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# Effects of Cryptocurrency on Senior High School Students' Financial Literacy

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***Abstract:*** Cryptocurrency, often known as a digital or virtual currency, is secured via cryptography.There are risk factors that could possibly affect an individual's financial literacy. Now that cryptocurrency is emerging continuously not only for investors, businessmen, but also now in students specifically on Senior High, this research aims to determine the effects of cryptocurrency on senior high school students' financial literacy - to see how the students balance their financing styles while investing in any forms of cryptocurrencies. To address the said topic, the researchers used a questionnaire method for their primary data gathering tool. Standardized questionnaires were used on determining the effect of cryptocurrencies in senior high school students on their financial literacy. The researchers gathered the responses and found out that there are many users of cryptocurrency yet some do lack the knowledge which had affected their financial literacy.

**Keywords:** Cryptocurrency, Financial Literacy, Senior High School Students

## 1. INTRODUCTION

As the years pass, a lot of digitization has occurred, and a lot of people have learned how to use modern technology. Cryptocurrency is a digital form of payment that can be traded online for goods and services. Many businesses utilize cryptocurrencies, which they refer to as tokens, to deal with one another. Cryptocurrency has the potential to increase in value spontaneously, which is why many investors are becoming increasingly interested in the area. You can buy things using cryptocurrency, as the name implies. It is now the modern source of income of different fields like businessmen, and now students. Cryptocurrency is indeed convenient to use since we can accomplish anything we want with it with only a few clicks[1].

However, there are problems and opportunities to consider in the Philippines' development of electronic payment systems. The list of cryptocurrency disadvantages, in the researchers opinion, is much longer, and includes things like the risk of money laundering, terrorist and other illegal activity financing, the lack of a central issuer, which means there is no legal formal entity to guarantee in the event of a bankruptcy, affects financial literacy, and so on.. Although it is difficult to predict, many scholars and professionals in this field believe that cryptocurrencies have a bright future since they will eliminate trade barriers and middlemen, lowering transaction costs, and therefore enhance trade and the economy. Nonetheless, we should consider and listen to gloomy intellectual voices. Furthermore, the significant risk of volatility, hacking threats, and a lack of institutional backing make the future of cryptocurrencies bleak[1].

The main objective of this research was to determine the effects of cryptocurrency on students when it comes to their financial literacy. To find out that as a student, to establish the level of financial literacy among Senior High School students, to investigate the impact of financial literacy on financial behavior, and to see how they balance their financing styles while investing in any forms of cryptocurrency [2].

Throughout this study, the researchers provided the background information about financial literacy and cryptocurrency wherein it hopes to help people in the field of business, investments, and especially students specifically in senior high school as aspiring individuals.

## 2. RELATED WORKS

The world is transitioning to an information age in which "data is the new gold," and the processing and management of this massive amount of data has become a chaos[3].

Cryptocurrency, often known as a digital or virtual currency, is secured via cryptography. One of the most enticing qualities of a cryptocurrency is its organic nature[1]. And as described by the Homeland Security Studies And Analysis Institute, is a sort of currency based exclusively on mathematics. Cryptocurrencies function as a decentralized and nearly borderless system for exchange[4]. This design eliminates the requirement for financial institutions or "trusted third parties"[5]. Around the world, digital currencies are becoming increasingly popular. These include Facebook Credits, Microsoft Points, and Amazon Coins [6]. Unlike Bitcoins, these monies are dispersed by corporations and are not related to any physical requirement, as previously indicated.The Philippines, being the second most populous country in Southeast Asia (SEA), provides fertile ground for blockchain development. The Philippines, with a population of over 107 million people and a 71 percent internet

penetration rate, is one of Southeast Asia's most powerful blockchain marketplaces. However, with such a large population comes the challenge of banking the unbanked, who make up a worrying 77 percent of the population. Fortunately, there is Project i2i, which aims to provide financial services to residents in rural areas, who make up a significant share of the archipelago's unbanked population [7].

Financial literacy is regarded as an important strategy for increasing financial inclusion and long-term financial security. The relationship between financial literacy and financial behavior and decision-making has been researched in depth. In order to anticipate and impact present and future behavior, the routes are then identified, modelled, and monitored [8]. However, academic and non-academic researchers are interested in cryptocurrency. Other researchers used a web-based questionnaire approach to perform a demographics survey. The four most likely roadblocks were additional financial costs of resources, distraction from existing curriculum, time to train instructors, and the belief that children are too young for this type of schooling. The findings also revealed that resistance scores are equally important regardless of grade level or district type [9].

Technological advancements have changed the way people obtain credit and make transactions. Deferred payments, installment loans, and personal credit cards were rare or used sparingly barely a decade ago in China, as an example [10]. The proposed cryptocurrency management paradigm is a good fit for the current challenge in the digital monetary system.

Future researchers in engineering, management, accounting, and those involved in the digital monetary system may find the framework useful as a reference. The following were presented as study suggestions based on the study's results and conclusion: 1) As the number of crypto currencies available grows, it is suggested that this proposed framework, which is based on the same principles as the US Dollar, be adapted to worldwide use;2) that future designs, innovation, and service expansion be implemented internationally; and 3) it continues the regulating of the process of the availability of monetary scheme model, and the equivalency of digital currency of a particular country based on its monetary exchange rate to maintain system's stable adaptation for the full implementation[11]. The potential of cryptocurrencies to be exchanged like commodities might also be a disadvantage. Commodity-based markets have a lot of value fluctuation due to numerous market occurrences. An unforeseen catastrophe could cause a large sum of money to be lost, eroding investor confidence[12]. It would be a mistake to turn a blind eye to this new decentralized monetary framework. Students are generally aware of one cryptocurrency coin, Bitcoin, and are comfortable purchasing lower-cost consumables with the medium. A survey instrument was designed and presented to the Cyber Business Law class via Survey Monkey[13]. The patterns of cryptocurrency usage and the ways it impacts users' trust is still understudied[14]. Bohr and Bashir studied the culture of cryptocurrency users, finding that some demographic features affected their usage patterns[15].

Using the discovered datum, it will be made as a reference for us researchers. It is mentioned that cryptocurrency is an online platform that can be a form of investment, but some of its investors were too young and there were additional financial costs of resources, but what it lacks is knowledge and discipline in financial literacy.

## 3. STATEMENT OF THE PROBLEM

The primary goal of this study was to examine the effects of cryptocurrencies on senior high school students' financial literacy. Specifically, this study sought answers to the following questions:

1. How may the use of cryptocurrency be described:
   1.1 Performance Expectancy (PE);
   1.2 Behavioral Intention (BI);
   1.3 Trust (T); and
   1.4 Perceived Risk (PE)?
2. What is the current status of the student's financial literacy?
3. Does cryptocurrencies affect the financial literacy of senior high school students?

## 4. METHODOLOGY

The researchers used the descriptive correlational research method. A correlational study is a type of study that involves observing two variables in order to establish a statistically significant relationship between them. Since it covers the description of independent and dependent variables, the goals of this study were to identify the variables that have some type of relationship to the extent that a change in one causes a change in the other [16]. Particularly, the aim of this research was to study the effects of cryptocurrencies on senior high school students' financial literacy.

The researchers used a questionnaire method for their primary data gathering tool. It is a standardized questionnaire used on determining the effect of cryptocurrencies in Senior High School students on their financial literacy.

The respondents of the study were senior high school students in private schools in Bulacan during the school year 2021-2022. The researchers used convenience sampling techniques. Convenience sampling (also known as Haphazard Sampling or Accidental Sampling) is a type of nonprobability or nonrandom sampling. It involves members of the target population who meet certain practical criteria, such as easy accessibility, geographic proximity or availability at a specific time[17].

The respondents of this study were 41 senior high school students in a private school in Bulacan. To gather the information for this study the researcher adapted a questionnaire that deals with the effects of cryptocurrency in Senior high school students' financial literacy. It is divided into 2 sections (A and B). Section A consists of 18 questions that talks about how effective cryptocurrency was [18-20]. The constructs' reliability was then assessed using Cronbach's composite and alpha reliability indicators with a proposed value of 0.7. Furthermore, convergent validity was ensured by measuring the average variance extracted (AVE).

While Section B consists of 8 questions that talks about the help given by financial literacy on a student's income. The researchers will adopt the Financial Management Behavior Scale that is being developed for the first time in this project (FMBS). It also used a nationally representative sample to investigate the scale's psychometric qualities. The dependability of the entire scale was satisfactory (Cronbach's alpha =.81).

To determine the relationship between, the Effects of Cryptocurrency in Senior High School's Financial Literacy means, Frequency counts, and the Pearson Correlation and regression analysis was used as the statistical formula of this study.

The researchers followed the following procedures when collecting the data:

An email was sent to the school principal and admin of a private school in the City of Marilao, Bulacan, asking for permission to conduct the study.

The researchers then distributed the questionnaires to the respondents through an email with the authorization of the school principal and the admin.

The researchers collected the questionnaires from the respondents and will check if they were able to answer all the questions given.

## 5. RESULTS AND DISCUSSION

The increasing rate of Cryptocurrency was likely to be acceptable since modern technology has risen and a lot of digital users invented some stocks or marketing for the people who want to invest or to have an income. In this section, the researchers will expand the responses of the respondents for the future researchers to obtain more knowledge.

**Cryptocurrency**

*Table 1. Performance Expectancy (PE)*

| Indicators | Mean | Interpretation |
|---|---|---|
| 1. I find the use of cryptocurrencies useful in my daily life. | 3.88 | agree |
| 2. The use of cryptocurrencies increases my chances of achieving tasks that are important to me. | 4.05 | agree |
| 3. The use of cryptocurrencies and related services (wallets, exchanges) helps me accomplish tasks more quickly. | 3.97 | agree |
| 4. The use of cryptocurrencies increases my productivity | 3.68 | agree |
| **Total** | 3.73 | agree |

In Table 1, it stated that the Senior High School Students responded "Agree" on the Performance Expectancy of cryptocurrency, as shown in the average score 3.73. Statement 2 got the highest mean score while the rest has the same precision of mean scores.

Its utility, on the other hand, does not always imply improved worth [23]. Currently, cryptocurrencies are utilized to purchase products and services. According to Venkatesh's findings [24], participants in this study are more likely to accept blockchain technology if they believe it will provide beneficial benefits. As a result, performance expectancy is likely to have a favorable impact on behavioral intention.

*Table 2. Behavioral Intention (BI)*

| Indicators | Mean | Interpretation |
|---|---|---|
| 1. intend to use cryptocurrencies instead of traditional money. | 3.08 | neutral |
| 2. I plan to use cryptocurrencies in the next 6-12 months | 3.46 | neutral |
| 3. I prefer to use cryptocurrencies in payment. | 3.21 | neutral |
| 4. The use of cryptocurrencies increases my productivity | 3.08 | neutral |
| **Total** | 3.21 | neutral |

In Table 2, the Behavioral Intention of cryptocurrency for Senior High school Students has the average score of 3.21 which fell off to the rating scale of "Neutral" as shown in the table.

Behavioral Intention for the use of cryptocurrency of Senior High School students was most likely to be positive or negative as the Performance Expectancy shows that it has the greatest number of positive responses.

*Table 3. Trust (T)*

| Indicators | Mean | Interpretation |
|---|---|---|
| 1. I believe that cryptocurrencies are trustworthy | 3.67 | agree |
| 2. I have confidence in cryptocurrencies. | 3.65 | agree |
| 3. I do not doubt the veracity of cryptocurrencies, their systems, and related services. | 3.63 | agree |
| 4. I am confident that the legal and technological structures protect me from problems with cryptocurrencies. | 3.44 | neutral |
| 5. Even if they were not regulated, I would still trust cryptocurrencies. | 3.44 | neutral |
| 6. Cryptocurrencies are capable of doing their job. | 3.60 | agree |
| **Total** | 3.57 | agree |

Table 3, may be extracted from different responses but the Trust of Cryptocurrency for Senior High school students has the average score of 3..57, which has the majority of the respondents who answered " Agree" as stated in the table.

Trust, according to Lewicki and Wiethoff, is "an individual's belief and willingness to act on the words, actions, and decisions of another" [21], i.e., an individual is able to depend, or intends to rely, on another party with a sense of relative security, given the lack of control over that party and the greater chance of negative consequences [22].

*Table 4. Perceived Risk (PR)*

| Indicators | Mean | Interpretation |
|---|---|---|
| 1. I think that the use of cryptocurrencies puts my privacy at risk. | 3.35 | neutral |
| 2. The mere use of cryptocurrencies exposes me to a general risk. | 3.37 | neutral |
| 3. Using cryptocurrencies puts my financial activities at risk | 3.40 | neutral |
| 4. I think hackers can control my transaction history if I use cryptocurrencies. Although Perceived Risk is a multilevel construct, we have used the scale of Overall Risk that includes all Risks. | 3.37 | neutral |
| **Total** | 3.37 | neutral |

Table 4, has the average score of 3.37 and had a rating scale of "Neutral" since most respondents were hesitant because cryptocurrency or the use of cryptocurrency have higher risk of getting exposed or may put privacy at risk.

Perceived risk can be a defining element in whether or not people trust each other [25], for example, if a customer identifies a high level of danger with an online transaction, trust in the seller drops and the urge to control the transaction rises [26]. Therefore, Perceived Risks affect the Trust of Senior High school students in using cryptocurrencies.

**Current Status of Student's Financial Literacy**

*Table 5. Financial Literacy.*

| Indicators | Mean | Interpretation |
|---|---|---|
| 1. Pay bills on time | 3.96 | agree |
| 2. Keep a financial record (Income) | 3.87 | agree |
| 3. Stay within budget. | 3.85 | agree |
| 4. Pay off credit card | 3.58 | agree |
| 5. Maintain or create an emergency fund | 3.67 | agree |
| 6. Max out credit card | 3.33 | neutral |
| 7. Invest money | 3.83 | agree |
| 8. Employed part time | 3.58 | agree |
| **Total** | 3.71 | agree |

Lastly, Table 5 showed that the Financial Literacy had the average score of 3.71 which made the responses have the rating scale of " Agree." Statement 1 has the highest mean score of 3.96 since as a Senior High School student, it is a responsibility to pay bills on time. Statement 6 got the least amount of mean score 3.33 because not all of the respondents used credit cards which was highly understandable.

**Effects of Cryptocurrency on Senior Highschool Students Financial Literacy**

According to the findings, there was a moderate or slight effect of cryptocurrency to students' financial literacy as evidenced by 0.5351 correlation coefficient. This is a moderate positive (negative) correlation which implies that there was a little effect when it comes to Cryptocurrency on Students' Financial literacy.

## 6. CONCLUSIONS AND RECOMMENDATIONS

In conclusion, these findings had affected the financial literacy of Senior Highschool students by the use of cryptocurrency. There may be a lot of factors or Perceived Risks but it positively affects the Performance Expectancy which leads to gaining the Trust of the users and the Behavioral Intention when it comes to Financial Literacy. What the future researchers should focus on is how a certain individual, specifically students, views these risks that may affect the Trust, Performance Expectancy, Behavioral Intention, and Financial Literacy to avoid conflict that might occur in the future.

Despite the fact that the researchers covered variables in this study that, after analyzing the results, do indeed influence cryptocurrencies, it would be interesting to see if the same is true of a sample at an international level, given that the sample studied is only at the Senior High School level and consists mostly of students between the ages of 17 and 18. Similarly, it would be fascinating to include other important variables to investigate how cryptocurrencies influence financial behavior, ease of use, or entertainment. The researchers would also like to suggest giving cryptocurrencies more attention because of the rising users of cryptocurrency.

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