IJPES
www.ijpes.com
International Journal of Psychology and Educational Studies
ISSN: 2148-9378

Developing a Financial Literacy Scale for Primary School Students: A Validity and Reliability Study

Sinan ÖZER[1], Ali ERSOY[2]

[1] *Ministry of National Education, Adıyaman, Turkey* *0000-0002-0317-4482*

[2] *Anadolu University, Eskişehir, Turkey* *0000-0001-5000-290X*

ARTICLE INFO

Article History
Received 12.02.2022
Received in revised form 25.06.2022
Accepted 28.07.2022
Article Type: Research Article

ABSTRACT

This study aims to develop a valid and reliable measurement tool to determine the financial literacy levels of primary school 4th-grade students. The research sample consists of 567 4th-grade primary school students studying in the Kahta district of Adıyaman. The prepared scale items were sent to the field experts for content and opinion validity, and the scale was and finalized according to their feedback. As the second step, exploratory factor analysis (EFA) was performed to determine the scale's construct validity. As a result of the EFA, a draft scale consisting of 17 items and 3 sub-dimensions was obtained, which explained 40.9% of the total variance. The factor loads of these 17 items ranged from 0.439 to 0.840. Confirmatory factor analysis (CFA) was performed to verify this draft scale. According to the CFA results, the goodness of fit indices are as follows: $\chi 2/df = 1.138$, RMSEA = 0.023, GFI = 0.95, SRMR = 0.049, CFI = 0.98, and NFI = 0.82. The values found due to CFA show that the scale items were well validated. The significance of the item discrimination coefficients was tested using the test-retest reliability coewith fficient, lower and upper 27% values calculated to increase the scale's reliability. The Cronbach Alpha internal consistency coefficient was 0.77 for the overall scale and between 0.65 and 0.67 for the sub-dimensions. It can be said that the Financial Literacy Scale for Primary School Students, which was developed according to the results of the analysis, is valid and reliable.

Keywords:
Financial literacy, financial literacy skill, financial literacy education, social studies, primary school.

1. Introduction

Economy is a phenomenon that is found in various forms in all spheres of human life and is indispensable for people. The concept of finance in the context of economic activities is defined as a sector that provides opportunities for various purposes, such as purchases that people make to satisfy their wants and needs in daily life, or a comfortable life in retirement by converting their income into savings. Nowadays, people encounter finances in every moment of their lives.Therefore, people need to know how to manage their financial situations (Bayram, 2010).

Financial literacy is one of the concepts frequently used in studies conducted to help people gain the ability to manage their financial situations. There is no standard definition for the concept of financial literacy in the literature. It is called by different names from country to country and field to field. It is known as "financial capability" in the UK and Canada, whereas it is called "financial literacy" in the United Stateefficientalia and some countries. In addition, "financial awareness" and "financial education" appear as other denominations (Gökmen, 2012).

[1]Corresponding author's address: Ministry of National Education, Kahta Science and Art Center [Kahta Bilim ve Sanat Merkezi], Adıyaman/Turkey
e-mail: sinanozer01@gmail.com
Citation: Özer, S. & Ersoy, A. (2022). Developing a financial literacy scale for primary school students: A validity and reliability study. *International Journal of Psychology and Educational Studies*, *9*(4), 1197-1207. https://dx.doi.org/10.52380/ijpes.2022.9.4.817

Financial literacy has been defined in the literature in many ways. Remund (2010) defines financial literacy as the capacity to make rapid and correct judgments based on a comprehension of basic financial terms such as saving, borrowing, and investing, as well as an aptitude for long-term planning.According to another definition, financial literacy is the ability to read, analyze, and manage the process in financial circumstances effectively, so enabling individuals to achieve financial security. Due to this competency, individuals should be able to make sound financial judgments, debate monetary matters with ease, follow daily financial trends and carefully plan for the future (Vitt et al., 2000).Financial literacy skills are increasing due to the development in the world's financial markets and socioeconomic and political factors. As a result of the rapid development of technology, people can access investment tools from banks, intermediary institutions or through various ways from the internet. With the increase in their average life expectancy, people want to have savings to spend their lives comfortably when they retire. Saving, investing, using loans, or getting involved in banking systems have important financial consequences. With the effect of these results, many people in the Organization for Economic Co-operation and Development [OECD] countries are trading in financial markets. However, most of these people are caught unprepared for the financial problems they face (Temizel, 2010). In this case, individuals' financial literacy needs to be or must have been developed. People with advanced financial literacy abilities can understand their options in financial matters and make more wise financial decisions. They'll act in ways that put them in financial trouble. These people, who correctly evaluate the state of the economy, take logical actions to improve the quality of life for themselves and their family. These behaviors are crucial for national economies because they increase the proportion of people who are financially knowledgeable (Sargül, 2020).As financial literacy skills have gained importance for countries and people, financial literacy has been placed on the agenda. Although the terms "financial literacy" and "financial education" are often used interchangeably in the literature, it can be said that financial literacy is a process, and financial literacy emerges as a result of this process (Gökhan, 2012).Financial literacy education tries to gain the most basic skills such as raising people's awareness of financial issues, making more accurate decisions in the financial sector, using financial tools appropriately and effectively, and increasing their financial well-being by being informed about financial risks and fraud. In addition, it desires to achieve high-level targets such as countries' economic development and long-term financial stability by increasing savings (Adalar, 2020). Different programs can be applied in financial education, and education methods can be diversified. This difference and diversity aims to facilitate the access of different populations and target groups in financial literacy education to these training. Countries that adopt financial literacy education focus more on young people as the target audience. Countries especially try to provide such financial education in schools (OECD, 2013).

The necessity of providing financial education to all age groups in schools has increased, despite the fact that countries concerned with financial literacy education prioritize youth. Younger generations face greater financial risks than their parents since they utilize financial services such as bank accounts and credit cards more frequently. Therefore, basic financial subjects and education should be given at a much younger age. Although there are some difficulties in providing financial education, it is possible to say that starting these educations in schools as a national strategy will make an important contribution to the prevention of possible financial problems that may be encountered in the future (Turkiye Cumhuriyet Merkez Bankası, 2011).

For financial education to be more efficient, it is necessary to determine the data about the financial literacy level of individuals (Atkinson & Messy, 2012). The increase in the number of studies on financial literacy in recent years (Adalar, 2019; Çarıkçı, 2019; Goyal and Kumar, 2021; Gök and Coşkun, 2020; Kocabıyık and Teker, 2018; Morgan and Long, 2020; Meyer, 2020; Seyrek and Gül, 2017; Yılmaz and Elmas, 2016) show the importance given to this issue. It is seen that some of the studies in the literature are scale development or situation determination. When the studies are evaluated, it is revealed that data is mainly collected from secondary schools, high schools, universities, and adults through questionnaires (Akhan & Kılıçoğlu, 2014; Bayram, 2010; Baysa, 2015; Er, Temizel, & Sönmez, 2015; Goyal & Kumar, 2021; Sarıgül, 2020). In this context, it is noteworthy that there are studies conducted on primary school students (Çarıkçı, 2019; Çelikten & Doğan, 2020).

Although the number of financial literacy development trainings has increased globally and in Turkey, there is a growing emphasis on the importance of providing these trainings at a young age. In this context, the Ministry of National Education's inclusion of financial literacy as a skill that should be directly gained in the

4th-grade Social Studies Course in the 2018 Social Studies Course curriculum shows the importance of gaining this skill at a young age (Çekten and Doğan, 2020). This study aims to develop a valid and reliable measurement tool for measuring the level of financial literacy skills, where the importance of gaining it at an early age is increasing day by day. In line with this purpose, it aims to contribute to education by determining the needs for financial education in the country and abroad, with the data to be collected from primary school students. It is thought that the scale to be developed will be a comprehensive data collection tool, especially for primary school students and will contribute to the financial education given at the primary school level in Turkey.

2. Methodology

2.1. Research Model

This study aims to develop a valid and reliable scale to determine the financial literacy attitudes and behaviors of primary school fourth-grade students. In this study, survey model, one of the quantitative research methods, was used.

2.2. Research Sample

The sample of the scale development study consisted of 4th-grade primary school students studying in public primary schools in the centre of Kahta District of Adıyaman Province. A simple random sampling method was preferred while determining the sample in this study. In this method, each sample representing the universe has an equal chance of being selected (Büyüköztürk et al., 2019). In this direction, data were collected for research from 567 students, 294 students in the exploratory factor analysis study and 273 in the confirmatory factor analysis.

2.3. Data Collection Tools and Procedure

In the study, a literature review was conducted for measurement tools that can be used to determine the financial literacy levels of 4th-grade students. As a result of the literature review, it was seen that most of the studies on financial literacy (Akhan & Kılıçoğlu, 2014; Bayram, 2010; Baysa, 2015; Er, Temizel & Sönmez, 2015; Goyal & Kumar, 2021) were done in the high school and above age groups. As Sarıgül (2020) stated in his study, there was no study on the financial literacy of primary school students in domestic thesis studies. Talking about this shortcoming in their research, Çelikten and Doğan (2020) developed a 21-item scale to reveal the financial literacy information of primary school 3rd-grade, 4th-grade, and middle school 5th-grade students. Çelikten and Doğan's (2020) scale and other scales developed on high school students and adults in the literature (Collins & Urban, 2019; Güvenç, 2016; Sarıgül, 2015; Sorgente & Lanz, 2019) were examined to determine the theoretical structure in the research. In addition, semi-structured interviews were conducted with classroom teachers and students. As a result of these examinations, a new scale considering the scope of the research needed to be developed. While creating the item pool of the developed scale, data obtained from the scales in the literature (Collins & Urban, 2019; Güvenç, 2016; Sarıgül, 2015; Sorgente & Lan, 2019), interviews with classroom teachers and students, and the Primary School Social Studies Program were used to determine the theoretical structure. A 53-item question pool was created based on this information. The draft form of this scale was sent to field experts (Social Studies Education, Curriculum and Instruction, Assessment and Evaluation, Classroom Education and Classroom Teachers) to ensure content validity and determine its suitability for the student level. In line with the experts' feedback, six items that were interpreted as inappropriate were removed from the draft form, and the draft form was reduced to 47 items. In addition, some changes were made to the root of the item to understand them better (e.g., I finish my money very quickly was changed to I spend my money very quickly and I don't like to save money was changed to I like spending money more than saving money). The new draft form, created from these corrections, was applied to 42 4th-grade students for the pilot application. After the pilot application, data were collected to analyse the scale by evaluating the students' feedback.

2.4. Ethical

Ethics permission was obtained from the Anadolu University Ethics Committee and the Ministry of National Education for this study. The scale items were sent to experts in the field, and their opinions were taken about their suitability for primary-level students.

3. Findings

More than 5 times the number of items are needed for sample draft items to be applied in scale development studies (Cokluk, Şekercioğlu, & Büyüköztürk, 2012). 47 draft items were created in the study. Data were collected from 294 students for EFA. Kaiser Meyer Olkin (KMO) sample adequacy measurement and Bartlett's sphericity test were performed to see if the collected data were suitable for EFA. As a result of the test, the KMO value was 0.784; Bartlett's test is χ^2 = 842,752; sd=136; It was calculated as p=0.00. If the result of this test is above 0.60, it indicates that the data are suitable for EFA. If this result is above 0.60, it can be said that the scores are normal (Büyüköztürk, 2019).

As a result of the EFA, a draft scale consisting of 17 items and 3 sub-dimensions was obtained, in which the total variance explained 40.9%. Considering that latent variables in social sciences can be affected by many observed or latent variables. As Çokluk, Şekercioğlu, Büyüköztürk (2016); and Karagöz, (2017) it is sufficient for the total explained variance to be between 40% and 60% for the studies in social sciences In the EFA analysis, the item factor load was entered as 0.40, and the promax horizontal rotation was used as the rotation process. Promax oblique rotation technique was used to test whether the scale was divided into different dimensions. The oblique rotation technique is preferred because there is a relationship between the dimensions that make up the scale. Based on the information in the literature, the oblique rotation technique is used when there is a relationship between the dimensions of the measurement tool (Kan, 2007). As a result of this process, 30 scale items with a factor load of less than 0.40, overlapping each other, and values less than 0.10 between two factors were removed from the draft scale. The remaining 17 items were named according to the factors in which they were included. The result of this analysis is shown in Table 1 below.

Table 1. *Financial Literacy Scale EFA Findings for Primary School Students*

No	Items	Factor 1 %21,876 Planned	Factor 2 %9,923 Saving	Factor 3 %9,131 Extravagant	Correlation
16	I prepare a weekly plan for my expenses.	.710			.499
20	I make a shopping list when I go shopping with my family.	.787			.436
22	I help my family do their monthly budget.	.568			.441
26	While shopping, I check the expiry dates of the products.	.504			.497
38	I make sure that the packaging of the products I buy is recyclable.	.605			.485
34	If I borrow money from my friends, I pay it back.		,689		.368
35	I use resources such as water, electricity and natural gas consciously at home or at school.		.822		.470
43	I save the pocket money I collect on holidays or special days.		.629		.483
47	I carefully use my belongings (such as shoes, clothes, notebooks, and pens).		.664		.494
4	When I have money, I spend it very quickly.			.439	.533
11	I spend all of my allowance the day I get it.			.603	.570
13	We can spend as much as we want with a credit card.			.840	.338
14	I would like to buy a product I want, even if it is expensive.			.573	.462
23	I pressure my family to comply with my wishes.			.543	.541
10	Even though I don't need it, I buy products that catch my attention (such as toys and fancy pens) from places such as canteens and markets.			.534	.385
24	I get very upset when my family doesn't buy my requests.			.587	.463
46	I spend the money I save for my wishes.			.459	.494

When Table 1 is examined, it is seen that the factor loads of 17 items that make up the draft scale vary between .439 and .840, and the load of two items is less than .50 (0.439, 0.459). The scale-item correlations measured on

the scale ranged from .338 to .570. The draft scale was modeled in three factors, 17 items in total. The factors were named as the 1st Factor "Planned", the 2nd Factor as "Saving", and the 3rd Factor as "Extravagant". The financial literacy scale Scree Plot chart can be seen in Figüre 1 below.

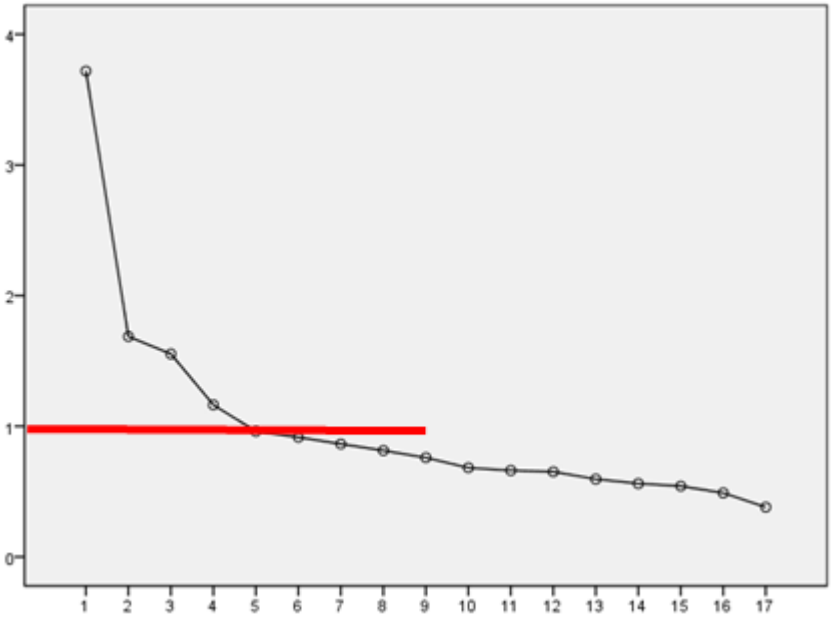

Figure 1. *Scree Plot*

The slope-slope graph is more important than the eigenvalue in interpreting the factor number and can also be used to decide the number of factors (DeVellis, 2014, pp. 128-129). When the graph given in Figure 1 is examined, it is seen that the cut-off point of the slope is at the fifth eigenvalue. According to this graph, it is revealed that the scale is four-dimensional. However, since the items in the third and fourth dimensions were very related to each other, it was decided to fix the scale in three factors.

To test the compatibility of the three-factor 17-item model determined after the EFA analysis in the research, data were collected from 285 4th grade students studying at schools in the city centre of Kahta, Adıyaman, except for the data used for the EFA analysis. Twelve of these scales were excluded from the analysis because they contain more than twenty per cent missing data. The remaining 273 data were used in confirmatory factor analysis. Confirmatory factor analysis tests and confirms the hypotheses made according to the analysis results previously found among the variables. For this purpose tests the factor structures found in the exploratory factor analysis (Özdamar, 2016, p. 231). The fit indices found from CFA are given in Table 2 below.

Table 2. *CFA Model Fit İndices of Primary School Financial Literacy Scale*

Fit Criterion	Ideal Fit	Good Fit	Acceptable Fit	DFA
$\chi 2$	p>0.10	0.05<p<0.10	p<0.05	0.148
$\chi 2$/df	<=2.00	2.00-5.00	----------	1.138
RMSEA	0-0.05	0.05-0.08	----------	0.023
SRMR	0-0.05	0.05-0.08	----------	0.049
NFI	1.00	0.95-1.00	0.90-0.94	0.82
CFI	1.00	0.95-1.00	0.90-0.94	0.98
GFI	1.00	0.90-1.00	0.85-0.89	0.95

As seen in Table 2, $\chi 2$/df (1.063) value and RMSEA (0.023) and SRMR (0.049) values, which constitute the analyses based on structural similarity functions, according to the values found after the confirmatory factor analysis performed, also showed an ideal fit. Ancillary criteria (NFI, CFI, GFI) values also provided a good and acceptable fit. After these evaluations, it can be said that the scale obtained valid results in structural terms (Özdamar, 2016). This shows that the values obtained from the exploratory factor analysis are confirmed by the values obtained from the confirmatory factor analysis. The DFA model is shown in Figure 2 below.

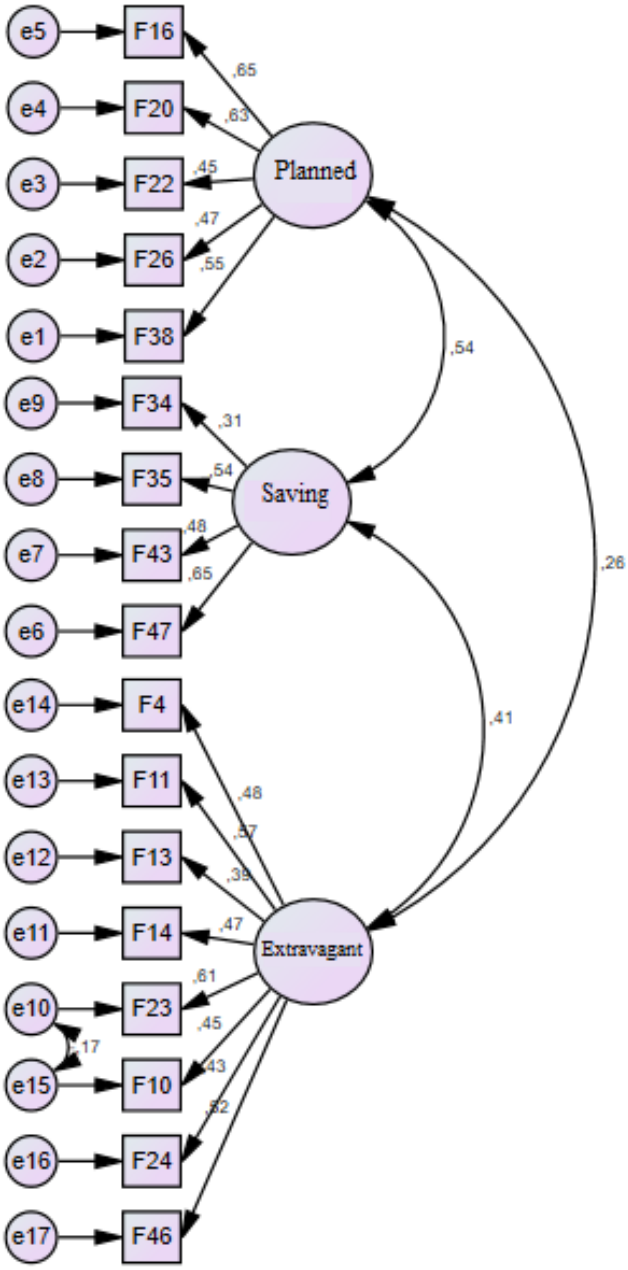

Figure 2. *Confirmatory Factor Analysis Model*

After the validity analyses of the Financial Literacy Scale for Primary School Students were completed, the reliability analyses of the scale were made. Büyüköztürk (2019) defines reliability analysis as the consistency of responses given by individuals to test items on a scale. Our study determined the Cronbach's alpha internal consistency coefficient and the upper group-subgroup formed by the item-total score correlation. The item analyses and test-retest correlation were calculated.

Table 3 displays the results of the t-test analysis comparing the difference between the item average scores of the lower 27 percent and upper 27 percent groups to the total score for each item.

Table 3. *Findings Regarding the Discrimination of Financial Literacy Draft Scale Items for Primary School Students*

Item No	Groups	n	$\bar{X}$	Ss.	Sd.	t
16	Upper Group	73	1.77	0.768	0.089	10.09**
	Lower Group	73	2.78	0.446	0.052	
20	Upper Group	73	1.97	0.74	0.086	9.15**
	Lower Group	73	2.84	0.371	0.043	
22	Upper Group	73	2.03	0.662	0.077	7.90**
	Lower Group	73	2.74	0.47	0.055	
26	Upper Group	73	2.34	0.727	0.084	6.19**
	Lower Group	73	2.91	0.376	0.044	
38	Upper Group	73	2.07	0.764	0.089	8.36**
	Lower Group	73	2.89	0.313	0.036	
34	Upper Group	73	2.69	0.618	0.072	3.06**
	Lower Group	73	2,95	0.327	0.038	
35	Upper Group	73	2.62	0.59	0.069	4.65**
	Lower Group	73	2.97	0.232	0.027	
43	Upper Group	73	2.43	0.664	0.077	6.64**
	Lower Group	73	2.97	0.163	0.019	
47	Upper Group	73	2.46	0.706	0.082	6.19**
	Lower Group	73	2.99	0.116	0.014	
4	Upper Group	73	2.19	0.655	0.076	8.14**
	Lower Group	73	2.91	0.338	0.039	
11	Upper Group	73	2.28	0.712	0.083	7.67**
	Lower Group	73	2.96	0.199	0.023	
13	Upper Group	73	2.41	0.701	0.081	5.49**
	Lower Group	73	2.91	0.295	0.034	
14	Upper Group	73	2.19	0.715	0.083	7.53**
	Lower Group	73	2.89	0.313	0.036	
23	Upper Group	73	2.41	0.739	0.086	6.08**
	Lower Group	73	2.96	0.199	0.023	
10	Upper Group	73	2.31	0.701	0.081	5.53**
	Lower Group	73	2.84	0.371	0.043	
24	Upper Group	73	1.95	0.617	0.072	7.11**
	Lower Group	73	2.62	0.516	0.06	
46	Upper Group	73	1.91	0.725	0.084	8.43**
	Lower Group	73	2.76	0.463	0.054	

***p<0.001*

When Table 3 is examined, the average scores of each item in the scale differ significantly between the upper and lower groups. This differentiation may show us that the items in the scale adequately distinguish the upper and lower groups in terms of the measured feature.

Table 4 shows the relationship between the overall scale and its sub-dimensions.

Table 4. *The Relationship Between the Overall Scale and Its Sub-dimensions*

Factors	Planned	Saving	Extravagant	Total
Planned	1	.288	.303	.730
Saving		1	.301	.634
Extravagant			1	.800
*p<0,01				

As seen in Table 4, the correlation value between the overall scale and its sub-dimensions ranged from .634 to .800. It is seen that the correlation between the whole scale and its sub-dimensions is significant.

Examining the consistency of the entire scale and its subdimensions, the alpha internal consistency coefficient was computed. Table 5 displays the Cronbach's Alpha Coefficient Values for the Overall Scale and its Subdimensions.

Table 5. *Cronbach's Alpha Coefficient Values for the Overall Scale and its Sub-dimensions*

	Factors	Number of Items	Cronbach Alfa Coefficients	Spearman-Brown Coefficients	Guttman-Split half Coefficients
1	Planned	5	.65	.64	.63
2	Saving	4	.67	.66	.66
3	Extravagant	5	.67	.65	.65
Scale Overall		17	.76	.71	.70

As can be seen in Table 5, the Spearman-Brown coefficient for the overall scale was .71, the Guttman- Split half coefficient for the overall scale was 0.70, the Cronbach's alpha coefficient for the overall scale was 0.77. It is seen that the Cronbach alpha coefficient of the sub-dimensions takes values between 0.65 and 0.67. There are various discussions about the acceptable limit of the Cronbach's alpha coefficient in the literature. Chakrapani (2004) states that the acceptable limit of the Cronbach's alpha coefficient is 0.50 and above. Bowling (2014), on the other hand, states that an acceptable limit of at least 0.50 in subscales with a small number of items may be sufficient in terms of internal consistency. When the Cronbach alpha coefficients of the sub-dimensions are examined, the sub-dimensions of "Planned Individual", "Saving Individual", "Extravagant Individual" are within limits accepted in the literature ($\alpha \geq 0.60$). The overall scale's coefficient is within the limits of "good" in terms of reliability (Salvucci, Walter, Conley, Fink, & Saba, 1997 as cited in Tan, 2010). According to the results of the content validity, construct validity, and reliability calculations, it can be said that the scale is valid and reliable.

4. Conclusion and Discussion

The purpose of this study was to design and develop a financial literacy scale for elementary school students to determine the attitudes and behaviours of fourth grade elementary students regarding financial literacy with a valid and reliable measurement tool. The literature states that it is very important to acquire and develop financial literacy at an early age (Holden, Kalish, Scheinholtz, Dietrich, and Novak 2009; Russia Trust Fund, 2013, cited in Çelikten and Doğan, 2020). When the literature is examined, it is noteworthy that the majority of studies on financial literacy are conducted with high school students and older individuals (Collins & Urban, 2019; Güvenç, 2016; Sarıgül, 2015; Sorgente & Lanz, 2019). It is seen that it is more functional and important to gain financial literacy skills early. Adding financial literacy skills to the 4th-grade Social Studies Curriculum by the Ministry of National Education indicates that importance is given to developing this skill starting from primary school. However, when the studies on financial literacy in Turkey are examined, it becomes clear that there is a need for studies involving primary school students (Çarıkçı, 2019; Çelikten & Doğan, 2020). It is thought that the theoretical examination of the studies, scanning of documents, examination of the primary school social studies course curriculum, analysis of the data obtained from the interviews with the teachers and students, and the addition of a new scale to the literature when the data that can be added to the studies are reached, will contribute positively to future studies in this field.

For this purpose, the validity and reliability study of the 47-item scale, which was prepared to measure the attitudes and behaviours of primary school students regarding financial literacy, was conducted. A draft scale consisting of 17 items and 3 subdimensions was created in which 40.9% of the total variance could be explained from the EFA result conducted as part of the validity study. While naming the scale sub-dimensions (Planned, Saving, Extravagant) was used, the qualitative semi-structured research that the researcher made with teachers and students, based on the literature (Collins, & Urban, 2019; Çelikten & Doğan, 2020; Güvenç, 2016; Sarıgül, 2015; Sorgente & Lanz, 2019), benefited from the results of the negotiations. The values calculated as a result of the CFA analysis of the scale (χ^2/sd=1.38, RMSEA=0.023, GFI=0.95, AGFI=0.93, SRMR=0.049, RMR=0.017, CFI=0.98) confirmed the construct validity of the scale. It is seen that it has an acceptable fit index (Özdamar, 2016). In the correlation test performed to check the scale's validity, it was observed that the relationship between the overall scale and the scale's sub-dimensions was positive and significant ($p<0.01$), and the scale-item correlation for the scale items values varied between .34 and .57. It can be said that the validity of the items found is high, and it is suitable for measuring the financial literacy attitudes and behaviours of primary school students. In the scale reliability analysis, the Cronbach's alpha coefficient found for the whole scale was 0.762, the coefficients of the sub-dimensions were between 0.65-.69, and according to the degree of safety preferred by the education and social sciences practitioners ($0.60 \leq \alpha < 0.75$) is among the generally accepted reliability level values in scales (Özdamar, 2017). In addition, the Spearman-Brown

coefficient was found to be .71 for the whole scale, and the Guttman-Split half coefficient for the whole scale was 0.70. The significance of the item discrimination coefficients was tested using the lower and upper 27% values and the test-retest reliability coefficient to increase the scale's reliability. The values found show that the scale is reliable.

- Considering the results of the above data analysis, the Financial Literacy Scale for Primary School Students has sufficient validity and reliability to be utilized in research on the attitudes and behaviors of primary school students about financial literacy. During the phase of scale development, the theoretical structures of comparable scales found in the literature, the perspectives of the classroom teachers and fourth-grade students, and the Social Studies Curriculum were utilized.Recommendations
- In future study, the opinions of parents and elementary school pupils at varying grade levels can be elicited in order to generate new expressions. Schools with low, moderate, and high socioeconomic levels might be selected for the sample. These schools' students can be investigated separately and will contribute to the literature in the future.

References

Adalar, H. (2019). *Sosyal bilgiler öğretmen eğitiminde finansal okuryazarlık ve öğretimi: Bir model önerisi* [Doktora tezi]. Gazi Üniversitesi, Ankara.

Akhan N. E., ve Kılıçoğlu G. (2014). Sosyal Bilgiler öğretmen adaylarının ekonomi kavramlarını anlama düzeyleri. *Elektronik Sosyal Bilimler Dergisi*, 13(51), 209-225.

Atkinson, A. & F., Messy. (2012). *Measuring financial literacy: results of the oecd / ınternational network on financial education (INFE) pilot study*. OECD Working Papers on Finance, Insurance and Private Pensions, No. 15, OECD Publishing, Paris, https://doi.org/10.1787/5k9csfs90fr4-en.

Bayram, S. S. (2010) *Finansal okuryazarlık ve para yönetimi davranışları: anadolu üniversitesi öğrencileri üzerine uygulama* [Yüksek lisans tezi]. Anadolu Üniversitesi, Eskişehir.

Baysa, E. (2015). *Finansal okuryazarlık ve banka müşteri segmentasyonları üzerine bir uygulama* [Yüksek lisans tezi]. Gaziosmanpaşa Üniversitesi, Tokat.

Bowling, A. (2014). *Research methods in health: investigating health and health services*. McGraw-Hill..

Burak, D. (2020). *İlkokul sosyal bilgiler öğretimine yönelik uyarlanabilir bir öğrenme ortamının tasarlanması, uygulanması ve değerlendirilmesi* [Doktora tezi]. Anadolu Üniversitesi, Eskişehir.

Büyüköztürk, Ş. (2019). *Sosyal bilimler için veri analizi el kitabı*. Pegem.

Büyüköztürk, Ş., Kılıç Çakma, E., Akgün, Ö.E., Karadeniz, Ş., ve Demirel, F. (2019). *Eğitimde bilimsel araştırma yöntemleri*. Pegem.

Collins, J. M. ve U. Carly (2020) Measuring financial well-being over the lifecourse, *The European Journal of Finance*, 26:4-5, 341-359. DOI: 10.1080/1351847X.2019.1682631

Chakrapani, C. (2004) *Statistics in market research.* Arnold.

Çarıkçı, O. (2019). İlköğretim öğrencilerinin finansal farkındalık düzeyinin belirlenmesine yönelik bir uygulama. *Akdeniz Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, (5), 133–157.

Çelikten, L. ve Doğan, M. C. (2020). marmara finansal okuryazarlık tutum ve davranış ölçeğinin geliştirilmesi. *Journal of Hasan Ali Yücel Faculty of Education/Hasan Ali Yücel Egitim Fakültesi Dergisi (HAYEF)*, *17*(2).

Çokluk, Ö., Şekercioğlu, G. ve Büyüköztürk, Ş. (2012). *Sosyal bilimler için çok değişkenli istatistik spss ve lisrel uygulamaları.* Pegem.

Çokluk, O., Şekercioğlu, G. ve Büyüköztürk, Ş. (2016). Sosyal bilimler için çok değişkenli istatistik SPSS ve LİSREL uygulamaları. Pegem.

DeVellis, F. (2014). *Ölçek geliştirme: Kuram ve uygulamalar* (3. baskı) (T. Totan, Çev.). Nobel.

Er, F., Temizel, F., Özdemir A. & Sönmez H. (2015). Lisans eğitim programlarının finansal okuryazarlık düzeyine etkisinin araştırılması: Türkiye örneği. *Anadolu Üniversitesi Sosyal Bilimler Dergisi*, 14(4), 113-126.

Goyal, K., & Kumar, S. (2021). Financial literacy: A systematic review and bibliometric analysis. *International Journal of Consumer Studies*, *45*(1), 80-105.

Gök, B. ve Coşkun, A. (2020). Z kuşağının finansal okuryazarlık eğilimlerinin incelenmesine ilişkin bir araştırma. *Uluslararası Kültürel ve Sosyal Araştırmalar Dergisi (UKSAD)*, *6*(1), 356-366.

Gökmen, K. (2012). *Finansal okuryazarlık*. Hiperlink.

Güvenç, H. (2016). Lise öğrencileri için finansal okuryazarlık ölçeği geliştirme çalışması. *Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi, 16*(3), 847-863.

Holden, K., Kalish, C., Scheinholtz, L., Dietrich, D., & Novak B. (2009). *Financial literacy programs targeted on preschool children: Development and evaluation*. La Follette School Working Paper No. 2009-009. 1-85.

Kan, A. (2007). Portfolyo değerlendirme. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 32, 133-144.

Karagöz, Y. (2017). *SPSS ve AMOS uygulamalı: Nitel, nicel ve karma bilimsel araştırma yöntemleri ve yayın etiği*. Nobel.

Kılcan, B. ve Ergür, Ş. (2019). Finansal tutum ölçeğinin (ftö) geliştirilmesi: Geçerlik ve güvenirlik çalışmaları. *Gelecek Vizyonlar Dergisi*, *3*(3), 59-68.

Kocabıyık, T. ve Teker, T. (2018). Finansal okuryazarlık: Süleyman Demirel Üniversitesi öğrencileri üzerine bir araştırma. *Stratejik ve Sosyal Araştırmalar Dergisi*, 2(2), 117–144.

Meyers, E. (2020). *Young adult financial literacy and ıit's underlying factors*. Honors Theses. 64. Retrieved from https://digitalcommons.assumption.edu/honorstheses/64

Morgan, P. J., & Long, T. Q. (2020). Financial literacy, financial inclusion, and savings behavior in Laos. *Journal of Asian Economics*, *68*, 101197.

OECD. (2013). *Advancing national strategies for financial education: a joint publication by russia's g20 presidency and the OECD.* https://www.oecd.org/finance/financialeducation/G20_OECD_NSFinancialEducation.pdf

Özdamar, K. (2016). *Eğitim, sağlık ve davranış bilimlerinde ölçek ve test geliştirme yapısal eşitlik modellemesi: IBM SPSS, IBM SPSS AMOS ve MINITAB uygulamalı*. Nisan.

Özdamar, K. (2017). *Eğitim, sağlık ve davranış bilimlerinde ölçek ve test geliştirme yapısal eşitlik modellemesi: IBM SPSS, IBM SPSS AMOS ve MINITAB uygulamalı*. Nisan.

Russia Trust Fund. (2013). *Financial education for youth and in schools*. OECD/INFE policy guidance, challenges and case studies. Retrieved from https://www.oecd.org/daf/fin/financialeducation/TrustFund2013_OECD_INFE_Finl_Ed_for_Youth_and_in_Schools.pdf adresinden erişilmiştir.

Salvucci, S., Walter, E., Conley, V., Fink, S. ve Saba, M. (1997). *Measurement error studies at the National Center for Education Statistics (NCES)*. Washington D. C.: U. S. Department of Education.

Sarıgül, H. (2015). Finansal okuryazarlik tutum ve davraniş ölçeği: geliştirme, geçerlik ve güvenirlik. *Yönetim ve Ekonomi Araştırmaları Dergisi*, *13*(1), 200-218.

Sarıgül, H. (2020). Türkiye'de finansal okuryazarlık alanında yazılan lisansüstü tezlerin içerik analizi. *Yükseköğretim ve Bilim Dergisi/Journal of Higher Education and Science, 10*(1), 153-165. https://doi.org/10.5961/jhes.2020.377

Seyrek, İ. H., Gül, M. (2017). Finansal okuryazarlık ve girişimcilik niyeti: Üniversite öğrencileri üzerine bir araştırma. *Journal of Management and Economics Research*, 15(2): 103.

Sorgente, A., & Lanz, M. (2019). The multidimensional subjective financial well-being scale for emerging adults:Development and validation studies. *International Journal of Behavioral Development* 2019, 43(5) 466–478

Tan, Ş. (2010). KR-20 ve Cronbach alfa katsayılarının yanlış kullanımları. *Eğitim ve Bilim, 34*(152), 101-112.

Temizel, F. (2010) *Mavi yakalılarda finansal okuryazarlık.* Beta.

T.C Merkez Bankası (2011). *Dünyada ve Türkiye'de finansal hizmetlere erişim ve finansal eğitim.* https://www.tcmb.gov.tr/wps/wcm/connect/362bbf12-7d95-47eb-9d4d-13039893ce5e/finansal_egitim.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-362bbf12-7d95-47eb-9d4d-13039893ce5e-m3fBalY

Vitt, L. A., Anderson, C., Kent, J., Lyter, D. M., Siegenthaler, J. K., & Ward, J. (2000). *Personal finance and the rush to competence: Financial literacy education in the U.S.* Middleburg, VA: Institute for Socio-Financial Studies.

Yılmaz, H. ve Elmas, B. (2016). Finansal okuryazarlık: Ağrı İbrahim Çeçen Üniversitesi İktisadi Ve İdari Bilimler Fakültesi öğrencileri üzerine bir çalışma. *Ağrı İbrahim Çeçen Üniversitesi Sosyal Bilimler Enstitüsü Dergisi,* 2(1), 115–140.