

# INVESTIGATION OF FINANCIAL LITERACY: A CASE STUDY OF UNIVERSITY STUDENTS

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# INVESTIGATION OF FINANCIAL LITERACY: A CASE STUDY OF UNIVERSITY STUDENTS

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### ABSTRACT

### INVESTIGATION OF FINANCIAL LITERACY: A CASE STUDY OF UNIVERSITY STUDENTS

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Globalization and technological developments have increased the variety and accessibility of financial instruments. Individuals must have financial literacy to make the right decisions. Financial literacy can be expressed as having knowledge about financial instruments and being able to use this information effectively. Individuals' choosing the most efficient alternative while making financial decisions is related to their financial literacy level. Increasing the financial literacy level of individuals contributes positively to their budgets and country economies. For this reason, it is important to investigate the financial literacy level of university students. University students the individuals who will manage their own budgets soon and affect the economic conditions the society which they live. For this reason, the aim of the study is to determine the financial literacy level of university students and to investigate the demographic characteristics that affect their financial literacy levels. It is also aimed to determine the relationship between the financial literacy levels of university students and their budgeting behavior. This study is a survey study, and a survey was applied to 391 university students. The survey data were analyzed in the SPSS program. As a result of the research, a statistically significant relationship was found between students' financial literacy levels and gender, class, internship experience, choice of finance courses, participation in financial activities and budgeting behavior. It was determined that male students' financial literacy levels are higher than female students.

Keywords: Financial Literacy, Financial Education, Budgeting Behavior, University Students, Demographic Features

## ÖZET

## FİNANSAL OKURYAZARLIK ÜZERİNE İNCELEME: ÜNİVERSİTE ÖĞRENCİLERİ ÜZERİNE BİR VAKA ÇALIŞMASI

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Globalleşme ve teknolojik gelişmeler, finansal araçların çeşitliliğini ve ulaşılabilirliğini artırmıştır. Bireylerin doğru kararlar verebilmesi için finansal okuryazarlığa sahip olması gerekir. Finansal okuryazarlık, finansal araçlar hakkında bilgi sahibi olmak ve bu bilgiyi etkin şekilde kullanabilmek olarak ifade edilebilir. Bireylerin finansal kararlar verirken en verimli alternatifi seçmeleri finansal okuryazarlık düzeyleri ile ilgilidir. Bireylerin finansal okuryazarlık düzeylerinin artması bütçelerine ve ülke ekonomilerine olumlu katkı sağlamaktadır. Bu sebepten, üniversite öğrencilerinin finansal okuryazarlık seviyesinin incelenmesi önemlidir. Üniversite öğrencileri yakın gelecekte kendi bütçelerini yönetecek ve yaşadıkları toplumun ekonomik koşullarını etkileyecek olan bireylerdir. Bu sebepten, çalışmanın amacı üniversite öğrencilerinin finansal okuryazarlık seviyesini belirleyip, finansal okuryazarlık seviyelerine etki eden demografik özellikleri incelemektir. Ayrıca finansal okuryazarlık seviyeleri ile bütçeleme davranışlarının arasındaki ilişkiyi belirlemektir. Bu çalışma bir anket araştırmasıdır ve 391 üniversite öğrencisine anket uygulanmıştır. Anket verileri SPSS programında analiz edilmiştir. Araştırma sonucunda öğrencilerin finansal okuryazarlık seviyeleri ile cinsiyet, sınıf, staj deneyimi, finans derslerini seçme durumu, finansal etkinliklere katılma ve bütçeleme davranışı arasında istatistiksel olarak anlamlı bir ilişki bulunmuştur. Erkek öğrencilerin finansal okuryazarlık seviyeleri kadın öğrencilerden yüksek olduğu belirlenmiştir.

Anahtar Kelimeler: Finansal Okuryazarlık, Finansal Eğitim, Bütçeleme Davranışı, Üniversite Öğrencileri, Demografik Özellikler

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#### **CHAPTER 1: INTRODUCTION**

The concept of economy and finance have continuously affected individuals, societies, and states. Finance is a significant concept for individuals. It is a system that serves different purposes such as shopping, retirement plans, and many other purposes. The use of finance in every field shows that individuals need to manage financial issues. However, in the current situation, the multitude and complexity of financial instruments and products in financial markets affect financial decision-making processes. Financial literacy level is important for making these decisions correctly and effectively. Individual financial literacy level is also significant for the economic system of countries. For the existence of an effective and active market, individuals need to know basic financial concepts and tools. For this reason, studies on the financial literacy level of young people and adults will contribute positively to the financial system. In addition, the importance of the issue has made it necessary to work in this area.

The importance of financial literacy level is increasing due to the changes in financial markets and the demographic features of the society. In the last 20 years, the diversification and complexity of financial instruments have led to the prominence of financial literacy. The fact that individuals are financial literate enables them to evaluate the products and services in the financial system correctly and to choose savings and borrowing products suitable for their needs. It also means being aware of the fundamental rights and obligations in this area. European countries, the USA, and some developing countries are examining financial literacy internationally. For example, the OECD (2014) carried out a study on 29.000 students in 18 countries (Australia, Belgium, Czech Republic, Estonia, France, Israel, Italy, New Zealand, Poland, Slovak Republic, Slovenia, Spain, Sweden, the Flemish Community of the United States of America, Colombia, Croatia, Latvia, the Russian Federation and Shanghai, China) in total including 13 OECD countries with the aim of determining the financial literacy. In this study, 10. % of the students included in the survey could answer the most difficult questions about the financial literacy. On the contrary, an average of 15. % of the students scored below lower limit of performance for PISA financial literacy. It was revealed that the students participating in the study were similar in terms of mathematics and reading but their financial literacy levels differed. In addition, it was seen that average financial literacy scores of the students of other all participant countries did not differ by gender and the students with the same socioeconomic status had different financial literacy level in different OECD countries. Taking into consideration other countries outside OECD (Colombia, Croatia, Latvia, the Russian Federation and Shanghai, China), it was found out that financial literacy average in Shanghai, China was at the first place and not different from score average of the OECD countries, Colombia had the lowest financial literacy score average among all participant countries and economies. Score averages of Croatia and Russia were lower than average of the OECD countries. The young population ratio is high in Turkey so the issue of financial literacy is important. Financial literacy subject has become an important issue for banks, politicians, educators, and many different groups. Many researchers have studied the causes and consequences of the financial decisions young people make, and researchers have made suggestions for the future. According to the results, researchers are increasingly concerned about the issue. To solve this situation, governments need to develop new and different policies. (Kiliç, Ata, and Seyrek, 2015). For example, undergraduate students should recognize the importance of financial literacy and receive education in finance. Since this issue affects all members of society, the subject should be explained to all individuals. Seminars and training can be organized by experts. This training process should be controlled and enabled by governments. Since young people will start making money in their career life, they must have financial literacy in their personal finance decisions. They should manage their financial situation for their needs. Generally, the young generation, especially students, love and prefer to spend money. By increasing the financial awareness and financial literacy level of students, it is ensured that they are more successful in budgeting behavior. (Rizwan et al., 2015)

There are many national and international studies investigating the importance of financial literacy. When analyzing studies in the literature, the subject of financial literacy was investigated using different demographic groups. Researchers continued to widely investigate relationship between demographic factors such as age, gender, class grade, educational attainment, education type and the financial literacy. Shaari et al. (2013) tried to determine effects of age, gender, educational attainment and spending habits of 384 students of University of Malaya on their levels of financial literacy by carrying out multiple linear regression analysis. According to the result of the study, a positive and crucial effect of spending habit and class variables on the financial literacy was determined. Effects of age on the financial literacy were negative. Researchers generally have tried to determine the level of financial literacy of high school students, university students, households, people working in the public and private sectors. As a result of the research, it has been determined that individuals' financial literacy level is generally low. For this reason, financial literacy training organized by the state and independent institutions and organizations should be generalized, the importance of financial literacy issue and why it is necessary should be explained and the knowledge and awareness of individuals on financial issues should be increased.

Researchers should investigate the importance and results of financial literacy. First, researchers must determine the current level. In this research, the survey method was used to reach the data. To reach correct results in survey studies, research should be done on certain groups. Therefore, instead of a general survey study, a certain group was determined. University students were chosen as the target audience. University students are one of the groups most in need of financial literacy knowledge because college students often do not have a steady income. They must spend money on their needs and save during their university life. At the same time, they will have to make use of their money after graduation. Unfortunately, the level of financial literacy is low when studies analyzed in developed, developing, and other countries. In the US Council of Ministers in 2010; It has been stated that if the financial knowledge of American youth is not increased, it will cause a great financial crisis in the future. (Geracioti, 2010). As a result of the studies, it has been observed that individuals with low financial literacy do not have enough education in finance. The low level of financial literacy knowledge is shown among the major problems of the countries in the future. Therefore, states should take measures and develop policies. The financial literacy problem is not only a problem for individual investors. It is also a problem for managers, companies, and country economies. Especially for a strong economy, it is very important for individuals in the society to make the right financial decisions. In this study, the details and importance of the subject have been tried to be explained by using national and international studies. Financial literacy levels of Celal Bayar University students were determined with the prepared questionnaire. In addition, the demographic characteristics that affect the financial literacy level were examined. The relationship between financial literacy level and budgeting behavior was also

examined. In the first part of the study, the basic concepts of financial literacy, the situations affecting the level of financial literacy are explained by including national and international studies. Afterward, the subject of financial education, which is extremely important in financial literacy, and its relationship with financial literacy are mentioned. Then, the empirical results discussion section was given.

As a result of the research, the relationship between students' financial literacy and demographic characteristics was examined. When analyzing the gender effect, it determined that the financial literacy rate of male students is higher than that of female students. The result is parallel to national and international studies. One of the significant impacts of this is that women are often afraid to take risks and think that the male gender is making better financial decisions. A statistically significant result was found between grade level and financial literacy level. As the number of courses increases with the classroom, the level of financial knowledge also increases. Therefore, university course programs should be organized, and the number of financial courses should be increased. The effect of demographic features on financial literacy was analyzed in the research. As a result of the research, a statistically positive relationship was found between financial literacy and budgeting behavior. Budgeting behavior is important for the economies of individuals and countries. For this reason, the level of financial literacy should be increased. As a result of the research, a statistically positive relationship was found between financial literacy and budgeting behavior. Budgeting behavior is important for the economies of individuals and countries. For this reason, the level of financial literacy should be increased. The number of finance courses in universities can be increased. Governments should support associations and organizations. As a result of the research, a statistically positive relationship was found between financial literacy and budgeting behavior. Budgeting behavior is important for the economies of individuals and countries. For this reason, the level of financial literacy should be increased. The number of finance courses in universities can be increased. Governments should support associations and organizations.

# CHAPTER 2: ESSENTIAL CONCEPT OF FINANCIAL LITERACY

This section examines the definition and basic concepts of financial literacy, the importance of financial literacy, and the factors affecting financial literacy.

#### 2.1. Basic Concepts and Financial Literacy

The subheadings of the financial literacy should be explained to understand its concept. The subheadings are the concept of finance and the concept of literacy. Examining the literature, it was tried to be understood what financial awareness and financial ability situations are for financial literacy. Therefore, in this section, the concept of finance, the concept of literacy, personal finance, financial awareness, and financial ability are explained.

#### 2.1.1. Concept of Finance

The concept of finance is a concept that individuals use in their daily lives. Finance is an important factor for individuals and businesses in changing economic conditions. The Turkish Language Institute explains the concept of finance as "commercial activity to provide funds and capital". However, it is difficult to express the concept of finance in one sentence so there are many definitions related to the concept of finance. Finance is the proper management of assets and resources in order to maximize the benefits (Özkan, 2013). According to Khan and Jain (2008), the concept of finance is defined as the art and science of managing money and capital. As can be understood from these words, to better understand the concept of finance, the concept of financial management should also be mentioned. Financial management concept has been defined as making financial decisions by determining the goals of individuals and businesses. (Paramasivan, and Subramanian, 2009).

Financial management was accepted as an important building block of the economy until the early 1900s. Since the beginning of this century, it has started to be accepted as a separate working area from the economy. As a result of the economic difficulties that occurred in the 1930s, studies on finance have changed. Financial management is focused on maintaining financial assets, maintaining liquidity, bankruptcy, and restructuring. Today, the main issues that finance managers emphasize are Working capital management, planning related to financial structure,

forecasting, capital budgeting, capital structure, audit and the most important subject or title in recent years is to maximize the firm value. (Ercan, et al., 2005) As stated in the definitions, finance is a concept that must be understood, to meet the needs of both individuals and businesses in a world where economic conditions change rapidly.

In the constantly changing world economy, new and detailed topics about finance concepts emerge. We can express them as personal finance and public finance. While examining the personal finance, it seems that individual finance and business finance come into the forefront, public finance stands out as a finance branch concerning states (Paramasivan, and Subramanian, 2009).

#### 2.1.2. Concept of Literacy

To understand the concept of financial literacy, it is necessary to fully understand the concept of "literate". The word "literate", as defined by TDK (2013), means "a person with literacy, who has been educated,". The definition of the word "literacy" is given as "to be able to read and write". According to Altun (2005), accompanied by literacy, reading, and writing activities; it is about the perception of the individual's life and objects and events within this life and giving meaning to all the relations in his social life. In other words, it is defined as reading, writing, and using numerical information. Longman (2013) defines literacy as "being able to read and write". But, contrary to what is stated in the definitions, literacy is about reading and writing. Tüzel, and Kurudayıoğlu (2010) explained the difference between reading and writing concepts according to some items. We can list these items as follows:

Reading-writing is understanding the alphabet. Literacy is the process of logical thinking and a logical approach,

Reading is a writing category; literacy is a degree,

The concepts of reading and writing are defined, but the definition of literacy continues,

Reading-writing is intended to explain symbols in the letter system. Literacy is a logical understanding of symbols.

The definition of literacy changes with new concepts. For example, we can say media literacy, library literacy, internet literacy, electronic literacy, and financial literacy (Bawden, 2001).

#### 2.1.3. Concept of Personal Finance

The concept of personal finance can be defined as the money people earn because of their work. The concept of personal finance was first defined in 1899. It is one of the most frequently discussed topics today. As a result of the high economic status of individuals, they can easily meet their needs. They also increase their wellbeing. The economic development of people also affects their social lives. For these reasons, countries aim to integrate the concept of personal finance into the educational activities of individuals. In a study conducted with the participation of 1800 students from four different universities in the USA, it was determined that university students need to improve their financial knowledge. 53% of the students gave correct answers to the savings, loan, investment, and insurance questions in the survey. As a result of this research, it can be said that students have limited abilities in making financial decisions. Individuals with a low level of financial knowledge have limited financial decision-making skills. According to the results of many studies, it has been concluded that personal finance education is not sufficient in education systems. Therefore, individuals did not know what would happen with their financial future and this situation had a high impact on their productivity. The inability of individuals to manage their financial situation has turned into a social problem (Chen, and Volpe, 1998). For the reasons explained above, personal finance education is very important. Individuals should know how much income they have, and individuals should be able to control their budgets by comparing their expenditures with their income. Also, individuals should be able to save and use these savings correctly. They should learn to be prepared for the risks that may be encountered in short and long terms.

#### 2.1.4. Financial Awareness

Financial awareness is the process by which financial consumers increase their understanding of financial products and concepts, become more aware of financial risks and opportunities, make more conscious choices and improve their financial interests OECD (2005). Mason (2003) thought that financial awareness is a part of financial literacy. He also claimed that financial awareness is needed to be financially literate. Another study was conducted at Cardiff University in 1970 by Lee and Tweedie. The purpose of the research was to identify various aspects of financial information. They measured financial awareness by using a set of pre-designed concepts. However, as a result of the research, financial awareness reasons and consequences were not determined.

In other words, financial awareness enables individuals and businesses to develop their knowledge and skills related to financial money, funds, and capital. It is a process that enables them to be sensitive to financial risks and opportunities, to take more conscious steps, to know where they can apply for financial aid, and to carry out their activities to raise their economic level. This process enables individuals to be aware of current financial opportunities, risks and consequences. In addition, consumers understand financial terms. It provides the individual with detailed information on economic issues and products and makes the best use of financial information.

#### 2.1.5. Financial Ability

In the developing and changing financial world, individuals should have some financial skills to make financial decisions. Incorrect financial determination can negatively affect the future of individuals. Therefore, individuals should develop financial information and financial talent for a positive finance life. To understand the concept of financial ability, three subheadings should be examined. (Mason, 2003).

#### 2.1.5.1. Financial Information and Understanding

Financial understanding is the first step in solving everyday financial problems and developing the necessary financial skills. It also helps in making financial choices and optimal decision making. (Mason, 2003). As can be understood from the statement, financial information and understanding is an important topic in explaining financial ability. For individuals to understand the level of their financial capacity or level of financial literacy, they must first determine how much the level of financial knowledge has developed. The fact that individuals have financial information does not mean that they will make effective financial decisions. They should use the financial information they know and integrate it into their financial lives. To understand the developing finance conditions, they should develop this information and increase their knowledge with finance training. Understanding the financial information that individuals have, knowing where and how to use financial information allows an individual to make more effective decisions. In other words, the ability of individuals to make optimal financial decisions among different options and ensuring their financial security in their daily lives depends on the high level of financial knowledge of individuals (Altıntaş, 2009).

#### 2.1.5.2. Financial Skills and Competence

Another concept of financial ability is financial skills and competence. Thanks to financial skills, individuals gain the knowledge to understand and interpret topics on both personal and general financial matters. For instance, individuals who lack financial knowledge and cannot interpret financial information do not have financial skills. In other words, having financial skills is not possible without any knowledge and knowing how to use this information. A person who is competent in financial matters defines financial problems and develops effective and efficient solutions to overcome them (Mason, 2003).

#### 2.1.5.3. Financial Responsibility

Financial responsibility is the ability of an individual to plan his/her income, expenditures, savings to achieve their financial goals. An individual with financial responsibility can meet her/his desires and requirements, save money for predictable and unforeseen situations, and make use of his/her resources effectively (Ryan, 2009). Individuals with financial responsibility can analyze their financial decisions from multiple perspectives. The multiple perspectives are important because sudden and wrong financial decisions negatively affect both the family and the society in which an individual life.

#### 2.2. Definition and Concept of Financial Literacy

Financial literacy is an important concept for individuals, societies and countries in a changing and developing world. For this reason, researches do research on financial literacy in both developing and developed countries. Importance of this subject has increased in recent years. There is no accepted common definition of the financial literacy. Countries use different definitions related to financial literacy. The USA, Australia, Turkey and some other countries use the concept of "financial literacy". In some countries such as the UK and Canada, they use the concept of "financial capability" (Gökmen, 2012). TDK (2013) states that it would be correct to use the term "financial literacy". Institutions, companies and researchers have different definitions for the financial literacy. Financial literacy is the ability of individuals to make accurate evaluations in the process of money management (Goel, and Khanna,

2013). Schagen, and Lines (1996) stated that this concept consists of three main skills: financial planning, problem-solving and decision making. The authors argued that a financially literate person could understand the most significant aspects of money management, understand financial institutions and systems and be successful in managing financial issues. Lusardi has many types of research on the financial literacy and has done research and evaluations in different samples. Lusardi (2006) considers financial literacy as the ability of consumers and investors to choose between risks and alternative financial products when they improve their financial knowledge. Two years later, Lusardi (2008) examined financial literacy under two titles. These are basic financial literacy and advanced literacy. The Jumpstart Program which is related to financial literacy in the USA argues that "Financial literacy is the ability to use the elements that secure their lives effectively and to obtain this information for the individual (PACFL, 2008). According to the TEB BANK, financial literacy is expressed as the level of knowledge that enables the consumer to make conscious evaluations in the decisions of money management and to make the right decisions in the selection of financial instruments. TEB (2012).

Researchers have different definitions in their studies in Turkey. According to Temizel and Bayram, financial literacy is used in daily life while preferring financial instruments, it expresses the level of competence that enables making informed decisions (Temizel, and Bayram, 2011). Gökmen argues that the financial literacy is a system of financial knowledge, skills, attitudes, and behaviors required to enable individuals to create and maintain their financial structures (Gökmen, 2012). The purpose of FODER is to increase financial literacy in Turkey. This association defined financial literacy as individuals' ability to evaluate their income, savings, and investments intelligently and manage their budgets correctly.

By making use of all definitions, the financial literacy has been defined as individuals having information about financial instruments and can make the right decisions thanks to learning financial knowledge. The level of financial literacy is significant for individuals to make the right decisions in their financial lives, to move safely in the financial markets and to live in prosperity.

#### 2.3. Development of Financial Literacy

Financial services are increasing day by day in the 21st century. Therefore, individuals should have more knowledge and options to solve financial problems they face. They need financial knowledge to be able to use new technologies and make the right financial decisions. Many people do not have ability to know and use basic financial concepts such as interest calculation. The number of people who have an idea of more complicated issues such as differences between bonds and stocks, how to create an investment funds and primary asset pricing is much less. To be aware of concepts about financial instruments expressed by Lusardi (2008), obtain, understand and evaluate necessary information related to decision making are considered in the scope of financial literacy.

The financial literacy has been the subject of foreign literature since the mid-1990s and of the national literature since the early of 2000s and especially as of the Financial Crisis of 2008 due to increasing importance of the subject and many studies have intensely been done on this subject. The level of the financial literacy affects individuals and societies during processes of economic crises and economic change. According to a study carried out by The Economist Journal (2008), following the Financial Crisis of 2008, those who took a mortgage loan in order to buy a house in the United States lost their houses and were unable to pay their debts. This was because they did not know payment would rise in case of an increase of interests. This finding reveals that low level of the financial literacy is a problem for not only developing countries but also developed ones. One of the methods which can eliminate this ignorance and wrong decision-making is the financial literacy. Klapper, Lusardi, and Panos (2013) wanted to research knowledge level of the financial literacy in Russia during the crisis period. According to this research, only 41% of the participants of survey knew compound interest during the crisis environment. 46% of the participants could answer a simple question about inflation. Furthermore, those with high financial literacy during negative income shock of 2009 suffered less. Although studies differ in terms of sample examined, they generally discuss the financial literacy and affecting factors. In the study carried out by Rooij et al. (2011) including 1508 people with the aim of examining relationship between the level of the financial literacy and financial decision-making, it was understood that educational attainment and the financial literacy had direct proportion. Another result of the study was that consumers with low

financial literacy were also less likely to invest in stocks and command the financial instruments.

#### 2.4. The Importance of Financial Literacy

The low level of financial knowledge of individuals has many negative consequences. For example, they can make wrong decisions and believe they are right. As a result, they may lose money, and then, affect the country's financial systems negatively. At the beginning of the 21st century, there were rapid developments and changes in the world economy. Especially, the financial system changed. In the 1970s, the system of Bretton Woods was destroyed. Therefore, financial markets became global and competition increased in international markets. As a result of extraordinary developments in technology, prices and costs became transparent and capital costs decreased. After the liberalization in foreign trade, capital movements were liberalized and liberalization of the movement of capital was ensured (Y1lmaz, and Tuncay, 2012). As a result of this liberalization, more complex financial products emerged. It is an important issue for individuals and societies to understand these situations. Correct decisions have become more critical for long-term financial plans. People trained in finance have a hard time making the right decisions and understanding the new system. This proved that the new system is not very simple. Changing financial developments and population changes highlight the importance of financial education. Especially in many developed countries like the USA, most of the individuals do not save money and manage their money. TEB (2013). Ünal (2018) expressed the importance of financial information as follows; "Financial crises faced on the global platform have increased importance of the financial knowledge because natural resources have reduced and financial markets have become complicated for individuals. For these reasons, financial literacy, which provides information on financial instruments and fundamental finance issues, is increasing day by day.

Changes in today's financial systems in terms of economic, political, technological and demographic factors caused individuals to manage their economies individually. However, the increase and complexity of the instruments in the financial system also cause an increase in the responsibilities and risks of individuals. In such environment, it is difficult for people who do not know the basic financial concepts to make decisions about their financial management, and their chances of success are reduced. Therefore, importance of the financial literacy, which provides information

on financial instruments and basic financial issues, has increased. (Bayazıt, and Hayta, 2011). A financially literate person can make right decisions about savings, investment, and borrowing. According to Jariwala, and Sharma (2011), financial literacy has many benefits. Individuals spend less money and save more. Furthermore, they estimate the risks and manage correctly. At the macro level, it causes economic fluctuations to decrease, financial instruments to develop, and economic development to accelerate. Financial literate individuals direct financial institutions that provide services to them because they make their choices in financial life. Financial institutions that are in supply-demand equilibrium pay more attention to preferred financial instruments. There is a competition in this field. This enables the increase and development of new products and services (OECD, 2005). Financial literacy level results do not affect only individuals but also affects societies. In societies which do not have the habit of saving and budgeting, individuals can go bankrupt, so they can negatively affect the financial sector.

For these reasons, individuals should be provided with financial literacy training. Since it is an important issue for the economic future, financial literacy education should increase in educational institutions (Bayram, and Seçil, 2010). As a result, the importance of financial literacy has increased because of global crises, debt ratios, diversification of financial instruments, and technological development. Individuals and societies must have a certain level of financial literacy.

#### 2.5. Factors Affecting Financial Literacy

While studying financial literacy, it is not enough to know the definition and concept of financial literacy. In order to understand financial literacy in general, it is necessary to examine the factors affecting financial literacy. Factors affecting financial literacy are socio-demographic characteristics and budgeting.

#### 2.5.1. Demographic Features

The demographic feature is a factor used in many studies because it affects the results of many subjects. Cases which influence financial literacy level of college students and cases which are influenced by the financial literacy level are examined by researchers. As a reason for this, Temizel, and Bayram (2011) state in their study in that college students are at the beginning of their career and life plans and young people have a long process to plan and manage financially. They express that this

period has to be managed successfully in financial terms and it is important to learn this knowledge. They also concluded that college students have active financial instruments such as paying school fee, having travel and health insurance and education loans by means of internet banking. Researchers continued to widely investigate relationship between factors such as age, gender, class grade, educational attainment, education type and the financial literacy. Adeleke (2013) applied a survey to 100 participants of Oklahoma State University in the USA to investigate whether gender of college students affected the financial literacy level. Variance analysis was carried out in the study. The researcher did not find out a relationship between gender of college students and their financial literacy level. On the other hand, according to the results of correlation analysis, significant relationships were found between how many years they were in university and their age and their financial literacy levels. In studies, generally surveys are conducted to students in order to find results. Ergün et al. (2014) tried to determine whether there was relationship between financial literacy level of students and their demographic features by means of survey method. The study concluded that students were financial literate at basic level. They found out that while students' basic knowledge on function of the stock market differed by gender, their knowledge on inflation depended on gender, type of education and average monthly household income.

#### 2.5.1.1. Gender

Measurement of the financial literacy levels of young people, especially college students and whether this level differs depending on different sociodemographic variables such as gender is focused on both national and international literatures. Chen, and Volpe (2002), 924 college students were applied a survey in order to test their financial literacy. Effects of gender factor were revealed as a result of the study. According to the result of the study, female students had less knowledge. Additionally, it was observed that the students with lower financial literacy tended to make wrong decisions. Another study examining gender factor on the financial literacy was carried out by Falahati, and Paim (2011). This study included 2340 college students. According to the study, male students were more knowledgeable than female ones. However, one of the striking results of the study that although male students had more knowledge about issues such as loan and risk management, female ones were better at general knowledge. Lusardi, and Mitchell (2011) detected that women and people with low educational attainment had low financial literacy. Er et al. (2014), a survey was applied to 221 students of the School of Economics and Administrative Sciences of Anadolu University. The study concluded that participants of the survey had high financial literacy. Furthermore, it was stated that gender difference and financial knowledge sources were not effective factors on the financial literacy.

#### 2.5.1.2. Age

The age element is determined as a variable in many studies. It is accepted as a specific variable used in research on financial literacy. Harrison, and Chudy (2011) conducted a study examining the relationship between financial literacy and age in the UK. As a result of the research, a positive relationship was found between age and financial literacy. At the end of the research, students who older are more successful in financial literacy. Akben, and Altıok (2014) examined the effect of age on university students. As a result of the research, it was concluded that there is a positive relationship between increasing age and financial literacy. Vieira (2012) conducted a study measuring effects of department differences of universities and ages. The goal of the study was to determine levels of financial literacy of 612 college students in Portugal. For this purpose, "Portuguese Student Finance Survey 2012" was applied to 612 students. The aim was to analyses differences between departments hence the students were chosen from engineering, business and administration, design and tourism departments. As a result of the study, a positive relationship was found between age factor and financial literacy. Accordingly, students older than the age of 25 had middle level of financial literacy with the rate of 92%. Moreover, according to results depending on the departments, the students of business and administration department were found to be more successful in financial literacy.

#### 2.5.1.3. Level of Grade

Individuals' level of knowledge varies with their grade level. In addition, level of class effect on financial literacy level. Beal, and Dalpachitra (2003) applied a survey to students at Federation University Australia. This study aimed to reveal the effect of grade level of the students thus a survey was applied to 837 freshmen of the Department of Business and other faculties. The study showed that financial literacy levels of the students were low. The reason for this was thought to be lack of financial ability education. Survey questions covered five main fields. These were basic

financial concepts, financial markets - instruments, financial planning, financial analysis and decision-making and insurance. Average score for the financial analysis and decision-making was 47% and was 46% for the insurance knowledge. The decision-making and insurance knowledge were fields that they least developed. The students were more successful in simple questions of basic financial concepts. The responding rate to compound interest question which was the most difficult was 52.9%. Mandell (2008) examining relationship between general educational attainment and level of financial literacy by taking into consideration school levels contrary to class grade carried out a study with 5150 high school students and 1030 college students between 2002-2008. In this study, those scoring 70% and above were with high financial literacy, those scoring 50% and below were with low financial literacy and those scoring between 50% and 70% were with middle financial literacy. The study found out that while the college students had middle financial literacy level with rate of 62.2%, high school students had low financial literacy level with the rate of 43.3%. In other words, he concluded that American students had better financial literacy level and could make more right decisions after graduating from university. Borden et al. (2008) examining whether courses of college students influenced their financial literacy analyses their knowledge levels and their attitudes on this matter before and after taking loan course by taking into account socio-demographic features. The study concluded that knowledge increase led to positive changes in credit card use and financial risks. Özen, and Kaya (2015) performed a study in Uşak University in order to measure effect of courses with financial content on the financial literacy. A survey was conducted to the students at the School of Economics and Administrative Sciences and the Applied Sciences Vocational School. The financial literacy rate of the obtained analysis results was 40.68%. It was understood that the students receiving finance education had higher financial literacy than those not taking this education. Moreover, financial literacy level of female students was found out to be higher than male ones.

#### 2.5.1.4. Family History

The family is the first place where individuals start to learn many topics. Researchers also investigated how the family factor influence financial literacy. Lawrence et al. (2006) who examined effect of family factor, one of demographic features on the financial literacy found that the family played a major role for financial life of children and family affected the level of financial literacy. The study was conducted by applying a survey to 1891 students in total including 491 ones of University of Georgia (UGA) and 1400 ones of Luisiana State University (LSU). Another study examining the effect of parents was carried out by Jorgensen (2007). As a result of the study, parents were seen to influence financial attitudes and behavior but not financial knowledge. The family is the first place where individuals start to learn many topics. Researchers also investigated how the family factor influences financial literacy. Lusardi, Michell, and Curto (2010), who has conducted many researches on financial literacy, emphasized that family history has a significant effect on financial literacy. As a result of the research, the education level of parents affects the ability of children to understand and manage their future financial instruments. Jorgensen, and Savla (2010), on the other hand, investigated the family impact of young adults on financial literacy level. The survey was applied to 420 students. As a result of the survey, they found that the family had a moderate impact on financial literacy and financial attitude. however, it was not observed to have an impact on financial information.

### 2.5.2. Financial Literacy Level and Attitudes

Financial literacy level is an effect on attitudes. The level of financial literacy level changes some decisions made. Bayram (2014) investigated basic financial literacy of the students of the School of Economics and Administrative Sciences of Anadolu University and Porsuk Vocational School of Eskişehir Technical University. This study concluded that the students found themselves well in terms of financial knowledge, but their success rates were low. Additionally, the students at the School of Economics and Administrative Sciences had more financial knowledge and financial responsibilities than the students of the Vocational School. A survey was carried out by Cam, and Barut (2015) to 400 associate degree program students of Gümüşhane University with the purpose of determining their financial literacy level and attitudes. They tried to determine factors affecting success of spending and managing money of the students by using multiple regression analysis. This study concluded that the students were not financial literate and had little knowledge about basic financial concepts. The study carried out by Danışman, Sezer, and Gümüş (2015) aimed to determine the financial literacy level of the college students in Turkey and raise awareness of students who would shape the future. A survey study was performed with 390 students of the School of Economics and Administrative Sciences on the assumption that they would represent the college students in Turkey. Although financial literacy levels of students of the School of Economics were expected to be above the average, frequency of their advanced financial literacy levels were low therefore it was seen that they had only basic finance knowledge. Another study carried out on students of the School of Economics in 2015 was carried out by Alkaya and Yağlı in Nevşehir Hacı Bektaşi Veli University. This study concluded that there was a relationship between financial attitude and financial behaviour. They found out that the students exhibited positive financial attitudes and behaviors but were inadequate in terms of financial knowledge.

#### 2.5.3. Budgeting

The budget is a quantitative and financial document written in terms of a defined policy cycle to be implemented for the duration decided to achieve. It is the process of creating a program followed in achieving this goal by comparing a set target with actual results (McMillan, 2010). Budgeting is a crucial concept so that individuals can maintain their lives economically. The budget shows how successful the individual is in money management. They should plan their expenses and not waste their money unconsciously. In addition, they should have a fund source in case of possible immediate and unexpected situations they may face in life. Those having adequate financial knowledge correctly and effectively can fulfil this requirement. According to Atkinson, and Messy (2012), the financial literacy is combination of awareness, knowledge, ability, attitude and behaviors required in order to make right financial decisions and achieve individual well-fare. In the literature, there are limited national and international studies investigating effects of the financial literacy level on budgeting behaviour. Studies have increased in recent years. Lusardi (2008) examined savings behaviors of American household in her study and asserted that financial education programs and financial advice not only affected savings of individuals for retirement but also increased other special savings in case of sudden loses or children's education that would help them. In line with findings of this study, majority of American citizens lacked of financial literacy and especially those not receiving education, women and Afro-Americans had low financial literacy. Beckman's study finding a positive relationship between household savings and financial literacy, significant positive effect of the financial literacy was revealed. (Beckman, 2013).

According to the study, individuals with higher educational attainment and having children tended to practice economy and unemployed ones tended to practice economy less than self-employed ones. Similar to results in other countries, individuals with low educational attainment, older ones and women had the lowest performance in financial literacy questions. On the other hand, individuals who could be qualified as financial literate were observed to be more likely to invest in their retirement funds. A wideranging study carried out in Turkey in 2009. With the participation of the Ministry of Development, the United Nations Development Programme (UNDP), the Habitat Centre for Development and Governance, Visa Europe Turkey and member banks, "I Can Manage My Money Project" was conducted. The purpose of this project gathering public, private sector and nongovernmental organizations for the first time on financial awareness was to investigate level of budgeting concept. Another purpose of this study was to give an education opportunity to young people between 15-30 ages so that they could budget personal financial sources and use financial services correctly and to raise awareness of them about sustainable development. In 2013, the decision to "Educate Freshmen of Universities regardless of their department on Financial Literacy" of the Banking Sub-Commission established within the body of the Petition Commission, the Turkish Grand National Assembly was notified to the Council of Higher Education and financial literacy education was provided in universities regardless of departments. Moreover, the Circular on "Financial Access, Financial Education, Strategy of Protecting Financial Consumers and Action Plan" under general heading of Financial Education was published in the Official Gazette by the Primary Ministry. An expression of this Circular was "It is quite important for consumers to access to financial products and services, use them consciously and be protected against wrong application in financial markets in order to achieve stability and development of the financial markets". The objective was to direct consumers in society to budgeting savings and raise financial awareness.

University period is the time for many students to decide about management of budget for the first time in their lives. Knowledge and behaviours, they have gain during this time will influence their financial situations during both university period and also their future. Recent studies have proved this. For instance, the study carried out by Sabri and MacDonald (2010) aimed to investigate relationship between financial literacy and savings behaviours of college students in Malesia. For this study, 2519 students from 11 universities in Malesia were chosen randomly and a survey was conducted to them. As a result of the analyses, a positive correlation was determined between financial literacy and savings behaviours. Additionally, it was found out that state university students tended to exhibit more savings behaviours than those of private universities. Another study examining budgeting behaviours was carried out by Yuan (2015). He conducted a survey to 449 college students and examined relationship between financial literacy levels and budgeting behaviours of students. The most significant variable influencing students' budgeting behaviour was determined as "the number of years the students have spent in private school". As the time increased the students have spent in the school, their behaviours got better. Furthermore, Akben, and Selçuk (2015) conducted a survey to 1539 college students in their study in Turkey. Data of this survey showed that budgeting behaviours of female students were more successful than male ones. Besides, it was seen that financial knowledge obtained from family influenced financial knowledge of the students.

#### 2.6. Financial Education

Increasing technological developments in recent years, the increase in the field of information processing and communication has accelerated the process of "globalization". It has caused the traditional management approaches of the countries to change. The globalizing world has enabled information to spread rapidly and access to information has increased. Country economies, companies and individuals are also affected by this change. The economies of the country have made new regulations, the importance of the private sector has increased, the need to create new resources has arisen due to the competitive environment. At this point, the importance of financial education has emerged. Financial education is an education necessary for everyone to develop financial literacy. Thanks to financial education, individuals can make more effective decisions and at the same time individuals can understand how to use their knowledge. Financial education should not be perceived as a proposal. Because the trainings generally help increase the awareness of individuals and how they should behave in their financial life.

Financial literacy is a way of recognizing economy. More simply, it is a combination of information and skills that helps individuals to make successful and responsible choices due to their own definition of finance. (Norman, 2010). Financial

education generally includes the ability to (a) manage money and assets (banking investment, credit insurance and tax) (b) time value and money distribution in basic investments (c) plan, implement and evaluate financial decisions. In other words, financial education means understanding the importance of money and money use or getting information about it. This can be summed up literally as using money effectively. (Hogarth, 2006)

#### 2.6.1. The Importance of Financial Education for Young People

The importance of financial education is an issue that concerns all societies. The importance of financial education has increased, especially due to economic and demographic changes. Access to economic and financial services is essential for young people because they need assistance in choosing financial products such as loans, savings, and insurance. They need to learn correct and valid information to make the right decisions. Young people should have goals in their lives and increase their financial knowledge and skills to achieve this. For these reasons, financial education is very important. For this reason, financial literacy education programs have been implemented in many countries, especially for children and young people. Financial education of children and young people enable them to take an active role in the economy today and tomorrow Temizel, and Bayram (2011). However, according to the researchers conducted today, it has been reached that young and adults do not have sufficient knowledge. The US government defends that financial literacy should be at all stages of education because, in the researches, the level of financial literacy of young people is low. In this respect, the US Council states that financial education should start at an early age (PACFL, 2008).

#### 2.6.2. The Need for Financial Education

There have been changes in financial systems recently and have affected the consumer. These changes have also affected the individuals' financial decisions process. There are responsibilities and risk transfer to the individual in the new system. In the past, governments made insurance and retirement decisions. However, today, individuals are responsible for their own financial decisions. The reason for this is technological developments and liberalization. Individuals can access financial instruments in a short time and make their own decisions. For these reasons, individuals should take more responsibility. (Gökmen, 2012). People with inadequate

personal finance education are a problem for society. It is a big problem that people cannot manage their income and expenses. The financial knowledge of individuals is insufficient to manage their financial investments such as compound interest, credit, inflation, and some risks in the stock market. As a result, increased awareness of financial education increases the level of social welfare. (Hastings, et al., 2013).

As a result, financial education is important to avoid major financial problems and to make good decisions. Individuals with financial knowledge are needed for our developing economy. Therefore, starting financial education training in our country has become a social and economic necessity. Necessary regulations and studies should be made for training.

#### 2.6.3. Benefits of Financial Education

Financial literacy is an important concept for individuals, communities, governments, and financial markets. Financial literacy levels have an impact on the lives of individuals. Financial education not only improves the well-being of individuals but also provides an increase in social welfare and more efficient use of financial markets. Therefore, it contributes to financial and economic stability. While evaluating the benefits of financial education, it is possible to divide it into three categories: contribution to individual well-being, contribution to financial markets, and contribution to social well-being.

#### 2.6.3.1. Contribution to Individual Welfare

Today, individuals have more financial responsibility. The biggest reasons for this are globalization and technological developments. For example, while individuals make their retirement plans with state institutions, they have started to prefer private pension systems. Until ten years ago, individuals preferred state institutions in their retirement plans, but now they started to prefer private pension systems in their retirement life. The private pension system allows people not to leave their future in the hands of the state and to contribute to their future on their own. In other words, the diversity of financial products has spread throughout the economic area and the choice of options has increased. Financial education enables individuals to protect their wellbeing while making optimum decisions.

Individuals should be able to increase their awareness of financial issues and understand financial market instruments. In particular, individuals should carefully consider active and passive situations when making budget plans. For example, people's awareness of credit card consumption will directly affect their indebtedness rates. At the same time, the right financial education will contribute to making a balanced and organized life plan. (CBRT, 2011)

#### 2.6.3.2. Contribution to Financial Markets and Financial Stability

Financial education will enable individuals to increase the level of financial literacy, get more information from institutions when choosing a financial product, because of these reasons financial institutions will have to be more transparent and reliable. It will also contribute to increasing the efficiency of the markets as consumers will make optimal decisions. (CBTR, 2011)

#### 2.6.3.3. Contribution to the Whole Economy and Social Welfare

Increasing the financial literacy levels of individuals directly contributes to the economic system and social welfare. Wrong decisions made by consumers affect markets negatively. For example, in times of crisis, most consumers made wrong decisions due to a lack of information. Berez researched the financial literacy levels of individuals. He examined the relationship between literacy levels and saving. As a result of the research, individuals with a high level of financial literacy save money. This situation is beneficial for both individuals and the economy. Individuals can increase their investment level by saving. In addition, when they evaluate their savings through financial institutions, the funds generated can be used in other sources. This will make a great contribution to the recovery of the economy. Beres, and Huzdik (2012)

#### 2.6.3.4. The Relationship Between Financial Literacy and Financial Education

There is a positive relationship between financial literacy and financial education. Financial education helps individuals to select and analyze financial products. Individuals make better decisions. Miller (2009). As the financial education level of individuals increases, their financial literacy level increases. It has been observed in the studies that training has a positive contribution. The public and private sectors have a great responsibility in this regard. Kanmaz (2018). Financial education is provided not only in schools but also in banks, financial consultancy offices, conferences, etc. (Godfrey et al., 2009). According to the researchers, it is aimed to

increase financial literacy with different training programs. These training programs are:

In terms of financial knowledge: savings, investment, interest, credit, inflation,

In terms of financial behavior: budget, investment personal finance, retirement plans

In terms of financial attitude: These are educational programs to improve financial attitude for correct and efficient decisions. (Kozup, Hogart vd.,2008).

In other words, financial literacy is increasing with the provision of accurate financial information on financial matters. With this financial information, financial literacy increases, and positive economic decisions are taken by individuals. For these reasons, formal financial education programs that aim to improve the knowledge, attitude, and behavior of individuals should be preferred. (Fox et al., 2005)

# **CHAPTER 3: METHODOLOGY**

#### 3.1. Purpose and Importance of Research

Today, with the development of technology, there has been a change in all sectors. The world has become globalized and individuals can easily access financial instruments. However, individuals have started to have difficulty in understanding financial instruments due to the diversification of financial instruments. The intensified sophistication of the financial system due to these reasons increased the importance of having financial knowledge and skills.

The aim of to research is to determine the financial literacy level of undergraduate students of Celal Bayar University and to determine the relationship between financial literacy level and demographic characteristics. Also, the research aims to determine how financial literacy level affect budgeting. For this purpose, a survey was applied to the students. In the first part, the questions are about the demographic characteristics of the students. The second part consists of the financial literacy test. In the last section of the survey, there are questions about budgeting.

#### 3.2. Method

The accessible universe of the research consists of 391 university students studying in economics and administrative sciences, engineering, science and literature, education, sports sciences, business and fine arts, design and architecture faculties selected by "convenience sampling" method. Financial Literacy Test and Budgeting Behavior Survey were used as data collection tools in the research. The survey consists of 17 statements in total.

#### 3.3. Research Hypotheses

#### Hypothesis 1

H0: There is no relationship between the gender of university students and their financial literacy level.

H1: There is a relationship between the gender of university students and their financial literacy level.

#### Hypothesis 2

H0: There is no relationship between the age of university students and the level of financial literacy.

H1: There is a relationship between the age of university students and the level of financial literacy.

#### Hypothesis 3

H0: There is no relationship between the class of university students and the level of financial literacy.

H1: There is a relationship between the class of university students and the level of financial literacy.

#### **Hypothesis 4**

H0: There is no relationship between the GPA of university students and their financial literacy level.

H1: There is a relationship between the GPA of university students and their financial literacy level.

# Hypothesis 5

H0: There is no relationship between university students' work experience / internship experience and financial literacy level.

H1: There is a relationship between the work experience / internship experience of university students and their financial literacy level.

# Hypothesis 6

H0: There is no relationship between the university students' employment status and their financial literacy level except for internship experience.

H1: There is a relationship between the university students' employment status and their financial literacy level except for internship experience.

### **Hypothesis 7**

H0: There is no relationship between the family income of university students and their financial literacy level.

H1: There is a relationship between the family income of university students and their financial literacy level

### Hypothesis 8

H0: There is no relationship between the educational level of the mothers of university students and their financial literacy levels.

H1: There is a relationship between the educational level of the mothers of university students and their financial literacy levels.

#### **Hypothesis 9**

H0: There is no relationship between the employment status of the university students' mothers within the last one year and their financial literacy level.

H1: There is a relationship between the employment status of the university students' mothers within the last one year and their financial literacy level.

# **Hypothesis 10**

H0: There is no relationship between the employment status of the university students' mothers while raising their children and their financial literacy levels.

H1: There is a relationship between the employment status of the university students' mothers while raising their children and their financial literacy levels.

#### Hypothesis 11

H0: There is no relationship between the educational level of the fathers of university students and their financial literacy levels.

H1: There is a relationship between the educational level of the fathers of university students and their financial literacy levels.

#### Hypothesis 12

H0: There is no relationship between the employment status of the university students' fathers within the last one year and their financial literacy level.

H1: There is a relationship between the employment status of the university students' fathers within the last one year and their financial literacy level.

#### Hypothesis 13

H0: There is no relationship between university students taking finance courses at university and their financial literacy level.

H1: There is a relationship between university students taking finance courses at university and their financial literacy level.

#### Hypothesis 14

H0: There is no relationship between the number of elective finance courses taken by university students and their financial literacy level.

H1: There is a relationship between the number of elective finance courses taken by university students and their financial literacy level.

#### **Hypothesis 15**

H0: There is no relationship between the number of finance courses taken by university students due to personal curiosity and their financial literacy level.

H1: There is a relationship between the number of finance courses taken by university students due to personal curiosity and their financial literacy level.

#### **Hypothesis 16**

H0: There is no relationship between university students' participation in finance activities outside of university and their financial literacy level.

H1: There is a relationship between university students' participation in finance activities outside of university and their financial literacy level.

#### Hypothesis 17

H0: There is no relationship between the university students' following current personal financial information and their financial literacy levels.

H1: There is a relationship between the university students' following current personal financial information and their financial literacy levels.

### **Hypothesis 18**

H0: Budgeting behavior levels do not differ according to the financial literacy level of university students.

H1: Budgeting behavior levels differ according to the financial literacy levels of university students.

### 3.4. Analysis of Data

All statistical analyzes were analyzed by IBM SPSS 25.0 program. In the study, firstly, whether the data collection tools fit the normal distribution hypothesis was determined by looking at the coefficients of skewness and kurtosis, and parametric test methods were preferred (Table 1). Then, the reliability of the data collection tools was evaluated, and then descriptive statistics was used. Finally, a hypothesis evaluation was made. Two methods are chosen while evaluating the hypothesis. These:

1. Determination of the relationship between students' financial literacy levels and their socio-demographic information evaluated by "Chi-Square" analysis.

2. The "independent sample t-test" was used in comparison of two groups ensuring a normal distribution assumption in order to determine differentiation of budgeting behaviors of the university students depending on their financial literacy level. Statistical significance was evaluated at p<0,05 level in all the found results.

Table 1. Skewness and Kurtosis Values of Data Collection Tools

Survey	Ν	Skewness	Kurtosis
Financial Literacy	391	211	250
Budgeting Behavior	391	291	305

According to Seçer (2015), the normal distribution assumption; he evaluated that using the values of 'skewness and kurtosis' would be a more accurate approach. Tabachnick, and Fidell (2013) accept that normal distribution is achieved when skewness and kurtosis values are between +1,500 and -1,500 values. As a result of the analyzes performed, it was found that all the variables are within the stated ranges and there are no extreme values. Also, the applicability of parametric tests has been reached.

#### 3.5. Internal Consistency Analysis

At this point in the study; Financial Literacy Test and Budgeting Behavior Survey, which are preferred as data collection tools, consisting of 17 items. "The evaluation criteria of the coefficient related to reliability are as follows;  $0.00 < \alpha < 0.40$  Not Reliable  $0.40 < \alpha < 0.60$  Low Reliable  $0.60 < \alpha < 0.80$  Quite Reliable

 $0.80 < \alpha < 1.00$  Highly Reliable '' (Özdamar, 1999).

#### Table 1. Reliability Analysis Findings of Data Collection Tools

Scales	Cronbach's Alpha	Ν
Financial Literacy	.698	8
Budgeting Behavior	.794	9

When the reliability coefficients of the Financial Literacy Test and Budgeting Behavior Questionnaire are examined; these values were determined as 0.698 and 0.794, respectively. These values are; It shows that the scales are very reliable. (Özdamar, 1999). According to this result, it was concluded that data collection tools are reliable and that it would not be a problem to use them in the analysis.

# 3.6. Results

Financial Literacy Test and Budgeting Behavior Questionnaire were applied to university students for research data. Demographic questions were asked in the survey content. The analysis of the data was carried out under this title. In the analysis made in this section; "Demographic profile of the university students included in the study and their families, descriptive analysis for variables, chi-square test, and independentsample t-test" are included.

# 3.6.1. Economic and Demographic Profile of University Students

In this part of the study, university students' of gender, age, faculty of education, grade, GPA, family income, level of mother's education life, employment status of the mothers within in the last one year, employment status of mother's while

raising their child, level of father's education life, employment status of the fathers within in the last year, internship experience, working status except for internship experience, taking finance courses at the university, how many of the finance courses taken are elective and how many of the selected courses were chosen with personal curiosity, the status of participating in finance activities outside the university and following their current financial information were analyzed with frequency analysis. The distribution of the gender status of the university students participating in the study is given in Table 3.

Table 2. Distribution of Gender Status of University Students

	Demographic Feature	f	%
	Female	192	49.1
Gender Status	Male	199	50.9
	Total	391	100.0

According to the results of the frequency analysis made in Table 3; It was concluded that 50.9% of the university students involved in the study were male and 49.1% were female. The age distribution of university students is shown in Table 4.

	Demographic Feature	f	%
	Age Range of 16-18	18	4.6
	Age Range of 19-21	180	4.0
Age Status	Age Range of 22-24	140	35.8
	Age Range of 25-28	53	13.6
	Total	391	100.0

Table 3. Distribution of the Age Status of University Students

According to the results of the frequency analysis made in Table 4; It is seen that 46.0% of the university students involved in the study are 19-21 years old, 35.8% are 22-24 years old, 13.6% are 25-28 years old and 4.6% are 16-18 years old. The distribution of the university students involved in the study according to the faculties they study is presented in Table 5.

	Demographic Feature	f	%
	Faculty of Economics and Administrative Sciences	284	72.6
	Faculty of Engineering	43	11.0
	Faculty of Arts and Sciences	12	3.1
Es sultas	Faculty of Education	13	3.3
Faculty	Faculty of Sports Science	1	.3
	Faculty of business	30	7.7
	Faculty of Fine Arts, Design and Architecture	8	2.0
	Total	391	100.0

Table 4. Distribution of University Students by Faculties of Education

According to the results of the frequency analysis made in Table 5; It is observed that 72.6% of the university students included in the survey were educated in the Faculty of Economics and Administrative Sciences. The class distribution of university students included in the study is presented in Table 6.

	Demographic Feature	f	%
	1	95	24.3
	2	89	22.8
Class	3	68	17.4
	4	139	35.5
	Total	391	100.0

Table 5. Distribution of the Class Level of University Students

According to the results of the frequency analysis made in Table 6; 35.5% of the university students in the 4th grade, 24.3% were in the 1st grade, 22.8% were in the 2nd grade and 17.4% were in the 3rd grade. The distribution of university students' involved in the study according to their grade point averages is presented in Table 7.

	Demographic Feature	f	%
	Between 0.00-1.00	4	1
	Between 1.01-2.00	59	15.1
Grade Average	Between 2.01-3.00	269	68.8
	Between 3.01-4.00	59	15.1
	Total	391	100

Table 6. Distribution of University Students by Grade Point Average

According to the results of the frequency analysis made in Table 7; It is seen that 68.8% of the university students involved in the study have a GPA between 2.01-3.00. The family average income distribution of the university students participated in the study is presented in Table 8.

 Demographic Feature
 f
 %

 2323 TL and below
 31
 7.9

 2324 TL- 5000 TL
 156
 39.9

Table 7. Distribution of Family Income of University Students

5001 TL -7500 TL

7501 TL and above

Total

Family Income

According to the results of the frequency analysis made in Table 8; 39.9 % of university students' families have an income between 2324 TL and 5000 TL.37.9% of university students' families have an income between 5001 TL and 7500 TL. 14.3% of university students' families have an income of 7501 TL and above, while 7.9% of their families have an income of 2323 TL and less. The distribution of university students' mothers' education level is presented in table 9.

148

56

391

37.9

14.3

100.0

	Demographic Feature	f	%
	Does not have any education life	8	2.0
	Primary school	112	28.6
Mothers Educational	Secondary school	39	10,0
Status	High school	135	34.5
	University	97	24.8
	Total	391	100

Table 8. Educational Status of the Mothers of University Students

According to the results of the frequency analysis made in Table 9; While 2.0% of the mothers of the university students included in the study did not have any education life, the mothers of 35.5% were high school graduates. It is observed that 28.6% of the mothers of the students are primary school graduates, 24.8% of them are university graduates and 10.0% are secondary school graduates. The distribution of university students' mothers' employment status within the last one year presented in Table 10.

Table 9. Distribution of the University Students' Mothers Employment Status withinthe Last One Year

	Demographic Feature	f	%
Mothers Employment Status within the Last One Year	Yes	197	50.4
	No	194	49.6
	Total	391	100

According to the results of the frequency analysis made in Table 10, it is seen that the mothers of 50.4% of the university students participating in the study have been working in a salaried job within the last one year. The distribution of university students' answers' to the question of 'Did your mother work in a job while you grow up" is presented in Table 11.

	Demographic Feature	f	%
Mothers	Yes	233	59.6
Employment Status While Raising Their Children		158	40.4
	r Total	391	100

Table 10. Distribution of University Students Answers' to the Question of "Did Your Mother Work in A Job While You Grow Up"

According to the results of the frequency analysis made in Table 11; 59.6% of the university students' mothers worked while raising their children. The distribution of university students' fathers' educational status presented in Table 12.

	Demographic Feature	f	%
Fathers Educational	Does not have any education life	3	.8
	Primary school	77	19.7
	Secondary school	33	8.4
Status	High school	161	41.2
	University	117	29.9
	Total	391	100

Table 11. Educational Status of the Fathers of University Students

According to the results of the frequency analysis made in Table 12; While 0.8% of the fathers of the university students included in the study did not have any education life, the fathers of 41.2 % were high school graduates. It is observed that 19.7% of the fathers of the students are primary school graduates, 29.9 % of them are university graduates and 8.4% are secondary school graduates. The distribution of university students' fathers' employment status within the last one year presented in Table 13.

	Demographic Feature	f	%
Father's Employment Status Within the Last One Year	Yes	316	80.8
	No	75	19.2
Lust one real	Total	391	100.0

Table 12. Distribution of the University Students' Fathers Employment Status within the Last One Year

According to the results of the frequency analysis made in Table 13, it is seen that the fathers of 80.8% of the university students participating in the study have been working in a salaried job within the last one year. The distribution of the internship experience of university students participating in the study is presented in Table 14.

Table 13. Distribution of University Students' Internship Experience

	Demographic Feature	f	%
	Yes	227	58.1
Internship Experience	No	164	41.9
	Total	391	100

According to the results of the frequency analysis made in Table 14; It is seen that 58.1% of the university students included in the research have internship experience. The distribution of the working status of the university students included in the study, excluding the internship experience, is presented in Table 15.

Table 14. Distribution of Employment Status of University Students ExcludingInternship Experience

	Demographic Feature	f	%
EmploymentYesStatusExcludingInternshipNoExperienceTotal		216	55.2
	No	175	44.8
	Total	391	100

According to the results of the frequency analysis made in Table 15, 55.2% of the university students work except the internship. The distribution of the university students participating in the study to choose at least one of the finance courses in their university education and the distribution of the number of courses they took are presented in Table 16.

Table 15. University Students' Status of Taking At least One of the Finance Courses in University Education and Their Distribution About These Courses

	Demographic Feature	f	%
Taking At least One of the	Yes	315	80.6
Finance Courses in University Education	No	76	19.4
	1-2	136	43.2
Number of	3-4	115	36.5
Courses Selected	5-6	56	17.8
	7 and more	8	2.5
	1-2	267	84.8
NumberofLessonsTakenwithPersonalCuriosity	3-4	37	11.7
	5-6	10	3.2
-	7 and more	1	.3

According to the results of the frequency analysis made in Table 16; It was observed that 80.6% of the university students included in the study took at least one of the finance courses. It was observed that 43.2% of university students taking finance courses chose 1 or 2 courses, and 36.5% chose 3-4 courses. 17.8% of them took 5-6 courses as elective. It is seen that 84.8% of the university students taking finance courses took 1-2 courses as elective due to their curiosity. The distribution of university students' participation in financial activities other than university activities is presented in Table 17.

	Demographic Feature	f	%
Participation in	Yes	235	60.1
Financial Activities Outside	No	156	39.9
the University	Total	391	100

 Table 16. Distribution of University Students' Participation in Financial Activities

 Outside the University

According to the results of the frequency analysis made in Table 17, it is seen that 60.1% of the university students included in the study participated in finance activities. Distribution of the university students following their current personal financial information is presented in Table 18.

Table 17. Distribution of the university students following their current financial information

	Demographic Feature	f	%
Following current	Yes	275	70.3
Following current financial information	No	116	29.7
	Total	391	100

According to the results of the frequency analysis in Table 18, it is seen that 70.3% of the university students included in the study follow up-to-date financial information.

#### 3.6.2. Distribution of University Students' Answers to the Financial Literacy Test

In this part of the study, the distribution of the answers given by the university students to the Financial Literacy Test is presented in Table 19. The answers were analyzed by frequency analysis.

	Answer	f	%
1- Suppose that you have 100 TL deposits in the bank and	True	325	83.1
the annual interest rate is 2%. How much will the money be in the bank after 5 years?	False	66	16.9
2- Suppose the deposit interest rate is 1% on an annual	True	228	58.3
basis and the inflation rate is 2%. How does your purchasing power change with your money in the bank after 1 year?		163	41.7
2. Just huving a company's stock is	True	175	44.8
3- Just buying a company's stock is	False	216	55.2
4. Which of the following statements is correct?	True	145	37.1
4- Which of the following statements is correct?	False	246	62.9
5- How do the prices of treasury bills change if interest	True	240	61.4
rates fall?	False	151	38.6
6- The risk of stocks than the risk of bonds	True	206	52.7
0- The fisk of stocks than the fisk of bonds	False	185	47.3
7- Which asset do you think will provide more risk-free	True	110	28.1
and higher returns in the long run (e.g., 10 years)	False	281	71.9
8- When an investor invests her money in different	True	145	37.1
financial instruments, the risk of her/his investment		246	62.9

Table 18. Distribution of University Students' Answers to the Financial Literacy Test

According to the results of the frequency analysis made in Table 19; The question with the highest correct answer by university students participating in the study is the first question. 83.1% of the students answered the question correctly. Also, the question that the university students included in the study gave the least correct answer is the 7th question. Only 28.1% of university students answered correctly.

# 3.6.3. Distribution of University Students' Answers to the Budgeting Behavior Questions

In this part of the study, the distribution of the answers given by university students to the questions of budgeting behavior has been examined with frequency analysis and is presented in Table 20.

Table 19. Distribution of University Students' Answers to the Budgeting Behavior Questions

		Do not agree	undecided	Agree
1. Learners and shop when I have a product or corrige	f	52	34	305
1- I compare and shop when I buy a product or service	%	13.3	8.7	78
2. I make all my novements on time	f	40	47	304
2- I make all my payments on time.		10.2	12	77.8
2. I have a maitten on all strangic magned of monthly appearance	f	206	46	139
3- I keep a written or electronic record of monthly expenses.		52.7	11.8	35.5
4. Lator within the limits of my hydrot or my sponding plan	f	50	88	253
4- I stay within the limits of my budget or my spending plan.	%	12.8	22.5	64.7
5 I now all may an dit cand dates arrange month	f	55	81	255
5-I pay all my credit card debts every month.	%	14.1	20.7	65.2
6 I now the minimum mice of my credit debte	f	160	35	196
6- I pay the minimum price of my credit debts.	%	40.9	9	50.1
	f	143	50	198
7- My spending is more than my credit card limit	%	36.6	12.8	50.6
9 I yought care arous month	f	131	61	199
8- I usually save every month.	%	33.5	15.6	50.9
9- I save money for a long-term purpose like a car, education,		163	48	180
home.	%	41.7	12.3	46

According to the frequency analysis results in Table 20; The question that the university students included in the study answered "I agree" is the first item. The question that university students gave the most undecided answer is in item 4 with a

rate of 22.5%. The question that university students answered "I do not agree" is the third question. 52.7% of the students answered, "I do not agree".

## 3.7. Findings Regarding the Variables

The variables used in the research; consists of "Financial Literacy" and "Budgeting Behavior". However, when using the financial literacy variable, the median value (4.00) was examined. In addition, two groups have been created. A low level of financial literacy is rated 3 and below, and a high level of financial literacy is rated 4 and above. In this part of the study, descriptive statistics about the variables will be expressed and financial literacy levels will be given.

Table 20. Descriptive Analysis Results Regarding the Variables

Scale	Ν	Min.	Maks.	Avg.	SS	Median	IGR
Financial Literacy	391	.00	8.00	4.03	1.66	4.00	2.00
Budgeting Behavior	391	1.22	3.00	2.24	.35	2.22	0.56

\* IGR: interquartile range

When the descriptive analysis results in Table 21 are examined;

The total average of answers of the university students participating in the study about the financial literacy is  $4,03\pm1,66$ , the lowest point is ,00 and the highest point is 8, 00.

The average of answers of the university students participating in the study about the budgeting is  $2,24\pm0,35$ , the lowest point is 1,22 and the highest point is 3,00.

Table 21. Distribution of University Students' Financial Literacy Levels

	Demographic Feature	f	%
	Low Level	137	35
Financial Literacy Level	High Level	254	65
	Total	391	100

According to the results of the frequency analysis made in Table 22, it is seen that 65.0% of the university students included in the study have a high level of financial literacy.

# 3.8. The Relationship Between University Students' Financial Literacy Level and Their Economic and Demographic Profile

In this part of the study, the relationship between university students the financial literacy level and gender, age, level of class, GPA, internship experience and employment status except for internship experience was examined.

 Table 22. Comparison of University Students' Financial Literacy Level with Their

 Economic and Demographic Characteristics

							1
		Low		High		$\mathbf{X}^2$	р
_		N=137		N=254		Δ	Ρ
Gender	Female	80	41.7 58.4	112	58.3 44.1	7.282	007
Gender	Male	57	28.6 41.6	142	71.4 55.9	1.202	.007
	16-21 *	74	37.4 54	124	62.6 48.8		
Age	22-24	47	33.6 34.3	93	66.4 36.6	1.154	.561
	25-28	16	30.2 11.7	37	69.8 14.6		
	1	44	46.3 32.1	51	53.7 20.1		
Level of Class	2	30	33.7 21.9	59	66.3 23.2	7.816	050
Level of Class	3	23	33.8 16.8	45	66.2 17.7	/.810	.030
	4	40	28.8 29.2	99	71.2 39		
	0.00-2.00*	25	39.7 18.2	38	60.3 15.0		
GPA	2.01-3.00	89	33.1 65	180	66.9 70.9	1.451	.484
	3.01-4.00	23	39.0 16.8	36	61.0 14.1		
Internship	Yes	68	30 49.6	159	70.0 62.6	6.142	012
Experience	No	69	42.1 50.4	95	57.9 37.4	0.142	.015
Employment Status Expect for Internship Experience	Yes	77	35.6 56.2	139	64.4 54.7		
	No	60	34.3 43.8	115	65.7 55.3	.079	.779

\* The 'no education' was united with the upper group because more than 20% of their frequencies was below 5.

The rate of female university students with a low level of financial literacy is 58.4%, and university students with a high level of financial literacy are male. The rate of male students is 55.9%. In addition, a statistically significant relationship was found between the financial literacy level of the university students included in the study and their gender. (p <0.05). According to this result, "H0: There is no relationship between the gender of university students and financial literacy level." hypothesis rejected, "H1: There is a relationship between the gender of university students and their financial literacy level." hypothesis was accepted.

54.0% of university students have a low level of financial literacy level and their ages are between 15-21 years old. 48.8% of university students with a high level of financial literacy are seen to be 16-21 years old. In addition, there was no statistically significant relationship between the financial literacy level of university students and their age (p > 0.05). According to this result, "H0: There is no relationship between the age of the university students and the level of financial literacy." hypothesis has been accepted. In addition, "H1: There is a relationship between the age of the university students and the level of financial literacy." hypothesis has been accepted. In addition, "H1: There is a relationship between the age of the university students and the level of financial literacy." hypothesis has been accepted.

University students with a low level of financial literacy have a GPA between 0.00 and 2.00 and their rate is 39.7%. The rate of university students with a high level of financial literacy is 70.9%. Their average score is between 2.01-3.00. There was no statistically significant relationship between the financial literacy level and grade point average of the university students participating in the study (p> 0.05). According to this result, "H0: There is no relationship between the GPA of the university students and the financial literacy level." hypothesis was accepted and "H1: There is a relationship between the GPA of the university students and their financial literacy level." hypothesis was rejected.

It is seen that 50.4% of university students with a low level of financial literacy do not have internship experience and 62.6% of university students with a high level of financial literacy have internship experience. In addition, a statistically significant relationship was found between the financial literacy level of the university students

involved in the study and their internship experience (p < 0.05). According to this result, "H0: There is no relationship between the work experience/internship experience of the university students and the level of financial literacy." his hypothesis was rejected. "H1: There is a relationship between the work experience/internship experience of the university students and the level of financial literacy." hypothesis was accepted.

It was observed that 56.2% of university students with low financial literacy worked out of the internship. However, it was evaluated that students with high financial literacy only had internship experience. In addition, no statistically significant relationship was found between the financial literacy level of university students and their working status other than internship experience (p> 0.05). According to this result, "H0: There is no relationship between university students' work experience/internship experience and financial literacy level." and this hypothesis is accepted. "There is no relationship between university students' work experience/internship experience and financial literacy level." hypothesis was rejected.

# 3.9. The Relationship Between University Students' Financial Literacy Levels and Family Information

In this part of the study, the relationship between the financial literacy level of the university students who participate in the study and the family income status, the mother's education level, mother's employment status within the last one year, mother's employment status while raising their children, the father's education level and the father's employment status within the last one year are examined. Table 24 show that comparison of university students' financial literacy level and family information.

 Table 23. Comparison of University Students' Financial Literacy Level and Family

 Information

Low	High		
N=238	N=212	$\mathbf{X}^2$	р

Table 24 (cont'd)

	2323 TL and less	14	45.2	10.2	17	54.8	6.7		
	2324 TL- 5000 TL	48	30.8	35.0	108	69.2	42.5		.403
Family Income	5001 TL and 7500 TL	54	36.5	39.4	94	63.5	37.0	2.930	
	7501 TL and more	21	37.5	15.3	35	62.5	13.8		
	Primary school /no education*	40	33.3	29.2	80	66.7	31.5		
Mother Education	n Secondary school	16	41.0	11.7	23	59	9.1	.869	.833
Level	High school	46	34.1	33.6	89	65.9	35.0		
	University	35	36.1	25.5	62	63.9	24.4		
Mothers	Yes	77	39.1	56.2	120	60.9	47.2	2.858	.091
Employment Status Within th Last One Year	<sup>e</sup> No	60	30.9	43.8	134	69.1	52.8		
Mother's	Yes	86	36.9	62.8	147	63.1	57.9		.346
Employment Status Whil Raising a Child	<sup>e</sup> No	51	32.3	37.2	107	67.7	42.1	.887	
	Primary school / no education *	27	33.8	19.7	53	66.2	20.9		
Father Education	n Secondary school	19	57.6	13.9	14	42.4	5.5	8.077	.044
Level	High school	53	32.9	38.7	108	67.1	42.5		
	University	38	32.5	27.7	79	67.5	31.1		
Father's	Yes	109	34,5	79.6	207	65.5	81.5		
employment status in the las year	<sup>st</sup> No	28	37.3	20.4	47	62.7	18.5	.215	.643

\* The note average group 0,00-1,00 was united with the upper group and age groups 16-18 and 19-21 were united because more than 20% of their frequencies was below 5.

The family income of university students with a low level of financial literacy is between 5001-7500 TL. The rate of university students with a high level of financial literacy is 42.5% and it has been observed that their family income is between 2324-5000 TL. In addition, there was no statistically significant relationship between the financial literacy level of the university students included in the study and their family income (p> 0.05). According to this result, "H0: There is no relationship between the family income of university students and their financial literacy level." hypothesis has been accepted. "H1: There is a relationship between the family income of university students and their financial literacy level." hypothesis was rejected.

The rate of university students with a low level of financial literacy is 33.6% and the mothers of the students are high school graduates. The rate of university students with a high level of financial literacy is 35.0% and their mothers are high school graduates. For this reason, there was no statistically significant relationship between the financial literacy level of the university students participating in the study and the mother education (p> 0.05). According to this result, "H0: There is no relationship between the educational status of the mothers of university students and their financial literacy level." accepted the hypothesis. "H1: There is a relationship between the educational status of the mothers of university students and their financial literacy level." his hypothesis was rejected.

The rate of university students with a low level of financial literacy is 56.2% and the mothers of the students have regularly worked in a job in the last year. The rate of university students with a high level of financial literacy is 52.8%. It is observed that their mothers have not been in a regular job in the last year. In addition, there was no statistically significant relationship between the financial literacy level of university students and their mother's employment status in the last year (p> 0.05). According to this result, "H0: There is no relationship between the employment status of the university students' mothers within the last one year and their financial literacy level." hypothesis has been accepted. "H1: There is a relationship between the employment status of the university students' mothers within the last one year and their financial literacy level." hypothesis was rejected.

The rate of university students with a low level of financial literacy is 62.8% and their mothers worked while raising their children. However, mothers of university

students with a high level of financial literacy worked while raising their children, and the rate of students is 57.9%. For this reason, there was no statistically significant relationship between financial literacy level and mother's working status while raising a child (p> 0.05). According to this result, "H0: There is no relationship between the employment status of the university students' mothers while raising their children and their financial literacy levels." accepted the hypothesis. "H1: There is a relationship between the employment status of the university students' mothers while raising their children and their financial literacy levels." hypothesis was rejected.

The rate of university students with a low level of financial literacy is 38.7% and the fathers of the students are high school graduates. The rate of university students with a high level of financial literacy is 52.5% and their fathers are high school graduates. For this reason, there was no statistically significant relationship between the financial literacy level of the university students participating in the study and the father education (p> 0.05). According to this result, "H0: There is no relationship between the educational status of the fathers of university students and their financial literacy level." accepted the hypothesis. "H1: There is a relationship between the educational status of the fathers of university students and their financial literacy level." his hypothesis was rejected.

The rate of university students with a low level of financial literacy is 79.6% and the fathers of the students have regularly worked in a job within the last one year. In addition, the rate of university students with a high level of financial literacy is 81.5%. It is observed that their fathers have been in a regular job in the last year. In addition, there was no statistically significant relationship between the financial literacy level of university students and their father's employment status in the last year (p > 0.05). According to this result, "H0: There is no relationship between the employment status of the university students' fathers within the last one year and their financial literacy level." hypothesis has been accepted. "H1: There is a relationship between the employment the imployment status of the university students' fathers within the last one year and their financial literacy level." hypothesis has been accepted. "H1: There is a relationship between the imployment status of the university students' fathers within the last one year and their financial literacy level." hypothesis has been accepted. "H1: There is a relationship between the imployment status of the university students' fathers within the last one year and their financial literacy level." "hypothesis was rejected.

# 3.10. The Relationship Between University Students' Financial Literacy Levels and Their Questions About Finance Courses

In this part of the study, the relationship between the financial literacy level of the university students included in the study and the status of taking at least one of the finance courses in university education, the number of finance courses taken, the number of finance courses chosen for personal curiosity, participation in financial activities outside the university and following up-to-date financial information was examined.

Table 24. Comparison of the University Students' Answers about Financial Courses by their Financial Literacy Levels

		Low			High				
		N=238			N=212			$X^2$	р
Taking At least Yes		99	31.4	72.3	216	68.6	85		
University	No	38	50	27.7	38	50.0	15.0	9.278	.002
Education					_		_		
1 (01110 01 01	1-2	60	44.1	60.6	76	55.9	35.2		
Elective Finance	3-4	24	20.9	24.2	91	79.1	42.1	18.007	.000
Lessons	5 and more *	15	23.4	15.2	49	76.6	22.7		
Number of Lessons Taken	1-2	88	33.0	88.9	179	67	82.9	1.904	.168
with Personal Curiosity	3 and more *	11	22.9	11.1	37	77.1	17.1		
Participation in Ye Finance	Yes	66	28.1	48.2	169	71.9	66.5		
Activities	No	71	45.5	51.8	85	54.5	33.5	12.511	.000
υ	Yes	77	28	56.2	198	72	78	20.174	.000
current Financial Information	No	60	51.7	43.8	56	48.3	22		

\* The groups 5-6 and 7 and more were united among the number of elective financial groups and the groups 5-6, 7 and more and 3-4 were united among the number of courses chosen by personal interest because more than 20% of their frequencies was below 5.

It is observed that 72.3% of university students with a low level of financial literacy took at least one of the finance courses in university education and 85.0% of university students with a high level of financial literacy took at least one of the finance courses. In addition, a statistically significant relationship was found between the financial literacy level of the university students included in the study and the status of taking at least one of the finance courses during their university education (p < 0.05). According to this result, "H0: There is no relationship between the university students' taking finance courses at the university and their financial literacy level." and the hypothesis was rejected and "H1: There is a relationship between the university students' taking finance courses at the university and their financial literacy level." hypothesis has been accepted.

University students with a low level of financial literacy took 1 to 2 elective finance courses. The ratio of university students with high financial literacy levels and taking finance courses as an elective is 42.1%. These students chose between 3-4 elective finance courses. A statistically significant relationship was found between the financial literacy level of university students taking elective finance courses and the number of finance courses they took (p <0.05). According to this result, "H0: There is no relationship between the number of elective finance courses taken by university students and their financial literacy levels." hypothesis was rejected, and "H1: There is a relationship between the number of elective finance courses taken by university students and their financial literacy levels." the hypothesis has been accepted.

88.9% of university students with a low level of financial literacy and taking finance courses chose 1-2 finance courses because of their personal curiosity. The rate of university students with a high level of financial literacy and taking finance lessons is 82.9%. It was observed that these students took 1-2 finance lessons due to their personal curiosity. In addition, there was no statistically significant relationship between the financial literacy level of university students taking finance courses and the number of finance courses they took with personal curiosity (p> 0.05). According

to this result, "H0: There is no relationship between the number of finance courses taken by university students due to personal curiosity and their financial literacy level." hypothesis has been accepted. "H1: There is a relationship between the number of finance courses taken by university students due to personal curiosity and their financial literacy level." hypothesis was rejected.

It is observed that 51.8% of university students with a low level of financial literacy do not participate in financial activities outside the university and 66.5% of university students with a high level of financial literacy participate in financial activities outside of the university. A statistically significant relationship was found between the financial literacy level of university students and their participation in financial activities outside of the university (p < 0.05). According to this result, "H0: There is no relationship between the university students' participation in finance activities outside university and their financial literacy level." hypothesis was rejected, and "H1: There is a relationship between the university students' participation in finance activities outside university and their financial literacy level." the hypothesis has been accepted.

The proportion of students with low financial literacy is 56.2% and they follow up-to-date financial information. It is seen that university students with a high level of financial literacy also follow up-to-date financial information. The ratio of these students is 78.0%. In addition, a statistically significant relationship was found between the financial literacy level of the university students included in the study and their status of following up-to-date financial information (p <0.05). According to this result, "H0: There is no relationship between the university students' following current personal financial information and their financial literacy levels." hypothesis was rejected, and "H1: There is a relationship between the university students' following current personal financial information and their financial literacy levels." hypothesis has been accepted.

# 3.11. The Relationship Between University Students' Financial Literacy Levels and Budgeting Behaviors

In this part of the study, the differentiation of budgeting behaviors of university students according to their financial literacy levels is examined.

Table 25. Differentiation of Average Scores obtained by the University Students in theBudgeting Behavior by their Financial Literacy

Variabl <b>es</b>	Financial Level	Literacy	f	Ā	SS	t	р
	Low		137	229	.35		
Budgeting Behavior	High		254	2.21	.34	2.236	.026

The results of the independent sample t-test are shown in Table 26. As a result of the analysis, there is a statistically significant result between university students' financial literacy levels and budgeting behavior (p <0.05). Furthermore, the fact that the university students' financial literacy is low or high leads to differentiation among average group scores of the budgeting behavior. According to this result, "H0: Budgeting behavior levels do not differ according to the financial literacy level of university students." hypothesis was rejected. "H1: Budgeting behavior levels differ according to the financial literacy level of university students." hypothesis has been accepted.

#### 3.12. Result

When the distribution of university students' gender, age, departments, level of class, GPA, family income, mother's education level, mothers employment status within the last one year, mothers employment status while raising their children, father's education level, father's employment status within the one last year, internship experience, working status except for internship experience, taking at least one of the finance courses in university education, how many of the finance courses taken are elective and how many of the selected courses were chosen with personal curiosity, participating in finance activities outside university and following current financial information situation was examined, some results were obtained;

• 50.9% of the university students participating in the study were male and 49.1% were female,

• Age distribution of university students included in the study; 46.0% were between 19-21 years old, 35.8% were between 22-24 years old, 13.6% were between 25-28 years old and 4.6% were between 16-18 years old,

• 72.6% of the university students included in the study were educated in the Faculty of Economics and Administrative Sciences,

• Level of class distribution of university students included in the study; 35.5% of them are in 4th grade, 24.3% of them are in 1st grade, 22.8% of them are in 2nd grade and 17.4% of them are in 3rd grade,

• 68.8% of the university students included in the study had a GPA between 2.01-3.00,

• The income distribution of the family of university students included in the study; 39.9% had income between 2324 TL - 5000 TL, 37.9% had income between 5001 TL - 7500 TL, 14.3% had income 7501 TL and above and 7.9% had income 2323 TL and below,

• Distribution of mother's educational status of university students included in the study; 2.0% of their mothers have no education, 35.5% mothers are high school graduates, 28.6% mothers are primary school graduates, 24.8% mothers are university graduates, and 10.0% mothers are a secondary school graduated,

• 50.4% of the university students included in the study had their mothers working in a job for the last year,

• Mothers of university students included in the study worked while raising their children, and the rate of this is 59.6%,

• Distribution of father's educational status of university students included in the study; 0.8% of their fathers have no education, 41.2% fathers are high school graduates, 19,7% fathers are primary school graduates, 29.9% fathers are university graduates, and 8.4% fathers are a secondary school graduated,

• 80.8% of the university students included in the study had their fathers working in a job for the last year.

• • 58.1% of the university students included in the study have internship experience,

• 55.2% of the university students included in the study worked except the internship period,

• 80.6% of the university students included in the study took at least one of the finance courses. Moreover, 43.2% of the university students had 1-2 elective

courses, 36.5% of them 3-4 elective courses, and 17.8% of them 5 - 6 elective courses took. 84.8% of university students took 1-2 finance elective courses due to their personal curiosity,

• 60.1% of the university students included in the study participated in finance activities outside the university,

• • It has been determined that 70.3% of the university students included in the study follow current financial information.

When the relationship between the financial literacy level of university students' and their status such as gender, age, departments, level of class, GPA, family income, mother's education level, the mother's employment status within the last one year, mother's employment status while raising their children , father's education level, father's employment status mothers within the last one year, internship experience, working status except for internship experience, taking at least one of the finance courses in university education, how many of the finance courses taken are elective and how many of the selected courses were chosen with personal curiosity, participating in finance event and following up current financial information situation was examined;

• There is a statistically significant relationship between the financial literacy level and gender of the university students included in the study.,

• There was no statistically significant relationship between the financial literacy level of the university students included in the study and age groups,

• There is a statistically significant relationship between the financial literacy level of the university students included in the study and their level of class,

• There is no statistically significant relationship between the financial literacy level of university students included in the study and their internship experience,

• There is no statistically significant relationship between the financial literacy level of the university students included in the study and their employment status, except for internship experience,

• There is no statistically significant relationship between the financial literacy level of the university students included in the study and their family income,

• There is no statistically significant relationship between the financial literacy level of university students included in the study and the education level of mothers,

• There is no statistically significant relationship between the financial literacy level of the university students participating in the study and the mother's employment status within the last one year,

• • There is no statistically significant relationship between the financial literacy level of the university students included in the study and the working status of the mother while raising their children,

• There is no statistically significant relationship between the financial literacy level of university students included in the study and the education level of fathers,

• There is no statistically significant relationship between the financial literacy level of the university students participating in the study and the father's employment status within the last one year.,

• There is a statistically significant relationship between the financial literacy level of the university students included in the study and taking at least one of the finance courses during their university life,

• There is a statistically significant relationship between the financial literacy level of the university students included in the study and choosing finance courses and the number of finance courses they chose,

• • There is no statistically significant relationship between the financial literacy level of university students taking finance courses and the number of finance courses taken with personal curiosity,

• There is a statistically significant relationship between the financial literacy level of university students included in the study and their participation in finance activities outside the university,

• It has been determined that there is a statistically significant relationship between university students' financial literacy level and following current financial information.

• Examining differentiation of the budgeting behaviour of the university students participating in the study by their financial literacy, it was determined that the

fact that the university students' financial literacy levels were low or high led to differentiation among average group scores of the budgeting behaviour.



# **CHAPTER 4: DISCUSSION**

This study tried to determine the financial literacy level of university students. The relationship between demographic characteristics and financial literacy influencing the financial literacy levels of the students and their budgeting behaviours was investigated.

Examining the financial literacy levels and demographic characteristics of the students included in the study, it was seen that there was a statistically significant relationship between gender and financial literacy of the students. The study found that the financial literacy level of male students was higher than female ones. Atkinson, and Messy (2011) conducted research in 12 countries in order to determine gender effect. Krizek, and Hradil (2012) researching causes affecting the financial literacy level made an online survey to 2120 university students in their study. This study also showed that male students had higher financial literacy level than the female ones. As a result of the research conducted by Şamiloğlu, Kahraman, and Bağcı (2016) to Erciyes university students, it was revealed that male students had better financial literacy level than the female ones. As a result of the research, the financial literacy level of females is lower than man. There are important reasons for this. According to the OECD (2013) study, females do not have stress management in the financial decision-making process and do not feel self-confident. Female stated that they fear the risks of investments. It was concluded that women think men can make the right financial decisions. Another study was conducted by Narlı (2016). As a result of the research, it was observed that women wanted to save money for buying a house, buying a car. Also, they were curious about financial instruments for saving. However, it observed that women's financial literacy level was low. Because they don't have regular plans for savings, and they have insufficient knowledge. The results of the above-mentioned studies are parallel with our results.

As a result of our study, a statistically significant relationship was determined between the financial literacy level and class level of the university students included in the research. The study showed that the financial literacy level of the 1st class level students was lower than the 4th class level. Beal, and Dalpachitra (2003) applied a survey to students at Federation University Australia. This study aimed to reveal the effect of grade level of the students thus a survey was applied to 837 freshmen of the Department of Business and other faculties. The study showed that financial literacy levels of the students were low. The reason for this was thought to be lack of financial ability education and level of class. Survey questions covered five main fields. These were basic financial concepts, financial markets - instruments, financial planning, financial analysis and decision-making and insurance. Average score for the financial analysis and decision-making was 47% and was 46% for the insurance knowledge. The decision-making and insurance knowledge were fields that they least developed. The students were more successful in simple questions of basic financial concepts. The responding rate to compound interest question which was the most difficult was 52.9%. On the other hand, Barmaki (2015) came to a different result in a study conducted in order to determine the financial literacy level of Hacettepe University students. As a result of this study, he did not detect a significant relationship between the class levels and the financial literacy score averages of the students. This may be because the students have different knowledge level and equipment.

Our study did not find a statistically significant relationship between the financial literacy and age groups of the university students included in our research. Luksander et al. (2014) investigated effect of demographic characteristics and educational characteristics on the financial literacy in their study to which was conducted 1.743 university students aged 18-25. As a result of the research, a statistically significant positive result was not revealed between the financial literacy and age of the students. Altan (2016) examined the financial literacy levels of the Cumhuriyet University, Faculty of Health Science students. No statistically significant differences in age were found. These results are parallel with the result of our study.

Ansong, and Gyensare (2012) examined financial literacy levels of university students based on different demographic characteristics. They surveyed 250 undergraduate and graduate students in Ghana. They examined demographic variables such as age, intern experience and educational status of parents. As a result of the research, a statistically positive relationship was determined between intern experience and financial literacy. As a result of our study, it was understood that 62.2% of the university students with high financial literacy level had internship experience. In other words, there is a statistically significant relationship between the financial literacy, internship experience and work experience. The results of our study are parallel with the results of Ansong and Gyensara' research.

Studies in the literature show that the reason why individuals have a low financial literacy level is due to their lack of adequate education. Examining course content of the universities, the students studying in finance field are more successful in the financial literacy. Altıntaş (2008) examined general education curricula of primary school, secondary school and certain public and foundation universities in Turkey. As a result of the evaluation, it was seen that any educational initiative or prepared curriculum related to the financial education and financial literacy did not exist. According to Altintas, a young teacher or a young engineer cannot make right decisions in financial services required by daily life even though they are completely occupationally equipped. Chen, and Volpe (1998) conducted a study in the USA with the aim of determining the financial literacy of college students and comparing those having high financial literacy with those do not. 1800 students of 14 colleges participated in this study. A survey was applied to these students. This study determined that the students who did not take financial courses and just started the college had lower financial literacy levels. Chen and Volpe's study found that the students with low financial knowledge did not take financial courses and were likely to fail to make prospective financial decisions and perform them. According to Er's research including 824 students of five state universities in Eskişehir, Bursa and Istanbul, educational field of the students is an important factor in their financial literacy levels. In other words, the students studying in educational fields which mention or require financial education knowledge have higher financial literacy than others (Er et al., 2014). These results show a significant positive relationship between taking finance course and the financial literacy. As a result of our study, a statistically significant relationship was observed between the financial literacy and taking finance courses and the number of these courses. The fact that the results of the abovementioned studies are parallel with ours strengthens our study.

Our study also found a statistically significant relationship between the financial literacy of the university students including in our study and participating in financial activities outside the university. The researcher Rosacker et al. (2009) aimed to measure the impact of an accounting seminar which would be given to freshman business students by professionals during one semester. Thus, the freshman class was divided into two groups and while the first group took this seminar, the other one did not. These two groups could be compared, they evaluated the financial literacy levels

of the students before and after the seminar. According to results of the analysis, the group which took the seminar by the senior accounting professionals increased their financial literacy levels. This result is parallel with the result of our study and this strengthens our study.

Family influence and results are frequently used in the financial literacy research. Sabri (2011) focused on how students obtained their financial literacy level. He examined whether the financial literacy was learnt during childhood and it affected future of students. He surveyed 2519 students in Malaysia for this research. This research revealed a statistically significant result of parents' contribution to financial education. Another study was performed by Calomato (2010). Undergraduate students were surveyed and impact of educational status and employment status of parents on the financial literacy were examined. As a result of the study, no statistically significant result was found between the students' answers and family influence. Jorgensen, and Savla (2010) who examined family influence on the financial literacy of young people surveyed 420 university students. Writers observed that family influenced the students' financial attitudes and behaviours but did not influence their financial literacy levels. Barmaki (2015) did not find a statistically significant difference between educational status of father and financial literacy score averages in his study aiming to determine the financial literacy of the Hacettepe University students. National and international studies are mentioned above. According to results of our study, family income, educational status of mother, mother's employment status within the last one year, mother's employment status while raising children and father's employment status within the last one year are determined not to statistically significant for the financial literacy level. However, our study found a statistically significant relationship between educational status of father and the financial literacy level of the university students. Contrary to other studies, the results of study carried out by Sabri (2011) are different from ours. This may be due to geographical conditions in which the students live, different sociodemographic structures and differences in their educations. Results of other studies are parallel with ours. Unlike other studies, our study found a statistically significant result between father's education status and the financial literacy level. The reason for this can be due to our social structure, social family roles and student profiles.

Another research issue is the relationship between the financial literacy and the budgeting behaviour. This was previously examined by many researchers too. Hilgert, and Hogarth (2002) examined the relationship between budgeting behaviour and financial knowledge of 1004 participants in the United States in their study about the financial literacy. They asked certain questions about the financial management to the participants, consequently, a statistically significant relationship was found between the financial knowledge and investment, savings, money and credit management. Moreover, as the financial literacy increased, the financial behaviour scores were positive. Another study, Barış (2016) investigated how financial literacy levels influenced individual budgeting behaviours. He conducted this study on students at the School of Economics and Administrative Sciences of Tokat Gaziosmanpaşa University. This study found out that success rate of the students on the financial literacy did not impact their budgeting behaviours positively. In addition, it was observed that financial literacy level of the students was basically good but low in an advanced level. As a result of our study, the fact that students have low or high financial literacy changes group average scores of budgeting behaviour. As in other studies, as a result of our study, there is a statistically significant relationship between the financial literacy of students and their budgeting behaviours and this result is parallel with the result of other studies.

# **CHAPTER 5: CONCLUSION**

The majority of consumers have to use financial systems with developing technology and globalization. Financial systems have been diversified and become more complex. Consumers must know how to use the system and products efficiently. Incorrect financial decisions made by individuals with insufficient knowledge will affect their own and national economies. Due to these reasons, the importance of the concept of financial literacy has increased. Consumers must have a high level of financial literacy to understand financial markets and make correct decisions. Financial education is essential for a good level of financial literacy. Financial information is a concept that consumers use in every period of their lives. Individuals with a high level of financial literacy contribute positively to the economic systems of their countries.

Due to the importance of making informed decisions on finance issues, financial literacy has become one of the current and important topics at national and international research. As a result of the research conducted in developed and developing countries, the financial literacy level of individual is low. OECD's (2011) study supports this hypothesis. Considering its individual and social benefits, the concept of financial literacy is an issue that should expand in our country. New strategies for financial education should design by governments and institutions. Recently, different organizations are working on financial literacy. For example, in 2011, the Global Financial Literacy Center of Excellence (GFLEC) was established at George Washington University. The center continues a project called "Financial Literacy (Flat World14)" around the world. It is very important for individuals that these organizations develop common and common strategies. Individuals who are financially literate can use their limited resources effectively. In order to improve the effectiveness of this concept, the current level of financial literacy must be measured. The concept of financial literacy is especially important for university students. University students often start to live in another city and manage their budgets individually. Also, students who are just starting their careers should know how to manage their budgets. For these reasons, finance courses should be added to their education lives to raise the awareness of university students about financial knowledge and difficulties in developing financial markets. Individuals with high financial literacy will have a better understanding of the financial market and instruments.

There are many national and international studies in the literature. The number of studies conducted in Turkey has increased after the 2000s. For example, a study can be started in several different universities at the same time. Comparing the results obtained will provide a broad perspective on the state of the financial literacy level and researchers continue to research the subject. Research investigating the financial literacy level of university students can be expanded. In addition, courses that include the basic features of financial literacy in universities can be added. The number of finance events could increase, and university students can be encouraged to participate in these events. Students' financial literacy levels will increase with financial education activities to be organized in different regions of our country. Thus, it is expected that there will be an increase in the financial markets, the country's economy, and the level of social welfare. With the increase in the level of financial knowledge, individuals will request information from financial institutions and thus transparency in financial markets will increase. The financial literacy level of our university students should be increased because this system should work effectively. Also, associations are an essential institution to increase financial literacy levels. Foder (Financial Literacy and Access Association), was founded in 2012 in Turkey. The aims of the association are to announce financial training to be organized, to organize conferences and seminars, to increase the interest of individuals in financial issues, and to increase the financial knowledge of women. Associations like this will be useful for university students and individuals who want to learn about financial instruments. The government should support associations and financial activities. As a result, financial literacy is an important issue for individuals and societies. Individuals with high financial literacy level manage their financial situation effectively and contribute to the strengthening of the country's economy.

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