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Contribution of the Social and Financial Leadership Education Program to Students and Teachers

Süleyman Avcı[1] · **Dinçer Demir**[2] · **Ayşe Candır**[2] · **Engin Güven**[2]

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Abstract

The social and financial leadership training program started to be implemented in Turkey in 2015 with the training of trainers, and a wide-ranging application covering the whole of Turkey was carried out in the 2020–2021 academic year. The project is aimed to provide students with knowledge and attitudes within the scope of social and financial leadership, and teachers with the ability to apply student-centered teaching methods as well as knowledge and attitude in the subject area within the scope of professional development. For the project, an open announcement is made for all teachers in Turkey working in the 3rd and 4th grades of the primary school and the 6th and 7th grades of the secondary school. 320 teachers and 3786 students from 81 provinces who applied for the announcement were included in the project. In the project, teacher training is carried out through active learning methods and in line with professional development principles, in 12 sessions of 2 h, in groups of 30, by 21 mentors. On the other hand, student training, lasted for five months, with a theme each month, between November and March by teachers under the guidance of mentors. All stages of the project were carried out through online training. Pre-test and post-test data were collected through knowledge, attitude, and skill scales developed for teachers and students within the scope of the research. The findings obtained in the research reveal that the social and financial leadership training program is effective in gaining knowledge and attitudes in the subject area in students and teachers.

Keywords Financial literacy · Instructional design · Professional development of teachers · Social and financial leadership training · Student centered teaching · Teacher training

Extended author information available on the last page of the article

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Introduction

Education plays a mediating role in ending the chronic poverty that continues for generations. However, poor children, who are defined as socially disadvantaged groups, cannot reach quality education adequately and cannot gain adequate equipment through education, resulting in the continuation of negative conditions for generations. Governments and non-governmental organizations that are aware of this situation carry out activities to increase the access of disadvantaged children to education. Although poverty decreases with increasing education, it is not clear what dimension of education is related to (Rose & Dyer, 2008). To prevent poverty, International Aflatoun recommends the social empowerment of children who attend formal education, and the development of their knowledge and skills financially (Billimoria, 2010). Studies on the importance of providing financial literacy, knowledge, attitudes, and behaviors not only to disadvantaged groups but also to the entire society, adults, and children, have been one of the research areas that have been emphasized for a long time by institutions (Allianz, 2017; Alpha Research., 2010; Klapper et al., 2015; OECD, 2020) and individual researchers (Fernandes et al., 2014; Kaiser et al., 2017). The findings reveal that financial literacy is important in making sound financial decisions (Nicolini & Haupt, 2019; Thomas et al., 2018). Making the right financial investment decisions, being careful against fraud, and ensuring the financial security of individuals born economically disadvantaged are among the reasons for financial education (OECD, 2020). Developed and developing countries continue to raise awareness through formal and non-formal education institutions to ensure that their citizens are adequately equipped in this field (Atkinson & Messy, 2013). As a result of these studies and comparisons made among the countries, it is seen that there are significant differences in the financial literacy of citizens (Klapper et al., 2015; Lusardi, 2019). It is seen that the financial literacy levels of the citizens of economically developed countries are higher than the citizens of developing countries. Turkey is below the average in terms of financial literacy levels of adults in international comparisons (Klapper et al., 2015; OECD, 2020). Although there are projects aimed at improving financial literacy targeting different age levels in Turkey (Tetik, 2019), the number is quite insufficient. A large-scale project to develop social skills and financial literacy at primary, secondary, and high school levels in Turkey is carried out by the Teachers Academy Foundation (ÖRAV) in cooperation with International Aflatoun. International Aflatoun is an institution that supports social development and financial literacy education at all levels of formal education from primary school to high school, especially in developing countries, through its local working partners. The project attaches special importance to the training of teachers in terms of the subject area and teaching skills to ensure that the effects of the studies are carried out continuously for a long time and that they believe in the importance of the subject and ensure that the practices continue voluntarily. The project has been implemented in 108 countries since 2008 (Kwauk et al., 2016) and achieved successful results (Aflatoun, 2020). Research (Kaat & Sulava, 2016; Shephard et al., 2017; Supanantaroek et al., 2017) proves that the project is effective. In Turkey, the project first started in 2016, and its

nationwide implementation took place in the 2020–2021 academic year. This study is about the results of the application in 2020–2021. This study, it is aimed to examine the contribution of the Turkish implementation of the 5 Tas Social and Financial Leadership project to primary and secondary school students and teachers working at primary and secondary school levels in terms of knowledge, attitudes, and skills.

Literature Review

Financial Literacy

The definition generally accepted in the literature for the concept of financial literacy belongs to the OECD, which conducts systematic research on this subject. A comprehensive concept definition determines the direction of education and research on the related subject (Kasman et al., 2018). According to OECD's definition targeting adult individuals, "Financial literacy is a combination of awareness, knowledge, skills, attitudes, and behaviors necessary to make sound financial decisions and ultimately ensure individual financial well-being" (OECD, 2016, p. 10). According to the definition made for children and youth, "Financial literacy is knowledge and understanding of financial concepts and risks, and the skills, motivation and confidence to apply such knowledge and understanding in order to make effective decisions across a range of financial contexts, to improve the financial well-being of individuals and society, and to enable participation in economic life" (OECD, 2020, p. 43). According to the definitions, while there is an emphasis on individual benefit in the development of adults' financial literacy, both individual and social benefits come to the fore in children. There is also the aim of ensuring children's participation in social life. The definition also emphasizes the awareness, knowledge, skill, attitude, and behavior dimensions of financial literacy. General life skills, which also form the basis for financial literacy, are taught to children from an early age. Cognitive skills including goal setting, making a plan for the goal, and following this plan, and basic knowledge and skills such as four actions, money, cost, and price are acquired by the individual starting from kindergarten. The basic financial concepts that make up the dimensions of knowledge and skills in financial education practices and are frequently included in the definitions are spending, budgeting, saving, investing, participating in the stock market, credit, debt, tax, insurance, banking, fraud, retirement plan, employment, and income (Goyal et al., 2021; Kasman et al., 2018). Financial behaviors also express the use of these dimensions in life (Kasman et al., 2018). Today, all these issues are now seen as life skills (Aprea et al., 2016). Good financial literacy results in the effective use of knowledge, skills, and behaviors in making the right financial decisions (Huston, 2010). For example, financial literacy level has a significant effect on investing in the stock market (Thomas et al., 2018). Financial literacy is an indicator of financial well-being. High financial literacy results in healthy financial decisions, while low levels result in unhealthy decision-making.. Credit card debts are the result of incorrect financial decisions (Goyal et al., 2021). Meta-analysis studies have concluded

that financial education has little effect on financial behavior (Fernandes et al., 2014; Goyal et al., 2021). However, it is seen that the training focusing on the needs of the individual and involving highly motivated participants are successful. Online stock market training for people who are interested in the stock market and introductory seminars given to employees for individual retirement is more effective. It has been seen that giving education such as stock market and retirement plan to high school students who do not make sense to them does not yield beneficial results. The issue that concerns high school students should focus on the choice of a profession that will bring a good income. In primary and secondary school, basic cognitive skills, money, and saving are the subjects compatible with age (Goyal et al., 2021). Depending on the situation, the social environment also precludes education in making financial decisions such as wealth accumulation, individual retirement decisions, and investing in the stock market (Liu et al., 2014; Brown et al., 2008; Brown & Taylor, 2007). Teachers have an active role in providing students with financial knowledge, attitudes, and behaviors (Desimone, 2009). The use of active learning approaches in financial education to be applied at formal education levels will ensure efficient results. Here, teachers who play the role of decision-maker and implementer have a great responsibility. Teachers achieved more effective results when they used simulation, case studies, gamification, social studies, and project practices in their education. These methods should be used together with subject-based teaching practices rather than alone. Teachers should also organize activities that will relate the topics to the students' lives. In the organization of the activities, options should be created in the whole process by considering the individual differences of the students. The important points in the teacher dimension are that the teacher is equipped with financial literacy, they believe in the necessity of education for students and financial skills in their own life (Compen et al., 2019; Mandell & Klein, 2009).

Professional Development of Teachers

The learning process for teachers to develop their knowledge and skills continues until the end of their professional life. Some of this learning takes place through their own teaching experiences and some of them through in-service training practices (Desimone, 2009). It is more appropriate to carry out similar learning experiences with in-service training practices, where active learning processes take place, since the learning process is long with their own teaching experience in the classroom, leading to wrong learning, and mistakes harming students. All designed learning activities that provide improvement in teachers' teaching knowledge and skills and student achievement are defined as professional development (Darling-Hammond et al., 2009; Desimone, 2009). Increasing the teaching knowledge and skills of teachers through professional development is an important variable that positively affects the academic development of students (Yoon et al., 2007). Professional development training programs for teachers are conducted through the ministry of education, universities, non-governmental organizations, and private courses. An effective professional development program; is related to the teacher's

field, takes into account the learning principles of adults, is based on active learning, includes cooperation between teachers, has a coaching system in the process, provides feedback, and is long-term (Bragg et al., 2021; Darling-Hammond et al., 2009; Desimone et al., 2002; Penuel et al., 2007). Considering the characteristics that a successful professional development program should have as a whole, it can be said that it is based on experiential learning, which is an effective approach to providing a permanent behavioral change in theory (Wilson & Beard, 2013). According to Kolb (1984, p. 41), "experiential learning is the process by which knowledge is created through the transformation of experience". According to a different definition, experiential learning is the process of making sense of the active participation between the inner world of the person and the outer world of the environment. (Wilson & Beard, 2013, p. 26). Learning from experiences takes place spontaneously as a part of life and also in the educational environment in its fictionalized form. In the educational environment, it is one of the basic application forms of learner-centered education to establish a connection between theory and real-life (Wilson & Beard, 2013). To achieve successful results reflected in practice, professional development activities organized for teachers should be organized according to experiential learning principles. Within the scope of this study, the training of project participant teachers is carried out with learning-teacher practices that enable teachers to learn by doing and experiencing. The program proposed by the project owner International Aflaton for the training of teachers includes professional development principles and uses the active learning approach within the framework of experiential learning in the process (Aflatoun, 2021). Although the main purpose of the projects is the development of students, it gives importance to the training of teachers to ensure the success of the project and to ensure that teachers continue this training in the following years (Kwauk et al., 2016). Even though both teacher training and student training were planned to be conducted face-to-face within the scope of social and financial leadership, all activities were carried out through distance education due to the COVID-19 pandemic. Online distance education has been used in all formal education levels and within the scope of non-formal education, including teacher education since the widespread use of internet technology (Moore et al., 2011). Effectively conducted distance professional development practices provide positive developments in teachers' content knowledge, self-efficacy, and perceptions of teaching methods (Bragg et al., 2021). Studies comparing face-to-face and online teacher training have shown that both provide equally successful results (Means, et al., 2010; Russellet al., 2009). Effective distance education for teachers should include activities diversified according to individual differences, give importance to active participation, provide learner coaching, enable the practical use of acquired knowledge and skills, and be flexible (Bragg et al., 2021; Dille & Røkenes, 2021).

Social and Financial Leadership Education Project

Aflatoun is a non-governmental organization that aims to break the cycle of poverty and lack of education through the education of children. Individuals who are economically and socially disadvantaged maintain their positions because they do

not have the knowledge and skills to cure themselves of this situation. In a world where financial literacy, knowledge, and skills within the scope of entrepreneurship are given by families, it does not seem possible for a parent who is not successful in this field to equip their child with the equipment to carry him/her higher. Entrepreneurial children who are self-confident, know themselves and their society, have high communication skills and can build a better future for themselves with their financial literacy skills. For this purpose, Aflatoun offers social and financial leadership training to all children from primary school to the end of high school (Billimoria, 2010). Aflatoun Foundation started its activities in 2005 and has been continuing its global education since 2008 (Billimoria, 2010). As of 2020, Aflatoun projects have reached 5.6 million children from different levels of formal education in 102 countries. Aflatoun's project partner in Turkey is the Teachers Academy Foundation (ÖRAV). ÖRAV was established in 2008 to support the personal and professional development of teachers, and since then it has organized numerous training such as environmental literacy, critical thinking skills training, and interactive course design in online education (www.orav.org.tr). The purpose of the "5 Tas" Social and Financial Leadership training program is to help children acquire good financial habits through education, participate as proactive citizens, develop community awareness, and ultimately become stronger individuals. The program has five themes for teaching two core subjects: (1) personal understanding and discovery, (2) rights and responsibilities, (3) awareness of saving and spending, (4) planning and budgeting, and (5) social and financial entrepreneurship. The program also aims to develop the knowledge and skills of teachers who are supporters of change, both professionally and individually (Billimoria, 2010).

The following hypotheses were tested in this study:

1. 5 Tas Social and Financial Leadership program has a positive effect on students' knowledge and attitudes in the field of social and financial leadership.
2. 5 Tas Social and Financial Leadership program has a positive effect on teachers' knowledge and attitudes in the field of social and financial leadership.
3. Teacher training organized within the framework of active learning principles has a positive effect on teachers' use of student-centered activities in their classrooms.
4. The effect of the 5 Tas Social and Financial Leadership program on students' knowledge and attitudes in the field of social and financial leadership, (4. a) gender, and (4b) education level have a mediating role.
5. In the effect of the 5 Tas Social and Financial Leadership program on teachers' knowledge and attitudes in the field of social and financial leadership, (4. a) gender and (4b) education level have a mediating role.
6. The effect of teacher education organized within the framework of active learning principles on the level of teachers' use of student-centered activities in their classes, (4a) gender, and (4b) education level have a mediating role.

Method

Research Design

In the design of this research, a single group pre-test-post-test experimental design, which is among the quasi-experimental designs, is used (Cook et al., 2002). The pre-test is used before the 5 Tas social and financial leadership program implementation, and the post-test is used at the end of the application. An open announcement is made by ÖRAV for participation in the project for all teachers in Turkey who work in the 3rd and 4th grades of primary school, and 6th and 7th grades in secondary school. The teachers who responded to the announcement and the students of these teachers were included in the study. According to 2020 data in Turkey, there are 382,109 teachers at the primary school level and 306,937 teachers at the secondary school level. Since two classes are taken from each level, half of the teachers mentioned constitute the universe of the project. This number is 191 thousand for secondary school and 153 thousand for primary school. For this number of teachers, the sample size should be at least 384 with a margin of error of five percent. Although 626 teachers participated in this study, 320 teachers answered the post-tests. In Turkey, as of 2021, there were 5,328,391 primary schools and 6,318,602 secondary schools (MEB, 2021). The number of samples calculated with a five percent margin of error over half of the number of students is 384. The number of students participating in the research is 9102, and the number of those who answered the post-test is 3786.

Study Group

In the evaluation of the data on the teachers and students participating in the research, those who participated in the post-test were taken into account. The descriptive features of the teachers and students included in the analysis are given in Table 1.

Teachers and students from all 81 provinces participated in the research. The number of teachers participating from provinces varies between 1 and 89. The top 5 provinces with the highest number of teachers and students are Istanbul (89), Kocaeli (53), Izmir (30), Ankara (29), and Mersin (28).

5 Tas Social and Financial Leadership Program

The Social and Financial Literacy curriculum has been prepared by the International Aflatoun, and each country translates the program into its language and implements it. The overall goal of the program is to increase the knowledge and skills of students studying in primary, secondary, and high schools on social and financial literacy. It uses a student-centered active learning approach to achieve this goal. The goals of the program for teachers are to gain experience in student-centered teaching and to improve their knowledge, attitudes, and skills in social and financial leadership. The active learning approach is used in the training of

Table 1 Descriptive statistics of teachers and students participating in the research

Variables	N	%
Teacher		
Gender		
Female	261	81.6
Male	59	18.4
Grade		
Primary	200	62.5
Middle	120	37.5
Total	320	100.0
Student		
Gender		
Girl	2008	53.0
Boy	1778	47.0
Grade		
Primary	2749	72.6
Middle	1037	27.4
Total	3786	100.0

teachers, just like students. The five themes that constitute the program and the learning objectives under these themes are given in Table 2.

1-Teacher Training

The training of the teachers is carried out by the Mentors working within ÖRAV. Mentors, who are experts in the field of teacher education, were first given training on e-mentoring and its different aspects due to the remote execution of the program. Within the scope of the program, a 2-h, 12-session program is organized for the training of teachers. These training were organized in the form of 30 working groups through 21 mentors. Within the scope of the training, activities were carried out for the teachers within the framework of the project subjects, through active learning methods. During the implementation process, regular meetings were held and feedback is given on the experiences of the teachers. Additionally to these, seminars were organized by experts in the field before starting the application for five themes.

2-Student Education

The education of the students lasted for five months, one month for each theme, from November to March. Active learning methods were used in student education within the framework of a student-centered learning approach. Based on the program, in-class practices are organized in the form of activities suitable for distance education in which the family is also included in the process. Students

Table 2 Themes and achievements of the program

Theme	Achievements	Theme	Achievements
Personal understanding and discovery	Introduces itself with different features	planning and budgeting	Recognizes the concept of a budget
	Explores different countries in a multi-faceted way		Makes a plan and draws up its implementation plan
	Recognizes and interprets emotions		He/ She sets goals and follows
	Introduces friends and characteristics		Plans an event and calculates its budget
	Recognizes respect for others		Applies a saving strategy while budgeting
	Recognizes similar and different features of differences		Lists what can be done with the savings
	He/ She does research		Recognizes the currencies of different countries
	He/ She realizes the situations in the past by interviewing his/ her parents		Recognizes the currency and features of a different country
			He/ She detects a problem in his/ her environment
Rights and responsibilities	Recognizes sustainable development goals		Develops solutions for the problem
	Designs promotional activity for one of these development goals		Makes budget planning for the solution
			Plans to reach a solution
	This goal sets the target for the application	social and financial entrepreneurship	Defines his dream world and presents its rationale
	Justifies the importance of one of the development goals		Associates his/ her dream with sustainable development plans
	Establishes the relationship between rights and responsibilities		Detects a problem in the environment
	Recognizes the Convention on the Rights of the Child		Implements problem-solving steps
	Lists the things to do for safe internet		Designs a plan to solve the problem
Awareness of saving spending	Defines what savings are		Describes the solution
	Discover how to save money		Explores different professions and their benefits to society
	Designs how to save money		Recognizes the concept of NGO
	Recognizes limited resources		Researches different NGOs and their work
	Recognizes the concepts of recycling, reuse, and reduction		Recognize the concept of volunteering
	Prepares and uses a piggy bank		Designs bags with recycling
	Recognize the Turkish lira and its features		Realizes the place and importance of money in our life
	Prepares savings plan		Plans to create the budget required to solve a problem and designs to make it sustainable
	Recognizes the difference between wants and needs		
	Knows all Turkish money		Puts cooperation at the center in solution plans and distributes tasks

are given tasks that they can actively participate in all processes and learn by doing and experiencing. Programs have been prepared for primary and secondary school levels within the framework of the same themes with different difficulty levels.

3-Solution Camp Event

At the end of the activities for the five themes, a teacher and his students from each study group participated in the solution camp activity together. In line with the guidelines for this camp, they were asked to prepare solution suggestions for a problem they saw in the environment. Each group presented their solution proposal to all participants and program coordinators in the 10-min time allocated to them on 24–25 April 2021. Teachers and students who were found successful by the evaluation jury were awarded a certificate of achievement according to their determined strengths.

Data Collection

Data collection for teachers and students is done with assessment tools developed within the scope of the research. The data were collected at two points, at the beginning and the end of the application. Validity and reliability studies of all tests were carried out before the application. Pre-tests were filled online in November 2020. The final tests were collected online again in April 2021. Within the scope of the research, teachers' knowledge and attitudes within the scope of social and financial leadership and their behaviors of using student-centered education in their classes were measured. The student's knowledge and attitudes within the scope of social and financial leadership were measured.

Assessment Tools

Assessment Tools Used for Teachers

In this study, three scales were developed to determine the contribution of the applied education program to teachers. The validity and reliability studies of the scales were carried out on the data obtained from the teachers who participated in the 2019–2020 academic year implementation of the project.

Social Leadership Skills Knowledge Scale

The scale is developed for teachers to self-assess their knowledge level in the field of social leadership. There are 11 items on the scale, which are prepared considering the program objectives. The scale is in a 5-point Likert type, and the answers given to the items range from "strongly disagree" to "strongly agree". All 11 items

developed for the candidate scale were also included in the final version of the scale. In the exploratory factor analysis, although there were two sub-dimensions with an eigenvalue above 1, all items had a load value (.810–.474) with the first factor, and the eigenvalue of the first dimension (5.789) and the explained variance value (52.628), the eigenvalue of the other dimension. It is decided that the scale showed a one-dimensional structure because it is considerably higher than (1.046) and explained variance values (9.512). The fact that the Cronbach Alpha internal reliability coefficient, in which all items of the scale were calculated together, is also high (.905) proves that the items show a single structure. Confirmatory factor analysis yielded good and acceptable fit index values ($\times 2/df = 1.6 < 2$, GFI = .96 > .95, AGFI = .94 > .90, RFI = .97 > .95, CFI = .99 > .95, RMSEA = .04 < .05). This result supports that the scale has a one-dimensional structure (Byrne, 2012; Hu & Bentler, 1999; Kline, 2011; Schumacker & Lomax, 1996).

Financial Leadership Skills Knowledge Scale

The scale is developed for teachers to self-assess their knowledge level in the field of financial leadership. There are 14 items on the scale, which are prepared considering the program objectives. The scale is in a 5-point Likert type, and the answers given to the items range from "strongly disagree" to "strongly agree". All 14 items developed for the candidate scale were also included in the final version of the scale. In the exploratory factor analysis, although three sub-dimensions with an eigenvalue above 1, all items had a load value (.770–.597) with the first factor, the first dimension is eigenvalue (6.642) and the explained variance value (47.441), the other two dimensions were eigenvalue and it is decided that the scale showed a one-dimensional structure because the values (1.724, 1.273) and the explained variance values (12,317, 9,090) were considerably higher. The fact that the Cronbach Alpha internal reliability coefficient, in which all items of the scale are calculated together, is also high (.913) proves that the items show a single structure. Confirmatory factor analysis yielded good and acceptable fit index values ($x^2/df = 2.6 < 3$, GFI = .93 > .90, AGFI = .87 > .85, RFI = .91 > .90, CFI = .96 > .95, RMSEA = .07 < .08). This result supports that the scale has a one-dimensional structure (Byrne, 2012; Hu & Bentler, 1999; Kline, 2011; Schumacker & Lomax, 1996).

Student-Centered Education Behavior Scale

The scale is developed to assess teachers' perceptions of their behavior in using student-centered activities in their classrooms. There are 21 items on the scale, which are prepared by considering the applications of the student-centered teaching approach for the classroom. The scale is in a 5-point Likert type, and the answers given to the items range from "strongly disagree" to "strongly agree". All 21 items developed for the candidate scale were also included in the final version of the scale. In the exploratory factor analysis, although there were three sub-dimensions with an eigenvalue above 1, all items had a load value (.839–.551) with the first factor and the

eigenvalue of the first dimension (10.494) and the explained variance value (49.972) for the other two dimensions. It is decided that the scale showed a one-dimensional structure because the values (1,760, 1.083) and the explained variance values (8,379, 5,159) were considerably higher. The fact that the Cronbach Alpha internal reliability coefficient, in which all items of the scale are calculated together, is also high (0.942) proves that the items show a single structure. Confirmatory factor analysis yielded good and acceptable fit index values ($x^2/df = 2.0 < 3$, GFI = .91 > .90, AGFI = .86 > .85, RFI = .91 > .90, CFI = .96 > .95, RMSEA = .06 < .08). This result supports that the scale has a one-dimensional structure (Byrne, 2012; Hu & Bentler, 1999; Kline, 2011; Schumacker & Lomax, 1996).

Assessment Tool Used for Students

Social and Financial Leadership Knowledge and Attitude Scale

The scale is developed for students to self-evaluate their attitudes in the field of financial leadership. The scale is used as a pre-test and post-test to evaluate the effectiveness of the project. There are 24 items prepared considering the learning objectives of the project. The scale is in a 5-point Likert type, and the answers given to the items range from "strongly disagree" to "strongly agree". Six of the 30 candidate items developed for the scale were not finalized as a result of the exploratory factor analysis. In the exploratory factor analysis, three sub-dimensions with an eigenvalue above 1 were found. In the first analysis, items with a load value in more than one factor and with a difference of less than .10 between load values were excluded from the scale. The eigenvalues of the three sub-dimensions in the final version of the scale are respectively 8.695, 1.454, and 1.157. The total variance explained by the three sub-dimensions is 47,110. The sub-dimensions of the scale were named financial leadership (5 items), social leadership (11 items), and entrepreneurship (8 items). The internal reliability coefficients of the three sub-dimensions determined by Cronbach's alpha were respectively .737, 857, and 802. Confirmatory factor analysis yielded good and acceptable fit index values ($\times^2/df = 1.5 < 2$, GFI = .98 > .95, AGFI = .97 > .90, RFI = .96 > .95, CFI = .96 > .95, RMSEA = .03 < .05). This result supports that the scale has a one-dimensional structure (Byrne, 2012; Hu & Bentler, 1999; Kline, 2011; Schumacker & Lomax, 1996).

Analysis of Data

In the analysis of the data, dependent groups t-test and mixed pattern ANOVA test are used. Before the tests, it is examined whether the data met the assumption of a normal distribution with the skewness and kurtosis values and whether there are extreme values with the Box Plot chart. First, the extreme values in the data are deleted, and then normality tests are performed. The dependent groups' t-test is used to analyze whether there is an increase in the post-tests of the teachers

and students compared to the pre-tests. The contribution of the teachers' grades (primary school—secondary school) and gender variables to the change in the pre-test-post-test is tested with mixed pattern ANOVA. The contribution of the grade level (primary school—secondary school) and gender variables, which are read similarly in students, to the change in the pre-test-post-test were tested with mixed pattern ANOVA. For the mixed pattern ANOVA test, the assumption of the equality of variances is analyzed with the Levene test, and the assumption of the equality of covariances is analyzed with the Box's M test.

Findings

Findings obtained from teachers and students are discussed under separate headings.

Contribution of Social and Financial Leadership Project to Teachers

Within the scope of the research, firstly, the t-test is applied to dependent groups to compare the answers given by the teachers to the pre-test and post-test applications of the three assessment tools. First of all, it is checked whether there are extreme values in the data. In the analysis made on the box plot graph, the data containing extreme values are deleted. Then, skewness and kurtosis values are calculated for the normality assumption of the test. The fact that all values are between + 1 and − 1 indicates that the normality assumption is met (Tabachnick et al., 2007).

The findings show that there are significant increases in the knowledge and attitudes of the teachers participating in the project in the field of social and financial leadership, and their behavior in applying student-centered teaching. Findings obtained from social leadership and financial leadership scales show that teachers' knowledge and attitude levels are quite high before they joined the program on social leadership ($\bar{X}=4.17$). It is understood that they have some knowledge and attitude about financial literacy ($\bar{X}=3.45$), although not as much as social leadership. A statistical increase is observed in the post-test compared to the pre-test in both areas ($p<.01$). The increase in knowledge and attitude towards financial literacy has been much greater. The calculated effect values show that the difference is very large for financial literacy ($d=1.58$) and large for social leadership ($d=.87$). Findings from the Student-Centered Teaching Behavior Scale ($\bar{X}=4.19$) show that teachers included student-centered activities in their classrooms before the project. After the application ($\bar{X}=4.65$), it is understood that there is a significant increase in the use of the activity ($p<.01$). It is seen that this difference is larger than the calculated effect value ($d=.78$). Secondly, the effect of the grade (primary school-secondary school) and gender variables on the pre-test post-test changes is analyzed with the mixed design ANOVA test. Before the analysis, the assumption of the equality of variances is analyzed with the Levene test, and the assumption of the equality of covariances is analyzed with Box's M test. Since the assumptions of normal

Table 3 T-test results in dependent groups to determine the effect of project ımplementation on teachers

	Pre-test			Post test			t	p	d
	N	Mean	Sd	N	Mean	Sd			
Social leadership	317	4.17	.47	317	4.69	.38	15.498	.000	.87
Financial literacy	317	3.45	.59	317	4.58	.45	28.270	.000	1.58
Student-centered ınstruction	317	4.19	.46	317	4.65	.39	13.821	.000	.78

distribution and the absence of extreme values in the data are provided beforehand, no further analysis is needed. The results of the Levene tests calculated separately for both variables ($p > .05$) show that the variances (Gastwirth et al., 2009) and the Box M test results ($p > .05$) show that the covariances are equally distributed (Friendly et al., 2018) (Table 3).

A mixed Pattern ANOVA test is applied to determine the effect of the level of duty on the test results. According to the results obtained, social leadership ($F(1\ 315) = .038$, $p = .845$), financial leadership sub-dimension ($F(1\ 315) = .000$, $p = .985$), and student-centered education practice ($F(.\ 1\ 315) = .426$, $p = .514$), it is concluded that the grief for which the task is performed does not affect the pre-test and post-test changes. Similar results are obtained for the gender variable as well. Social leadership ($F(1\ 315) = 0.005$, $p = 0.942$), financial leadership sub-dimension ($F(1\ 315) = .172$, $p = .679$) and student-centered educational practice ($F(1\ 315) = 1.353$), $p = .246$), it is concluded that the grade of duty does not affect the pre-test post-test changes. These results indicate that male and female teachers working at different teaching levels benefit equally from the training (Table 4).

Contribution of Social and Financial Leadership Project Implementation to Students

Secondly, within the scope of the research, the t-test is applied to the dependent groups to compare the answers given by the students to the pre-test and post-test applications of the assessment tool. First of all, it is checked whether there are extreme values in the data. In the analysis made on the box plot graph, the data containing extreme values are deleted. Then, skewness and kurtosis values are calculated for the normality assumption of the test. The fact that all values are between $+1$ and -1 indicates that the normality assumption is met.

Findings from the Social and Financial Leadership Knowledge and Attitude Scale show that students' knowledge and attitude levels are quite high before they join the program on social and financial leadership ($\bar{X} = 4.30$). As in the whole scale, it is understood that the students have knowledge and attitude before the application in the sub-dimensions of financial leadership ($\bar{X} = 4.22$), social leadership ($\bar{X} = 4.44$), and entrepreneurship ($\bar{X} = 4.20$). A statistical increase is observed in the post-test compared to the pre-test in both the whole scale and its sub-dimensions ($p < .01$). The calculated effect values (.19, .20, .10, .19) show that the difference is low for all four assessments (Table 5).

Table 4 The effect of grade of duty and gender variables on the change in the pre-test post-test

	Sum of squares	Df	Mean square	F	Sig	η^2
Grade						
Social leadership						
Test*grade	.007	1	.007	.038	.845	.000
Error	56.115	315	.178			
Financial literacy						
Test*grade	.00009	1	.00009	.000	.985	.000
Error	80.535	315	.256			
Student-centered ınstruction						
Test*grade	.074	1	.074	.426	.514	.074
Error	54.749	315	.174			
Gender						
Social leadership						
Test*gender	.001	1	.001	.005	.942	.000
Error	56.121	315	.178			
Financial literacy						
Test*gender	.044	1	.044	.172	.679	.001
Error	80.491	315	.256			
Student-centered ınstruction						
Test*gender	.235	1	.235	1.353	.246	.004
Error	54.588	315	.173			

Table 5 T-Test results in dependent groups to determine the effect of project implementation on students

	Pre test			Post test			t	p	d
	N	Mean	Sd	N	Mean	Sd			
Financial leadership subscale	3564	4.22	.49	3564	4.35	.47	11.149	.000	.19
Social leadership subscale	3658	4.44	.41	3658	4.55	.39	11.847	.000	.20
Entrepreneurship subscale	3531	4.20	.48	3531	4.26	.47	5.627	.000	.10
Social and financial leadership knowledge and attitude scale	3650	4.30	.49	3650	4.40	.38	11.372	.000	.19

Afterward, the effect of the grade (primary school-secondary school) and gender variables on the pre-test and post-test changes are analyzed with the mixed design ANOVA test. Before the analysis, the assumption of the equality of variances is analyzed with the Levene test, and the assumption of the equality of covariances is analyzed with Box's M test. Since the assumptions of normal distribution and the absence of extreme values in the data are provided before, no further analysis is needed. The results of the Levene tests calculated separately for both variables ($p > .05$) show that the variances and the Box's M test results ($p > .05$) show that the covariances are evenly distributed.

Table 6 Mixed pattern ANOVA results to determine the effect of grade level on test results

	Sum of Squares	Df	Mean Square	F	p	η^2
Grade						
Financial Leadership Subscale						
Test*grade	.074	1	.074	.319	.572	.000
Error	830.278	3562	.233			
Social leadership subscale						
Test*grade	.171	1	.171	1.064	.302	.000
Error	586.377	3656	.160			
Entrepreneurship subscale						
Test*grade	2.622	1	2.622	11.510	.001	.003
Error	803.787	3529	.228			
Social and financial leadership knowledge and attitude scale						
Test*grade	.896	1	.896	6.077	.014	.002
Error	538.075	3648	.147			
Gender						
Financial leadership subscale						
Test*gender	.230	1	.230	.988	.320	.000
Error	830.122	3562	.233			
Social leadership subscale						
Test*gender	1.088	1	1.088	6.792	.009	.002
Error	585.459	3656	.160			
Entrepreneurship Subscale						
Test*gender	.230	1	.230	1.009	.315	.000
Error	806.178	3529	.228			
Social and financial leadership knowledge and attitude scale						
Test*gender	.070	1	.070	.477	.490	.000
Error	538.901	3648	.148			

The mixed Pattern Anova test is applied to determine the effect of class level on test results. According to the results obtained, the pre-test post-test of the class level for the financial leadership sub-dimension (F(1 3562) = .319, p = .572) and the social leadership sub-dimension (F(1 3656) = 1.064, = 0.000) It is concluded that there is no effect on the changes in entrepreneurship, but there is an effect in terms of the entrepreneurship sub-dimension (F(1 3529) = 11.510, p = .001) and the whole scale (F(1 3648) = 6.077, p = .014). If partial eta square values are close to .01, it is interpreted as a low effect, close to .06 as a medium effect, and close to .14 as a high effect (Richardson, 2011). Partial eta square values show that although the interaction effect is significant, the effect is very low (Table 6).

After the interaction effect analysis, simple main effect analyzes are also carried out for the assessments.

The results of the simple main effect analysis for the grade level show that the increase in knowledge and attitude of primary school students (X = .0872) is higher

Table 7 Simple main impact analysis results for testing

	Mean	Sd	t	p
Entrepreneurship subscale				
Primary	.0872	.66	3.393	.001
Middle	.0001	.69		
Grade				
Social and financial leadership knowledge and attitude scale				
Primary	.1158	.54	2.477	.013
Middle	.0660	.53		
Gender				
Social leadership subscale				
Girl	.1338	.55	2.606	.009
Boy	.0849	.57		

than that of secondary school students (X = .0001) in entrepreneurship sub-dimension. This difference between primary and secondary school students is also statistically significant (p < .05). Similarly, a larger increase is observed in primary school students (X = .1158) compared to secondary school students (X = .0660) across the scale (p < .05). The results of the simple main effect analysis for gender show that primary school students' knowledge and attitude increase (X = .1338) is higher than secondary school students (X = .0849) in the social leadership sub-dimension (p < .05) (Table 7).

Discussion

Education has a high impact on children who are disadvantaged in terms of social, cultural, and economic level, having better conditions than their parents (Rose & Dyer, 2008). Financial literacy education from an early age ensures healthy financial decisions (Nicolini & Haupt, 2019). To be economically free, the individual must also be socially empowered and the entrepreneurial spirit must be brought in (Billimoria, 2010). It can be said that the 5 Tas Social and Financial Leadership project, which aims to strengthen the children in primary and secondary school socially and to develop their knowledge, attitudes, and skills in financial terms, partially achieved its goals for students and at a very high level in teachers. According to these results, hypotheses 1 and 2 were accepted. Social and financial education for students increased their knowledge and attitudes, but the effect of the increase in the post-test remained low compared to the pre-test. In terms of teachers' knowledge and attitudes, the effect of the increase in the post-test compared to the pre-test is very high in terms of financial literacy and high in terms of social literacy. Although the effect of financial knowledge, attitude, and skills on healthy financial behaviors is quite high (Nicolini & Haupt, 2019; Thomas et al., 2018), educational studies aimed at gaining financial knowledge and attitude have generally not been effective (Fernandes et al., 2014; Goyal et al., 2021). The findings of this study are

different from the literature in terms of its results. Findings from different countries where the social and financial literacy program is implemented indicate that the project is effective (Kaat & Sulava, 2016; Shephard et al., 2017; Supanantaroek et al., 2017). The main reason for the failure of financial literacy training to be successful is that the training is not suitable for the needs or interests of the age groups. Training that appeals to the person's interest and is suitable for his level has always yielded positive results (Goyal et al., 2021). The fact that the achievements of this study and the active learning methods applied were suitable for the target group may have contributed to its success. The fact that successful results similar to the findings of this study have been obtained in the implementation of the project in different countries supports this interpretation Although teachers are not the target audience of the program in terms of subject scope, it is also very important that they perceive themselves as advanced in both social and financial fields. This finding can also be interpreted as deficiencies in the basic issues of financial literacy among adults. The level of financial literacy among adults in Turkey is quite low. The fact that Turkey is in the category of developing countries is one of the main reasons for the low level of knowledge about financial literacy. The level of financial literacy positively correlates with the level of development (OECD, 2020). The improvements of the teachers' understandings from the project are at least as important as the students'. Teachers will be able to transfer their understandings of financial literacy at the level of knowledge and retention to their next students even when the project is over. In this way, the project will continue to show its effects in the long run. One of the factors that positively affect students' academic development is the development of teachers' knowledge and skills about teaching methods (Yoon et al., 2007).

In this study, the training for teachers within the framework of professional development is carried out in line with the principles of experiential and active learning. Teachers are trained with active learning methods, support is provided from the beginning to the end of the program with the e-mentoring application, the training continued throughout the five-month program, and the teachers have the opportunity to apply what they learned in a short time. In addition, the teachers participated in the project on a completely voluntary basis without any external coercion. All these practices carry out within the scope of the project are in line with the principles of effective professional development training conducted face-to-face or online (Bragg et al., 2021; Dille & Røkenes, 2021). There is no problem in the process of online professional development training of teachers. Studies conducted in the field also show that there is no difference in terms of achieving success between teachers' face-to-face and online training (Means et al., 2010; Russell et al., 2009). According to the results of this study, teachers have started to apply more student-centered educational activities in their classrooms as a result of both teacher education and the education they give to students. According to this result, hypothesis 3 is accepted. The effect size of the change in terms of behavior is also high. In a study in which the social and financial leadership project is implemented in a different country, it is concluded that teacher education studies are effective in gaining students' student-centered teaching skills (Shephard et al., 2017). Within the framework of the curriculum in Turkey, teachers are expected to continue their lessons according to the student-centered teaching principles (TTKB, 2022). Most of the time, this expectation

is not met in practice, and teachers tend to continue teaching in traditional ways. Lack of knowledge and experience is one of the main reasons why teachers prefer teacher-centered teaching practices instead of student-centered ones. Thanks to this project, teachers gained both knowledge and experience about how student-centered education should be.

This project is carried out on primary and secondary school students and the results obtained belong to both groups. Teachers also consist of classroom teachers at the primary school level and branch teachers at the secondary school level. The analysis made on the findings of the teachers showed that the class and branch teachers are equally successful, and the level of duty has no effect on success. Teachers working at both levels are similar in terms of applying student-centered teaching activities in their classrooms. Student-centered education is a set of practices that allow more frequent and effective use at primary school level. Since classroom teachers are only interested in a single class, they can implement student-centered activities that require time much more easily. The lack of difference between the two groups can be explained by the high level of effort of secondary school teachers. At the same time, it can be interpreted as that primary school teachers do not make effective use of student-centered education practices despite suitable educational environment. In students, there are partial differences between primary and secondary school students. While there is no difference in the sub-dimensions of financial and social leadership, it is concluded that there is a difference between the two groups in terms of entrepreneurship and overall score. There is a greater increase in knowledge and attitude in primary school students compared to secondary school students. Although there is a statistical difference between the two groups, the impact factor is very low. According to these results, hypotheses 5b and 6b are rejected, and hypothesis 4b is partially accepted. Secondary school students have a higher level of prior knowledge about project subjects than primary school students. This situation may have caused more knowledge increase in primary school students at the end of the project.

As a result of the fact that financial literacy is an area that men are interested in all over the world, it is seen that women's financial literacy knowledge, attitudes, and behaviors are at a lower level than men's (Bucher-Koenen et al., 2017; Hasler & Lusardi, 2017; Ponthieux & Meurs, 2015). The findings obtained in this study show that, unlike the general literature, there is no difference in financial literacy between men and women. It is concluded that there is no effect of gender on the increase in social and financial leadership knowledge and attitude development and student-centered education behavior among teachers. This result, which is different from the literature, may be due to the fact that all of the female participants were working people with salaries. The experience of women in terms of managing their own earnings may have caused them to be at least as knowledgeable about financial literacy as men. It is seen that there is a difference in favor of girls only in terms of social leadership knowledge and attitude among students. Statistically, the impact factor for the difference is very low. According to these results, hypotheses 5a and 6a are rejected, and hypothesis 4a is partially accepted.

Conclusion and Recommendations

As a result, 5 Tas Social and Financial Leadership training conducted in partnership with Aflatoun and ÖRAV in Turkey has a positive impact on the knowledge and attitudes of primary and secondary school students and teachers in the field of social and financial leadership. At the same time, teachers have a positive effect on student-centered education practices. The results of this study show that the education that is appropriate for the student level and organized within the framework of active learning principles has positive effects on students' knowledge and attitudes in the field of financial literacy. The findings show that the training conducted within the framework of active learning principles will have positive effects on the learning of both teachers and students. It has been observed that successful results will be achieved when the principles of active participation, active learning processes, learning coaching, use of knowledge in practice, long-term education, and taking into account individual differences are followed in the training carried out within the framework of the professional development of teachers. The results of this study reveal findings of which application principles should be organized within the framework of the success of the training carried out for the professional development of teachers. It has been revealed by the literature in the field that short-term, massive, non-interactive, non-practical, compulsory education will not be beneficial for teachers. This study presents principles regarding how the training for teachers should be in Turkey. Attempts can be made to implement the curriculum developed within the scope of this study throughout Turkey, especially in regions with low socioeconomic levels. The easiest way would be to increase the number of gains in the curriculum. This study reveals that teachers also lack basic knowledge. To eliminate this deficiency, financial literacy course can be included as an elective course in undergraduate teacher education programs.

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Authors and Affiliations

Süleyman Avcı[1] · Dinçer Demir[2] · Ayşe Candır[2] · Engin Güven[2]

✉ Süleyman Avcı
suleyman.avci@marmara.edu.tr

Dinçer Demir
dincer.demir@orav.org.tr

Ayşe Candır
ayse.candir@orav.org.tr

Engin Güven
engin.guven@orav.org.tr

[1] Ataturk Faculty of Education, Marmara University, Istanbul, Turkey

[2] Teacher Academy Foundation, Istanbul, Turkey