Vocational and senior high school differences in financial literacy

Khusaini1,*, Mutiah1, and H C Ramdani1
1Islamic Syekh-Yusuf University, Jl. Maulana Yusuf Babakan No. 10
Tangerang Banten, Indonesia

*khusaini@unis.ac.id

Abstract. Lack of knowledge and understanding of students in financial has an impact on difficulties in financial management and its decision making, so they tend to behave consumptively. The purpose of this study was to examine differences in financial literacy between senior high school students and those from vocational high schools according to the characteristics of gender, education, and parents' income in the Tangerang Regency. The design of the research was comparative research. The number of samples was 371 samples chosen by using proportionate random sampling. The research instrument had been verified for its validity and reliability. The authors used crosstab, independent samples t-test, and ANOVA analysis. Results showed that the level of students’ financial literacy was in the category of the medium tier. It was revealed that there was a significant correlation between senior high school and vocational school related to student financial literacy; however, gender, parents’ education, and parents’ income had no significance. Meanwhile, the result of the different tests according to school characteristics showed that there was no significant difference in the level of financial literacy between senior high school students and vocational high schools, as well as gender characteristics, education, and parents' income. The results of this study contributed to schools to increase understanding of the importance of financial literacy for students.

1. Introduction

Nowadays, adults and young people are required to have a better knowledge of financial concepts and risks, as it will help to increase financial decision-making abilities. In addition, financial literacy is now a very essential life skill [1]. Ignoring financial literacy skills for young people will result in vulnerable and extravagant behavior, due to a lack of understanding of financial literacy [2]. Studies on financial literacy have been conducted by previous researchers, who concluded that the level of financial literacy ranges from low [3]–[7], moderate [8], [9], to high in Germany [10]. Therefore, by understanding and practicing financial literacy, it is expected that individuals can make decisions and find out the possible consequences [11]. The ability to manage personal finances is very important today, and thus individuals must plan both short and long term investments [12].

Financial literacy is needed to manage assets so that they can be used as best as possible. [13] stated that financial literacy is financial knowledge that aims for prosperity [14]. Knowledge in financial matters is a basic need for everyone to avoid problems [15]. Financial literacy is important for several reasons. First, to save for an emergency and in the future. Second, it is also directly related to positive financial behavior. Knowledge of planning and managing personal finances is the first step in the ability to manage finances properly. It is necessary to have an appropriate budget plan and be strict with it by only spending money according to needs. People with high levels of financial literacy will tend to save more money for the future, compare prices before shopping and prefer discounted prices while shopping, set financial goals and prepare financial budgets for the short and long term [16], and save money for the future needs [17]. A good financial planner will help in deciding to invest in the future [18], formed financial [19], and saving behavior of students [20]–[22].

Optimal personal financial management will make individuals responsible for planning and realizing their future plans. In contrast, poor financial management affects student’s achievement, in
terms of their physical well-being, mental, and even the skills to find a job after graduation. After graduating from high school (SMA), individuals will face increasingly complex financial decision-making [23]. In personal financial management, self-control is needed, and thus by exercising self-control, individuals will have a responsible attitude in financial management.

Apart from this fact, the current level of financial literacy in children and especially adolescents tends to be low, which will lead to both individuals and social impact. In the aftermath of the global financial crisis, the lack of financial knowledge has become a worldwide concern today [24]. This phenomenon occurs among middle school students. A research by [25] showed that the percentage that the senior high schools achieved in financial knowledge was: 19%, financial behavior 57.3%, and the percentage of the attitudes on finances was at least 70%. A similar study using various samples by [23] highlighted that German Middle School (SMA) Students were lacking of financial knowledge.

There have been various surveys or studies to determine the rate of public financial literacy in Indonesia. These surveys show that during 2006 – 2010, the financial literacy index of Indonesia's population with good literacy was only 7.21%, or in the low category. In 2011 – 2012, this level decreased to 6.30%. In 2013 – 2014, there was an increase of 9.01% and in 2015 – 2016, the financial literacy index of the Indonesian population experienced a significant increase to 77.48% with many Indonesians started to use financial services [5]. The Financial Literacy Index by Age Group indicated the financial literacy of the Indonesian population based on the age group with 18-25 years of 35.5%, 26 - 35 years of 37.4%, 36 - 50 years of 36.0%, over 50 years of 31.7%, and students with 9% [5].

A comparative study of student’s financial literacy was conducted by [26], which compared students’ financial literacy based on Bloom's cognitive level between Korean and American students. The results show that Korean students’ financial literacy is relatively stronger at the level of cognitive knowledge but relatively weaker in understanding. Another study in vocational schools was conducted by [27] which pinpointed that the level of financial literacy of students who took the Banking and Insurance, Foreign Trade, and Accounting and Tax programs was higher than that of other program students. Other studies have also found that financial literacy rates in secondary schools are far from high [28].

Gender is generally a classification used by researchers to test differences in the ability and conveying of financial literacy to see the differences of financial literacy between men and women. Men have a higher level of financial literacy knowledge than women, but women are more careful and diligent in daily financial applications [29]. Gender is proven to have a significant effect on financial literacy [9], [30], [31]. Meanwhile, [25] found that women's financial literacy was higher at a cognitive level compared to men.

On the other hand, some research findings indicate a different correlation between gender and financial literacy, as done by [8], [18], [22], which shows that there is no difference in financial literacy between male students and female students. Women feel inadequate in making financial decisions, even though the financial behavior of men and women is significantly different [32], even it has a stark difference [3].

Parent’s income plays an important role in increasing their children's understanding of financial literacy. Parent’s income is measured by students' perceptions of the income received by parents per month [33]. Students of high-income parents have high financial literacy for financial management [34]. Similarly, [35] also found that there was a significant correlation between parents' income and financial literacy.

However, some research findings are opposite to this in that family income does not seem to be a significant predictor of financial literacy [33], because wealthier families provide greater educational resources to children and can have better discussions about investment and savings issues [36]. The same research findings also state that parents’ income does not have a significant effect on financial literacy [3], [23].

The National Education System Law Number 20 of 2003 stated that the level of education includes basic education, secondary education, and higher education. Parents who have higher education play a more important role in increasing their children's financial literacy because parents can guide, teach, and
discuss finances. The results showed that the teaching of finance by parents to their children had a positive effect on students' financial literacy [9], [33], while [18] found the opposite.

Based on the previous literary studies, the authors argue that there is almost no research to compare financial literacy skills between vocational high schools and high schools, especially in Indonesia. Previous researches mostly used a homogeneous type of school or study program. Therefore, the researcher considers the importance of fulfilling this gap by conducting a financial literacy test based on the type of school. This attempt is done because some inconsistent research results were found on the relation between gender, education, and parents' income in determining the financial literacy skills of high school students. The researcher believes that it is still necessary to retest these variables in order to obtain consistent research results.

In this article, the researcher discusses the question of "What is the level of student’s financial literacy based on school type, school status, gender, income, and parental education? Furthermore, the second question to answer is "Are there any significant differences in students’ financial literacy based on school type, school status, gender, income, and parents’ education?" The results of this study are expected to contribute to schools, in general, to increase students’ understanding of the importance of financial literacy through education and training written in the curriculum. It is expected that students will be able to manage their finances and make financial decisions correctly to avoid extravagant and consumptive behavior in everyday life. The researcher establishes a unit of analysis for vocational high schools and high schools in Sepatan District, Tangerang Regency.

2. Methods

Using a cross-sectional approach based on a paper-based questionnaire, the sample of this study amounted to 371 students of a total of 5,112 students in Sepatan District, Tangerang Regency. The sample was taken proportionally and randomly, consisting of 185 students or 49.86% from SMK Negeri 2 Tangerang Regency, 40 students or 10.78% from SMK Az-Zahra, 115 students or 30.99% from SMA Negeri 11 Tangerang Regency, 31 students or 8.4% from SMKS MKGR Sepatan. The sample consisted of 247 women or 66.58% and 174 men or 33.42%. From the point of the school status, the samples consisted of 300 students or 80.86% from public secondary schools and 71 students or 19.14% from private schools. According to the type of school, the sample 225 students or 60.65% vocational school students and 146 students or 39.35% senior high school students.

The financial literacy variable was measured by 5 indicators adapted from [18], [22], [23], [25], [31], [34] covering general knowledge of personal finance with 9 questions, financial services with 4 questions, savings and loans with 6 questions, insurance with 3 questions, and investment with 3 questions, totaling to 25 questions. The financial literacy score was obtained based on respondents’ perceptions measured by a Likert scale with a range of 1 - 5 (never - strongly often). Meanwhile, the criteria for the financial literacy were as follows: ≤ 60% indicating individuals with low financial knowledge, 60% -79% indicating sufficient or moderate knowledge, and ≥ 80% indicating a high level of knowledge [37].

Furthermore, parents’ income was measured by the average monthly income of parents divided into 3 categories, namely: low for the one ranges of ≤ Rp. 5,000,000, moderate for the monthly income ranges of Rp. 5,000,001 - Rp. 10,000,000, and high for the monthly income ranges of > Rp. 10,000,000. Meanwhile, parental education describes the average level of education completed by parents and based on six categories, namely: Elementary school/equivalent, Junior high school/ equivalent, high school/ equivalent, Bachelor degree/ Diploma 4, Masters, and Doctorate. The level of education was grouped into 3 categories, which consisted of primary, secondary and higher education.

The researcher has tested the validity of the study using the internal validity items of Pearson correlation and construct reliability with Chronbach-alpha. The internal validity indicates that all construct items are valid (dropping 1 construct item into 25 construct items) and the consistency of the construct is 0.840 > 0.05 so that the 25 construct items are consistent.

The data were analyzed by firstly testing the requirements of the analysis which consists of normality and homogeneity testing of the data groups. Furthermore, the authors conducted a descriptive
analysis using cross-tabulation, Chi-Square test, and inferential analysis. The author also tested the hypothesis of differences in financial literacy based on the characteristics of school type, school status, gender, income, and parent’s education by using the Independent samples t-test and analysis of variance (ANOVA). All tests were two-sided and a p-value of less than 0.05 was considered statistically significant.

3. Results and Discussion
Before analyzing the data, the researcher described the results of data processing on students’ perceptions of financial literacy based on 371 samples according to the characteristics of school type, school status, gender, income, and parental education. The data processing revealed that the overall mean (M) value of financial literacy of the 25 questions regarding general knowledge of personal finance, financial services, savings and loans, insurance, and investment was 72.06, with a standard deviation (SD) of 12.59. This result indicated that the financial literacy rate in senior high school was moderate category because it is between 60% - 79% [12]. Of these five, the highest average of students’ financial literacy score is knowledge of personal finance at 63.1% and the lowest one was about insurance at 42.0%. The data processing on financial literacy of vocational high school students is (M = 73.5, SD = 13.27) and high school is (M = 70.38, SD = 11.33). These results indicated that the financial literacy rate of vocational high school students was higher than that of senior high school.

The samples of public secondary schools of 300 students result in financial literacy scores for public secondary schools of (M = 72.61, SD = 12.66) and private high schools of (M = 69.73, SD = 12.16). These results indicate that the financial literacy score of public secondary schools is higher than that of private secondary schools. The financial literacy scores of female students are (M = 72.25, SD = 11.69) and male are (M = 69.79, SD = 12.77). Although female students have higher financial literacy scores (knowledge of personal finance and financial services), male students have better financial decisions, namely in terms of saving and credit, insurance, and investing. The authors classify the average scores of the sample group according to low, medium, and high parental income levels.

The results of data processing show that the financial literacy score based on parents’ income was low (M = 72.32, SD = 12.83), moderate (M = 71.02, SD = 11.16), and high (M = 68.29, SD = 13.17). These results pointed out that the higher the income level of the parents, the lower the child’s average financial literacy score, even though the data distribution varied. Meanwhile, the average score of financial literacy based on the level of education of parents is as follows: (M = 70.49, SD = 11.96), moderate (M = 73.33, SD = 13.09), and high (M = 74.67, SD = 12.78). These results revealed that the higher the level of parent’s income, the higher the average score of student’s financial literacy with varying data distribution.

In this paper, the researchers described the data descriptively using crosstab analysis to answer the research problem formulation and the relationship between categorical variables in nominal and ordinal forms (between rows and columns) or known as the independence test. Crosstab analysis was used to test the independence of the characteristics of school type, school status, gender, income, and parental education. The cross-tabulation results can be seen in the following table:

| Financial Literacy Criteria | School Type         | Total |
|-----------------------------|---------------------|-------|
|                             | Vocational High School | Senior High School |       |
| Less                        | 12.1                | 5.4    | 17.5 |
| Moderate                    | 45.6                | 19.7   | 65.2 |
| High                        | 8.9                 | 8.4    | 17.3 |
| Total                       | 66.6                | 33.4   | 100  |
The results of the cross-tabulation between the types of vocational high schools and high schools based on financial literacy in table 1 presented that students with a low score of financial literacy from vocational high school was 45 (12.%) and those of senior high schools was 20 (5.4%) students. Meanwhile, vocational high school student with moderate category was 169 (45.6%) students, and senior high school was 73 (19.7%) students. The vocational high school students with the high category were 33 (8.9%) and those of high school were 31 (8.4%) students. Thus, it can be concluded that the majority of the students' financial literacy levels are moderate.

Table 2: The crosstab results of of financial literacy by status of school (%)

| Financial Literacy Criteria | Status   | Total |
|-----------------------------|----------|-------|
|                             | Public   | Private |     |
| Less                        | 13.5     | 4.0    | 17.5 |
| Moderate                    | 52.3     | 12.9   | 65.2 |
| High                        | 15.1     | 2.2    | 17.3 |
| Total                       | 80.9     | 19.1   | 100  |

Table 2 describes financial literacy based on the status of public high schools and private schools in Sepatan District, Tangerang Regency, which is in the medium category (65.2%). Of these, 194 (52.3%) were from public high school students and 48 (12.9%) were from private high school students. Meanwhile, the average score of financial literacy with low and high criteria for public schools was 50 (13.5%) students and 56 (15.1%) students, respectively. The average financial literacy score of private secondary schools with low and high criteria was 15 (4.0%) students and 8 (2.2%) students, respectively.

Table 3: The crosstab results of financial literacy by gender (%)

| Financial Literacy Criteria | Gender | Total |
|-----------------------------|--------|-------|
|                             | Female | Male  |     |
| Less                        | 10.5   | 7.0   | 17.5 |
| Moderate                    | 38.8   | 26.4  | 65.2 |
| High                        | 11.3   | 5.9   | 17.3 |
| Total                       | 60.6   | 39.4  | 100  |

This study involved 371 students as the research respondents, constituting 225 female students and 146 male students (see table 3). There were 39 (10.5%) students, 144 (38.8%) students, and 42 (11.3%) students with low, medium, and high financial literacy respectively. Meanwhile, male students with low, medium, and high levels of financial literacy were 26 (7.0%) students, 98 (26.4%) students, and 22 (5.9%) students, respectively. Female students on average have a higher level of knowledge of personal finance and financial services than male students because female students have higher cognitive abilities.
Parents’ income was grouped into three levels, namely low, medium, and high levels. Table 4 describes that students of low, medium, and high level of financial literacy from parents with low income were 54 (14.6%) students, moderate with 207 (55.8%) students, and high with 50 (13.5%) students. The number of students with a moderate level of parents’ income was 53 or 14.3%. Of these, the literacy levels of students who were categorized as a low, medium, and high were 9 (2.4%) students, 38 (10.2%) students, and 6 (1.6%) students, respectively. In general, the number of students with a high income level of parents of more than Rp. 10,000,000 is very small, amounting to only 7 students. Among those, students with low, medium, and high levels of financial literacy were 2 (0.5%) students, 4 (1.1%), and 1 (0.3%), respectively. Thus, it can be concluded that most of the students’ parents who participated in this study have low income, which is less than IDR 5,000,000 per month.

The analysis of student financial literacy based on the educational characteristics of parents with the categories of primary, secondary, and high education revealed that generally, students’ parents completed secondary education, namely senior high school/vocational and basic education or elementary school or junior high school. Table 5 above illustrates that students with low, medium, and high financial literacy levels from parents with basic education were 37 (10.0%) students, 118 (31.8%) students, and 25 (6.7%) students respectively. Meanwhile, students with the financial rate are low, moderate, and high from parents with secondary education were 26 (7.0%) students, 108 (19.1%) students, and 33 (8.9%) students, respectively. Furthermore, the level of financial literacy of students with the low, medium, and high categories of parents with a high level of education (D1, D2, D3, and S1 / D4 - S3) was 2 (0.5%) students, 16 (4.3%) and 6 (1.6%) students respectively.

Furthermore, the researchers conducted an independent test for students’ financial literacy variables based on school type, school status, gender, parents' income, and parents' education using the chi-square test. The criteria for testing the univariate relationship between rows and columns is asymptotic significant (2-tailed) of 5%. The results of the test are presented in the following table:
Table 6: The results of chi-square test: type of school, the status of the school, gender, parents' education, and parents' income

| Variable                  | Pearson Chi-Square test | df | Asymptotic Sig. (2-tailed) |
|---------------------------|-------------------------|----|----------------------------|
| Type of school            | 7.844                   | 2  | 0.020**                    |
| School status             | 2.550                   | 2  | 0.279                      |
| Gender                    | 0.808                   | 2  | 0.664                      |
| Education of Parents      | 5.109                   | 4  | 0.276                      |
| Parents' income           | 1.457                   | 4  | 0.834                      |

Note: ** significance level 5%

Table 6 shows that the type of school has a significant positive correlation with the financial literacy of students in Sepatan District, Tangerang Regency because the chi-square test value was 7.844 and the asymptotic significant value (2-tailed) was 0.020 < 0.05. Meanwhile, the characteristics of school status, gender, education of parents, and parents' income have not shown any correlation. It can be seen from the result of asymptotic significant (2-tailed) values of 0.279, 0.664, 0.276, and 0.834 > 0.05, respectively. Therefore, it can be concluded that school status and financial literacy have significantly correlated. Meanwhile, school status, gender, education of parents, and parents' income have not significantly correlated. Thus, the more students attend vocational high schools, the higher the student's financial literacy compared to that of senior high schools.

To answer the research formulation of the second problem, the researcher first tested the data on financial literacy as a fulfillment of the analysis requirements consisting of the normality and homogeneity tests. The test results can be seen in the following table:

Table 7: The results of the normality and homogeneity test

| Criteria                  | Vocational | Non-vocational | Status | Gender | Parental Income | Educational Income |
|---------------------------|------------|----------------|--------|--------|-----------------|--------------------|
| Normality:               |            |                |        |        |                 |                    |
| Stat.                     | 0.992      | 0.989          | 0.990  | 0.985  | 0.989           | 0.999              |
| df                        | 225        | 146            | 300    | 71     | 247             | 124                |
| Sig                       | 0.225      | 0.280          | 0.031  | 0.578  | 0.057           | 0.459              |
| Homogeneity test:        |            |                |        |        |                 |                    |
| Levene Stat.             | 2.987      | 0.143          | 0.087  | 0.132  | 0.471           | 0.200*             |
| df1, df2                 | 1:369      | 1:369          | 1:369  | 2:368  |                 |                    |
| Sig.                     | 0.085      | 0.706          | 0.768  | 0.544  |                 | 0.670              |

Note: * Kolomogorov-Smirnov

The results of the normality test as shown in Table 7 indicate that all sample group data according to the characteristics of school type, school status, gender, income, and parental education result in a probability value greater than 0.200 > 0.05. These results indicate that the data is normally distributed. However, one sample group does not have a normal distribution, namely financial literacy data for public schools because the significance value is 0.031 < 0.05. The homogeneity test results showed that all sample data groups with each characteristic obtained probability values of 0.085, 0.706, 0.768, 544, and 0.670> 0.05. This result indicates that the data group has the same variance (homogeneous). The results of this test have met the requirements for using the parametric inference test, namely the
Independent Samples T-test and Analysis of Variance (ANOVA). The results of the test can be seen below:

**Table 8:** Results of comparative test of the students’ financial literacy

| Karakteristik       | Jenis Uji        | F-test    | Sig   |
|---------------------|-----------------|-----------|-------|
| Type of school      | Independent Samples T-Test | 2.073     | 0.039**|
| School status       | Independent Samples T-Test | 1.735     | 0.084* |
| Gender              | Independent Samples T-Test | -0.006    | 0.996  |
| Education of Parents| ANOVA            | 2.835     | 0.060* |
| Parents’ income     | ANOVA            | 0.561     | 0.571  |

**Table 8 above presents the results of the test on differences in financial literacy between students of vocational high schools and high schools with the Independent Sample T-test producing an F-test value of 2.073 and a significance value of 0.039 > 0.05.** These results indicate a significant difference in the financial literacy sample group data between vocational high school students and high schools. Meanwhile, the test on the difference in student financial literacy according to the school status, public and private high schools, resulted in an F-test value of 1.735 and a significance value of 0.084 < 0.1. These results showed a significant difference in the financial literacy data group between public and private high school students with a significance level of 10%. In other words, the average value of financial literacy scores is significantly different. The test results of the financial literacy data group based on gender produced an F-test value of -0.006 and a significance value of 0.966 > 0.05. Thus, it can be stated that the data of gender between male and female students shown that there is no significant difference or has an average value, or the same rate.

The researcher used ANOVA test to test differences in financial literacy data for more than 2 sample groups. The researcher divided parents’ education into 3 groups, namely primary, secondary and tertiary education. The ANOVA test results show that the F-test value is 2.835 and the significance value is 0.060 < 0.1, indicating a significant difference in student financial literacy based on the educational level of parents or in other words the data for the three sample groups have significantly different mean values. Meanwhile, the results of student financial literacy based on parents’ income resulted in an F-test value of 0.561 and a significance value of 0.571 > 0.05. This result shows that there is no significant difference in the financial literacy of students with a low level of parent’s income, middle, and high income or the three sample groups have the same average value.

The samples of this study were 371 students who had a good knowledge of financial literacy. It can be seen that the financial literacy of SMKN 2 Sepatan is higher than that of the other three schools, namely SMAN 11 Kab. Tangerang, SMA MKGR Sepatan, and SMK Az-Zahra Sepatan. These results indicate that the overall level of student financial literacy is in the medium category with an interval of 60% - 79%, which means that the individual has sufficient or moderate financial knowledge. These results are consistent with the research findings [30], [38]. Even though the research results show a moderate category, it was revealed that some students were lacking of financial literacy. Similar results regarding moderate category financial literacy were also found by [23]. The findings of this study are different from a survey by [5] in 20 provinces of Indonesia, which stated that the financial literacy of the Indonesians was still in the low category, which increased in the next survey in 34 provinces from 21.84% to 29.66%.

The previous crosstab analysis provided an initial indication that the results of the Chi-Square test on students’ perceptions of financial literacy based on the criteria for school type, gender, parental education, and parents’ income resulted in an insignificant correlation. This means that the type of public-private school where students study, gender, parents’ level of income, and parents’ level of education do not determine the increase in student financial literacy. In this study, the initial description
that determines student financial literacy is the type of school. The type of school that students choose after graduating from junior high school/equivalent is significantly correlated with financial literacy skills or understanding. These results are supported by the results of comparative testing, which show that vocational high school (SMK) students have better financial literacy skills than high school students (SMA) in Sepatan District, Tangerang Regency.

Overall, the average score of students’ perceptions of financial literacy for vocational high schools was 73.12 or 58.52%, while high schools were 70.38 or 56.31. These results pointed that vocational high school students have a better level of financial literacy rate than high school students. The scores of financial literacy rate for vocational high school students is higher because students often conduct lab work as compared to theoretical learning in the classroom. As a result, vocational high school students tend to think more practically and have a better understanding of the importance of financial management that makes them have better financial management ability for their daily needs.

The results of this study are the same as the findings of [24], [25], [39]. Vocational high school students’ understanding of financial literacy not only shapes financial behavior [19] but also determines individual financial decision making [40], as well as students’ saving behavior [20], [21]. Therefore, it is important for senior high schools to increase their understanding of financial literacy in order to have a good financial management plan. Students or individuals will undergo planned daily financial activities because they do personal financial management [7].

Financial literacy is essential for life. It deals with the way to manage finances and allocate them properly in order to achieve prosperity in life. It is important to provide an understanding of financial literacy not only for university students and society at large but also for school students. This aims for providing graduates with the ability to live independently [38]. Of the five identified areas of financial knowledge (skills), decision-making skills, and insurance knowledge appear to be the least developed [28].

The results of this study also confirm the previous research findings, which state that, on average, students in public schools better than students in private schools [25]. The study by [25] used a more comprehensive approach through instruments as done by [24], [37] that examined the effects and differences between public and private schools in terms of the financial literacy of students aged 16-18 years, using regression analysis as the analytical tool. In contrast, this research tested the differences in financial literacy of students in state and private high schools using a comparative analysis. Thus, these two studies produce the same findings, even though the analytical tools used were different. That is, school status is not a determinant for students’ knowledge of financial literacy. All students can increase their financial literacy knowledge in order to be able to manage personal finances, make financial decisions appropriately, and economically so that students can meet their needs rationally.

The hypothesis testing conducted by the researcher by using the Independent Samples T-Test shows that data on gender has the same variants. Thus, it can be concluded that there is no significant difference in the level of financial literacy between female and male students. This result is in line with the research conducted by [18], [22], which stated that gender did not have a significant effect on financial literacy. However, these results do not agree with the findings of a study conducted by [30] who found that female students’ financial literacy was lower than that of male students’, and gender had a significant effect on financial knowledge. In contrast, [25] found that women’s financial literacy was higher at a cognitive level than that of men. In fact, [8], [31] confirmed the findings that the only gender had a significant effect on financial literacy.

There are different findings of current and previous studies because knowledge and experience between female students and male students are different. Females have better cognitive abilities than male students, but male students have a better experience. Male students are more enthusiastic in increasing their financial knowledge and consider it more important than women [30], even women perceive themselves as less confident in their financial abilities [24], women were more sensitive in answering questionnaire’s questions about finance, especially those related to investment and retirement savings [41].
Furthermore, the test results of the financial literacy analysis of variances based on the characteristics of parents’ income show that the financial literacy rate of students with low, middle, and high parental income is proven to have significantly different variances with a significance level of 10%. These results indicated that the higher the parents’ income, the better the students’ knowledge of financial literacy. Although this study uses a comparative approach, it can describe the role of parents’ income in determining children’s knowledge of financial management, saving behavior, investing, and so on. Parents with higher incomes will provide their children with a better understanding of financial literacy, especially on how to do good financial management, allocate resources for the benefit of the family, and strategy for future investment in the future than parents of students with lower incomes.

The results of this study do not confirm that of the previous research conducted by [23], [31] which stated that income did not have a significant effect on financial literacy. However, it confirms the research conducted by [42] which showed that parents’ income affected financial literacy. The differences in the findings of this study are due to a different analysis and measurement tools regarding financial literacy. In addition, in this study, the probability value used as the criterion for rejection of the hypothesis is 10%, although in social science it is still tolerated.

Finally, the researchers tested the rate of financial literacy based on the education level of students’ parents, namely primary, secondary and higher education. The test results show that the financial literacy data is differentiated based on the level of education of parents having the same variants. Thus, there is no difference in the rate of students’ financial literacy according to the education of their parents. The level of parental education does not determine the level of student knowledge about financial literacy. The results of this study are in line with [18], who stated that parental education did not affect the financial literacy of children who were assumed to be university students. In other words, financial literacy that starts in the family, especially when children observe their parents’ financial habits, such as saving and investing or receiving financial education directly from their parents has no impact on their children. The results are inversely proportional to [9], [33], [43] who found that education, especially related to finances at home, contributed to increasing children’s financial literacy. The difference in this finding is because it used the regression analysis as its analytical model and measurement of financial literacy variables.

General knowledge about personal finance, financial services, savings and loans, insurance, and investments that students have not resulted from home education, but is obtained from the school. In fact, knowledge and understanding of financial literacy for students are very important because it will determine students' financial decision making in the future. Secondary school students should continue to be encouraged to study harder to increase their knowledge and understanding of financial literacy. Likewise, teachers in schools are advised to constantly update and increase their knowledge about finance, because teachers are a vital input in the teaching and learning process and the parties to communicate directly with students in the class. This is true based on the fact that, if many students are not financially literate, it will have an impact on the future of the economy at large and an increasingly complex one. It is as stated by [25] that financial literacy can become a chronic problem in the increasingly sophisticated and complex world of economy and finance. This complex financial problem will be lead people to face a confusing set of financial decisions and an increasing number of sophisticated financial products with varying degrees of risk.

Policy makers should be aware that students need to be financially literate to carry out tasks in their daily life, such as using payment cards or choosing between cellphone packages. In addition, students will be more independent from their families, given that the number of tasks in their life is increasing rapidly and complex. In fact [1] argues that there are at least two reasons why students should be financially literate, namely: “(a) First, young people are likely to face more challenging decisions if financial transactions continue to grow in complexity; (b) in some countries, future generations will probably bear more financial risks during their lifetime than the current adult population, due to factors such as increased life expectancy, less welfare protection and more uncertainty in retirement income due to changing pension regimes; and (c) growing income and wealth inequality might mean that without strong financial literacy, socio-economically disadvantaged groups could fall further behind”.

10
4. Conclusions

Financial literacy is fundamental for students to enable correct financial decision making since an early age, especially given the fact that the current and future financial products and levels of risk are increasingly varied and complex. Although the financial literacy rates of Indonesian students is still low, this study shows that the financial literacy rate of students between senior high school and vocational high school in Sepatan District is in the moderate category, namely between 60% -79%. The type of school is proven to have a significant correlation with student financial literacy, meaning that whether the students choose the school correctly will determine the level of knowledge and understanding of financial literacy. However, the cross-tabulation results show that school status, gender, income, and parental education do not represent an independent relationship with student financial literacy.

The researcher also complemented the results of this study by conducting a comparative test of student financial literacy based on school type, school status, gender, parent’s income, and parental education to complete the descriptive analysis. The researcher found that there were significant differences in the financial student's rate between senior high school and vocational high school, between public and private high schools, and between elementary, middle, and higher parental education in Sepatan District, Tangerang Regency. Meanwhile, financial literacy according to gender characteristics and parental income did not differ significantly.

The most important point to highlight in this study is that the level of literacy among students currently in the medium category is not different from that of the previous studies and higher than the national survey by OJK. This result implies that students’ knowledge and understanding of financial literacy still has to be improved. This increase can be done by holding seminars, training, and practice in financial education, especially for senior high schools and private schools as a way to achieve better impact in determining financial decisions and increasing welfare in the future. Another important recommendation is to consider including the topic of financial education in the curriculum for secondary schools in Tangerang District as local content or the local curriculum.

The role of gender in financial literacy does not have an impact on financial literacy because male and female students have relatively the same perceptions and competencies towards financial literacy, both in terms of cognitive and application (action) of financial literacy. It implies that male students have the same opportunity to make financial decisions as females. Even though women have a higher level of knowledge and understanding about personal finance and services, male students have the advantage of decision making ability to allocate their finances for saving, borrowing, and investing, so that the two can complement each other.

Parents’ income has an important role in student financial literacy. This result implies that the management of income by parents becomes a role model for their children. Parents are urged to have discussions with their children in making financial decisions, spending money based on their most urgent interests and needs, and investing for future needs. In addition, the higher the parents’ income, the more parents are able to facilitate their children’s needs to increase their knowledge of understanding about financial literacy compared to parents with lower incomes.

The author also realizes that this study still contains some limitations both in terms of content and the analysis model. The analysis only used the data collected at the sub-district level even though the sample size is quite large and represents the whole population, leading to a difficult generalization. Therefore, it is recommended that future studies use a broader unit of analysis, namely districts or provinces with the same research object. We believe that the measurement of financial literacy among young people is very important and good for the future of the country. Therefore, it is recommended that further research use a comparative causal analysis model since this study only used descriptive analysis (chi-square correlation test) and comparison test. The combination between both models is expected to generate a more holistic result. It is also recommended to use the current research instrument in some types of systematic district/province/national survey.
Acknowledgment

We wish to thank all people who have given assistance and supports in writing this article. Firstly, to all authors, reviewers, and ICEGE’s steering committees, and its members who have given all the valuable contributions in making this article happen. Finally, there is no conflict of interest related to this article.

References

[1] OECD, *PISA 2018 Results (Volume IV): Are Students Smart About Money?* Vol. IV. Paris: OECD Publishing, 2020.
[2] H. Suyanto, D. Mardiati, R. H. Winarsa, and W. Astusti, “Workshop Financial Literacy Untuk Siswa SMA 6 Tangerang Selatan,” vol. 2, no. 1, pp. 42–47, 2020.
[3] J. Almenberg and J. Säve-Söderbergh, “Financial Literacy and Retirement Planning in Sweden,” *SSRN Electron. J.*, 2012.
[4] L. Mandell, “Financial Literacy of Young American Adults,” Washington, DC., 2008.
[5] OJK, “Survei Nasional Literasi dan Keuangan 2016,” Jakarta, Indonesia, 2017.
[6] O. A. Stolper and A. Walter, “Financial Literacy, Financial Advice, and Financial Behavior,” *J. Bus. Econ.*, vol. 87, no. 5, pp. 581–643, 2017.
[7] A. N. Yushita, “Pentingnya Literasi Keuangan Bagi Pengelolaan Keuangan Pribadi,” *Nominal, Barom. Ris. Akunt. dan Manaj.*, vol. 6, no. 1, 2017.
[8] G. N. Ahmad, S. Dalimunthe, S. Thahirah, and H. Aminah, “Demographic Characteristics, Personality Characteristics, and The Level of Student’s Financial Literacy,” *Accounting*, vol. 6, no. 5, pp. 629–636, 2020.
[9] A. Suherman, E. Wardani, Kartika Puspa, and Khusaini, “Analisis Literasi Keuangan Mahasiswa di FKIP UNIS Tangerang,” *J. Pendidik. Ekonom.*, vol. 13, no. 1, pp. 18–29, 2020.
[10] L. Klaper, A. Lusardi, and O. S. Mitchell, “Financial Literacy Around the World: Insight From the S&P Global Finlit Survey,” Washington, D.C., 2015.
[11] A. Roestanto, *Liternasi Keuangan*. Yogyakarta : Istana Media, 2017.
[12] H. & Chen and R. P. Volpe, “An Analysis of Personal Financial Literacy Among College Students.” *Financ. Serv. Rev.*, vol. 7, no. 2, pp. 107–128, 1998.
[13] A. Lusardi and O. S. Mitchell, “Financial Literacy Around the World: An Overview,” *J. Pension Econ. Financ.*, vol. 10, no. 4, pp. 497–508, 2011.
[14] P. Bhushan and Y. Medury, “Financial Literacy and its Determinants,” *Int. J. Eng., Bus. Enterp. Appl. ( IJEBA )*, vol. 4, no. 2, pp. 155–160, 2013.
[15] Suryanto dan Rasmini Mas, “Analisis Literasi Keuangan dan Faktor - Faktor yang Mempengaruhi (Survey pada Pelaku Usaha Mikro, Kecil dan Menengah di Kota Bandung),” *J. Ilmu Polit. dan Komun. Vol.*, vol. VIII, no. 2, p. 18, 2018.
[16] S. Zulaihati, S. Susanti, and U. Widyastuti, “Teachers’ Financial Literacy: Does It Impact on Financial Behaviour?,” *Manag. Sci. Lett.*, vol. 10, no. 3, pp. 653–658, 2020.
[17] S. Rapih, “Pendidikan Literasi Keuangan Pada Anak: Mengapa dan Bagaimana?,” *Scholaria*, vol. 6, no. Mei 2, pp. 14–28, 2016.
[18] H. S. Homan, “Comparative Study of Students Financial Literacy And Its Demographic Factors,” in *First International Conference on Economics and Banking*, 2015, pp. 106–111.
[19] S. Shim, J. J. Xiao, B. L. Barber, and A. C. Lyons, “Pathways to Life Success: A Conceptual Model of Financial Well-Being for Young Adults,” *J. Appl. Dev. Psychol.*, vol. 30, no. 6, pp. 708–723, 2009.
[20] M. Agusmin, R. Dewi, and Y. Rozali, “Studi Literasi Keuangan dalam Meningkatkan Perilaku Menabung Remaja,” in *Seminar Internasional Riksa Bahasa XIII*, 2020, pp. 1371–1380.
[21] M. F. Sabri, M. Macdonald, J. Masud, L. Paim, T. Hira, and M. A. Othman, “Financial Behavior and Problems among College Students in Malaysia: Research and Education Implication,” *Consum. Interes. Annus.*, vol. 54, pp. 166–170, 2008.
“Interdisciplinary Journal of Contemporary Research in Business Financial Literacy: a Study Among the University Students,” pp. 279–299, 2013.

[23] M. Erner, Carsten. Goedde-Menke, Michael & Oberste, “Financial Literacy of High School Students: Evidence from Germany,” J. Econ. Educ., vol. 47, no. 2, pp. 95–105, 2016.

[24] A. Lusardi and O. S. Mitchell, “The Economic Importance of Financial Literacy: Theory and Evidence,” J. Econ. Lit., vol. 52, no. 1, pp. 5–44, 2014.

[25] E. O. Arceo-Gómez and F. A. Villagómez, “Financial Literacy Among Mexican High School Teenagers,” Int. Rev. Econ. Educ., vol. 24, pp. 1–17, 2017.

[26] K. Jang, J. Hahn, and H. J. Park, “Comparison of Financial Literacy Between Korean and U.S. High School Students,” Int. Rev. Econ. Educ., vol. 16, no. PA, pp. 22–38, 2014.

[27] M. M. Çelikkol and H. Çelikkol, “The Evaluation of the Students in Dumlupinar University Vocational School of Social Sciences About Levels of Financial literacy,” Copernican J. Financ. Account., vol. 4, no. 2, p. 43, 2015.

[28] I. W. N. Lantara and Ni Ketut Rai Kartini, “Financial Literacy Among University Students: Empirical Evidence From Indonesia,” J. Indones. Econ. Bus., vol. 30, no. 3, pp. 247–256, 2015.

[29] C. Aprea et al., “International Handbook of Financial Literacy,” Int. Handb. Financ. Lit., pp. 1–713, 2016.

[30] H. Chen and R. Volpe, “Gender Differences in Personal Financial Literacy Among College Students,” Financial Services Review, vol. 11, no. 3, p. 289, 2002.

[31] N. T. Herawati, “Tingkat Literasi Keuangan Mahasiswa Serta Faktor-Faktor yang Mempengaruhi,” in Seminar Nasional Riset Inovatif 2017, 2017, pp. 131–137.

[32] D. Walczak and S. Pienkowska-Kamieniecka, “Gender Differences in Financial Behaviours,” Eng. Econ., vol. 29, no. 1, pp. 123–132, 2018.

[33] E. Akben-Selcuk and A. Altiok-Yilmaz, “Financial Literacy Among Turkish College Students: The Role of Formal Education, Learning Approaches, and Parental Teaching,” Psychol. Rep., vol. 115, no. 2, pp. 351–371, 2014.

[34] F. Margaretha and R. A. Pambudhi, “Tingkat Literasi Keuangan Pada Mahasiswa S-1,” J. Manaj. dan Kewirausahaan, vol. 17, no. 1, pp. 76–85, 2015.

[35] L. Mandell, “Financial Literacy of High School Students,” in Handbook of Consumer Finance Research, Eds., J. J. Xiao, Ed. New York: Springer, 2008, pp. 163–183.

[36] B. L. Jorgensen and J. Savla, “Financial Literacy of Young Adults: The Importance of Parental Socialization,” Fam. Relat., vol. 59, no. 4, pp. 465–478, 2010.

[37] OECD, “PISA 2012: Financial Literacy Framework,” Paris, 2013.

[38] M. Lamada, E. S. Rahman, and Herawati, “Analisis Kemampuan Literasi Siswa SMK Negeri di Kota Makassar,” J. Media Komun. Pendidikan Teknol. dan Kejur., vol. 6, no. 1, pp. 35–42, 2019.

[39] A. Atkinson and F.-A. Messy, “Measuring Financial Literacy: Results of the OECD/International Network on Financial Education (INFE) Pilot Study,” Oecd, no. 15, pp. 1–73, 2012.

[40] N. Susilowati, L. Latifah, and Jariyah, “College Student Financial Behavior: An Empirical Study on the Mediating Effect of Attitude Toward Money,” Adv. Sci. Lett., vol. 23, no. 8, pp. 7468–7472, 2017.

[41] A. Lusardi, O. S. Mitchell, and V. Curto, “Financial Literacy and Financial Sophistication in the Older Population,” J Pension Econ Financ, vol. 13, no. 4, pp. 347–366, 2017.

[42] S. R. Nidar and S. Bestari, “Personal Financial Literacy Among University Students (Case Study at Padjadjaran University Students , Bandung , Indonesia),” World J. Soc. Sci., vol. 2, no. 4, pp. 162–171, 2012.

[43] A. Darmawan and F. A. Pratiwi, “Pengaruh Pendidikan Keuangan Keluarga, Pembelajaran Keuangan di Perguruan Tinggi, Sikap Keuangan dan Teman Sebaya Terhadap Literasi Keuangan Mahasiswa,” Fokus Bisnis Media Pengkaj. Manaj. dan Akunt., vol. 19, no. 1, pp. 27–37, 2020.