perfect Agreement

RESULTS AND DISCUSSION

Presented in this section is the result of the study which is divided according to the three stages undertaken to develop the financial education program; (i) analysis; (ii) design; and (iii) development.

Analysis Stage

Three international standards for financial education were used by the experts to identify suitable financial education lessons for Filipino kindergarten learners. After identifying financial education lessons from the three standards, these were mapped into the Philippine Kindergarten Curriculum 2016. The identified lessons can be seamlessly integrated in the Second Quarter of the curriculum with the theme – My Family. Seven lessons are included in the financial education program for kindergarten learners. Table 3 shows the identified

financial lessons, its integration to the Philippine Kindergarten Curriculum 2016, and the lessons included for the financial education program.

Table 3
Identified Financial Lessons, Integration to the Philippine Kindergarten Curriculum 2016, and Lessons included for the Financial Education Program

Identified Financial Lessons based on International Financial Education Standards			Integration to the Philippine Kindergarten Curriculum 2016	Lessons included for the Financial Education Program
CYFI	Jump\$art	NFEC		
Money and Use a. Understands the things they can buy and the things they need their parents or caregivers to buy.	Financial Decision a. People have different needs and wants.	Financial Psychology We may need to choose between needs and wants.	Week 11 – I belong to a family. Lesson: I am a member of a family. Lesson Objective: Identify needs of the family and how it can be provided.	Identifying Needs and Wants
Money and Use a. Appreciates the importance of sharing resources with others. Risk and Reward a. Understands the benefits of sharing.	Spending and Saving a. There are two kinds of sharing: Something that does not have to be returned is a gift. Something borrowed must be returned. Credit and Debt: a. Sometimes people can borrow money or an item if they promise to return it.	Credit, Debt & Loans When we borrow something, we must give it back.	Week 12 – We care for one another in our family Lesson: We care for one another by sharing. Lesson Objective: Tell, identify, and show the importance of sharing – e.g. sharing food, toys, and clothes.	Sharing
Money and Use a. Understands where they get money from and what they need it for. Planning and Budgeting a. Understands the different ways in which they can acquire money.	Employment and Income a. People have jobs that pay money.	Income, Careers, Business & Entrepreneurship We do various tasks as a way to earn money. We can earn money by having a job or starting a business.	Week 13 – My family members help one another by doing different roles. Lesson: Some of my family members work to earn for a living for the family. Lesson Objective: Identify needs of the family and how it can be provided.	Working to earn money
Risk and Reward a. Understands the consequences of being careless with possessions.	Risk Management and Insurance a. There are ways to keep possessions, including money,	Risk Management & Insurance Making good choices will help keep you safe.	Week 14 – My family provides my shelter. Lesson: My family	Protecting oneself and possessions

(Continue)

	safely at home and other places.		practices safety measures at home. Lesson Objective: Take care of one's belongings.	
Money and Use a. Understands the things they can buy and the things they need their parents to buy.	Spending and Saving a. Different goods or services have different prices. b. People trade money to buy goods or services (tasks performed by others)	None	Week 15 – My family provides for my food Lesson: There are certain kinds of foods that I should not eat much of. Lesson Objective: Identify needs of the family and how it can be provided.	Spending money
Risk and Reward a. Practice the habit of saving for special things. b. Understands the benefits of saving.	Spending and Saving a. Saving means choosing not to spend money today in order to buy something in the future.	Accounts, Savings & Budgets Sometimes we need to wait to get what we want. Saving means choosing to have something later instead of having it now.	Week 17 – My family celebrates special occasions. Lesson: My family celebrates birthdays. Lesson Objective: Identify needs of the family and how it can be provided.	Saving money
Risk and Reward a. Understands the benefits of sharing.	Spending and Saving a. One way to help others is by giving money.	None	Week 19 – My family participates in the community activities Lesson: My family helps other families in the barangay (town). Lesson Objective: Show willingness to help others in times of need.	Helping others by sharing and giving/donating money or things

One of the most important things to consider in developing a financial education program is identifying the contents based on a well-recognized financial education standards (Totenhagen et al., 2015; JumpStart, 2010). This is to ensure that the lessons provided in the program are appropriate and suitable to the abilities of the intended target learners. Building upon established financial education standards ensures that the financial competencies, objectives, and learning outcomes contained in the program are attainable and achievable by the learners.

In this study, three financial education standards were used as the basis for identifying suitable financial education lessons for kindergarten learners. These are; (i) the CYFI Education Learning Framework for Financial Education (2012); (ii) JumpStart Coalition's National Curriculum in K – 12 Personal Finance Education (2015); (iii) and the National Financial Literacy Framework & Standards by the National Financial Educators' Council

(NFEC). These international standards are widely used in different countries and states in crafting national financial education strategies, frameworks, curricula, and programs.

Seven financial education lessons were identified by the experts. These are; (i) identifying wants and needs; (ii) sharing; (iii) working to earn money; (iv) protecting oneself and possessions; (v) spending money; (vi) saving money; and (vii) helping others by sharing and giving/donating money or things. These lessons are also included in some of the available financial education programs for young learners such as the JA Ourselves program by Junior Achievement, Kiddynamics authored by Meszaros et al. (2015) and provided by the Federal Reserve Bank of St. Louis, the Financial Fitness for Life by the Council for Economics Education (CEE) and the Money Smart for Young People series sponsored by the Federal Deposit Insurance Corporation (FDIC).

The seven financial lessons are mapped and integrated in the second quarter of the Philippine Kindergarten Curriculum 2016 with the theme – My Family. This quarter focuses on topics regarding the child and his/her family. Integrating financial education lessons under this quarter is in accordance to Birbili and Kontopoulou (2015) who emphasize that in developing a financial education for children, one should consider the family financial context of children that influence their prior knowledge of financial matters.

Result of this study is in line with the majority in the field of financial education which espouse the integration of financial concepts and practices across different subject areas as suitable and appropriate in the elementary level (Walstad et al., 2017; Birbili & Kontopoulou, 2015; APEC, 2014; OECD, 2012; OECD, 2008; Van Fossen, 2011; Hilgert & Hogarth, 2003). Integrating financial education lessons across curriculum yield several benefits. First, learners are given opportunities to enhance their decision-making skills and understand real-world behaviors (Walstad, et al., 2017). Second, it can give varied real-life contexts across a range of different curricular subjects which can capture students' interest and therefore facilitate and enhance learning (APEC, 2014; OECD, 2012; FLEC, 2006). Third, integration of financial education in different subject areas allows teachers to teach their subjects and at the same time expose learners to valuable financial literacy lesson, thus avoiding classroom time to be wasted (FLEC, 2006). In addition, teachers in the elementary school tend to be generalists and integrating financial lessons in the subjects they teach is much easier (Walstad et al., 2017).

Design Stage

Kindergarten teachers were interviewed on the aspects that must be considered when developing a financial education program for kindergarten learners. The aspects considered were based on literature reviews regarding financial education. Based on the answers of the kindergarten teachers, elements of financial education emerged which were included in the development of the program. Table 4 shows the aspects of financial education program based on literature review, kindergarten teachers' answers, and elements of financial education.

Table 4

Aspects of Financial Education Program based on Literature Review, Kindergarten Teachers' Answers and Elements of Financial Education

Aspects of a Financial Education Program based on Literature Review	Kindergarten Teachers' (KT) Answers	Elements of Financial Education
1. Learning Activities and Materials	KT2: Simulation, role playing, guided group activities supervised by the teacher.	<ul style="list-style-type: none"> • Hands-on, interactive, experiential, and play-based learning activities • Varied instructional and learning materials
	KT4: Role playing... experiential and play-based. Also, simulation. Paper-and-pen like coloring activities and worksheets.	
	KT6: Story-telling...Dramatic plays... Games and manipulatives and big books	
2. Use of Literature	KT1: Yes, to serve as a springboard and to get their attention. Especially if they experience the story, it becomes interactive.	<ul style="list-style-type: none"> • Use of teacher-made stories based on Filipino culture and context. • Stories must be based on the child's experience and must be relatable.
	KT3: Yes, story-telling is very important. It good if it is based on the Filipino culture.	
	KT5: Yes mam. The more they can relate and experience the story, the more they will understand the lessons. When we use story as a springboard, the more their attention is caught.	
3. Parent Involvement	KT2: Yes, because in all things, parents are the first teachers.	<ul style="list-style-type: none"> • Inclusion of activities with parent involvement
	KT3: It's a big thing. Teachers and parents should go hand-in-hand so children will not be confused.	
	KT4: Yes. The parents should know and follow up what the teacher has taught.	

A vital aspect in developing financial education program for early childhood is the learning activities and materials for teaching and learning. Kindergarten teachers answered that in teaching financial lessons among young learners, the use of simulations, dramatic and role plays, games and group activities can be utilized. They also emphasize that activities should be experiential and play-based. These answers are related to the idea of Birbili and Kontopoulou (2015) that recommend the use of practical, interactive, experiential learning, and hands-on activities. Collins and Odders-White (2015) also explain that experiential learning means that students learn through active participation in classroom activities which are personally relevant and meaningful to them. Additionally, financial education should also include hands-on activities linked to real-life contexts (Lau et al., 2010; OECD, 2008). The teachers' answers are also related to APEC (2014) which emphasizes that hands-on, participatory learning are very effective in terms of learner engagement and information retention. This is supported by the report of Ci Research (2012) which reveals that financial education interventions that are interactive, relevant, and fun make young learners better engaged in the classroom.

Aside from learning activities, kindergarten teachers also answered that instructional materials such as manipulatives, big books, and worksheets are also useful in teaching

financial lessons. Teachers' answers are in relation of FLEC (2006) that also underscored the importance of effective financial literacy materials, curricula, and resources in developing a financial education program. This is also consistent to the idea that instructional materials and resources is an necessary in teaching learners about financial literacy (APEC, 2014; McCormick, 2009).

Another aspect in developing financial education program for early childhood is the use of literature. Based on the kindergarten teachers' answers, stories can be used as springboard to teach financial education lessons. This is similar to Singapore's initiatives and strategies in teaching age-appropriate financial literacy lessons which also uses storytelling in kindergarten (Koh, 2016). Kinder teachers also state that when stories are used as a springboard for introducing financial education lessons, children will pay attention. Tisdell et al. (2013) also mention that stories make the financial topic personal to the learners and thus, it can create engagement among learners. Further, Van Fossen (2011) also stresses that the use of children's literature can motivate learners to learn economic concepts.

Kindergarten teachers also emphasized that stories should be based on the experiences of the learners so that they can relate to it and they can understand the lesson better. They also pointed out that stories should be based on Filipino culture. This supports the idea that children's literature can be used to present and teach different possibilities to learners as most of children's storybooks contain descriptions of different home situations and contexts (Department for Education and Employment [DfEE], 2000). Likewise, use of stories that are relevant to the financial topic being discussed can make the lesson more applicable to the learners' everyday financial lives (Tisdell et al., 2013). Also, use of stories to approach poverty and wealth in a non-stereotypical way can also introduce financial concepts among learners in a way that they would be able to relate their life experiences (Birbili & Kontopoulou, 2015).

Finally, kindergarten teachers emphasize the importance of parent involvement in teaching financial education lessons among young learners. They pointed out that parents are the first teachers of children. This view supports other studies which has shown that one of the most influential source of financial knowledge among children comes from the family, more specifically, the parents (Lusardi et al., 2010; Williams, 2010). Children acquire financial knowledge and skills by observing their parents' behavior and other significant people in their environment (Kolodziej et al., 2014). The teachers also emphasize that teachers and parents should work together and that parents should make a follow-up on what has been taught in school. These roles of parents in teaching financial lessons among young learners is in agreement to the idea that parents have a part in the explicit and implicit learning of children regarding money, that is, the direct financial instruction of parents help in shaping a child's financial behavior and that parents should also serve as role models (Van Campenhout, 2015).

Development Stage

A financial education program was developed after taking into consideration the results gained from the analysis and design stage. Result from the analysis stage provided the suitable financial education lessons that can be integrated in the Philippine Kindergarten Curriculum. Result from the design stage provided the elements that must be considered in developing a financial education program.

The developed financial education program is entitled “Kwartalino Financial Education Program” intended for Filipino kindergarten learners. Kwartalino comes from two Filipino words; “kwarta” meaning money, and “talino” meaning intelligent. The title captures the overall goal of the program which is to develop money-intelligent Filipino children. Table 5 shows the components of the developed financial education program and its description.

Table 5

Components of the Financial Education Program and Description

Components of the Financial Education Program	Description
1. Program Overview	This document provides kinder teachers with a description of the program and a detailed explanation of the other essential components of the program. (Appendix A)
2. Matrix of Kwartalino lessons, Kinder Learning Domains, and Competencies for the Three International Financial Education Standards.	This document provides teachers with detailed description of how the financial literacy lessons are mapped and integrated in the Philippine Kinder Curriculum. It also contains the financial education lesson objectives as well as the competencies integration from the different learning domains (subject areas). (Appendix B)
3. Teacher’s Instructional Plan	This is a compilation of lesson plans on how to execute and deliver the seven financial education lessons. (Appendix C)
4. Kwartalino Learner’s Workbook	This workbook is meant to be answered by the kinder learners. The learner’s workbook contains three activities for each lesson. The first activity is meant to be answered with the guidance of the teacher. The second activity is meant to be answered at home with the assistance of the parents. The last activity is meant to be answered by the learners independently or with minimal supervision from the parents. (Appendix D)
5. Kwartalino Financial Education Stories	These are seven originally developed short stories designed to teach financial lessons as well as incorporating language, literacy, and communication competencies included in the kinder curriculum. Mother-tongue language is used in the stories. In addition, the plot in each story takes into consideration the real-life context of the Filipino kinder learners. (Appendix E)

FLEC (2006) recommends that teachers should be provided with effective financial literacy materials, curricula, and resources. In the Kwartalino financial education program, teachers are provided with a complete package that can help them in teaching financial lessons which are developmentally appropriate for kindergarten learners. The different components of the program are based on the result of the analysis and design stage of the present study.

The first component of the financial education program is the Program Overview. This document serves as a guide for teachers on the; (i) description of the program; and (ii) the essential components of the program and their descriptions. The second component is the Matrix of Kwartalino lessons, Kinder Learning Domains, and Competencies for the Three International Financial Education Standards. This component is based on the result of the analysis stage where the seven financial education lessons are identified and integrated in the Philippine Kindergarten Curriculum 2016.

The third component is the Teacher’s Instructional Plan. This serves as a detailed guide for teachers on how to teach and implement the seven financial education lessons. It also contains activities for classroom which are hands-on, interactive, experiential, and play-based. This document also contains suggested instructional materials for teaching the

financial education lessons. It is based on kinder teachers' answers that financial education program should have hands-on, interactive, experiential, and play-based learning activities and should include varied instructional and learning materials.

The fourth component is the Kwartalino Learner's Workbook. This component is developed in connection with the teachers' answers in the design stage that workbooks can be used for teaching financial education lessons. Aside from this, the workbook also serves as a follow-up activity at home where parents can be involved in completing the activities. This is also based on the design stage that parent involvement is vital in a financial education program.

The last component of the financial education program is the Kwartalino Financial Education Stories. These stories are based on Filipino culture and context which is based on kindergarten teachers' answer on the design stage. These stories are designed to be used as a springboard for introducing financial education lessons among kinder learners.

A pool of experts in the field of ECE and economics validated the two components contained in the Kwartalino Financial Education Program; (i) the Kwartalino Financial Education Lessons; and (ii) Kwartalino Learner's Workbook. Quantitative content validation made use of an instrument adapted from the study of Pineda (2014). The instrument has two parts. The first part contains an 18-item checklist used to validate the Kwartalino Financial Lessons (Appendix F). The second part includes a 22-item checklist used to validate the Kwartalino Learners' Workbook (Appendix G). On the first part of the instrument, the items in the checklist are divided to six areas; (i) contents; (ii) objectives; (iii) instructional materials used; (iv) financial story used; (v) lesson procedures; and (vi) lesson presentation. For validating the Kwartalino Financial Education Lessons, the experts examined three documents; (i) Matrix of Kwartalino Lessons, Kinder Learning Domains and Competencies for Three International Financial Education Standards; (ii) Teacher's Instructional Plan; and (iii) Kwartalino Financial Education Stories. Table 6 shows the average ratings with verbal interpretation regarding the Kwartalino Financial Education Lessons.

Table 6
Mean Rating of the Kwartalino Financial Education Lessons

Area	Mean	Verbal Interpretation
A. Contents	4.87	Highly Acceptable
B. Objectives	4.80	Highly Acceptable
C. Instructional Materials	4.73	Highly Acceptable
D. Financial Story	4.80	Highly Acceptable
E. Lesson Procedures	4.67	Highly Acceptable
F. Lesson Presentation	4.67	Highly Acceptable
Overall Mean Rating	4.76	Highly Acceptable

Mean was used to measure the relative importance of each component in a specific criterion on the evaluation instrument. Microsoft Excel 2016 was used for a more reliable computation. The overall mean of the Kwartalino Financial Education Lessons was 4.76 out 5.0 suggesting that the developed lessons for the program is deemed to be highly acceptable by the pool of experts. All the areas taken into consideration in evaluating the Kwartalino Financial Education Program show that the program gained a highly acceptable rating from the experts. Thus, it can be said that the program contains lessons with suitable and appropriate contents and objectives for the kindergarten learners; the instructional materials

and financial stories used are interesting and can arouse learners' curiosity to learn money lessons; and that the lesson procedures and presentation follows the kindergarten's class schedule, provides varied activities for learners to be engaged, and uses strategies appropriate for its intended learners.. Table 7 shows the content validity coefficient of the Kwartalino Lessons.

Table 7
Content Validity Coefficient (v) of the Kwartalino Lessons

Checklist Items	Aiken's VI_k (Content Validity Coefficient)
1	1.00
2	0.95
3	0.95
4	1.00
5	0.95
6	0.90
7	0.90
8	0.95
9	0.95
10	1.00
11	0.85
12	1.00
13	0.90
14	0.95
15	0.90
16	1.00
17	0.95
18	0.80
Average	0.94

In addition, content validity coefficient was also determined per checklist items of the instrument (Appendix F) for the Kwartalino Lessons using Aiken's Content Validity Coefficient. This is to ensure that the lessons in the program is actually rated as content valid. All the experts who rated the items of the program found each component to be valid in terms of content as shown in the values of Table 7 Content Validity Coefficient (v) of Kwartalino Lessons ($VI_k \approx 1.0$). All the items in the checklist were rated close to 1 suggestive of a high content validity coefficient (Aiken, 1985). Table 8 shows the measure of inter-rater reliability of experts' validation on Kwartalino Lessons.

Table 8
Measure of Inter-rater Reliability of Experts' Validation on Kwartalino Lessons

Area	Kappa Value (K)	Verbal Interpretation
A. Contents	0.67	Substantial Agreement
B. Objectives	0.58	Moderate Agreement
C. Instructional Materials	0.50	Moderate Agreement
D. Financial Story	0.75	Substantial Agreement
E. Lesson Procedures	0.33	Fair Agreement
F. Lesson Presentation	0.67	Substantial Agreement
Overall Kappa Value	0.58	Moderate Agreement

The inter-rater reliability among the pool of experts was also computed. The existence of agreement among validators shows that the ratings reflect the aspects they are supposed to reflect. Based on Table 8, the raters have substantial agreements on the areas – contents, financial story used, and lesson presentation. They also have moderate agreement on objectives, and instructional materials used. The experts have a fair agreement on the area of lesson procedures. The overall Kappa value shows moderate agreement among experts, which means that there is a good possibility that the ratings does reflect the facets they are supposed to reflect.

The second component of the Kwartalino Financial Education program is the learner's workbook. For validating the Kwartalino Learner's Workbook, the experts examined the accompanying Kwartalino learner's workbook. Quantitative content validation made use of the second part of the instrument adapted from Pineda's (2014) study which includes a 22-item checklist (Appendix G). The items on the checklist is divided into six areas; (i) financial concepts; (ii) learning activities; (iii) lay-out; (iv) illustrations; (v) presentation and organization; and (vi) language. Table 9 shows the average ratings with verbal interpretation regarding the Kwartalino Learner's Workbook.

Table 9
Mean Rating of the Kwartalino Learner's Workbook

Area	Mean	Interpretation
A. Financial Concepts	4.73	Highly Acceptable
B. Learning Activities	4.80	Highly Acceptable
C. Lay-Out	4.76	Highly Acceptable
D. Illustrations	4.80	Highly Acceptable
E. Presentation & Organization	4.87	Highly Acceptable
F. Language	4.90	Highly Acceptable
Overall Mean Rating	4.81	Highly Acceptable

The six areas considered in evaluating the usefulness of the learner's workbook all received a highly acceptable rating from the experts. This shows that the Kwartalino Learner's Workbook can be aptly used for teaching financial education lessons among young learners. Further, this instructional material can help teachers and parents enhance the financial knowledge of kinder through its varied activities. Table 10 shows the content validity coefficient of learner's workbook.

Table 10
Content Validity Coefficient (V) of Learner's Workbook

Checklist Items	Content Validity Coefficient
1	1.00
2	0.90
3	0.90
4	0.90
5	0.95
6	1.00
7	1.00
8	0.95
9	0.95
10	0.95
11	0.85
12	1.00
13	0.95

Checklist Items	Content Validity Coefficient
14	0.95
15	0.90
16	1.00
17	0.95
18	0.95
19	0.95
20	0.95
21	1.00
22	1.00
Average	0.95

Similar with the Kwartalino Lessons, content validity coefficient was also determined per checklist items (Appendix G) for the Learner's Workbook using Aiken's Content Validity Coefficient. This is to ensure that the workbook is actually rated as a content valid workbook. All the experts who rated the items of each part of the workbook found each component to be valid in terms of content as shown in the values of Table 10 Content Validity Coefficient (v) of Learner's Workbook ($VI_K \approx 1.0$). All the items in the checklist were rated close to 1, also suggestive of a high content validity coefficient. Table 11 shows the measure of inter-rater reliability of experts' validation on Kwartalino Learner's Workbook.

Table 11

Measure of Inter-rater Reliability of Experts' Validation on Learner's Workbook

Area	Kappa Value (K)	Interpretation
A. Financial Concepts	0.50	Moderate Agreement
B. Learning Activities	0.67	Substantial Agreement
C. Lay-Out	0.55	Moderate Agreement
D. Illustrations	0.56	Moderate Agreement
E. Presentation & Organization	0.67	Substantial Agreement
F. Language	0.75	Substantial Agreement
Overall Kappa Value	0.61	Substantial Agreement

The inter-rater reliability among the pool of experts regarding the learner's workbook was also computed. The existence of agreement among validators shows that the ratings reflect the aspects they are supposed to reflect. The value of kappa which shows Substantial Agreement which is close to "Almost Perfect/Perfect Agreement" suggests that the experts rating have almost similar views with regards to the content validity of the Kwartalino Learner's Workbook. As can be seen from the table, experts have substantial agreements on areas such as learning activities, presentation and organization, and language. They also have moderate agreement on areas – financial concepts, lay-out, and illustrations. Summarized in Table 12 are the specific components and statistical characteristics of the Kwartalino Financial Education Program.

Table 12

Summary of Statistical Characteristics of the Kwartalino Financial Education Program

Kwartalino Financial Education Program
<ul style="list-style-type: none"> • *n (experts) = 5 • Content Validity of the Kwartalino Lessons & Learner's Workbook = 4.79 out of 5.00 • Content Validity Coefficient of the Kwartalino Lessons & Learner's Workbook = 0.95

-
- Overall Inter-rater Reliability of the Kwartalino Lessons & Learner's Workbook = 0.60
-

Based on Table 12, the Kwartalino lessons and workbook has 4.79 out of 5.00 content validity suggesting that the developed program has high acceptability among the experts. Results also show that the program has a high (0.95) content validity coefficient. Expert raters also showed moderate agreement (0.60) on the financial lessons and learner's workbook indicative that the program can be implemented for classroom instruction to develop the financial literacy of kindergarten learners.

CONCLUSIONS AND RECOMMENDATIONS

This study sought to develop a financial education program for kindergarten learners. The study employed developmental research. It followed three stages; (i) analysis; (ii) design; and (iii) development stage. Result of the analysis stage identified seven financial education lessons which can be integrated in the Philippine Kindergarten Curriculum 2016. These lessons are based on three financial education standards (CYFI, Jump\$start, and NFEC) identified by experts. Integration of these financial education lessons is mapped in the Second Quarter of the curriculum with the theme – My Family. Result of the design stage determined essential elements that must be included in a financial education program. These are; (i) hands-on, interactive, experiential, and play-based learning activities; (ii) varied instructional and learning materials; (iii) use of teacher-made stories based on Filipino culture and context that centers on children's experiences that can relate to; and (iv) inclusion of activities with parent involvement. From these, a financial education program for kinder learners was developed entitled – Kwartalino Financial Education Program.

The Kwartalino financial education program is designed to be integrated in the kindergarten curriculum to develop financial literacy among young learners. It offers a complete package in delivering financial lessons which can assist teachers and parents in teaching financial lessons to children. There are seven standards-based financial literacy lessons included which aim to teach basic personal financial concepts and principles as well as develop money-management skills and instill positive financial attitude among kindergarten learners. It comes with a teacher's instructional plan to guide teachers in using the accompanying instructional materials such as the financial education stories and the learner's workbook. Hands-on, experiential and varied learning activities included in the program are meant to make the lesson relevant and meaningful for the learners. Developmentally appropriate instructional materials are also developed for teachers', learners', and parents' use. Financial education stories are originally developed taking into consideration the real-life context and experiences of young children, the language they use, and family values regarding money to ensure that learners can relate to the stories. The learners' workbook serves to bridge the lessons taught in the classroom with activities which can be done at home to enrich the learning experience of children with the guidance of the parents.

The developed financial education program has a great potential to develop young learners' financial literacy in terms of their financial knowledge, skills, and attitude. From the high rating on the different components of the program, it can be said that the Kwartalino financial education program can be used in kindergarten classroom to support and enrich the curriculum as well as to introduce financial lessons among children. It can also help in

supporting Republic Act 10922 – Economic and Financial Literacy Act which encourages the Department of Education to provide opportunities to make financial literacy an integral part of formal learning.

However, there are some aspects of the study that needed to be improved and polished. First, in identifying the financial lessons to be included in the program, parents of kindergarten learners can also be included to identify financial lessons to be taught to their children. This way, their perspectives on the financial concepts to be taught can also provide input on how the lesson will be presented to young learners. Second, inclusion of song-based materials, videos, mobile applications, computer and internet games and programs that focus on financial lessons and concepts can also be produced as part of instructional materials for teachers', parents', and learners' use. Third, activities which include participation of other family members can be added as part of enrichment program. This is to encourage other family members to take active participation and involvement in discussing family financial concerns, issues, and decisions. Finally, it is recommended that the program be implemented in kindergarten classes in order to evaluate its effectiveness.

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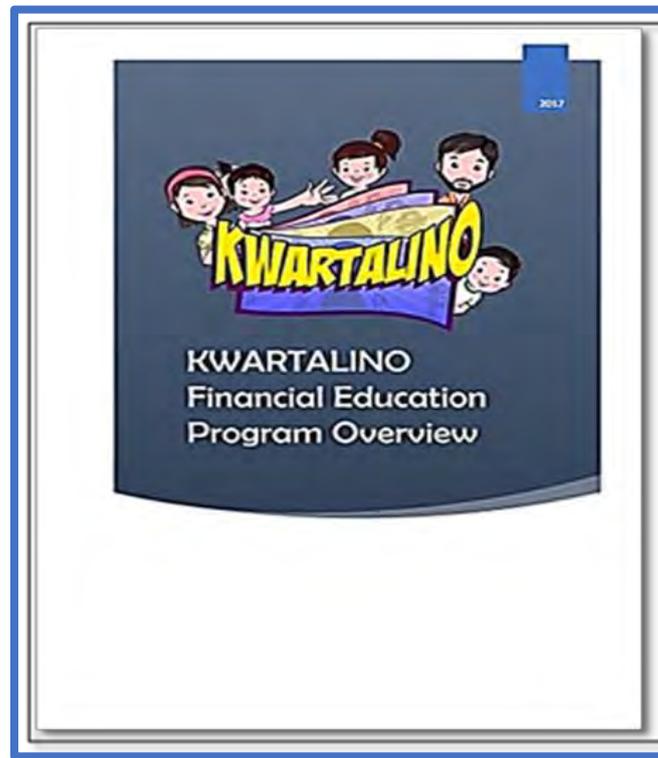
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Appendix A

Program Overview



Appendix B

Matrix of Kwartalino lessons, Kinder Learning Domains, and Competencies for the Three International Financial Education Standards

Financial Lesson	Integration Week - Content Focus Integration Day - Daily Message	3 International Financial Education Standards
Lesson Objectives	Kinder Learning Domains	
MATRIX OF KWARTALINO LESSONS, KINDER LEARNING DOMAINS AND COMPETENCY FOR THREE INTERNATIONAL FINANCIAL EDUCATION STANDARDS		
KWARTALINO Financial Lessons	KINDER LEARNING DOMAINS	INTERNATIONAL FINANCIAL EDUCATION STANDARDS
<p>Lesson : Needs and Wants Aralin 1: Kailangan at Gusto</p> <p>Lesson Objectives:</p> <ol style="list-style-type: none"> 1. Tell the difference between Needs and Wants. (Remembering) <i>(Nasabi ang pagkakaiba ng kailangan at gusto.)</i> 2. Categorize things as needs or wants of the family. (Analyzing) 	<p>Integration: Week 11 - I belong to a family. Monday - I am a member of a family.</p> <ul style="list-style-type: none"> ✓ <i>Sosyo-emosyonal (SE):</i> Natutukoy ang mga pangangailangan ng pamilya at kung paano nila ito matutugunan. (KMKPPam-00-7) ✓ <i>Kagandahang-asal (KA):</i> Nakagagawa nang may kusa (KAKPS-00-2); Nakagagawa nang nag-iisa (KAKPS-00-3). ✓ <i>Mathematics (M):</i> Sort and classify objects according to one attribute or property. (MKSC-00-6) ✓ <i>Language, Literacy, and Communication (LL):</i> <ul style="list-style-type: none"> o Identify the letters of the alphabet (LLKAK-ih-3) - Letter Mm and Aa o Give sound of each letter (LLKAK-ih-7) - Letter Mm and Aa 	<p>CYFI</p> <p>Money and Use</p> <p>a. Understands the things they can buy and the things they need their parents or caregivers to buy.</p>
<p><i>(Makakategorya ang mga bagay kung kailangan at gusto ng pamilya.)</i></p>	<ul style="list-style-type: none"> o Recall and use words from story listened to. (LLKV-00-3) o Listen attentively to stories/poems/songs (LLKLC-00-1) o Relate personal experience to events in stories/poems/songs listened to (LLKLC-ig-4). 	<p>JumpStart</p> <p>Financial Decision</p> <p>Knowledge Statement:</p> <p>a. People have different needs and wants.</p>
	<ul style="list-style-type: none"> ✓ <i>Kalusugang Pisikal at Pagpapaligid ng Kakayahang Motor (KP):</i> Nakasasal sa mga laro, o anumang pisikal na gawain at iba't-ibang paraan ng pag-aaralan. (KPKPF-00-1) ✓ <i>Arts (S):</i> Nakaguguhit, nakapagpipinta, at nakapagkukulay ng iba't-ibang bagay o gawain (dekorasyon sa name tag, kasapi ng mag-anak, gawain ng bawat kasapi ng mag-anak, mga alogang hayop, mga halaman sa paligid) (SKMP-00-2) 	<p>Performance Statement:</p> <p>a. Give an example of something that could be a need for one person but not for another.</p> <p>NFEC</p> <p>Financial Psychology</p> <p>Big Idea: We may need to choose between needs and wants.</p> <p>Skills: Identify needs. Identify wants. Model choosing between needs and wants.</p>

Appendix D

Kwartalino Learner's Workbook – Lesson 1

Pamilya natin ang nagbibigay ng ating mga **KAILANGAN** at **KAGUSTUHAN**.



Ako ay may mga **KAGUSTUHAN**. Ito ang mga bagay na gusto kong makuna at maramasan. Maari pa rin akong mabuhay kahit wala ito.



Aralin 1: Kailangan at Kagustuhan

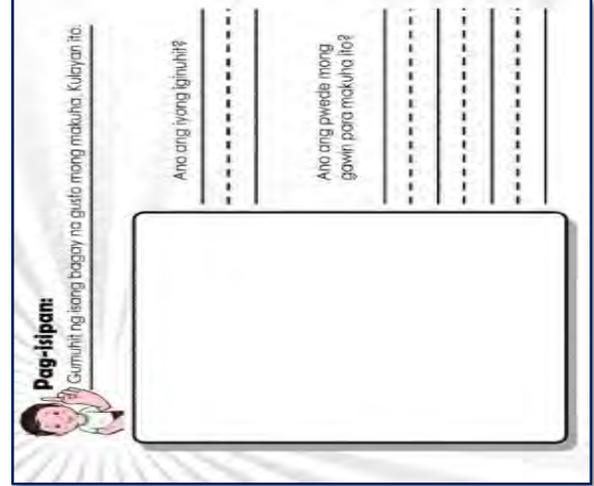
Ako ay may mga bagay na **KAILANGAN**. Ito ay mahalaga para mabuhay ako nang maayos araw-araw. Mahirap mabuhay kung kulang o wala ito.



Pag-iipani: Gumuhit ng isang bagay na gusto mong makuna. Kulayan ito.

Ano ang iyong iginuhit?

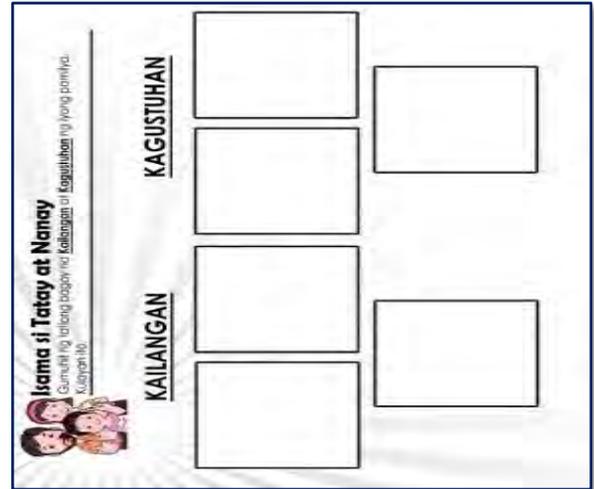
Ano ang pwesto mong gawin para makuna ito?



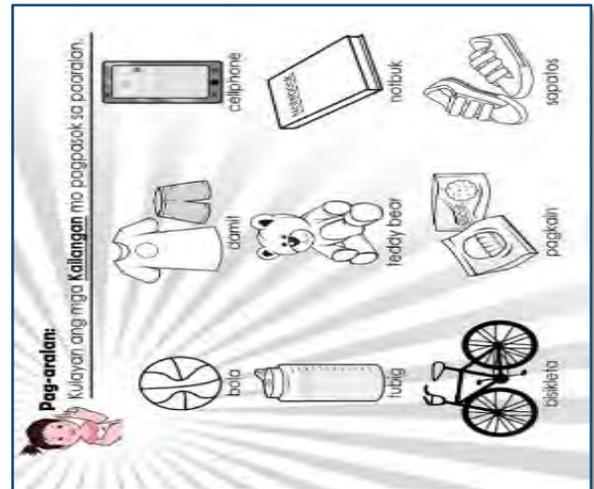
Isama si Tatay at Nanay
Gumuhit ng isang bagay na **kailangan** at **kagustuhan** ng iyong pamilya. Kulayan ito.

KAILANGAN

KAGUSTUHAN



Pag-aralan: Kulayan ang mga **kailangan** na pagpapakas sa paaralan.



Appendix E

Kwartalino Financial Education Stories



Appendix G

Evaluation Rating Sheet for The Kwartalino Financial Education Program

II. Kwartalino Learner's Workbook

(Kindly refer to the *Kwartalino Learner's Workbook* for your reference.)

CHECKLIST ITEMS	HA	A	MA	SA	NA
A. FINANCIAL CONCEPTS					
1. Concepts presented are clear and age-appropriate.	5	4	3	2	1
2. Suitable to the learners' level of development.	5	4	3	2	1
3. Concepts are presented accurately	5	4	3	2	1
B. LEARNING ACTIVITIES					
4. The activities are adequate to realize the objectives of the lesson.	5	4	3	2	1
5. Provides for the development of higher cognitive skills such as critical thinking, creativity, learning by doing, inquiry, and problem solving, etc.	5	4	3	2	1
6. Contributes to the achievement of objectives.	5	4	3	2	1
C. LAY-OUT					
7. Over-all lay-out is neat.	5	4	3	2	1
8. Attractive and pleasing to look at.	5	4	3	2	1
9. Adequate illustrations in relation to text.	5	4	3	2	1
10. Harmonious blending of elements.					
11. Size of letters is appropriate to the user.	5	4	3	2	1
D. ILLUSTRATIONS					
12. Illustrations are clear, attractive and appealing.	5	4	3	2	1
13. Simple and easily recognizable.	5	4	3	2	1
14. Properly labeled and captioned.	5	4	3	2	1
15. Culturally relevant.					
E. PRESENTATION & ORGANIZATION					
16. Follows the lessons presented on the Instructional Plan.	5	4	3	2	1
17. Logical and smooth flow of concepts presented.	5	4	3	2	1
18. Activities can be easily followed by the users (teachers, parents, and learners).	5	4	3	2	1
F. LANGUAGE					
19. Language used is simple and clear.	5	4	3	2	1
20. Vocabulary suited to learners' experience and understanding.	5	4	3	2	1
21. Language used is free from misspelled words.	5	4	3	2	1
22. Language used is free from grammatical errors.	5	4	3	2	1