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Determining The Level of Financial Literacy Among Secondary School Students: The Case of Sakarya Province [1]

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Abstract

The aim of this study is to determine the financial literacy level of secondary school students attending different types of secondary schools and to compare it with the financial literacy levels of secondary school students studying in the accounting and finance department. To this end, data were collected from 431 participants in secondary education institutions in four central districts of Sakarya Province, namely Adapazarı, Arifiye, Erenler, and Serdivan, during the second semester of the 2022-2023 academic year using a questionnaire method. The data were analysed using the SPSS 25.0 programme. The analyses revealed that secondary school students studying accounting and finance did not show a significant difference in terms of financial knowledge, financial attitudes, and financial behaviour compared to students studying in other school types. Furthermore, it was observed that the participants' levels of financial knowledge and financial attitudes were higher than their levels of financial behaviour. These results indicate that the participants were unable to translate their financial knowledge and positive financial attitudes into financial behaviour.

Key words: Financial Literacy, Financial Literacy Education, Secondary Education

JEL Code: M4, G53, D31, D9, F65

1. Introduction

The measure of a country's economic development is indicators such as national income, growth, inflation, borrowing, and investment rates. The main agenda of policymakers is to improve these economic data and increase social welfare. Therefore, the level of financial literacy among high school students, who will be the main actors in tomorrow's economic world and will be effective in management,

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politics, and business life, is one of the key determinants in achieving these goals. Access to financial products and services has become easier, particularly due to technological developments, and the rate at which individuals from different demographic groups in society benefit from these services has increased. However, at the same time, changes in financial systems, financial products and services have exposed individuals to financial risks. The need for literacy has arisen for consumers to be able to make the right decisions about their future savings goals and how these should be evaluated (Lusardi, 2008). For this reason, the concept of financial literacy has become a concept that concerns the whole of society. Individuals' ability to make effective financial decisions, be aware of economic risks, plan their future correctly, and the welfare of society are closely related to the level of financial literacy. Growing evidence shows that financial literacy plays an important role in financial well-being and that differences in financial knowledge acquired in early life can explain a significant portion of financial well-being in adulthood (Panos and Wilson, 2020). At this point, increasing the financial awareness and literacy levels of young people who will shape the economy is of vital importance for them to be included in the financial system, make the most effective use of financial services, and be guided correctly.

Accordingly, the aim of this study is to determine the level of financial literacy among students attending secondary education institutions in the province of Sakarya. Financial literacy components are assessed in terms of financial knowledge, financial attitudes, and financial behaviour. The difference between this study and similar studies is that it compares the financial literacy levels of participants studying at qualified schools affiliated with the Ministry of National Education (Science High School, Social Sciences High School) and address-based schools (Anatolian High School, Anatolian Imam Hatip High School, Vocational and Technical Anatolian High School) with participants studying in the field of accounting and finance. It is believed that the results will contribute to the process of evaluating and developing the current financial education methods and content of secondary education institutions that provide education in the field of accounting and finance, as well as to future studies in the field of financial education.

The study of financial literacy among secondary school students in Turkey is important for several reasons. Firstly, secondary education is compulsory in Turkey and free in state schools. All schools are subject to a national curriculum set by the Turkish Ministry of National Education. An examination of the Ministry's curriculum reveals that topics such as budgeting, saving, and money are included in the content of certain subjects, such as life skills, social studies, and mathematics, at different grade levels. In addition, business, entrepreneurship, and economics courses have been included in the curriculum as elective courses in secondary schools. Within the Ministry of National Education's secondary education programmes, the curriculum of the Accounting and Finance department, which is part of the Vocational and Technical Anatolian High Schools (MTAL), includes courses covering financial literacy, and a financial literacy course is also offered as an elective. Outside of this department, financial courses are lacking in school curricula. This gap in financial literacy may negatively affect students' success in

making difficult choices in their current and future financial decisions. The OECD (2024) reported that most 15-year-olds are users of financial services and are likely to encounter financial market risks in the future.

Secondly, financial literacy gained importance in Turkey following the global financial crisis of 2008, and with the pandemic and the spread of e-commerce, ensuring financial resilience and well-being for the younger generation has become even more challenging. Young people have less financial experience than adults when faced with financial difficulties. The proliferation of digital transactions has left individuals vulnerable to activities such as financial fraud. In this digital age, where such threats are increasing, government agencies, civil society organisations, private sector initiatives, universities and similar institutions are conducting numerous studies on financial literacy, which is becoming increasingly important. However, despite these efforts, the level of financial literacy in Turkey remains inadequate compared to developed countries and is below the OECD average. In a study conducted by Ipsos Social Research on behalf of the Turkish Financial Literacy and Access Association (FODER) and Visa Turkey with a total of 2,006 participants aged 15 and over in Turkey, the basic financial literacy index was determined to be 54% (Ipsos Social Research, 2021). In contrast, according to the OECD, the accepted rate for financial literacy adequacy is 70 out of 100 points (OECD, 2023). Similarly, according to the results of the Financial Literacy Survey among Young People conducted in 2018, 84% of the young population lacks knowledge about financial matters and their financial literacy skills are below the desired level (BKM, 2018). Financial literacy is recognised as a fundamental life skill for empowering individuals and supporting the financial well-being of societies at a global level (G20, 2021). In this context, more effort and resources should be allocated to increase the financial competence of young people, who represent the future of society, and financial literacy should be made part of the education system. When young people do not know how to budget for spending and financial goals, this can lead to low credit ratings, bankruptcy, large debts and other negative consequences at both the micro and macro levels. The OECD (2020) advocates integrating financial literacy into school curricula due to the importance of early intervention in equipping individuals with financial skills. Recent research also emphasises that economic preferences develop significantly during adolescence (Reisdorfer-da-Silva et al., 2025).

The remainder of the article is organised as follows: The second section summarises the literature. The third section provides information on the methodology. The fourth section presents the analysis results and findings. The article concludes with a discussion evaluating the findings and making suggestions for future research.

2. Literature Review

Financial literacy is the knowledge and competence to understand the most basic financial concepts, make sound decisions when planning for the future by monitoring economic conditions (Remund, 2010), and organise financial systems efficiently and rationally (Hastings et al., 2013). Financial literacy, which is a behaviour and life skill developed based on acquired knowledge (Bodie, 2006), consists of three fundamental steps: financial knowledge, financial attitude, and financial behaviour. Financial knowledge encompasses technical skills such as interest calculations, while financial attitude refers to the tendency to save or spend. Financial behaviour, on the other hand, focuses on financial planning and conscious purchasing decisions (OECD, 2023). Studies on financial literacy among secondary school students are summarised below.

Chen and Volpe (2002), in their study of 924 college students in the United States, found that female students had lower levels of financial literacy than male students. Again for the United States, Cude et al. (2006) and Carlin and Robinson (2012) found that financial education provided to secondary school students positively affected their financial skills and behaviour. A study conducted by the World Bank in Brazil, covering 20,000 high school students, observed that financial literacy education increased students' financial literacy levels and led to a clear improvement in making responsible financial choices in purchasing and spending behaviour (Bruhn et al., 2013). Kalwij et al. (2019), who conducted a similar study for the Netherlands, found that financial literacy education implemented at all levels of basic education increased the desire to save money. Results from a survey of 1,416 secondary school students in Germany showed that pupils who were more successful in primary school and had higher mathematical skills had a higher level of financial literacy (Erner et al., 2016). Furthermore, male students scored higher than female students. In contrast, Liu et al. (2019) reported in their study in Taiwan that girls were more successful than boys in secondary school. In New Zealand, Cameron et al. (2014) found in their study of 352 secondary school students that having a lower income level and lower English and maths skills reduced the level of financial literacy. For India, Jayaraman and Jambunathan (2018) found that students with high numerical skills were unable to transfer this to financial calculations. Ghazali et al. (2017), in their study covering 458 high school students in Malaysia, found that having business knowledge increased the level of financial literacy. Khoirunnisaa and Johan (2020) found that students studying science in Indonesia had a higher level of financial literacy than those studying social sciences. A survey conducted with 889 secondary school students in Mexico found that very few students understood basic financial concepts and that school type or income level had no effect on financial literacy (Arceo-Gómez and Villagómez, 2017).

Alongside studies aimed at determining financial literacy levels, some studies (Wang and Loh, 2023; Kurniasari, 2021; Hidajat et al., 2022; Ahmed, 2023) have also shown that financial education techniques such as gamification can improve financial literacy. Recently, Reisdorfer-da-Silva et al. (2025) also

demonstrated in their study that using a board game lesson with a financial education theme and the tendency score matching technique increased students' financial literacy. Another set of studies has qualitatively assessed financial literacy by focusing on financial education programmes and studies for young people and children (McCormick, 2009; Amagir et al., 2018; Totenhagen et al., 2015; Adesina et al., 2025).

3. Methodology

A four-week application was carried out in the second term of the 2022-2023 academic year in state high schools affiliated with the Ministry of National Education in the central districts of Sakarya Province (Adapazarı, Arifiye, Erenler, Serdivan), including Anatolian High Schools, Anatolian Imam Hatip High Schools, Science High Schools, Social Sciences High Schools, Vocational and Technical Anatolian High School. The survey was conducted face-to-face with 431 high school students in grades 10, 11, and 12, excluding 9th graders (due to the more limited course content that could affect the financial literacy level of students receiving accounting and finance education). The survey questions were developed using the OECD's toolkit for measuring financial literacy and financial participation (OECD, 2022) and the Turkish Banks Association (TBB)'s "Financial Literacy Level Measurement Survey". The target population of the study was 30,358 students enrolled in secondary education (high school) in the central districts according to the 2019 Sakarya Provincial Directorate of National Education strategic plan. The sample size was determined as with a 95% confidence interval and a 5% margin of error (Yamane, 2001).

$$n=\frac{Nt^2pq}{d^2(N-1)+t^2pq}$$

In the formula;
n: Sample size,
N: The number of units in the sample population, i.e., the number of students, which is 30,358
t: Since the sample size is greater than 30, the Z table value will be taken. The Z table value is taken as 1.96, as the study will be conducted with a 5% margin of error.
p: The probability of accepting the invitation to participate in the sample, set at 50%, or 0.50, to reach the maximum number of surveys.
q: The probability of not accepting the invitation to participate in the sample is taken as 1-p = 0.50.
d: This is taken as 0.05 at a 95% confidence interval.
Accordingly, the sample size is calculated as:

$$n=\frac{30358*(1,96)^2*0,5*0,5}{0,05^2*(30358-1)+(1,96)^2*0,5*0,5}=379,37$$

was calculated.

The sample size was calculated as 379, but in order to increase the reliability of the research results, the sample size was increased by approximately 15% and 438 surveys were conducted. As the financial literacy level of secondary school students in Sakarya province was to be measured, participants were selected from different types of secondary schools (high schools) according to class levels using simple random sampling. The questionnaire consisted of a total of 57 questions: 8 questions related to demographic characteristics, 2 questions related to financial access, 23 questions related to financial knowledge, 11 questions related to financial attitudes, and 13 questions related to financial behaviour.

After the survey was conducted, a Cronbach Alpha analysis was performed on the raw data, and the reliability coefficient was found to be 0.486. Accordingly, in order to increase the reliability coefficient, 8 questions or options in the survey were excluded from the analysis, increasing the reliability coefficient to 0.702. Furthermore, 7 surveys with insufficient responses were excluded from the dataset of 438 surveys, and item analysis and chi-square analysis for categorical variables were performed using SPSS 25.0 on the remaining 431 surveys.

The distribution of participants according to school type is as follows:

Table 1: Distribution of Participants by School Type

Number of Students	**School Type**	**Characteristics of School Type**
101	Anatolian High School	Anatolia High School (Address-Based)
103	Anatolian Imam Hatip High School	
54	Vocational and Technical Anatolian High School	
41	Science High School	Students Placed by Score (Qualified)
42	Social Sciences High School	
90	Vocational and Technical Anatolian High School	Students Studying in the Field of Accounting and Finance

Source: Authors' calculations

4. Findings

Three main categories were established when analysing the findings of the research.

- **Qualified high schools**: students in science high schools and social sciences high schools where students are placed according to their success ranking.
- **Address-based secondary schools:** Students at Anatolian secondary schools, Anatolian Imam Hatip secondary schools, and vocational and

technical Anatolian secondary schools who are placed through an address-based system regardless of academic ranking.

- **Accounting and finance field;** students in fields where accounting and finance education is provided under the status of vocational and technical Anatolian high schools.

Findings Regarding the Demographic Characteristics of Participants

In the survey, participants were asked eight demographic questions. The answers to these questions are shown in Figures 1, 2, 3, 4, 5, 6, 7, and 8.

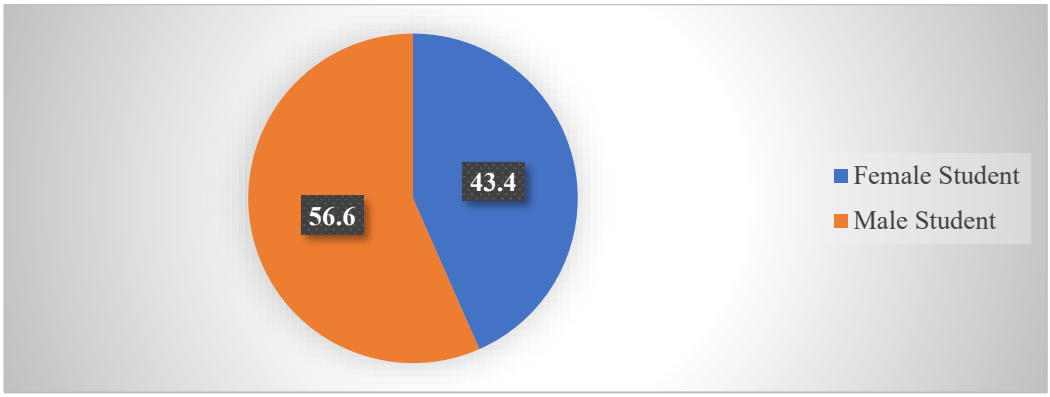

Figure 1: Gender Distribution of Participants

A total of 431 high school students participated in the survey. The gender distribution of these students was 43.4% female and 56.6% male.

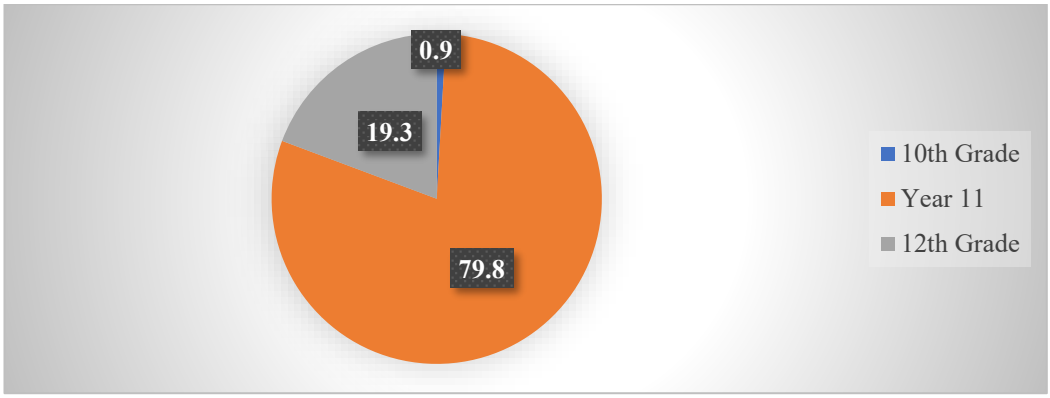

Figure 2: Distribution of Participants by Grade Level

Of the participants, 4 students were in Year 10, 344 students were in Year 11, and 83 students were in Year 12. The survey was not administered to Year 9 students because their curriculum did not include courses related to financial literacy. The vast majority of students participating in the survey (79.8%) were Year 11 students.

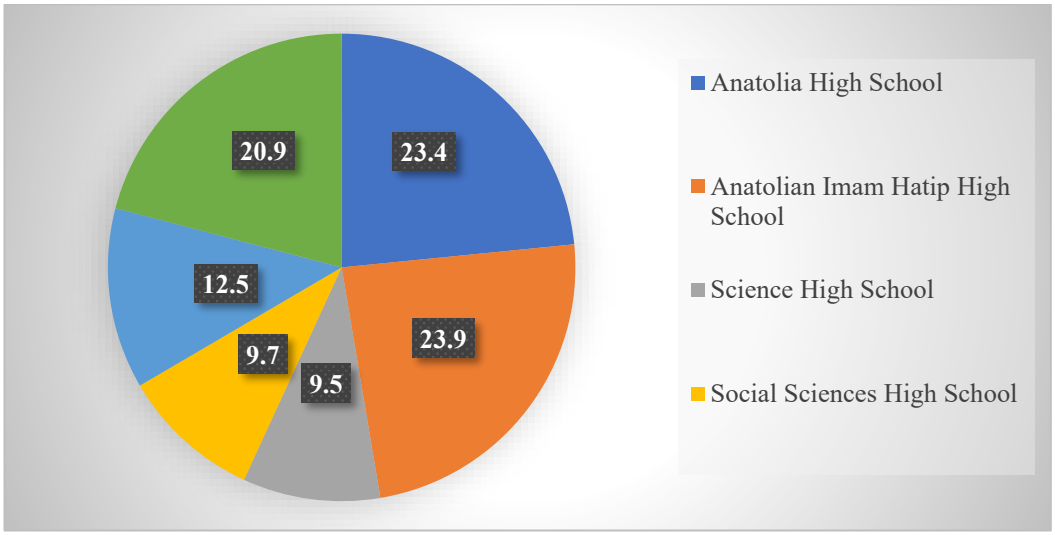

Figure 3: Distribution of Participants by School Type

When the distribution of the 431 participants by school type was examined, it was found that 23.4% of the students attended Anatolian High Schools, 23.9% attended Anatolian Imam Hatip High Schools, 9.5% attended Science High Schools, 9.7% attended Social Sciences High Schools, 12.5% attended Vocational and Technical Anatolian High Schools, and 20.9% attended Vocational and Technical Anatolian High Schools-studying in the Accounting and Finance field.

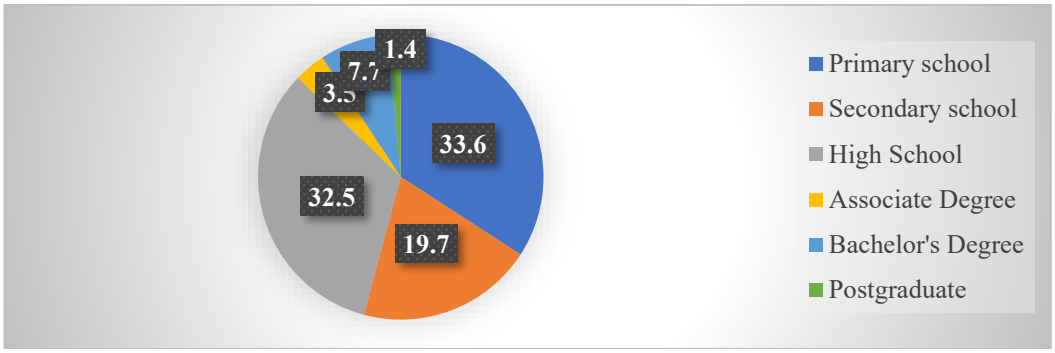

Figure 4: Distribution of Participants According to Their Mothers' Educational Level

Of the participants, 145 students' mothers had primary school education, 85 students' mothers had middle school education, 140 students' mothers had high school education, 15 students' mothers had associate degree education, 33 students' mothers had bachelor's degree education, and 6 students' mothers had postgraduate education. Considering all participants, 33.6% answered the question about their mother's educational status as "primary school". The second most common answer was "high school" at 32.5%.

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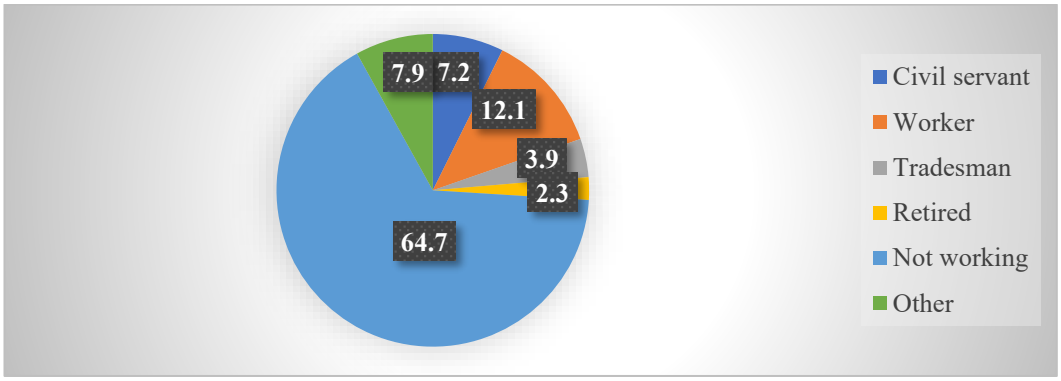

Figure 5: Distribution of Participants' Mothers' Occupations

Of the participants, 31 students' mothers were civil servants, 52 students' mothers were workers, 17 students' mothers were tradespeople, 34 students' mothers worked in occupations other than these, 10 students' mothers were retired, and 279 students' mothers were not working. Considering all participants, 64.7% answered the question about their mother's occupation as "Not working".

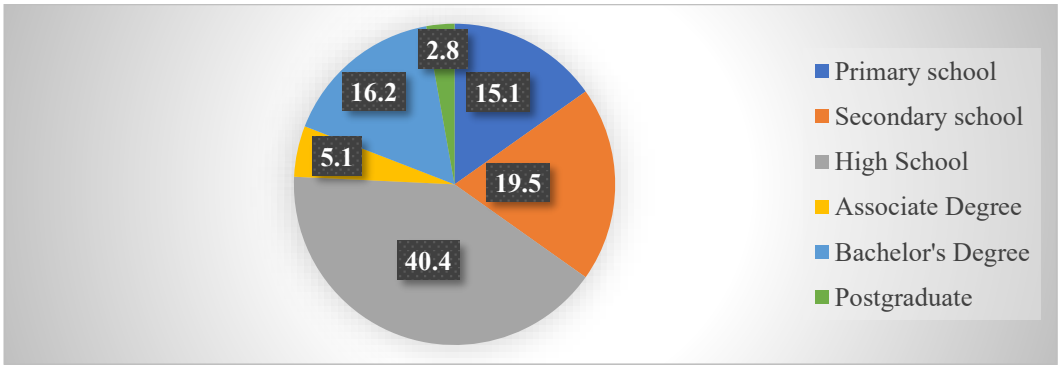

Figure 6: Distribution of Participants According to Father's Education Level

Of the participants, 65 students' fathers had primary school education, 84 students' fathers had middle school education, 174 students' fathers had high school education, 22 students' fathers had associate degree education, 70 students' fathers had bachelor's degree education, and 12 students' fathers had postgraduate education. Considering all participants, 40.4% answered the question about their father's educational status as "High School". The second most common answer was "Middle School" at 19.5%.

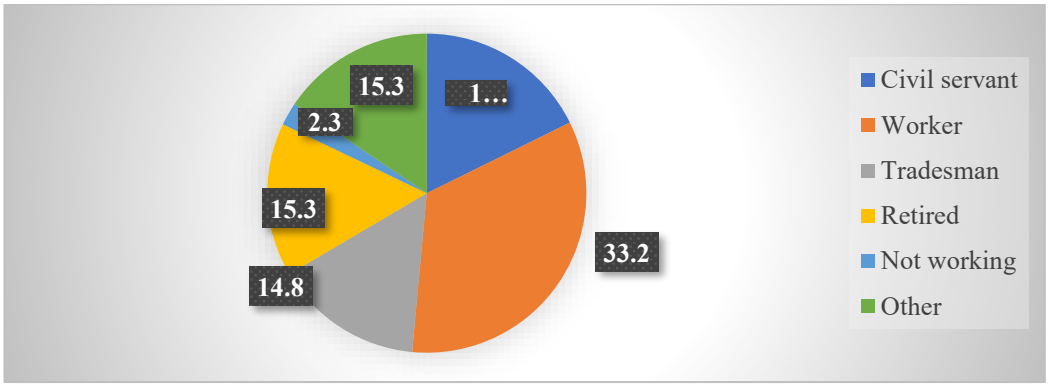

Figure 7: Distribution of Participants' Fathers' Occupations

Of the participants, 75 students' fathers were civil servants, 143 students' fathers were labourers, 64 students' fathers were tradesmen, 66 students' fathers worked in occupations other than these, 66 students' fathers were retired, and 10 students' fathers were not working. The majority (33.2%) of participants responded "labourer" when asked about their fathers' occupations.

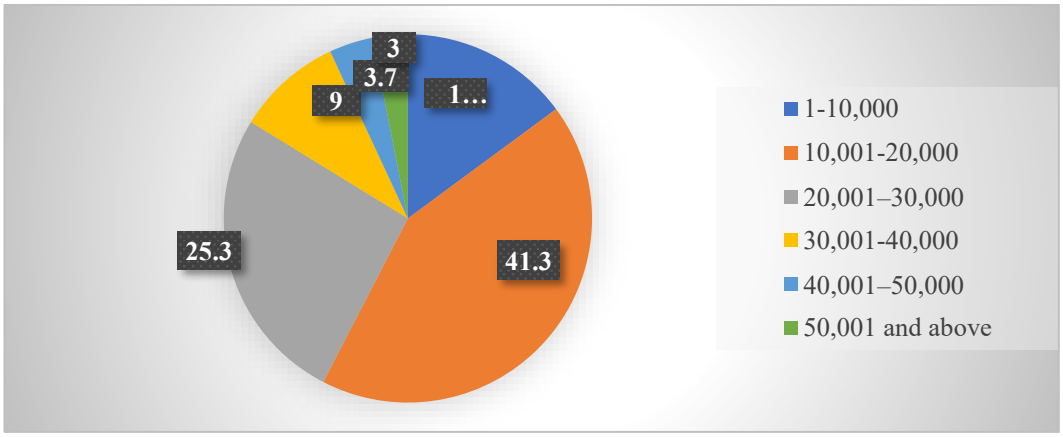

Figure 8: Distribution of Participants' Total Monthly Family Income(TL)

It was observed that 41.3% of the participants' families had a total monthly income between 10,001 and 20,000. (Income ranges were determined in May 2023, taking into account factors such as the minimum wage and average civil servant salary.)

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Findings Regarding Participants' Financial Access

Participants' responses to questions regarding where they obtain financial access are presented in Table 2.

Table 2: Participants' Data on Financial Access

Financial Access	**Options**	**Accounting and Finance Field t = 89**	**Address-Based Schools t = 256**	**Qualified Schools t = 79**	**P**
Where do you obtain information about developing economic events or money-related issues (banking, spending, saving, etc.) in the world and in Turkey?	Family	30	112	35	0.223
	Social Environment	38	116	42	0.357
	TV	38	115	39	0.675
	School	49	52	17	,000
	Books and magazines, etc.	10	22	10	0.511
	Social Media	71	198	67	0.356
	Websites	33	129	40	0.800
	Not following	0	13	3	0.096

* This is the p-value obtained from the chi-square test.

The table shows that 79.2% of the high school students participating in the study access finance through social media. In terms of school types, 79.8% of students studying accounting and finance, 77.3% of students attending address-based schools, and 84.8% of students attending qualified schools selected social media as their preferred option. Looking at the second most preferred options, it was found that for qualified schools, "Social Environment" was 53.2%, for address-based schools, "Websites" was 50.4%, and for accounting and finance, "School" was 55.1%.

Findings Regarding Participants' Financial Literacy

The data obtained from the responses to the five-section questionnaire measuring participants' financial literacy levels are as follows:

Table 3: Participants' Data Regarding Financial Knowledge (Consumer Rights)

Financial Knowledge	**Options**	**Accounting and Finance Field t = 87**	**Address-Based Schools t = 252**	**Qualified Schools t = 79**	**P***
Where should you turn if you encounter a problem with your purchase and the seller fails to resolve it?	Police Headquarters	4	12	0	0.374
	Tax Office	2	3	0	
	Consumer Arbitration Board	79	230	79	
	Municipality	2	6	0	

* This is the p-value obtained based on the results of the chi-square test.

When the responses were examined, it was observed that 92.8% of participants preferred the "Consumer Arbitration Board" option; 90.8% of those studying accounting and finance, 91.3% of those attending address-based school types, and all participants attending qualified schools preferred this option.

Table 4: Participants' Data Related to Financial Knowledge (Interest Calculation)

Financial Knowledge	**Options**	**Accounting and Finance Field t = 86**	**Address-Based Schools t = 244**	**Qualified Schools t = 76**	**P**
If we deposit our 5,000 TL in the bank at an annual interest rate of 20%, how much TL will we have in our account at the end of the year?	5,000 TL	4	8	0	,000
	7,500 TL	19	35	2	
	6,000 TL	52	193	72	
	5,500 TL	11	8	2	

* This is the p-value obtained from the chi-square test result.

When the data related to the question was examined, it was observed that 78.1% of participants who chose the "6,000" option answered the question correctly; 60.5% of those studying accounting and finance, 79.1% of those studying

at address-based school types, and 94.7% of participants studying at qualified schools answered this question correctly.

The survey included 10 financial concepts to measure participants' financial literacy, and they were asked to evaluate these concepts as "Never heard of it - Only heard of it - I know about it". The responses are as follows:

Table 5: Participants' Data on Financial Knowledge (Basic Concepts*)*

Financial Knowledge					
(Please indicate your level of knowledge about the following concepts.)	**Options**	**Accounting and Finance Field t = 89**	**Address-Based Schools t = 254**	**Qualified Schools t = 79**	**P***
Inflation	Never heard of it	1	2	0	0.576
	I've only heard of it	25	53	17	
	I know	63	199	62	
Budget	Never heard of it	0	3	0	0.032
	I've only heard about it	9	13	6	
	I know	80	237	73	
Exports	Never heard of it	2	2	0	0.005
	I've only heard about it	20	39	3	
	I know	66	214	76	
Time Value of Money	Never heard of it	9	41	10	0.034
	I've only heard about it	14	69	25	
	I know	66	144	43	
Central Bank	Never heard of it	1	4	1	0.761
	I've only heard of it	18	68	19	
	I know	70	179	58	
Dividend	Never heard of it	56	188	62	0.188
	I've only heard of it	20	47	12	
	I know	12	19	5	
Depreciation	Never heard of it	2	199	65	,000
	I've only heard about it	29	43	12	
	I know	58	13	2	
	I've never heard of it	1	5	0	

VAT (Value Added Tax)	I've only heard about it	14	40	9	0.606
	I know	74	209	69	
Foreign exchange	Never heard of it	0	3	0	0.532
	I've only heard about it	17	37	11	
	I know	72	215	68	
Stock Exchange	Never heard of It	1	3	0	0.892
	I've only heard of it	21	62	21	
	I know	67	190	58	

* This is the p-value obtained based on the result of the chi-square test.

The majority of participants stated that they were knowledgeable about all concepts. The highest participation rate for the 'I am knowledgeable' option was 92.6% for budget; the lowest participation was 8.6% for the concept of dividends. Only for the concepts of dividends and depreciation did the majority (72.7% and 62.9%) state that they had never heard of them. According to the table, the majority of students from all types of secondary schools stated that they had knowledge of the concepts of inflation, budget, exports, time value of money, Central Bank, VAT and foreign exchange, but the percentage of accounting and finance students who had knowledge lagged behind other school types. Regarding the concept of dividends, 63.6% of participants studying accounting and finance, 74.0% of participants attending address-based schools, and 72.7% of participants attending qualified schools selected the "Never heard of it" option. The percentage of accounting and finance students who are knowledgeable about this concept is also higher than that of other school types (13.6%). Among these concepts, only for the concept of depreciation did participants studying accounting and finance (65.2%) state that they were knowledgeable, with a significantly higher percentage than other school types (5.1% and 2.5%). The percentage of accounting and finance students who are knowledgeable about the concept of the stock market (75.3%) is also higher than that of participants educated in other types of schools (74.5% and 73.4%).

The survey included ten statements related to financial concepts to measure the level of financial knowledge, and participants were asked to evaluate these statements as "True-False". The answers are presented in Table 6.

Table 6: Participants' Data Related to Financial Knowledge (Statements)

Financial Knowledge (Evaluate the statements below and select the option that best aligns with your perspective.)	**Options**	**Accounting and Finance Field t = 89**	**Address-Based Schools t = 254**	**Qualified Schools t = 79**	**P***
	Correct	14	21	3	0.022

A decrease in product prices reduces purchasing power.	Incorrect	75	233	75	
An increase in exports negatively impacts the country's economy.	Correct	20	29	4	0.002
	Incorrect	68	227	75	
There is no difference between the 5,000 TL I earned two years ago and the 5,000 TL I earn now.	Correct	11,	15	1	0.012
	Incorrect	78	241	78	
The institution authorised to print paper money (banknotes) in Turkey is the Turkish Agricultural Bank.	Correct	41	79	13	,000
	Incorrect	47	170	63	
Costs are lower in e-commerce.	Correct	51	187	66	0.003
	Incorrect	32	60	12	
Everyone who reaches retirement age retires without any conditions.	Correct	27	34	5	,000
	Incorrect	61	217	74	
The same VAT rate applies to the bread and detergent we buy from the supermarket.	Correct	16	63	9	0.031
	Incorrect	73	193	70	
Foreign currencies are referred to as foreign exchange.	Correct	81	228	74	0.128
	Incorrect	7	25	2	
The stock market is a marketplace where shares and other investment instruments are bought and sold.	Correct	78	229	78	0.038
	Incorrect	10	23	1	
The budget represents the ratio of one country's currency to another's.	Correct	51	95	17	,000
	Incorrect	37	157	59	

* This is the p-value obtained from the chi-square test result.

The majority of participants selected the appropriate option regarding the concepts of inflation, exports, time value of money, Central Bank, e-commerce, retirement, and stock market. Participants studying accounting and finance lagged behind all other school types for these concepts. Regarding the concepts of VAT and foreign exchange, participants educated in accounting and finance preferred the correct option at a higher rate than those from address-based school types, but

lagged behind participants educated in qualified school types. Regarding the concept of budget, 60.8% of participants selected the "Incorrect" option. It was observed that 77.6% of participants educated in qualified schools preferred the correct option. Participants educated in accounting and finance lagged behind all other school types with a rate of 42.0%, and it was observed that the incorrect option was preferred at a rate of 58.0%.

Findings Regarding Participants' Financial Attitude Levels

The data obtained from the participants' responses to 11 statements measuring their financial attitude level are as follows:

Table 7: Participants' Financial Attitude Data

Financial Attitude					
(Evaluate the statements below and select the option that best reflects your views.)	**Options**	**Accounting and Finance Field t = 89**	**Address-Based Schools t = 256**	**Qualified Schools t = 79**	**P***
I would rather save my money than spend it.	I disagree	14	65	17	0.273
	Undecided	32	71	28	
	I agree	43	120	34	
I trust the services offered by financial institutions such as banks.	I disagree	11	68	16	,000
	Undecided	29	120	39	
	I agree	48	68	24	
I am worried that my money will not be enough now and in the future.	I disagree	17	54	7	0.014
	Undecided	24	52	11	
	I agree	48	148	60	
I enjoy talking about money-related topics.	I disagree	16	67	29	0.023
	Undecided	28	66	26	
	I agree	89	118	24	
Shopping online is not safe.	I disagree	35	138	61	,000
	Undecided	45	91	16	
	I agree	9	24	2	
Credit card use increases people's spending.	I disagree	14	54	15	0.039
	Undecided	26	61	9	
	I agree	48	137	55	

I have financial goals for the future and I am working hard to achieve them.	I disagree	14	56	8	0.065
	Undecided	26	67	17	
	I agree	49	133	54	
I can distinguish between my wants and needs.	I disagree	1	22	3	0.059
	Undecided	7	31	9	
	I agree	81	203	67	

* This is the p-value obtained based on the result of the chi-square test.

Participants most frequently selected the "I agree" option in statements regarding savings, future concerns, money, credit cards, financial goals, desires, and needs. When responses were analysed by school type, students studying accounting and finance showed a similar rate. However, most participants were undecided regarding the statement about trust. Students studying accounting and finance differed from the overall result for this statement and preferred the "I agree" option the most, at 54.5%. Regarding the statement about the internet, the "I disagree" option was the most preferred choice, at 55.6%. When examining the responses by school type, the most preferred option among students studying accounting and finance was "Undecided" at 50.6%, while 54.5% of students attending address-based schools and 77.2% of students attending qualified schools preferred the "Disagree" option. The statement that participants agreed with the most was the distinction between wants and needs (82.8%); the lowest participation rate was related to the insecurity of online shopping. The majority of participants have concerns about the present and the future; they believe that credit cards increase spending and are making efforts towards their financial goals for the future. Again, the participation rate for the statements on savings, trust and money is lower than for those who did not participate and were undecided.

Findings Regarding Participants' Financial Behaviour Level

In the survey, four sections were created to measure participants' financial behaviour levels, including three statements and one action-oriented statement. Participants were asked to respond to the given statements according to the options that best suited them. The data created based on participants' responses to the questions is as follows:

Table 8: Participants' Data Related to Financial Behaviour (Money Management)

Financial Behaviour	**Options**	**Accounting and Finance Field t = 89**	**Address-Based Schools t = 256**	**Qualified Schools t = 79**	**P***
Do you or your family engage in any	I make and follow a plan to	71	185	59	0.376

of the following activities? (**You may select more than one option in this question.**)	use my money wisely				
	I keep track of my expenses	14	32	18	0.081
	I separate my income and expenses	39	89	33	0.235
	I take measures to reduce my expenses	44	144	50	0.195

* This is the p-value obtained according to the results of the chi-square test.

When the responses were examined, it was found that 74.3% of participants planned to use their money wisely. When examined by school type, participants studying accounting and finance had a higher planning rate (79.8%) than participants from other school types. The habit of noting down expenses was found to be low for all school types, with an overall rate of 15.1%. In this section of the survey , 38.0% of participants selected the statement "I separate my income and expenses". In terms of school type, 43.8% of students studying accounting and finance chose this option. While the overall rate of students who chose the option "I take measures to reduce my expenses" was 56.1%, 63.3% of students attending qualified secondary schools chose this option.

The responses to the question regarding participants' saving methods are as follows:

Table 9: Participants' Data on Financial Behaviour (Saving Methods)

Financial Behaviour	**Options**	**Accounting and Finance Field t = 89**	**Address-Based Schools t = 256**	**Qualified Schools t = 79**	**P***
Which of the following methods have you used to save money? (**You may select more than one option for this question.**)	I saved money at home	65	205	67	0.157
	I saved money in my bank account	28	80	26	0.962
	I saved money by buying gold	33	94	36	0.352
	I saved money by buying foreign currency	22	65	27	0.267
	I did not save money	5	20	7	0.706

*This is the p-value obtained according to the chi-square test result.

Upon examining the table, it is seen that the most preferred option is "I save money at home" with a rate of 79.5%. The rate of participants who preferred the "I do not save money" option is 7.5%. To measure the level of financial behaviour, participants were asked to select the statement that best described them from Table 10. The data obtained based on the responses are as follows:

Table 10: Participants' Financial Behaviour (Statements) Data

Financial Behaviour					
(Evaluate the statements below and select the option that best describes you.)	**Options**	**Accounting and Finance Field t = 89**	**Address-Based Schools t = 256**	**Qualified Schools t = 79**	**P***
I review my receipt after shopping.	Never	13	22	2	0.032
	Occasionally	49	163	46	
	Always	27	71	31	
I divide my pocket money into daily portions.	Never	24	57	26	0.221
	Occasionally	38	102	32	
	Always	27	97	21	
I plan my daily expenses in advance.	Never	18	54	14	0.875
	Occasionally	35	111	33	
	Always	35	90	32	
I set aside money from my allowance and save it.	Never	16	34	9	0.226
	Occasionally	44	116	30	
	Always	29	106	39	
I shop online.	Never	11	18	1	0.035
	Occasionally	50	151	42	
	Always	28	83	35	
Advertisements on social media influence my purchasing decisions.	Never	38	99	23	0.363
	Occasionally	40	131	46	
	Always	11	25	10	
I check price comparison websites before purchasing a product.	Never	7	40	4	0.017
	Occasionally	37	102	26	
	Always	45	114	49	

If the price of the product I want is high, I would prefer a similar product at a more affordable price.	Never	5	30	5	0.023
	Occasionally	39	142	40	
	Always	45	84	34	
I look for places that sell the product I want at a more affordable price.	Never	6	10	1	0.429
	Occasionally	29	97	29	
	Always	54	149	49	

* This is the p-value obtained from the chi-square test.

The majority of students preferred the "Always" option for the statements "I check price comparison websites before purchasing a product" and "I search for places that sell the product I want at a more affordable price"; for the other statements, the most frequently selected option was "Occasionally". In terms of school type, it was observed that students attending qualified or address-based schools selected the "Always" option. When examining the responses to the statement "Advertisements on social media influence my purchasing decisions," 42.7% of students studying accounting and finance selected the "Never" option in terms of school type. For the statement "If the price of the product I want is high, I prefer a similar product at a more affordable price," the "Always" option was selected second, but it was the first choice for 50.6% of students studying accounting and finance. A low level of financial behaviour was observed across all school types. Students studying at qualified school types had the highest level of financial behaviour among the school types.

5. Conclusions

The aim of the study is to determine the financial literacy level of high school students studying in secondary education institutions in Sakarya province and the effect of differences in school types on financial literacy.

Upon examining the results, it was observed that social media, social circles and websites were the primary means of accessing financial information for students, while they hardly ever used books and magazines. In educational activities related to financial literacy, it is important to focus on social media, especially in content planned for this age group. Financial information can be provided to more people at a lower cost by creating engaging content on platforms that young people access more frequently or by integrating financial information into existing content (games, applications, etc.). Similarly, short-form financial information content can be created for these platforms. Students were found to give correct answers to questions measuring their basic knowledge of consumer rights, the four arithmetic operations, and financial concepts. Regarding their financial attitude level, students were found to be concerned with saving, planning, budgeting, and monetary issues. Furthermore, while students find online shopping safe, they do not trust banking systems to the same extent.

Overall, it was observed that as students' financial literacy level increased, their anxiety about financial matters also increased. The attitudes developed by the participants regarding financial matters are desirable. However, in studies to be conducted in this field, work on the importance of saving, the benefits of banking services, financial security, and ensuring future financial well-being would be beneficial in developing positive financial attitudes. Another finding of the research is that participants possess financial knowledge related to budgeting, have developed positive financial attitudes towards budgeting, but do not exhibit budgeting behaviour. It is thought that implementing practices in lower education levels to ensure continuity will be effective in the process of acquiring the habit of budgeting and developing financial behaviour, enabling this age group, who will manage their own income and expenditure in the near future, to acquire the behaviour of budgeting.

In terms of school types, it is observed that students attending qualified school types have higher levels of financial knowledge, financial attitudes, financial behaviour, and financial literacy compared to other school types. There is no significant difference in the levels of financial knowledge, attitudes, and behaviour of students studying accounting and finance compared to the other groups. In fact, it is seen that the financial knowledge level of these students lags behind other school types ( ). The research results are parallel to those of Mandell and Klein (2009). According to these results, it can be said that developing activities aimed at teaching students money management skills would be beneficial. In financial education activities for this age group, different ways of saving should be introduced, and the importance of using efficient saving methods for individuals and societies should be conveyed. When evaluating the components of financial literacy, the following results were obtained:

- The financial knowledge level of the survey participants is high in terms of basic concepts.
- The financial attitude level of the high school students participating in the research is low.
- The financial behaviour level of the high school students participating in the research is low.
- In terms of school type, no significant positive difference was found in the levels of financial literacy, financial knowledge, financial attitudes, and financial behaviour among students studying accounting and finance.
-

The low level of financial literacy among the high school students who participated in the survey is consistent with similar studies (Butters and McCoy, 2012; Lusardi and Mitchell, 2023). The results obtained are consistent with studies showing that education remains at the level of knowledge and does not translate into positive attitudes and desired behaviours (Kirsch 2014; Fernandes et al., 2014).

One of the reasons why students in the accounting and finance field, which has a strong curriculum in financial literacy, have a lower level of financial literacy compared to other school types may be the way they are placed in these schools.

Students placed in qualified schools (Science High School, Social Sciences High School) according to their success rankings form cognitively homogeneous groups. The characteristics of students in these types of schools, such as perception, ability, and interest, are similar to each other and at a higher level than in other types of schools. A study involving 195 university students found that those with high cognitive abilities also had high levels of financial literacy (Muñoz-Murillo et al., 2020). Another reason is that the financial education content provided in these types of schools is intensive and not appropriate for the cognitive level of the students. It has been observed that financial education provided with content prepared for a basic level of financial knowledge within compulsory and intensive curricula does not contribute to financial literacy at the desired level. Firstly, it is necessary to convey to those who will receive financial education how financial literacy can have an impact, particularly to younger age groups, in more concrete ways. Since developing financial behaviour is a more difficult and lengthy process, the work to be carried out should be aimed at developing behaviour, starting from the lowest level of compulsory education and reaching all members of society.

Despite the critical role of financial literacy and its recent integration into school curricula in Turkey to a certain extent, the results show that secondary school students need to develop their financial literacy for their personal financial well-being in the medium and long term. Future studies could examine the impact of more interactive teaching methods, such as game-based learning, on literacy by developing curricula that incorporate active learning. Furthermore, Adesina et al. (2025) emphasise that financial literacy is a promising area of research for accounting academics.

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