

*FİNANS*

## **LİSE ÖĞRENCİLERİ İÇİN FİNANSAL OKURYAZARLIK**

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### **ÖZ**

Finansal okuryazarlık, kişinin para kullanma ve yönetimi hakkında bilgiyle değerlendirme yapması ve etkili karar verme yetisidir. Bireyin bütçeleme, tasarruf, borç alma ve yatırım gibi temel finansal kavramlar konusunda ekonomik koşulları da göz önünde bulundurarak karar alma yeterliliğini ve finansal planlama yoluyla kişisel finans durumunu idare etme yeteneğini gösterdiği durumdur. Bu araştırma, lise öğrencilerinin sahip oldukları finansal durum, finansal plan ve finansal bilgi seviyeleri gibi faktörler ile finansal okuryazarlık seviyeleri arasındaki ilişkiyi tespit etmeyi hedeflemektedir. Araştırmanın örneklemi, İstanbul'da yer alan 18 lisede eğitim gören 1292 lise öğrencisi oluşturmıştır. Bu anket ile öğrencilerin finansal bilgi ve geleceğe yönelik finansal planlarını inceleyerek finansal okuryazarlık düzeylerini belirlemeyi amaçlamaktadır. Veriler, yüz yüze anket yöntemi kullanılarak elde edilmiştir. Öğrencilerin cinsiyetleri finansal planlama davranışları açısından belirgin bir etkiye sahip olmazken, ailenin sahip olduğu gelir seviyesi ve eğitim düzeyi pozitif bir etki sağlamaktadır. Ayrıca öğrencilerin SBS sınav sonuçları benzer şekilde pozitif bir ilişki sergilemektedir.

**Anahtar Kelimeler:** *Finansal Okuryazarlık, Finansal Planlama, Finansal Bilgi*

*FINANCE*

### **FINACIAL LITERACY FOR HIGH SCHOOL STUDENTS**

#### **ABSTRACT**

Financial literacy is the ability to make informed decisions about the use and management of a person and to make effective decision-making. It is the ability of the individual to demonstrate his ability to manage decision-making, and to manage his personal finances through financial planning, taking into account the economic conditions of basic financial concepts such as budgeting, savings, borrowing and investment. The purpose of the research is to determine the level of financial literacy that is shaped by financial situation, plan and knowledge for high school students. The sample of the research is composed of 1292 high school students in 18 high schools in Istanbul. This questionnaire aims to determine the financial literacy levels by examining the student's financial plans for the financial information and the future. Data were obtained by face-to-face survey method. Gender does not play a significant role in students' financial planning behavior however family income and parent's education have a positive effect on our dependent variable. Student's SBS score has a similar positive effect on our dependent variable.

**Keywords:** *Financial Literacy, Financial Planning, Financial Knowledge*

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## INTRODUCTION

Financial literacy is the ability to make informed decisions about the use and management of a person and to make effective decision-making. In other words, financial literacy can be defined as the ability of individuals to wisely evaluate their income, savings and investments and to have the ability to manage their budget appropriately. According to OECD; financial literacy is the process of increasing financial well-being by ensuring that financial consumers are informed about financial products and concepts or that they have a preference for financial risk and alternatives.

Financial literacy is the level of competence that enables individuals to make information-based decisions in financial matters. Increasing financial product diversity as a result of the financial crises and technological developments that have become widespread due to globalization has made the concept of financial literacy an important subject to be emphasized. In everyday life there is a need to make financial decisions by using complex financial instruments. The need to become a financial literate is increasingly seen in order to be able to effectively make many financial decisions, such as comparing credit card alternatives, developing preferences among payment methods, where to invest and where to obtain the best terms of a loan (Lusardi, 2008: 14).

Increasing diversification of financial products and services, complexity of product and service contracts increase the importance of concepts in the financial sector and require a certain amount of financial information, accumulation, sufficient risk analysis capability and awareness for consumers (BDDK, 2014). The way to increase financial knowledge is financial education. Financial awareness starts in the family and the budget grows in saving-conscious families. In a number of studies on students, a large majority of students have stated that they have gained their knowledge of spending and managing money through their families. Although financial awareness is first earned in the family, the knowledge and skills gained in the family are not sufficient and the financial education should be supported by different studies. In this context, the project "Social and Financial Education through Art" has been put into practice in order to raise financial awareness in Turkey between the Ministry of National Education, the Turkish Economy Bank (TEB) and UNICEF in children aged 6-14 years. In addition, universities in Turkey have more intensive courses in finance courses in the curriculum of the university, with the special training programs of the university, the Banking Regulation and Supervision Agency (BRSA), Capital Markets Board (CMB), Stock Exchange Istanbul, FODER (Financial Literacy and Access Society) It is aimed to increase the financial literacy level of young people with studies aiming to raise awareness about financial literacy in various institutions.

A financial plan is a comprehensive evaluation of an investor's current and future financial state by using currently known variables; predict future cash flows, asset values, withdrawal plans. These metrics are used along with estimates of asset growth to determine if a person's financial goals can be met in the future, or what steps

need to be taken to ensure that they are. A financial plan is based on an individual's or a family's clearly defined financial goals including funding a college education for the children, buying a larger home, starting a business, retiring on time or leaving a legacy. Financial goals should be quantified and set to milestones for tracking. The level of knowledge on financial issues, financial plan and behaviors affect financial literacy. In order for an individual to be a basic level financial knowledge, the individual must know basic concepts of finance such as simple interest, compound interest, time value of money, interest-inflation, and risk-return. Financial attitudes and behaviors affect future decisions on monetary matters such as spending and accumulation. For example, individuals who are worried about the future will have a different tendency to spend and accumulate than those who are not worried about the future.

One of the important studies in this regard was carried out by the Organization for Economic Co-operation and Development (OECD). The survey, conducted with the participation of the International Cooperation for Financial Education (INFE), was developed to measure financial literacy and was implemented in 14 countries worldwide. This survey, conducted by the OECD and INFE in 2012, aimed to identify the financial literacy levels associated with the level of development of the countries and to be useful for policy makers in the countries.

Chen and Volpe (1998) investigated the impact of financial literacy on students' financial literacy and the relationship between their characteristics and their financial literacy on students' thinking and decisions in their work on 924 university students. Participants answered about 53% of the questions correctly. It was determined that students who did not have sufficient knowledge were inclined to wrong thinking, which in turn led to wrong decisions.

Lewis Mandell (2008) studied the high school students in the United States and examined the level of financial literacy of students and the level of influence they would have on future financial decisions. In the cumulative progress since 2002, the impact of socio-economic levels on students' financial literacy levels was also analyzed. Lusardi, Mitchell and Curto (2010) found that financial literacy among high school students was low in financial literacy. It has also been observed that financial literacy is related to socio-economic characteristics and the level of family financial knowledge. Chinen and Endo (2014) examined the financial literacy levels of their students in their study of high school students in Japan and their reflection on financial behavior. The level of financial knowledge of students in the study and the role of these knowledge levels on financial decisions and financial behaviors are examined. In this context, the main purpose of the study is to explain financial literacy theoretically in the frame of financial knowledge, financial attitude and financial behavior.

## DATA

The data in the study is obtained from the financial literacy questionnaire prepared for high school students. This questionnaire prepared for the students aims to determine financial literacy levels by examining the financial knowledge and financial planning of the students. The data were obtained using the face-to-face survey methodology.

**Table 1: Frequency and Percentage Allocation of the Sample**

| High School Level     | Freq. | %    | Home Ownership                    | Freq. | %    | Credit Card Use       | Freq. | %    |
|-----------------------|-------|------|-----------------------------------|-------|------|-----------------------|-------|------|
| Level 1               | 268   | 20,7 | Rent                              | 315   | 24,1 | Personal Credit Card  | 125   | 9,7  |
| Level 2               | 358   | 27,7 | Own                               | 977   | 75,9 | Parent's Credit Card. | 345   | 26,7 |
| Level 3               | 519   | 40,2 | Family's Total Income             | Freq. | %    | Don't use             | 822   | 63,6 |
| Level 4               | 147   | 11,4 | Less than 20.000 TL               | 208   | 16,1 |                       |       |      |
| SBS Score             | Freq. | %    | Between 20.000 - 39.999 TL        | 335   | 25,9 | Holiday               | Freq. | %    |
| Less than 250 point   | 28    | 3    | Between 40.000 - 79.999 TL        | 278   | 21,1 | Working Part Time     | 115   | 8,9  |
| Between 250-450 point | 815   | 63,1 | 80.000 TL or more than this       | 186   | 14,4 | Working Full Time     | 205   | 16,2 |
| More than 450 points  | 412   | 31,9 | Unknown                           | 285   | 22,5 | Don't Work            | 972   | 74,9 |
| Unknown Score         | 37    | 2    | Parent's Education Level          | Freq. | %    | Bank Account          | Freq. | %    |
| Gender                | Freq. | %    | Nobody graduated from high school | 280   | 21,8 | No account            | 773   | 59,8 |
| Female                | 658   | 50,9 | Graduated from High School        | 407   | 31,5 | Share With Family     | 190   | 14,7 |
| Male                  | 634   | 49,1 | Graduated from University         | 423   | 32,8 | Personal Bank Account | 329   | 25,5 |
|                       |       |      | Graduated from Master or PHD      | 130   | 10,1 |                       |       |      |
|                       |       |      | Unknown                           | 52    | 3,8  |                       |       |      |

The questions used in the questionnaire have been obtained from various resources as a result of our detailed literature review. The questions are classified in different categories and analyzed with their own set of questions as well as demographic questions. The sample of the study is composed of 1292 high school students in 18 high schools in Istanbul. Because high school class levels differ from each other, cluster sampling is preferred when sampling group is identified.

Study is analyzed by using STATA package program. STATA is a statistical package for managing, analyzing, and graphing data. Stata provides the summarize command which allows you to see the mean, median and the standard deviation. The methods used in the study include one-way frequency, multiple frequency and correlation analysis. Frequencies and percentage distributions are also indicated for the variables.

## EMPIRICAL FINDINGS

In this section, financial knowledge and financial planning analyzes are presented under two separate headings. In addition, survey questions describing dependent and independent variables that direct the analysis are also mentioned. One way and multiple (combine) frequency tables for the dependent and independent variables are shown separately. We also included the summary statistics and correlation tables in a combined form.

### A. FINDINGS FOR FINANCIAL PLANNING

Financial planning is the process of estimating the capital required and determining its competition. It is the process of framing financial policies in relation to procurement, investment and administration of funds of a person. In general usage, a financial plan is a comprehensive evaluation of an individual's current pay and future financial state by using current known variables to predict future income, asset values and withdrawal plans.

In this case main question (dependent variable) is:

**Q (Main Question):** What is the determining factor of a financial plan?

**Y (Dependent Variable):** Q15 (on Financial Literacy Survey)

**Q.15. After finishing your education, how much money do you plan to earn per year?**

- A. I don't know    B. Less than 15.000 TL    C. 15.000 TL – 19.999 TL  
D. 20.000 TL – 29.999 TL    E. 30.000 TL – 39.999 TL  
F. 40.000 TL or more than this

The questions that could be associated with the financial plan in the questionnaire were selected for analysis. Demographic questions, family income, family education level, SBS scores of students are asked for analysis purposes.

***Q.9. Do you own the house you live in or not?***  
***A. The house belongs to us. B. We pay rent for it.***

According to Q9 results, people who own the house that they live in are more flexible about their future financial plans rather than who have paid rent.

***Table 2: One Way& Multiple Frequency Table for Q9 and Q15***

***One Way Frequency Table***

| <b><i>Q9 (I.V.)</i></b> | <b><i>Freq.</i></b> | <b><i>Percent</i></b> | <b><i>Cum.</i></b> |
|-------------------------|---------------------|-----------------------|--------------------|
| <i>1(Own House)</i>     | 311                 | 24,24%                | 24,24%             |
| <i>2(Rent)</i>          | 972                 | 75,76%                | 100,00%            |
| <b><i>Total</i></b>     | <b><i>1283</i></b>  | <b><i>100,00%</i></b> |                    |

***Multiple Frequency Table***

| <b><i>Dependent Var. (Q15)</i></b> | <b><i>Independent Var.(Q9)</i></b> |                       | <b><i>Total</i></b> |
|------------------------------------|------------------------------------|-----------------------|---------------------|
|                                    | <b><i>1(Own House)</i></b>         | <b><i>2(Rent)</i></b> |                     |
| <i>0(I don't know)</i>             | 23,61%                             | 76,39%                | 100,00%             |
| <i>1(Less than 15.000 TL)</i>      | 24,16%                             | 75,84%                | 100,00%             |
| <i>2(15.000-19.999 TL)</i>         | 24,60%                             | 75,40%                | 100,00%             |
| <i>3(20.000-29.999 TL)</i>         | 28,19%                             | 71,81%                | 100,00%             |
| <i>4(30.000-39.999 TL)</i>         | 23,98%                             | 76,02%                | 100,00%             |
| <i>5(More than 40.000 TL)</i>      | 23,52%                             | 76,48%                | 100,00%             |
| <b><i>Total</i></b>                | <b><i>309</i></b>                  | <b><i>961</i></b>     | <b><i>1270</i></b>  |
|                                    | <b><i>Total (Freq)</i></b>         |                       |                     |

Table 2 shows the percentage distributions of options in the selected independent variables. In Table 2; 311 of the students, which is %24 of our total sample, indicated that they own their houses. The remaining %75 indicated that they spend their money for rent. Second section of Table 2 shows the multiple frequency table and the percentage relationship between the main variable and the independent variables. Most of the students who own their homes plan to earn between 20,000 TL and 29,999 TL after completing their education. The majority of students who pay rent for their homes expect to earn more than 40,000 TL. In this case, it can be said that the students

who pay rent for their homes has a stronger motivation to have a more comfortable living space in the future.

**Q.10. What is your gender?**

**A. Female B. Male**

**Table 3: One Way& Multiple Frequency Table of Q10 and Q15**

**One Way Frequency Table**

| <b>Q10 (I.V.)</b> | <b>Freq.</b> | <b>Percent</b> | <b>Cum.</b> |
|-------------------|--------------|----------------|-------------|
| 0(Female)         | 634          | 49,07%         | 49,07%      |
| 1(Male)           | 658          | 50,93%         | 100,00%     |
| <b>Total</b>      | <b>1292</b>  | <b>100,00%</b> |             |

**Multiple Frequency Table**

| <b>Dependent Var. (Q15)</b> | <b>Independent Var.(Q10)</b> |                | <b>Total</b> |
|-----------------------------|------------------------------|----------------|--------------|
|                             | <b>0(Female)</b>             | <b>1(Male)</b> |              |
| 0(I don't know)             | 42,46%                       | 57,53%         | 100%         |
| 1(Less than 15.000 TL)      | 43,70%                       | 56,29%         | 100%         |
| 2(15.000-19.999 TL)         | 42,06%                       | 57,93%         | 100%         |
| 3(20.000-29.999 TL)         | 53,33%                       | 44,66%         | 100%         |
| 4(30.000-39.999 TL)         | 48,79%                       | 51,26%         | 100%         |
| 5(More than 40.000 TL)      | 52,36%                       | 47,63%         | 100%         |
| <b>Total</b>                |                              |                | <b>100%</b>  |

Table 3 shows the percent distributions of participants in terms of gender. The sample consists 49,07% women and 50.93% are male. The majority of the female students with a rate of 53.33% surveyed planned to earn between TL 20,000 and TL 29,999 in the future. The majority of male students aim to earn between TL 15,000 and TL 19,999. According to this, it is seen that female students are aiming for more annual earnings than male students.

**Q.12. What is the total annual income of your family (approximately)?**

**A. I don't know. B. Less than 20.000 TL C. 21.000 TL – 39.000 TL  
D. 40.000 TL – 79.000 TL E. 80.000 TL or much than this**

Question 12 aims to measure whether there is a relationship between the annual earnings of the students' families and the future annual earnings expectations of the students.

**Table 4: One Way& Multiple Frequency Table of Q12 and Q15**

**One Way Frequency Table**

| <b>Q12 (I.V)</b>       | <b>Freq.</b> | <b>Percent</b> | <b>Cum.</b> |
|------------------------|--------------|----------------|-------------|
| 1(I don't know.)       | 208          | 16,34%         | 16,34%      |
| 2(Less than 20.000 TL) | 335          | 26,32%         | 42,66%      |
| 3(21.000-39.000 TL)    | 273          | 21,45%         | 64,10%      |
| 4(40.000-79.000 TL)    | 178          | 13,98%         | 78,08%      |
| 5(More than 80.000 TL) | 279          | 21,92%         | 100,00%     |
| <b>Total</b>           | <b>1273</b>  | <b>100%</b>    |             |

**Multiple Frequency Table**

| <b>Dependent Var.<br/>(Q15)</b> | <b>Independent Var.(Q12)</b> |            |            |            |            | <b>Total</b> |
|---------------------------------|------------------------------|------------|------------|------------|------------|--------------|
|                                 | <b>1</b>                     | <b>2</b>   | <b>3</b>   | <b>4</b>   | <b>5</b>   |              |
| 0(I don't know)                 | 13,57%                       | 13,57%     | 12,86%     | 11,43%     | 48,57%     | 100,00%      |
| 1(Less than 15.000 TL)          | 38,51%                       | 14,86%     | 14,86%     | 10,81%     | 20,95%     | 100,00%      |
| 2(15.000-19.999 TL)             | 23,20%                       | 36,00%     | 16,00%     | 4,80%      | 20,00%     | 100,00%      |
| 4(30.000-39.999 TL)             | 11,22%                       | 36,73%     | 28,57%     | 6,12%      | 17,35%     | 100,00%      |
| 5(More than 40.000 TL)          | 9,34%                        | 21,87%     | 26,44%     | 23,66%     | 18,69%     | 100,00%      |
| <b>Total</b>                    | <b>204</b>                   | <b>335</b> | <b>270</b> | <b>176</b> | <b>275</b> | <b>1260</b>  |

In Table 4, the annual earnings of the students' families are shown as the percentage distribution. When frequency and percentage distributions are examined, the majority of the students stated that the annual earnings of their families are below 20.000 TL. It can be claimed that the expectation of the students with less family annual earnings has higher future financial plans.

**Q.13. What is the highest level of education your mother or father has received?**

- A. I don't know. B. None of them are high school graduates.  
C. High school graduate D. Graduated from a university  
E. Has a Master or a PhD

With this question in the questionnaire, it was measured whether the educational background of the students' parents was related to the financial plans of the students. Table 5 shows the education level of the families of the students in frequency and percentage distributions. The majority of the participants' family members have a college degree. Most of the remaining sample has at least a high school degree.



**Table 5: One Way Multiple Frequency Table for Q13**

| <b>One Way Frequency Table</b> |              |                |             |
|--------------------------------|--------------|----------------|-------------|
| <b>Q13 (I.V.)</b>              | <b>Freq.</b> | <b>Percent</b> | <b>Cum.</b> |
| 0(I don't know)                | 47           | 3,66%          | 3,66%       |
| 1(No one high sch. graduates)  | 279          | 21,75%         | 25,41%      |
| 2(High school graduates)       | 407          | 31,72%         | 57,13%      |
| 3(Graduated from University)   | 420          | 32,74%         | 89,87%      |
| 4 (Master or PhD)              | 130          | 10,13%         | 100         |
| <b>Total</b>                   | <b>1283</b>  | <b>100,00%</b> |             |

**Multiple Frequency Table**

| <b>Dependent Var. (Q15)</b> | <b>Independent Var.(Q13)</b> |            |            |            |            | <b>Total</b> |
|-----------------------------|------------------------------|------------|------------|------------|------------|--------------|
|                             | <b>0</b>                     | <b>1</b>   | <b>2</b>   | <b>3</b>   | <b>4</b>   |              |
| 0(I don't know)             | 9,66%                        | 22,07%     | 25,52%     | 34,48%     | 8,28%      | 100          |
| 1(Less than 15.000 TL)      | 3,31%                        | 37,09%     | 29,80%     | 24,50%     | 5,30%      | 100          |
| 2(15.000-19.999 TL)         | 2,42%                        | 28,23%     | 29,03%     | 30,65%     | 9,68%      | 100          |
| 3(20.000-29.999 TL)         | 4,67%                        | 26,67%     | 37,33%     | 24,00%     | 7,33%      | 100          |
| 4(30.000-39.999 TL)         | 3,55%                        | 19,53%     | 43,20%     | 41,42%     | 7,14%      | 100          |
| 5(More than 40.000 TL)      | 2,19%                        | 16,10%     | 31,21%     | 35,98%     | 14,51%     | 100          |
| <b>Total</b>                | <b>46</b>                    | <b>277</b> | <b>404</b> | <b>412</b> | <b>130</b> | <b>1269</b>  |

When the multiple frequency table is examined, the students whose family graduated from high school aimed to earn between 20,000 TL and 29,999 TL in the future. Students whose family members have a master's degree or a PhD are planning to earn much more in the future. In this case, it can be said that the educational level that families have according to percentage distributions effects the students future financial expectations.

**Q.17. How do you spend the holidays?**

**A. I work full time.      B. I work part time.      C. I rest.**

With this question in the questionnaire, the students' tendency to work was measured. The work experience is assumed to play an important role in the financial planning process.

**Table 6: One Way & Multiple Frequency Table for Q17 and Q15**

**One Way Frequency Table**

| <b>Q17 (I.V)</b>    | <b>Freq.</b> | <b>Percent</b> | <b>Cum.</b> |
|---------------------|--------------|----------------|-------------|
| 1(I work full time) | 112          | 8,77%          | 8,77%       |
| 2(I work part time) | 205          | 16,05%         | 24,82%      |
| 3(I rest)           | 960          | 75,18%         | 100,00%     |
| <b>Total</b>        | <b>1277</b>  | <b>100%</b>    |             |

**Multiple Frequency Table**

| <b>Dependent Var. (Q15)</b> | <b>Independent Var. (Q17)</b> |            |            | <b>Total</b> |
|-----------------------------|-------------------------------|------------|------------|--------------|
|                             | <b>1</b>                      | <b>2</b>   | <b>3</b>   |              |
| 0(I don't know)             | 5,56%                         | 15,97%     | 78,47%     | 100,00%      |
| 1(Less than 15.000 TL)      | 10,74%                        | 22,15%     | 67,11%     | 100,00%      |
| 2(15.000-19.999 TL)         | 6,50%                         | 17,89%     | 75,61%     | 100,00%      |
| 3(20.000-29.999 TL)         | 14,67%                        | 21,33%     | 64,00%     | 100,00%      |
| 4(30.000-39.999 TL)         | 8,16%                         | 18,37%     | 73,47%     | 100,00%      |
| 5(More than 40.000 TL)      | 7,78%                         | 11,38%     | 80,84%     | 100,00%      |
| <b>Total</b>                | <b>109</b>                    | <b>203</b> | <b>951</b> | <b>1263</b>  |

When one-way frequency chart in Table 6 is examined, it can be stated that the majority of the participants prefer to rest on their vacations. 75.18% of the students spend their holidays resting. When Table 6 is examined, it is seen that the students who spend their holidays resting plan to earn more than 40.000 TL in the future. In this case, contrary to what is believed, it can be said that there is not a linear distribution of the students' working conditions and financial plans as a percentage.

**Q.20. What is your SBS\* score/rating/points? (\* SBS is a placement test in Turkey before the high school education and calculated over from 400 points)**

- A. I don't know. B. Less than 250 points. C. Between the 250-450 points. D. 450 points and more than this.**

This questionnaire aims to determine whether there is a relation between the SBS score and financial planning tendencies. The changing preferences of students according to SBS score were examined as percentage and frequency.

**Table 7: One Way& Multiple Frequency Table of Q20 andQ15****One Way Frequency Table**

| <b>Q20 (I.V)</b>          | <b>Freq.</b> | <b>Percent</b> | <b>Cum.</b> |
|---------------------------|--------------|----------------|-------------|
| 0(I don't know)           | 26           | 2,02%          | 2,02%       |
| 1(Less than 250 pts)      | 815          | 63,18%         | 65,19%      |
| 2(Between 250-450 pts)    | 412          | 31,94%         | 97,13%      |
| 3(450 and more than this) | 37           | 2,87%          | 100,00%     |
| <b>Total</b>              | <b>1290</b>  | <b>100%</b>    |             |

**Multiple Frequency Table**

| <b>Dependent Var. (Q15)</b> | <b>Independent Var. (Q20)</b> |            |            |           | <b>Total</b> |
|-----------------------------|-------------------------------|------------|------------|-----------|--------------|
|                             | <b>1</b>                      | <b>2</b>   | <b>3</b>   | <b>4</b>  |              |
| 0(I don't know)             | 2,74%                         | 50,68%     | 39,04%     | 7,53%     | 100,00%      |
| 1(Less than 15.000 TL)      | 2,65%                         | 72,85%     | 22,52%     | 1,99%     | 100,00%      |
| 2(15.000-19.999 TL)         | 2,38%                         | 65,08%     | 29,37%     | 3,17%     | 100,00%      |
| 3(20.000-29.999 TL)         | 0,67%                         | 78,67%     | 18,67%     | 2,00%     | 100,00%      |
| 4(30.000-39.999 TL)         | 2,54%                         | 64,97%     | 30,46%     | 2,03%     | 100,00%      |
| 5(More than 40.000 TL)      | 1,58%                         | 57,79%     | 38,26%     | 2,37%     | 100,00%      |
| <b>Total</b>                | <b>25</b>                     | <b>805</b> | <b>410</b> | <b>37</b> | <b>1277</b>  |

When the percentage distribution chart based on the participants' SBS scores is examined, most of the participants are 250 points or less. 63.18% of the students who participated in the survey are 250 points or less. On the other hand, 31.94% of the students are between 250 and 450 points. When Table 7 is examined, it is seen that the students with SBS score of 450 and above do not declare a decision on future financial plans. Students in the 250 and below who make up the majority of the participants aimed to earn between 20,000 TL and 29,999 TL in the future.

**Table 8: Summary and Correlation Table for Q9-Q10-Q12-Q13-Q17- Q20****Summary Table**

| <b>Variable</b> | <b>Obs</b> | <b>Mean</b> | <b>Std. Dev.</b> | <b>Min</b> | <b>Max</b> |
|-----------------|------------|-------------|------------------|------------|------------|
| <b>Q15</b>      | 1,278      | 3.271.518   | 1.808.962        | 0          | 5          |
| <b>Q9</b>       | 1,283      | 1.757.599   | .4287025         | 1          | 2          |
| <b>Q10</b>      | 1,292      | .5092879    | .5001073         | 0          | 1          |
| <b>Q12</b>      | 1,273      | 2.988.217   | 1,390902         | 1          | 5          |
| <b>Q13</b>      | 1,283      | 2.239.283   | 1.019.903        | 0          | 4          |
| <b>Q17</b>      | 1,277      | 2.664.056   | .6315132         | 0          | 4          |

|            |       |           |          |   |   |
|------------|-------|-----------|----------|---|---|
| <b>Q20</b> | 1.290 | 2.356.589 | .5721551 | 1 | 4 |
|------------|-------|-----------|----------|---|---|

**Correlation Table**

|            | <b>Q15</b> | <b>Q9</b> | <b>Q10</b> | <b>Q12</b> | <b>Q13</b> | <b>Q17</b> | <b>Q20</b> |
|------------|------------|-----------|------------|------------|------------|------------|------------|
| <b>Q15</b> | 1          |           |            |            |            |            |            |
| <b>Q9</b>  | 0.0100     | 1         |            |            |            |            |            |
| <b>Q10</b> | -0,077     | 0,0081    | 1          |            |            |            |            |
| <b>Q12</b> | 0,02       | -0,0093   | -0,015     | 1          |            |            |            |
| <b>Q13</b> | 0.01672    | 0.0830    | -0,0456    | 0.0798     | 1          |            |            |
| <b>Q17</b> | 0.0498     | 0.0229    | 0.1923     | 0.1227     | 0.1755     | 1          |            |
| <b>Q20</b> | 0.0181     | 0.0693    | -0,014     | 0.0723     | 0.1420     | 0.0726     | 1          |

In table 8; Question 9 has standard distribution and the correlation table shows independent variable has positive effect on dependent variable and a weak positive linear relationship. Question 10 has standard distribution and the independent variable has a negative correlation on our dependent variable and shows a weak negative linear relationship. In this question, where gender is taken as an independent variable, it seems that there is no difference between male and female students. Question 12 has standard distribution and the independent variable has a positive correlation with the dependent variable. We can say that as the annual income of the family increases, the future financial expectations of the students also increase. Question 12 has standard distribution and the independent variable has a positive correlation with the dependent variable. We can say that as the as the educational level of the families increases, the financial expectations of the future of the students also increase. A large majority of the students stated that they mostly prefer to spend their holidays resting. Question 17 has standard distribution and the independent variable has a positive correlation with the dependent variable. In this case, the fact that the students spent their vacation periods resting did not negatively affect the future financial plans of the students. Question 20 has standard distribution and the independent variable has a positive correlation with the dependent variable. As scores of the students increase, the financial expectations about the future increases as well.

## B. FINDINGS FOR FINANCIAL KNOWLEDGE

Financial literacy is the education and understanding of various financial areas. This topic focuses on the ability to manage personal finance matters in an efficient manner, and it includes the knowledge of making appropriate decisions about personal finance such as investing, insurance, real estate, paying for college, budgeting, retirement and tax planning.

In this case main question (dependent variable) is:

Q (Main Question): What is the determining factor of financial knowledge?

Y (Dependent Variable): Q1 (on Financial Literacy Survey)

**Q.1. How do you rate your level of knowledge about the economy? (0- I don't know 1- Very Low / 2- Low / 3-Little / 4- Middle / 5- Much / 6- High / 7- Very High)**

**A. 0      B.1      C.2      D.3      E.4      F.5      G.6      H.7**

This question was asked to determine the level of economic knowledge of the students. Many factors have been identified that determine the level of economic knowledge. Economic information level, demographic characteristics, use of bank products, SBS scores were tried to be determined and financial knowledge levels of the students were tried to be determined.

**Q.2.What is your gender?**

**A. Female      B. Male**

**Table 9: One Way& Multiple Frequency Table for Q10 and Q1**

| <b>One Way Frequency Table</b> |              |                |             |
|--------------------------------|--------------|----------------|-------------|
| <b>Q10 (I.V.)</b>              | <b>Freq.</b> | <b>Percent</b> | <b>Cum.</b> |
| 0(Female)                      | 634          | 49,07%         | 49,07%      |
| 1(Male)                        | 658          | 50,93%         | 100,00%     |
| <b>Total</b>                   | <b>1292</b>  | <b>100,00%</b> |             |

  

| <b>Multiple Frequency Table</b> |                               |            |              |
|---------------------------------|-------------------------------|------------|--------------|
| <b>Dependent Var. (Q1)</b>      | <b>Independent Var. (Q10)</b> |            |              |
|                                 | <b>0</b>                      | <b>1</b>   | <b>Total</b> |
| 0(I don't know)                 | 35,15%                        | 64,85%     | 100%         |
| 1(Very Low)                     | 30,71%                        | 69,29%     | 100%         |
| 2(Low)                          | 31,67%                        | 68,33%     | 100%         |
| 3(Little)                       | 48,94%                        | 51,06%     | 100%         |
| 4(Middle)                       | 55,47%                        | 44,53%     | 100%         |
| 5(Much)                         | 67,09%                        | 32,91%     | 100%         |
| 6(High)                         | 70,59%                        | 29,41%     | 100%         |
| 7(Very High)                    | 78,21%                        | 21,79%     | 100%         |
| <b>Total</b>                    | <b>633</b>                    | <b>657</b> | <b>1292</b>  |

The one way frequency table shows the percentage distribution of participants for gender. According to Table 9, 49,07% of the participants are female students. Also, 50.93% of the participants are male students. The multiple frequency table shows the percentage relationship between the main variable and the independent variable. When Table 17 is examined, 78,21% of female students stated that their economic knowledge level is very high. The majority of male students expressed a lower level of economic knowledge with a rate of 69.29%. In this case, it can be said that female students claims to have a more stronger economic knowledge than male students.

**Q.16.Whose credit card do you use?**

**A. I don't use a credit card. B. Parent's credit card. C. My own credit card.**

Nowadays, credit card usage rate is very widespread. As a result, credit card ownership has dropped to high school students. It can be said that credit card usage affects financial knowledge. This question examines whether there is a relationship between the use of credit cards and the level of financial knowledge of students using credit cards.

According to Table 10, 64.24% of the students do not use credit cards. While 25.98% of the students use their own credit cards, 9.78% of the students use a common credit card with their family. When the multiple frequency table is examined, the vast majority of students do not identify the level of economic knowledge, while the majority of students who use their credit card with family and own credit cards identify financial knowledge as high.

**Table 10: One Way& Multiple Frequency Table for Q16and Q1**

| One Way Frequency Table  |       |                           |         |       |
|--------------------------|-------|---------------------------|---------|-------|
| Q16                      | Freq. | Percent.                  | Cum.    |       |
| 0(I don't use)           | 821   | 64,24%                    | 64,24%  |       |
| 1(Parent's Credit Card)  | 125   | 9,78%                     | 74,02%  |       |
| 2(My own credit card)    | 332   | 25,98%                    | 100,00% |       |
| Total                    | 1278  | 100,00%                   |         |       |
| Multiple Frequency Table |       |                           |         |       |
|                          |       | Independent Var.<br>(Q16) |         |       |
| Dependent Var.<br>(Q1)   | 0     | 1                         | 2       | Total |

|                 |            |            |            |             |
|-----------------|------------|------------|------------|-------------|
| 0(I don't know) | 68,90%     | 9,15%      | 21,95%     | 100%        |
| 1(Very Low)     | 57,94%     | 14,29%     | 27,78%     | 100%        |
| 2(Low)          | 66,67%     | 7,22%      | 26,11%     | 100%        |
| 3(Little)       | 68,55%     | 8,13%      | 23,32%     | 100%        |
| 4(Middle)       | 64,61%     | 6,58%      | 28,81%     | 100%        |
| 5(Much)         | 61,78%     | 12,10%     | 26,00%     | 100%        |
| 6(High)         | 52,00%     | 16,00%     | 32,00%     | 100%        |
| 7(Very High)    | 53,95%     | 17,11%     | 28,95%     | 100%        |
| <b>Total</b>    | <b>821</b> | <b>125</b> | <b>332</b> | <b>1278</b> |

**Q.18.Do you have a bank account?**

**A. I don't have a bank account. B. I have a bank account that I share with my family. C. I have my own bank account.**

People can use their information about financial products more actively when using a bank account. This increases the financial knowledge of the people. Table 11 shows that most of the students do not have any bank account. 60.36% of the participants do not have any bank account. When Table 11 is examined, the students who do not have a bank account do not determine their economic information levels by any criteria.

**Table 11:One Way& Multiple Frequency Table for Q18and Q1**

| <b>One Way Frequency Table</b>  |                               |                 |             |              |
|---------------------------------|-------------------------------|-----------------|-------------|--------------|
| <b>Q18</b>                      | <b>Freq.</b>                  | <b>Percent.</b> | <b>Cum.</b> |              |
| 0(I don't have a bank acc.)     | 772                           | 60,36%          | 60,36%      |              |
| 1(Share with family)            | 190                           | 14,86%          | 75,22%      |              |
| 2(Personal bank acc.)           | 317                           | 24,78%          | 100,00%     |              |
| <b>Total</b>                    | <b>1279</b>                   | <b>100,00%</b>  |             |              |
| <b>Multiple Frequency Table</b> |                               |                 |             |              |
| <b>Dependent Var. (Q1)</b>      | <b>Independent Var. (Q18)</b> |                 |             | <b>Total</b> |
|                                 | <b>0</b>                      | <b>1</b>        | <b>2</b>    |              |
| 0(I don't know)                 | 69,51%                        | 12,80%          | 17,68%      | 100%         |
| 1(Very Low)                     | 57,94%                        | 18,25%          | 23,81%      | 100%         |
| 2(Low)                          | 57,54%                        | 12,29%          | 30,17%      | 100%         |
| 3(Little)                       | 61,92%                        | 13,17%          | 24,91%      | 100%         |
| 4(Middle)                       | 59,67%                        | 16,87%          | 23,46%      | 100%         |
| 5(Much)                         | 58,86%                        | 15,19%          | 25,95%      | 100%         |
| 6(High)                         | 60,78%                        | 15,69%          | 23,53%      | 100%         |
| 7(Very High)                    | 50,65%                        | 18,18%          | 31,17%      | 100%         |
| <b>Total</b>                    | <b>772</b>                    | <b>190</b>      | <b>317</b>  | <b>1279</b>  |

Students who use a personal bank account with their family members have a high financial knowledge level. When we analyze the percentage distribution levels, we can observe that there is a significant similarity with credit card ownership results.

**Q.19. What is your high school level?**

**A.1                                      B. 2                                      C. 3                                      D. 4**

This question investigates whether there is any relationship between the high school class level and the level of financial knowledge. When one way frequency table for Table 12 is examined, the majority of the participants are students from 3<sup>rd</sup> grade high school with a rate of 40.19%. Since the students participating in the questionnaire are selected by cluster sampling management, the distribution of the participants does not cause any adverse effect in this case.

**Table 12: One Way & Multiple Frequency Table for Q19 and Q1**

| One Way Frequency Table  |                        |          |         |        |       |
|--------------------------|------------------------|----------|---------|--------|-------|
| Q19                      | Freq.                  | Percent. | Cum.    |        |       |
| 1(Level 1 )              | 268                    | 20,79%   | 20,79%  |        |       |
| 2(Level 2)               | 357                    | 27,70%   | 48,49%  |        |       |
| 3(Level 3)               | 518                    | 40,19%   | 88,67%  |        |       |
| 4(Level 4)               | 146                    | 11,33%   | 100,00% |        |       |
| Total                    | 1289                   | 100,00%  |         |        |       |
| Multiple Frequency Table |                        |          |         |        |       |
|                          | Independent Var. (Q19) |          |         |        |       |
| Dependent Var. (Q1)      | 1                      | 2        | 3       | 4      | Total |
| 0(I don't know)          | 21,82%                 | 33,94%   | 37,58%  | 6,67%  | 100%  |
| 1(Very Low)              | 25,20%                 | 22,83%   | 40,16%  | 11,81% | 100%  |
| 2(Low)                   | 17,78%                 | 27,78%   | 40,56%  | 13,89% | 100%  |
| 3(Little)                | 19,72%                 | 25,70%   | 46,13%  | 8,45%  | 100%  |
| 4(Middle)                | 24,29%                 | 28,74%   | 36,03%  | 10,93% | 100%  |
| 5(Much)                  | 19,11%                 | 29,30%   | 35,67%  | 15,92% | 100%  |
| 6(High)                  | 17,65%                 | 19,61%   | 45,10%  | 17,65% | 100%  |
| 7(Very High)             | 16,67%                 | 28,21%   | 42,31%  | 12,82% | 100%  |
| Total                    | 268                    | 357      | 518     | 146    | 1289  |

When Table 12 is examined, it is observed that as the high school level increases, a percentage increase in the level of financial knowledge is observed. As the high school



grade level increases, the knowledge of the students about economy increases as well. In this case, as the high school level increased, the level of financial knowledge also showed a proportional increase in percentage.

**Q. 20. What is your SBS\* score/rating/points? (\* SBS is a placement test in Turkey before the high school education and calculated over from 400 points)**

- A. I don't remember my SBS score      B. Less than 250 points      C. Between the 250 and 450 points  
D. 450 and more than this**

This question investigates the relationship between the SBS score and the level of economic knowledge of the students. As in the first part of the analysis, the vast majority of participants constitute students with a score of 250 or less. 63.18% of the students are at SBS scores of 250 and below. When Table 13 was examined, there was no correlation between participants' SBS score and economic knowledge levels.

**Table 13: One Way & Multiple Frequency Table for Q20and Q1**

**One Way Frequency Table**

| <b>Q20 (I.V)</b>          | <b>Freq.</b> | <b>Percent</b> | <b>Cum.</b> |
|---------------------------|--------------|----------------|-------------|
| 0(I don't know)           | 26           | 2,02%          | 2,02%       |
| 1(Less than 250 pts)      | 815          | 63,18%         | 65,19%      |
| 2(Between 250-450 pts)    | 412          | 31,94%         | 97,13%      |
| 3(450 and more than this) | 37           | 2,87%          | 100,00%     |
| <b>Total</b>              | <b>1290</b>  | <b>100%</b>    |             |

**Multiple Frequency Table**

| <b>Dependent Var. (Q1)</b> | <b>Independent Var. (Q20)</b> |           |            |            | <b>Total</b> |
|----------------------------|-------------------------------|-----------|------------|------------|--------------|
|                            | <b>0</b>                      | <b>1</b>  | <b>2</b>   | <b>3</b>   |              |
| 0(I don't know)            | 4,85%                         | 3,64%     | 56,36%     | 35,15%     | 100%         |
| 1(Very Low)                | 4,76%                         | 5,56%     | 55,56%     | 34,13%     | 100%         |
| 2(Low)                     | 1,67%                         | 1,11%     | 61,67%     | 35,56%     | 100%         |
| 3(Little)                  | 2,11%                         | 0,35%     | 66,55%     | 30,99%     | 100%         |
| 4(Middle)                  | 2,03%                         | 2,44%     | 67,48%     | 28,05%     | 100%         |
| 5(Much)                    | 1,90%                         | 0,63%     | 70,25%     | 27,22%     | 100%         |
| 6(High)                    | 5,88%                         | 1,96%     | 64,71%     | 27,45%     | 100%         |
| 7(Very High)               | 3,85%                         | 2,56%     | 53,85%     | 39,74%     | 100%         |
| <b>Total</b>               | <b>37</b>                     | <b>26</b> | <b>815</b> | <b>410</b> | <b>1288</b>  |

Contrary to expectations, we could not identify a positive relationship between SBS score and level economic knowledge of the students.

**Table 14: Summary Statistics and Correlation Table for Q1-Q10-Q16-Q18-Q19-Q20**

| <b>Summary Statistics</b> |            |             |                  |            |            |  |
|---------------------------|------------|-------------|------------------|------------|------------|--|
| <b>Variable</b>           | <b>Obs</b> | <b>Mean</b> | <b>Std. Dev.</b> | <b>Min</b> | <b>Max</b> |  |
| <b>Q1</b>                 | 1,29       | 3.076.744   | 1.919.926        | 0          | 7          |  |
| <b>Q10</b>                | 1,281      | .5092879    | .5001073         | 0          | 1          |  |
| <b>Q16</b>                | 1,292      | .6213895    | .8782858         | 0          | 2          |  |
| <b>Q18</b>                | 1,281      | .64375      | .8515956         | 0          | 2          |  |
| <b>Q19</b>                | 1,28       | 2.420.604   | .9411406         | 1          | 4          |  |
| <b>Q20</b>                | 1,29       | 224186      | .6293442         | 0          | 3          |  |

  

| <b>Correlation Table</b> |           |            |            |            |            |            |
|--------------------------|-----------|------------|------------|------------|------------|------------|
|                          | <b>Q1</b> | <b>Q10</b> | <b>Q16</b> | <b>Q18</b> | <b>Q19</b> | <b>Q20</b> |
| <b>Q1</b>                | 1         |            |            |            |            |            |
| <b>Q10</b>               | 0,278     | 1          |            |            |            |            |
| <b>Q16</b>               | 0,053     | 0,0081     | 1          |            |            |            |
| <b>Q18</b>               | 0,055     | -0,0093    | -0,015     | 1          |            |            |
| <b>Q19</b>               | 0,05      | 0.0830     | -0,0456    | 0.0798     | 1          |            |
| <b>Q20</b>               | 0,001     | 0.0229     | 0.1923     | 0.1227     | 0.1755     | 1          |

Financial knowledge of the students who do not have a credit card as a percentage is higher. Although the financial information of the family or of the students using the credit card on their own is proportionally close to each other, there is no significant relationship with this variable. The level of knowledge about financial products does not tend to increase as the class levels of students increase. According to the findings of the analysis, there is no relation between class level and financial behavior. It was expected that students with a higher SBS score such as a score of 450 and above would have more financial knowledge. However, the percentage of the success rates showed that the students with 450 and above SBS scores are in the 2nd place. The surprising part is that the frequency score is higher for the students who score above 450 are more successful at this point as a percentage. We also see that at the intensity of frequency values for students with SBS score between 250 and 450 are more successful than others.

## CONCLUSION

The concept of financial literacy encompasses basic skills that enable individuals to make decisions that are both short and long in terms of the level of knowledge of basic financial concepts, tools, and timeliness. Today, with the prevalence of free market

economy, the importance of financial awareness has increased rapidly. Especially in recent years, the financial crises that have taken place in the global dimension have caused the new investment instruments and the diversification of applications in the aftermath of capital markets, leading to a further increase in the prejudice of financial awareness.

In this study, which was conducted with the aim of determining the financial literacy levels of high school students and analyzed with a total of 1292 students, a questionnaire related to basic financial areas was applied to the students. General hypotheses have been determined in the analyzes made on the questionnaire evaluation. Question-based hypotheses have been developed to test these several research questions. As a result of the STATA independence test, we did not find a significant effect of gender on financial literacy. However, SBS scores of the students appeared as a significant variable. One of the interesting findings of this research was the relationship between general SBS grade average and high school level financial knowledge. The general expectation before our analysis was that those with higher SBS grade averages are better educated so their financial knowledge would be higher. However, the demographic features mentioned are not linked to any type of financial information. Gender and house ownership have less effect on students' financial planning. Family income and parent's education has a positive effect on our dependent variable. Student's SBS score has positive effect on our dependent variable.

In recent years, financial literacy levels have been measured regularly in developed and developing countries and various proposals have been made to improve financial literacy. It emphasizes the need to increase the level of financial literacy, in particular to increase savings and protect against the effects of possible financial crises. Financial literacy levels need to be improved so that individuals can make sound financial decisions on issues such as savings, investment and debt management. This research proves one more time that it is essential for high school students to understand the importance of financial literacy and to receive adequate training in financial matters.

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