

# Financial Literacy of 12th Grade Science High School Students

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## ABSTRACT

Financial literacy plays a pivotal role in shaping an individual's financial security and overall success. Moreover, acquiring financial literacy is crucial for young people, as it equips them with the skills needed to autonomously and effectively manage financial matters in their future. Therefore, the primary objective of this study is to evaluate the extent of financial literacy among 70 Grade 12 students during the School Year 2021-2022 at the Philippine Science High School-Ilocos Region Campus. To achieve this, a mixed methods research approach was employed, incorporating both qualitative and quantitative analyses. To collect data, an online survey, consisting of a financial literacy questionnaire, was administered through Messenger and Google Forms. The data obtained were subjected to various analytical methods, including content analysis, mean and percentage calculations, Likert scales, and Multivariate Analysis of Variance (MANOVA) with the Wilks' test. The results unveiled that the students possess a satisfactory level of knowledge and confidence when it comes to financial matters and transactions. Furthermore, the outcomes of the MANOVA analysis indicated that there is no significant overall correlation between the students' gender and their scholarship categorization concerning their financial literacy levels. It is recommended that future studies consider increasing the sample size and adjusting the sampling methodology to enhance the precision of the results, particularly in investigating the potential links between scholarship categorization, gender, and students' financial literacy levels. Additionally, incorporating interviews as a research method could provide further insights beyond the scope of survey responses.

**Keywords:** financial literacy, gender, scholarship categorization

## INTRODUCTION

In the current era where various methods of purchasing products and services are widespread, consumers' spending habits are also constantly changing to meet their needs and desires. Furthermore, the financial situation of consumers remains uncertain due to the continuous rise in the cost of living, coupled with ongoing technological advancements and the fluctuating state of the economy. One of the factors influencing consumers' financial well-being is their financial literacy, which encompasses knowledge and habits related to money management. According to Hosein et al. (2013), individuals with higher levels of financial knowledge tend to have better financial outcomes. It is essential to assess the financial literacy of citizens to discover how it can contribute to their daily lives as consumers. Moreover, it is advisable to promote financial literacy early on to instill responsible money management habits in the youth. Secondary school students are approaching a pivotal point in their lives where they will experience financial independence. These students need to be prepared for future financial responsibilities, especially as they will soon become part of the workforce. As observed in Obsioma's research (2018), some secondary school students possess sufficient financial knowledge in areas such as investments and numeracy, but they lack knowledge in important areas like inflation and compound interest, despite these topics being included in their curriculum.

Hence, the objective of this research is to assess the level of financial literacy among 12th-grade students

during the academic year 2021-2022 at the Philippine Science High School – Ilocos Region Campus (PSHS-IRC). This research can serve as a guide for researchers and fellow students in enhancing their understanding of financial matters and preparing for future financial management. Additionally, it can be valuable for educational institutions and other organizations in devising programs to strengthen the financial literacy of secondary school students.

### **Statement of the Problem**

The aim of this study is to examine the level of financial literacy among 12th-grade students at PSHS-IRC. The study also intends to address the following questions:

1. What is the demographic profile of the students involved in the study in terms of gender and scholarship categorization?
2. What is the level of financial literacy among 12th-grade students at PSHS-IRC in terms of: financial terms; financial decisions; money management; banking transactions; and using electronic devices?
3. Is there a significant relationship between gender and scholarship categorization with the financial literacy of the participants?
4. What are the potential factors that may affect the financial knowledge of secondary school students at PSHS-IRC?

### **Hypotheses**

1. There is no significant correlation between the level of financial literacy of students and their gender.
2. There is no significant correlation between the level of financial literacy of students and their scholarship categorization.

### **Related Literature and Studies**

#### **Financial Literacy**

Financial literacy, as defined by Lampa et al. (2019), refers to the ability of consumers to understand and use various financial concepts to make decisions about money management based on their needs or desires. It combines knowledge and financial habits. To be considered financially literate, a consumer needs to be knowledgeable about budgeting, investing, and financial management. A sufficient level of financial literacy leads to sound financial well-being as it helps avoid possible financial strain or overspending (Sabri & Zakaria, 2015). Some of the benefits of being financially literate include reduced financial stress, effective budgeting, and debt avoidance. Therefore, there is a need for comprehensive and meticulous financial education for consumers.

#### **Budget Allocation (Budgeting)**

The term “budgeting” or “paglalaan ng badyet” in Filipino is defined by the Merriam-Webster (2022) dictionary as “to put or allow for in a statement or plan coordinating resources and expenditures.” In simpler terms, budgeting is often about planning. It cannot be called budgeting if money allocation for expenses is not done properly and systematically. Several research papers have explored the concept of budget allocation, and it is commonly divided into three aspects: what budgeting means in various day-to-day contexts, who should allocate budgets, and why it is essential in life. Having a budget, according to a study by Abaya et al. (2021), is beneficial to ensure that an average family can meet their monthly expenses. They

explained that budget allocation is a way for individuals to make informed decisions about their expenditures. Those who do not know how to budget often resort to borrowing to fulfill their wants before their needs. On the other hand, according to Aldovino et al. (2013), budgeting is used in businesses to sustain not only the owners but also the employees. The difference between the two studies lies in the participants. While Abaya's research focuses on individuals who may not be knowledgeable about budgeting, Aldovino's participants are skilled in effective budget allocation, as it has been proven that individuals in the business field are generally more knowledgeable about financial matters than others.

In the research conducted by Esmail Alekam et al. (2018), financial behavior is influenced by an individual's existing beliefs. Because of this, people should not simply budget without careful consideration. A citizen must first become informed before handling money because there is a high chance that those who do not think critically may easily be influenced. In such cases, people may experience scams or lose money thoughtlessly. According to Bona (2018), attitude plays a role in influencing a person's behavior regarding budgeting. As Alekam mentioned, the answer to whether someone can handle money and make decisions about it can be found within the individual.

The meaning of budget allocation is undoubtedly broader than the definitions and examples presented in the research and will likely continue to evolve, given the existence of online banking systems such as GCash, which have become more accessible even to children. In this study, we not only see the responses of students in a survey but also observe patterns among the youth growing up in a modern society.

### **Investment**

Investment is described as a way to generate money in the future. According to Virlics (2013), there are two types of investments: fixed investments and monetary investments. Fixed investments can take the form of real estate, including rental properties, buildings, and plants, while monetary investments include market stocks and bonds. Virlics also mentioned Harcourt et al. (1967), who stated that investment decisions depend on the expected return of the investor, the value of the asset being invested, the ability to invest, and the method of funding the investments. Furthermore, Dimatanday et al. (2019) emphasized that investment is based on the concept of the "Time Value of Money," where the value of money changes due to inflation and deflation. Therefore, if more money is invested earlier, its value may increase over the years, leading to higher returns in the future. It was also mentioned that investing in the stock market is one of the most common ways to make money, but it is also one of the riskier investment options. In a study by Aldovino et al. (2013), real estate was found to be one of the most common investment options among their respondents due to what is called appreciation, which is the increase in the value of an asset depending on its location and the level of real estate development. Investment should not be done haphazardly, as it is important to choose the appropriate investment option. It is also crucial to be wise and inquisitive in analyzing risks or uncertainties before making investment decisions (Virlics, 2013).

### **Financial Management**

Aldovino et al. (2013) described financial management as the management of income and ensuring that it is sufficient to sustain one's current standard of living. Additionally, financial management is a way to secure future needs, especially during times of crisis. According to Echavez et al. (2019), financial literacy is one of the crucial factors affecting a person's financial management. If their financial knowledge is insufficient, it can lead to financial problems because their understanding of financial management is limited. Consequently, the level of financial management varies from one individual to another.

Heck (1984), on the other hand, identified financial management behaviors as the planning and implementation of financial matters, such as setting financial goals, budgeting, timely bill payments, and

successful adherence to goals and spending plans. These behaviors are influenced by various factors, including financial dependence and resources, civil status, and individual needs. He also mentioned that an individual's level of financial management behaviors is an indication of successful financial management, where the cultivation of these behaviors can ensure financial success and security.

## **METHODOLOGY**

### **Study Design**

The research approach used in this study is quantitative. This study also utilized a descriptive research design as it aimed to determine the level of financial literacy among secondary students at PSHS-IRC. Additionally, this design sought to depict existing phenomena systematically, making it suitable for researching the financial literacy of students and the factors that may influence it (Atmowardoyo, 2018). Furthermore, this study used a correlational design to examine whether age, gender, and scholarship categorization have a positive relationship with students' levels of financial literacy.

### **Population and Sampling**

The participants in this research were secondary students in the twelfth grade of PSHS-IRC for the Academic Year 2021-2022. Seventy (70) students participated in the survey out of eighty-three students in the twelfth grade to achieve a 95% confidence level with a 5% margin of error in sampling. They were selected using an opportunistic or convenience sampling method. According to McLeod (2019), this sampling method is one of the easiest and most cost-effective to implement since participants only need to meet the specified criteria to answer the surveys and/or interviews. These participants were chosen because it is essential for students of their age to have knowledge about financial matters to prepare them for financial management in the future.

### **Research Instrument**

The instrument used in the research was a survey containing a financial literacy questionnaire from the Programme for International Student Assessment (PISA) by the Organisation for Economic Co-operation and Development (OECD). The original survey was in English and was translated into Filipino to make it more understandable for the research participants. The survey was conducted using Google Forms and was shared online through communication platforms such as Messenger. Additionally, this study also utilized a Likert scale in data analysis. This is one of the most commonly used psychometric tools in educational research to measure scientific and valid methods of behavior or habits (Chandel et al., 2015).

### **Data Collection and Analysis Methods**

Data were collected through a survey divided into three parts. The first part contained questions about the demographic details of the participants, which were analyzed using frequency counts and percentages. The second part included a financial literacy questionnaire adapted from the Programme for International Student Assessment (PISA) by the Organisation for Economic Co-operation and Development (OECD). PISA is primarily developed by the OECD for 15-year-old youths to measure their proficiency in reading, science, mathematics, and other life skills. Information gathered in this section was analyzed using percentages, means, and Likert scales. Furthermore, the results from the Likert scales were analyzed using a statistical instrument: Multivariate Analysis of Variance (MANOVA) and Wilks' Tests to determine if there is a significant relationship between demographic characteristics and the financial literacy levels of the students. The last part of the survey contained questions about the factors affecting the financial literacy of secondary students, which were analyzed using content analysis.

## RESULTS AND DISCUSSION

### Demographic Profile of Students

Seventy (70) students participated in a survey about the financial literacy of secondary students at the Philippine Science High School – Ilocos Region Campus (PSHS-IRC). The survey commenced on March 8, 2022, and concluded on May 3, 2022. During the conducted survey, responses were obtained concerning the locations where financial literacy is applied and learned. To comprehend the participants' answers, it is necessary to first analyze the demographics of those who took part in the survey. The surveyed participants were students of PSHS-IRC aged 17 to 19 years old. It is presumed that participants of this age group should already have some knowledge of financial matters. Additionally, young individuals in this age range are expected to be financially literate as suggested in the study by de Bassa Scheresberg (2013). The study noted that an increasing number of adults are drowning in debt due to poor financial management. Furthermore, de Bassa Scheresberg pointed out that the likelihood of college students repaying their debts worsened over the past years, with the total number of college students borrowing beyond their capacity to repay increasing from less than 10% in 2004 to 17% in 2012. Young people were the group that showed the highest increase in default episodes on these loans. The majority were females, comprising 55.7% (n=39). Next were males at 37.1% (n=26). Five (5) did not specify their gender, accounting for 7.1%. According to Smith (2008), women are more likely to respond to surveys compared to men, which is evident among the survey participants, especially considering that there are more females in the 17-19 age group at PSHS-IRC. Furthermore, as Bailey (2019) suggests, women tend to be more frugal when it comes to expenses, as most of those who create and adhere to their budgets are women. The percentages of surveyed participants based on their scholarship categorization, which the school uses to provide students with a monthly stipend. This stipend is used by students to meet their needs and desires and can also be saved for future expenses. Full scholars, receiving more than Php 4,000 per month, make up 35.7% (25 participants). On the other hand, Partial 1 scholars, who receive more than Php 3,300, account for 12.9% (9 participants). There are 15 Partial 2 scholars, representing 21.4%, who receive more than Php 2,500, while 21 Partial 3 scholars, totaling 30%, receive more than Php 500. According to Brian Tracy International (2019), even as a person's income increases, they may still find it challenging to meet their basic needs (Parkinson's Law). This paper will examine the truth of Parkinson's Law based on data collected from the student participants.

Overall, each of the demographic factors mentioned has a connection to people's financial literacy. It is essential for young individuals to be financially savvy as the cost of living continues to rise, particularly for those who aspire to or are currently attending college (de Bassa Scheresberg, 2013). Women tend to be more frugal when it comes to money (Bailey, 2019), and regardless of a person's increasing income, they may still find it challenging to meet their basic needs (Brian Tracy International, 2019).

### Level of Financial Literacy Among Students

According to Waite (2011), as mentioned by Spitzer (2006), the brain is constantly learning, not only in designated contexts like the classroom where learning frequently occurs. Furthermore, play, especially for younger children, is an essential method of learning. Similarly, financial matters are learned not only within the classroom but also through other interactions, such as conversations with friends or school cafeterias.

The subject of Economics is part of the curriculum at PSHS-IRC for the 11th grade, where some terms related to crucial financial literacy issues are introduced. However, it does not directly teach how money should be managed correctly or recommended practices.

**TABLE I Different financial terms and the students’ knowledge about them.**

| Terms                | Mean | Descriptive Rating                                   |
|----------------------|------|--|
| Interest Payment     | 2.46 | I have learned it, and I know its meaning.           |
| Compound Interest    | 2.7  | I have learned it, and I know its meaning.           |
| Exchange Rate        | 2.49 | I have learned it, and I know its meaning.           |
| Depreciation         | 2.3  | I heard it before, but I can’t remember its meaning. |
| Shares/Stocks        | 2.61 | I have learned it, and I know its meaning.           |
| Return on investment | 2.43 | I have learned it, and I know its meaning.           |
| Dividend             | 2.13 | I heard it before, but I can’t remember its meaning. |
| Diversification      | 1.76 | I heard it before, but I can’t remember its meaning. |
| Debit Card           | 2.71 | I have learned it, and I know its meaning.           |
| Bank Loan            | 2.74 | I have learned it, and I know its meaning.           |
| Pension Plan         | 2.46 | I have learned it, and I know its meaning.           |
| Budget               | 2.89 | I have learned it, and I know its meaning.           |
| Wage                 | 2.8  | I have learned it, and I know its meaning.           |
| Entrepreneur         | 2.84 | I have learned it, and I know its meaning.           |
| Central Bank         | 2.87 | I have learned it, and I know its meaning.           |
| Income Tax           | 2.76 | I have learned it, and I know its meaning.           |
| Credit Default Swap  | 1.86 | I heard it before, but I can’t remember its meaning. |
| Call Option          | 1.87 | I heard it before, but I can’t remember its meaning. |
| Factor Average       | 2.48 | I have learned it, and I know its meaning.           |

Legend:

2.34-3.00: I have learned it, and I know its meaning.

1.67-2.33: I heard it before, but I can’t remember its meaning.

1.00-1.66: I haven’t heard it yet.

In the table, it can be observed that the category with the highest number is the one that states, “I have learned it and understand its meaning,” indicating that the students have sufficient knowledge about terms related to financial matters. In the same category, it can also be seen that the terms with the lowest counts are “Credit Default Swap” and “Call Option.” Both of these terms are used primarily in corporate business and not in normal classroom discourse, which is why it is expected that students do not use them frequently. This is because these words are relatively new in the world of corporate business and even more so in the world familiar to students (Arora, Ghandi, & Longstaff, 2012).

**TABLE II Frequency of students discussing financial decisions with adults.**

| Statement/s                             | Mean | Descriptive Rating    |
|---|------|-----------------------|
| Your spending decisions                 | 2.37 | Once or twice a month |
| Your savings decisions                  | 2.24 | Once or twice a month |
| Family budget                           | 2.23 | Once or twice a month |
| Money for things you want to buy        | 2.2  | Once or twice a month |
| News related to the economy or finances | 2.11 | Once or twice a month |
| Factor Average                          | 2.23 | Once or twice a month |

Legend:

3.26-4.00: Almost every day

2.51-3.25: Once or twice a week

1.76-2.50: Once or twice a month

1.00-1.75: Never

Based on the table above, it can be observed that the general response of students regarding the frequency of discussing money-related decisions with older individuals is only once or twice a month ( $\mu = 2.23$ ). However, students most frequently discuss their spending decisions with older individuals compared to other topics listed ( $\mu = 2.37$ ). Although students only discuss money decisions with older individuals once or twice, Dulin (2016) reported that their financial decisions are influenced by their parents, siblings, and other relatives.

**TABLE III How much do students agree with the following statements about your money management?**

| Statement/s  | Mean | Descriptive Rating |
|--|------|--------------------|
| I can make decisions on my own about how to allocate money.  | 3.13 | Agree              |
| I can set aside money on my own for small amounts, but I need permission from my parents when it's a large amount. | 3.01 | Agree              |
| I need to ask my parents or guardian for permission before spending any money on myself.                           | 2.19 | Disagree           |
| I am responsible for my own money.   | 3.46 | Strongly agree     |
| Factor Average   | 2.95 | Agree              |

Legend:

3.26-4.00: Strongly agree

2.51-3.25: Agree

1.76-2.50: Disagree

1.00-1.75: Strongly disagree

In the table, it can be seen that the common response of the students is "Agree." Among the gathered responses, the highest mean ( $\mu = 3.46$ ) is for the statement that their own money is their responsibility, where students strongly agree. Meanwhile, the common response regarding seeking permission from parents before spending money for themselves is "Disagree" ( $\mu = 2.19$ ). Financial literacy is crucial for everyone, especially for young individuals. Their level of knowledge and financial experience are two significant factors that affect how young people manage their money for their daily expenses. Heck (1984) also mentioned that cultivating an individual's financial management behaviors can help in handling finances and can also ensure financial success and security in the future.

**TABLE IV How often do students do the following when planning to buy new items using their allowance?**

| Statement/s   | Mean | Descriptive Rating |
|---|------|--------------------|
| Comparing prices at different stores/markets.         | 3.49 | Always             |
| Comparing prices between physical and online markets. | 3.27 | Always             |

|  |      |           |
|--|------|-----------|
| Buying without comparing prices.                 | 1.97 | Rarely    |
| Waiting for the price to drop before purchasing. | 2.94 | Sometimes |
| Factor Average                                   | 2.92 | Sometimes |

Legend:

3.26-4.00: Always

2.51-3.25: Sometimes

1.76-2.50: Rarely

1.00-1.75: Never

Based on the table, most of the responses to the mentioned situations are consistently done by the students. When it comes to comparing prices at different markets, the general response of the students is “Always” ( $\mu = 3.49$ ). However, it was found that very few students rarely compare prices before making a purchase ( $\mu = 1.97$ ). This is in line with the findings of Ismail et al. (2018), where students prefer cheaper items when shopping. According to Ashok (2021), consumers often compare prices of goods, especially when shopping online, where it is easier to do so, making it a common influence on their online purchases.

**TABLE V How confident are the participants in doing the following things?**

| Statement/s   | Mean | Descriptive Rating |
|---|------|--------------------|
| Performing money transfers                                      | 2.47 | Somewhat confident |
| Filling out forms at the bank                                   | 2.37 | Somewhat confident |
| Understanding bank statements                                   | 2.09 | Somewhat confident |
| Understanding sales contracts                                   | 1.59 | Not confident      |
| Balancing my account  | 2.59 | Confident          |
| Planning my spending considering my current financial situation | 2.64 | Confident          |
| Factor Average  | 2.29 | Somewhat confident |

Legend:

3.26-4.00: Extremely confident

2.51-3.25: Confident

1.76-2.50: Somewhat confident

1.00-1.75: Not confident

Based on the table, the common responses of the participants to the statements are “Somewhat confident” and “Confident,” while the statement about understanding sales contracts received the lowest mean ( $\mu = 1.59$ ) corresponding to the descriptive rating “Not confident.” On the other hand, the statement about planning expenses while considering their financial situation obtained the highest mean ( $\mu = 2.64$ ) equivalent to the descriptive rating “Confident.” According to Sjam (2015), financial literacy is positively related to financial behavior. Table 10 suggests that the students’ knowledge about banking matters is not yet sufficient, which is why they are only somewhat confident when it comes to these issues. Additionally, due to the students’



age, they have limited experience with banking transactions, which affects their confidence in handling the matters mentioned above.

**TABLE VI When using digital or electronic devices outside the bank (e.g., at home or in stores), how confident are the participants in the following things?**

| Statement/s  | Mean | Descriptive Rating |
|--|------|--------------------|
| Transferring money   | 2.56 | Confident          |
| Checking the balance   | 2.7  | Confident          |
| Making payments using a debit card instead of cash   | 2.19 | Somewhat confident |
| Making payments using a mobile device instead of cash  | 2.64 | Confident          |
| Ensuring the security of sensitive information when making electronic payments or using online banking | 2.53 | Confident          |
| Factor Average   | 2.52 | Confident          |

Legend:

3.26-4.00: Extremely confident

2.51-3.25: Confident

1.76-2.50: Somewhat confident

1.00-1.75: Not confident

In general, the participants are confident when it comes to using digital or electronic devices outside of the bank (Table 11). Among the five statements above, it was found that the participants are only somewhat confident ( $\mu = 2.19$ ) when it comes to making payments using their debit cards compared to other situations. It can also be seen in the table that the overall response of the participants is confident when it comes to checking their account balance, which obtained the highest population mean among all the mentioned situations ( $\mu = 2.70$ ). According to Navya (2021), online payment is more commonly used by students compared to cash payments because online transactions are easy to perform. This explains the confident behavior of students when it comes to making online payments. Additionally, it was found that most students do not yet have a debit card, which may also be a reason for their somewhat confidence in using debit cards for payments.

**Relationship between Demographic Profile and Financial Literacy Levels of Students**

**TABLE VII Statistical analysis (Wilks’ test) of Table 1**

|                   | <i>Gender</i>  | <i>Scholarship Categorization</i>                          |
|-------------------|--|--|
| Lambda            | 0.637  | 0.446  |
| F Observed values | 0.704  | 0.847  |
| DF1               | 36   | 54   |
| DF2               | 100  | 147  |
| F Critical value  | 1.535  | 1.425  |
| p-value           | 0.884  | 0.755  |
| Decision          | Do not reject the null hypothesis                          | Do not reject the null hypothesis                          |
| Interpretation    | No significant effect on the level of financial knowledge. | No significant effect on the level of financial knowledge. |

Based on the table, gender ( $p=0.884$ ) and scholarship categorization ( $p=0.755$ ) do not have a significant relationship with the students' knowledge levels in financial terms such as compound interest, depreciation, shares or stocks, and others. This result is supported by the research of Chambers, Asarta, & Farley-Ripple (2019), where they stated that the level of financial literacy in secondary education is not well understood. It is also noticeable in their study that the gender gap in financial literacy is not associated with gender differences in financial decision-making. Some studies have reported the gender effect (Organisation for Economic Co-operation and Development, 2013), while others have not identified a clear relationship between gender and financial literacy (Atkinson & Messy, 2012).

**TABLE VIII Statistical analysis (Wilks' test) of Table 2.**

|                   | <i>Gender</i>  | <i>Scholarship Categorization</i> |
|-------------------|--|-----------------------------------|
| Lambda            | 0.917  | 0.643                             |
| F Observed values | 0.556  | 2.054                             |
| DF1               | 10   | 15                                |
| DF2               | 126  | 172                               |
| F Critical value  | 1.907  | 1.725                             |
| p-value           | 0.847  | 0.014                             |
| Decision          | Do not reject the null hypothesis                          | Reject the null hypothesis        |
| Interpretation    | No significant effect on the level of financial knowledge. |                                   |

Based on the results of the Wilks' test, gender does not have a significant effect on the level of financial knowledge ( $p>0.05$ ), while the scholarship categorization of the students has a significant effect ( $p<0.05$ ) on their financial knowledge when it comes to making decisions about money with adults. Wagner (2019) observed that financial literacy is related to the income people receive, where he stated that those who earn more money tend to have more knowledge about finances because they are expected to manage their money more effectively. The statement also works vice versa because it's harder for individuals without money to learn about financial matters, especially younger minors. Additionally, teaching individuals without money about finances can be challenging because it's a practical matter used in everyday life.

**TABLE IX Statistical analysis (Wilks' test) of Table 3**

|                   | <i>Gender</i>  | <i>Scholarship Categorization</i>                          |
|-------------------|--|--|
| Lambda            | 0.884  | 0.774  |
| F Observed values | 1.016  | 1.411  |
| DF1               | 8  | 12   |
| DF2               | 128  | 167  |
| F Critical value  | 2.011  | 1.811  |
| p-value           | 0.428  | 0.165  |
| Decision          | Do not reject the null hypothesis                          | Do not reject the null hypothesis                          |
| Interpretation    | No significant effect on the level of financial knowledge. | No significant effect on the level of financial knowledge. |

The table shows that both gender ( $p>0.05$ ) and scholarship categorization ( $p>0.05$ ) do not have a significant effect on the level of financial knowledge of students when it comes to discussing how to manage money. In terms of how parents manage money for their children, parental income is not highly significant. According to Homan (2015), parents with higher incomes are assumed to be better at financial management, and they also pass on these skills to their children. However, this only has a significant impact on their child's behavior if it is directly discussed and taught.

**TABLE X Statistical analysis (Wilks' test) of Table 4**

|                   | <i>Gender</i>  | <i>Scholarship Categorization</i>                          |
|-------------------|--|--|
| Lambda            | 0.927  | 0.811  |
| F Observed values | 0.622  | 1.145  |
| DF1               | 8  | 12   |
| DF2               | 128  | 167  |
| F Critical value  | 2.011  | 1.811  |
| p-value           | 0.759  | 0.328  |
| Decision          | Do not reject the null hypothesis                          | Do not reject the null hypothesis                          |
| Interpretation    | No significant effect on the level of financial knowledge. | No significant effect on the level of financial knowledge. |

Based on the table, gender ( $p > 0.05$ ) and scholarship categorization ( $p > 0.05$ ) do not have a significant relationship with students' intention to buy new items using their allowance. This indicates that students have similar behaviors when it comes to comparing prices of goods. According to Haberman & Danes (2007), the buying behavior of males and females in terms of comparing prices of their purchases is almost the same. Rani (2014) also suggests that their perceptions of comparison are influenced by their beliefs, lifestyle, and needs or desires.

**TABLE XI Statistical analysis (Wilks' test) of Table 5**

|                   | <i>Gender</i>  | <i>Scholarship Categorization</i>                          |
|-------------------|--|--|
| Lambda            | 0.898  | 0.683  |
| F Observed values | 0.569  | 1.385  |
| DF1               | 12   | 18   |
| DF2               | 124  | 173  |
| F Critical value  | 1.831  | 1.664  |
| p-value           | 0.864  | 0.144  |
| Decision          | Do not reject the null hypothesis                          | Do not reject the null hypothesis                          |
| Interpretation    | No significant effect on the level of financial knowledge. | No significant effect on the level of financial knowledge. |

Based on the table, both gender and scholarship categorization do not have a significant effect ( $p > 0.05$ ) on the level of financial literacy regarding the ability to do the following things listed in table 10. This finding contradicts the results of Herstein & Tifferet (2012), who found that gender influences consumers' impulsive spending. However, Salih (2019) mentioned that the results of studies on this topic vary because shopping habits are also influenced by the emotions of both men and women in their purchasing decisions.

**TABLE XII Statistical analysis (Wilks' test) of Table 6**

|                   | <i>Gender</i> | <i>Scholarship Categorization</i> |
|-------------------|---------------|-----------------------------------|
| Lambda            | 0.788         | 0.811                             |
| F Observed values | 1.591         | 0.904                             |
| DF1               | 10            | 15                                |
| DF2               | 126           | 172                               |

|                  |  |  |
|------------------|--|--|
| F Critical value | 1.907  | 1.725  |
| p-value          | 0.116  | 0.561  |
| Decision         | Do not reject the null hypothesis                          | Do not reject the null hypothesis                          |
| Interpretation   | No significant effect on the level of financial knowledge. | No significant effect on the level of financial knowledge. |

Based on the results of the Wilks' test, the gender and scholarship categorization of students do not have a significant association ( $p > 0.05$ ) with their financial literacy, specifically regarding the use of digital or electronic devices outside of the bank. This finding contradicts the findings of Fachrudin & Silalahi (2022), where the amount of income influenced the use of apps or cards for payments because those with higher income have more need for card-related purchases. However, the difference in results may be due to the limited capabilities of students at their age, resulting in similar responses among those who do not yet have debit or credit cards.

*Factors Affecting Students' Financial Literacy* This section will discuss students' opinions on financial literacy and other factors affecting their financial knowledge.

There are factors that affect the financial literacy of students. Some of them say that having a GCash personal account is one way they learn more about money, which is almost the same as having a bank account because both factors are related to owning a personal account. The most mentioned factor is purchasing from online shops because, according to Gaubys (2021), the number of online shoppers in the Philippines increased during the pandemic; from 2.14 billion shoppers worldwide, there were 50.49 million online shoppers in the Philippines in 2021 alone. There are also more complex factors such as having a brokerage account and cryptocurrency wallet, mortgages, assets, real estate and property value, and networking. The influence of parents is also a significant factor in financial matters, especially since students often seek their parents for money to cover their school-related expenses. According to Dulin (2016), the financial decisions of students are influenced by their parents.

## CONCLUSIONS

Seventy (70) students from the 12th grade of the Philippine Science High School – Ilocos Region Campus (IRC) participated in the study for the academic year 2021-2022. Based on the study's results, the participants were aged 17 to 19, with the majority being 18 years old (79.7%). More than half of the respondents were female (55.7%), while 37.1% were male. The remaining 7.1% did not specify their gender. The study also found that most of the students were full scholars (35.7%), followed by partial 3 scholars (30%). Meanwhile, 21.4% were partial 2 scholars, and the lowest percentage were partial 1 scholars (12.9%). The study has demonstrated that the students in the 12th grade of PSHS-IRC are financially literate, as evidenced by their extensive vocabulary related to financial literacy, including terms like compound interest, income tax, budget, debit card, bank loan, and others ( $\mu = 2.48$ ). However, there are some terms, such as credit default swap, dividend, call option, and depreciation, that they have heard but cannot remember the meanings of. The study also revealed that the participants are comfortable using digital or electronic devices outside of the bank ( $\mu = 2.52$ ). However, they are only somewhat confident in managing finances ( $\mu = 2.29$ ). Based on the students' responses, they acquire their financial knowledge from the internet, parents, friends, and other sources. It was also found that most students learn from activities outside of school compared to their classes. Their financial literacy is also related to their experiences with money-related activities such as online shopping, mobile payments, ensuring change and remaining cash, overspending, and more. Additionally, it was discovered that in the past year, students had experiences related to money in a classroom setting, including describing the purpose and use of money, investigating spending money on needs and wants, and discussing consumer rights and how the value of money changes

in the stock market. Overall, these activities are rarely discussed or experienced in their daily lives. Most of the students agree that it is their responsibility to manage their own money ( $\mu=3.46$ ) and that they are capable of allocating money for various purposes ( $\mu =3.13$ ). However, some students require their parents' permission for significant financial allocations ( $\mu =3.01$ ). The results also show that students commonly compare prices at different stores/markets ( $\mu =3.49$ ) and also compare online and physical markets ( $\mu =3.27$ ). Students are confident in managing money outside the bank, such as transferring money and making payments using a mobile device instead of cash, except for using debit cards ( $\mu =2.19$ ), as few students have debit cards. Regarding banking matters, including performing money transfers, filling out bank forms, and understanding bank statements, students are only somewhat confident, while they are not confident in understanding sales contracts. However, students are confident in balancing their account and planning their spending while considering their financial situation. The study also found that gender and scholarship categorization do not significantly affect students' overall financial literacy. However, scholarship categorization was found to have a significant relationship with students' discussions about financial decisions with adults, as those who handle money tend to learn more from adults or those who have more knowledge. It is challenging to teach those who do not handle money about finances because it is a practical matter used in daily life. Based on the participants' responses, the main factor affecting their financial literacy is online shopping. This is because almost all of them have internet access and access to various online shops. Other factors affecting the financial literacy of the participants include having a GCash account, which makes it easy to manage money online, and having a bank account. Some of the respondents also mentioned purchasing celebrity merchandise, watching online videos about financial matters, and experiencing property loss.

## RECOMMENDATIONS

One recommendation for improving this study is to include respondents from lower grade levels. This will help determine the level of financial literacy of secondary school students beyond just those in the 12th grade at PSHS-IRC. In this study, a convenience sampling method was used to select respondents, but it is recommended to use other sampling methods such as random sampling to avoid biases in the study's results. Additionally, one limitation of the study is that it only used surveys and a financial literacy questionnaire based on PISA to assess the participants' financial literacy. Therefore, it is recommended to use other research instruments, such as interviews, to strengthen the study's results by obtaining additional details and insights from participants about their level of financial literacy.

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