Determination of Technology-Based Accounting Curriculum through Financial Literacy

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ABSTRACT

Purpose — *This study aims to determine which factors that can affect financial literacy as the basis for developing a technology-based accounting curriculum at the Accounting Department, Faculty of Economics and Business, Mulawarman University.*

Design/methodology/approach — *This research is a quantitative study using primary data obtained through a questionnaire filled out by 100 respondents, then the data is processed using Smart-PLS.*

Findings — *The results showed that financial behavior and financial attitudes had a positive effect on financial literacy, while financial technology had no effect on financial literacy. This proves that the behavior and attitudes shown by students of the Faculty of Economics and Business can increase student curiosity regarding financial management and understanding of financial instruments so as to improve student financial literacy. In addition, from the respondents' answers, it can also be seen that the literacy level of students is at a sufficient literate level, which means that students have a good understanding of financial management but are still unable to maximize the use of financial products and services. This is evidenced by the lack of use of financial technology by students.*

Practical implications — *The results of this research contribute to the Accounting Department needing to add material about the benefits and functions of financial technology in financial management to improve student competence in the industrial era 4.0.*

Originality/value — *This paper presents the case of financial literacy as the basis to improve a technology-based curriculum which is currently indispensable in the scope of accounting education.*

Keywords — *Financial Literacy; Financial Technology; Financial Attitude; Accounting Curriculum*

Paper type — *Case study*

INTRODUCTION

Financial literacy is one of the most important agendas in the international world, especially in Indonesia. Therefore, the President made Presidential Regulation (PP) No. 82 of 2016. In PP No. 82 of 2016 concerning the National Strategy for Financial Inclusion (SNKI) it has been stipulated that Indonesia in 2019 reaches the target of 75 percent of the adult population in accessing formal financial services. The definition of financial literacy according to SNKI is a person's ability to have and use access to use formal financial products and services such as transactions, payments, credit, savings, and insurance. The SNKI program aims to enable the entire community to easily access the services of financial service institutions that suit their needs. Global Findex included Indonesia in a survey conducted on 1,000 respondents in 2015 showing that the number of people over 15 years old who have accounts in various financial institutions increased from around 19.6 percent to 35.9 percent in 2011. The National Survey of Indonesian Financial Literacy and Inclusion in 2016 conducted by the Financial Services Authority (OJK) also provides an overview of the condition of the level of public financial inclusion in Indonesia which is 67.82 percent.

However, on the other hand, the 2016 SNLKI stated that the level of financial literacy in Indonesia was only 29.66 percent. These results indicate that for every 100 people, only less than 30 people are included in the well-literate category (good financial literacy). The increase in the financial inclusion of the population in Indonesia, which is classified as good, is not accompanied by a significant level of financial literacy. This is then unable to show that financial literacy will be followed by financial inclusion in accordance with the analysis of the Financial Services Authority.

Even so, different things happen to the level of student financial literacy in several regions in Indonesia which is still very low. Financial Literacy of students in Indonesia, which only covers 23.4 percent, shows that the use of financial products by students is not balanced with knowledge and understanding in the use of these products, this shows that the literacy level of students in Indonesia is very low (Upadana & Herawati, 2020). This is due to the lack of general knowledge about financial products and services. Students as the younger generation will not only face increasing complexity in financial products, services, and markets, but they are more likely to have to bear more financial risks in the future than their parents (Lusardi & Mitchelli, 2007). Students generally have greater freedom to make personal decisions in financial matters. Many students learn from trial and error, but this has not been able to make them smart economic actors in the industrial 4.0 era as it is today. Learning in

higher education will eventually play a very important role in the process of forming student financial literacy.

Students live in a diverse and complex economic environment, so an increased need for financial literacy is necessary. Some countries have even recognized the importance of financial literacy being taught in the classroom. This of course aims that students who have the knowledge and ability to manage their finances well will show wise decision-making behavior related to their finances, such as when is the right time to invest, save, and use credit cards. Effective and efficient learning of finance will help students to have the ability to understand, assess, and act in their financial interests. Gutter & Copur, (2011) and Putri & Rahyuda, (2017) in their research state that financial education has a significant positive effect on financial knowledge, attitudes, and behavior.

The lack of financial knowledge is recognized as one of the factors that contribute to financial decisions that lack information so that it can have a negative impact. Therefore, students must be equipped with good financial knowledge in order to create harmony between the income they earn and the expenditure or consumption they spend. This must be done because not all individuals have the same income and needs. Sometimes there are individuals who have sufficient income but they are equipped with good financial knowledge, so they can manage their finances well too. On the other hand, there are individuals who have large incomes but cannot manage their finances properly due to a lack of knowledge about financial management. Therefore, so that finances can be processed carefully and efficiently, it is important for students to understand financial literacy.

Along with the development of information technology and also supported by the rapid rate of internet penetration, several digital financial services have emerged that can make it easier for the public to make transactions or obtain financing. This digital financial service is called financial technology which was later shortened to fintech. The Financial Services Authority (OJK) itself said that the presence of fintech was able to increase and encourage financial literacy in Indonesia. OJK encourages that it can be directed to fill the void of formal financial services in segments that have not been able to receive formal financial services. OJK has also noted that there are currently more than 150 fintech companies in Indonesia. Both those working with the Peer to Peer Lending business model, equity crowdfunding, insurTech, RoboAdvisher, and others. The rapid development of fintech in Indonesia itself is triggered by the presence of high penetration of internet usage with smartphones, so this has resulted in a shift in people's behavior in the aspect of digital services.

OJK's support for the expansion of fintech is in line with the government's program to make Indonesia the largest digital economy country in Southeast Asia by 2020, which is supported by a national financial inclusion strategy, e-commerce regulations, and similar programs.

The distribution of fintech companies in Indonesia in 2019 can be seen in Figure 1 based on the following FintechNews Singapore survey:

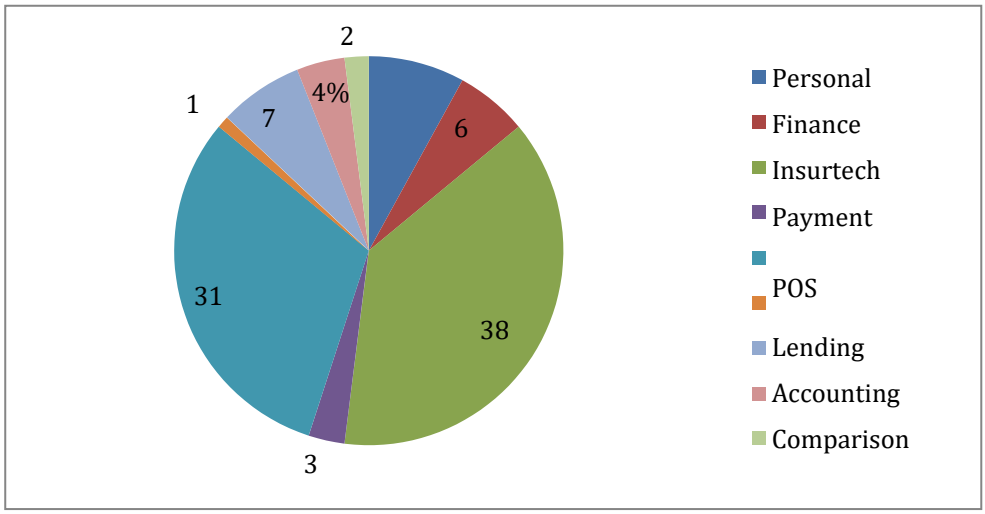

Figure 1. Fintech Distribution in Indonesia
Source: FintechNews Singapore (2019)

Indonesians mostly use payment-based fintech services with a percentage of 38 percent and followed by loan services at 31 percent. This shows that the availability of fintech in Indonesia is able to assist the government in providing payment and loan financial services that are wider and more efficient. The total value of the investment in fintech in Indonesia in 2018 reached 2.29 trillion rupiahs according to data from the Daily Social and Statistics in the Indonesian Fintech Report (Dailysocial.id, 2018). The World Economic Forum (2015) report in the Indonesian Fintech article, predicts that Indonesia will become one of the largest digital markets in Southeast Asia by 2020. This prediction shows the opportunity for the development of digital financial services in Indonesia in the near future to meet the needs of financial services for consumers. public.

Based on the Bank Indonesia Financial Stability Study (Bank Indonesia, 2017), fintech is considered capable of reaching people who cannot be reached by conventional banking. The existence of

fintech aims to make it easier for people to access financial products, facilitate transactions, and can also increase financial inclusion. This goal can be achieved with the opportunity based on the 2014 Global Index data contained in the attachment to the National Strategy for Financial Inclusion (2016), only about 36 percent of the adult population in Indonesia have access to formal financial institutions. Thus, fintech can target other Indonesian adults to obtain financial services. Supporting the OJK statement, according to the Ministry of PPN (BAPPENAS) in 2017, fintech is one form of implementation of the National Financial Inclusive Strategy (SNKI).

Over the past twenty years, the global economy has been faced with various financial complexities. An increasingly difficult job market, increasing personal debt, and increasingly uncertain income can increase the financial distress experienced by the community. Therefore, basic knowledge and skills in managing finances properly and correctly are very necessary to be instilled in students as provisions for their future (Ida & Dwinta, 2010). This is related to the theory of behavioral finance which stated the behavioral finance is a study about how psychological phenomena affect financial behavior. Nofsinger, (2011) defines behavioral finance as studying how humans actually behave in a financial setting. In particular, study how psychology affects financial decisions and financial planning.

Faculty and Lecturers have a very important role in preparing students to be successful in their fields. Financial literacy is one of the main soft skills that must be possessed by students, especially students of the Faculty of Economics and Business (FEB). Financial literacy is very important to be included in the accounting curriculum because it is not impossible that many people will need financial advice from accountants who have accounting services offices (KJA) or public accounting firms (KAP). Anders & Crawford, (2005) in their research suggest that accounting students train themselves to be able to manage finances so that later these skills can help themselves and their prospective clients later.

This research contributes to accounting education in two important ways. First, this study provides an innovative approach to incorporating financial literacy, a topic largely missing from the accounting curriculum, into the classroom in a way that can significantly benefit the students. Second, it proves the need for practitioners for accounting graduates to have more financial literacy skills to better serve their clients. Therefore, this research is expected to facilitate the improvement of the competence of accounting graduates to better assist prospective accountants in meeting requests for personal financial advice needed by graduate users. Based on the phenomena that have been stated, this study will try to

explore what influences financial literacy in accounting students based on the Theory of Behavior Finance, which specifically aims to analyze how the influence of financial behavior, financial attitudes, and financial technology on the financial literacy of students majoring in accounting. The results of this study are expected to be additional information regarding the level of financial literacy among students majoring in Accounting at FEB Mulawarman University so that it can be the basis for developing a technology-based Financial Accounting curriculum.

METHOD

This study uses a quantitative approach through a confirmatory research type survey method which is based on questionnaire data collection (Hartono, 2011). By using the questionnaire instrument, it is hoped that a clear description and pictures can be made of the level of awareness of Accounting students related to financial accounting in relation to financial literacy. The phenomenon to be described in this study is about the awareness of Accounting students related to financial attitudes and behavior as well as financial technology to get an idea of student readiness and the suitability of graduate profiles in accordance with the vision and mission of the Accounting Department, Faculty of Economics and Business, Mulawarman University to produce students who understand sustainable finance information technology-based. Thus, the hypotheses to be tested in this research include:

H1: Financial behavior has an effect on financial literacy
H2: Financial behavior has an effect on financial literacy
H3: Financial technology has an effect on financial literacy

Collecting research data using purposive sampling technique, namely determining the criteria for respondents who will be used as samples with criteria for undergraduate and graduate students in Accounting, who have taken financial accounting courses, management accounting, and have used financial technology-based applications. The research questionnaire consists of questions that discuss the level of characteristics of students' financial attitudes and behavior regarding the level of financial literacy among students which is sent via a google form link that is sent directly to the respondent's cellphone number. The data obtained from the questionnaire were evaluated using the SmartPLS (J.F. Hair *et al.*, 2008; Joe F. Hair *et al.*, 2011) program for further analysis to explain the factors that affect the financial literacy of students majoring in accounting.

FINDINGS AND DISCUSSION

Prior to testing the hypothesis, the construct indicator algorithm was tested based on Table.1 to test the validity, reliability, R^2 and GOF (Goodness of fit) value of the construct.

Table 1. Test Results of Field Test Construct Indicator Algorithms

Konstruk	AVE	Composite Reliability	R Square	Cronbachs Alpha	Communality
X1	0,658	0,904		0,864	0,883
X2	0,729	0,889		0,816	0,841
X3	0,744	0,897		0,828	0,831
Y1	0,644	0,879	0,831	0,816	0,819

Source: Processed data, 2021
Description: X1=Financial Attitude; X2= Financial Behavior; X3=Financial Technology; Y= Financial Literacy

Convergent Validity. The AVE value and communality of all constructs as can be seen in Table 1 are more than 0.50. Thus, the AVE and communality values have met the rule of thumb used to test convergent validity (Hartono & Abdillah, 2009). This indicates that the data is valid for further testing.

Discriminant Validity. The results of the discriminant validity test based on the cross-loading value in the appendix are the cross-loading values of each construct indicator having a higher value or accumulating on a predetermined construct. This proves empirically that each construct predicts indicators in their block better than indicators in other blocks.

Reliability. Based on Table 1, it can be seen that all constructs have a composite reliability value of more than 0.60 and a Cronbach alpha value of more than 0.60. Salisbury *et al.*, (2002) states that composite reliability is considered better in estimating the reliability of a construct. Thus, it can be concluded that each construct is reliable.

R Square (R^2). The R^2 value of financial literacy as can be seen in Table 1 is 0.83. This explains that the construct of financial literacy can be explained by 83% through the constructs of financial attitudes, financial behavior and financial technology, while the remaining 17% is explained through other variables outside the model. This proves that the predictive model is appropriate to explain the level of variation of changes in the independent variable to the dependent variable. However, the value of R^2 is not the only parameter in measuring the accuracy of a predictive model because the basis of the theoretical relationship is the most important

parameter to show the causality relationship (Hartono & Abdillah, 2009). Therefore, it is necessary to look at the GOF (Goodness of fit) value of the dependent construct.

Goodness of fit (GOF). Based on R square in Table 1, namely R^2 Financial Literacy (Y) of 0.831. The GOF formulas are as follows (Tenenhaus et al., 2005):

$$\sum\sqrt{communality\ x\ R^2} = \sum\sqrt{0{,}819 * 0{,}831} = 0{,}824$$

GOF calculated using the formula Tenenhaus et al., (2005) is 0.824. Thus, it can be concluded that the structural model is fit, because the GOF value is more than 0.80. The model can be used for hypothesis testing. That is, the value of Q2 formed has a good accuracy or model accuracy because the value is above 80%.

Then, the results of the research structural model testing were evaluated using a significance test through the path coefficient value. The researcher used bootstrapping technique in SmartPLS to test the significance of the direct relationship between the constructs in this study. The results of the research hypothesis test can be seen in the table below:

Table 2. Hypothesis Test Results

Hypothesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	P-Values	T-Statistics	Result
(H_1) X1 → Y	0,589	0,612	0,129	0,000	4,571	**Accepted**
(H_2) X2 → Y	0,322	0,316	0,121	0,008	2,667	**Accepted**
(H_3) X3 → Y	0,030	0,014	0,127	0,815	0,234	**Rejected**

Source: Processed data, 2021

Description: X1=Financial Attitude; X2= Financial Behavior; X3=Financial Technology; Y= Financial Literacy

The hypothesis built in this study uses two-tailed hypothesis testing on H1, H2, and H3. Based on attachments and Table. 2 above, it can be concluded that hypothesis 1 and hypothesis 2 are accepted because the t-statistic value is more than the two-tailed rule of thumb, namely > 0.05 = 1.96, while hypothesis 3 is rejected because the t-statistic is < 0.05 = 1.96. The following is a description of the hypothesis testing of each construct in the financial literacy model.

Hypothesis 1 (H1). H1 states that financial attitudes can affect the financial literacy of students majoring in accounting. The test results in table 4.6 above show that the t-statistics value for the first hypothesis is 4.571 (> 1.96) so it can be concluded that H1 =

Accepted. The results of testing the first hypothesis show that financial attitudes affect the financial literacy of accounting students. This means that a careful attitude in managing personal finances can be an indication that the financial literacy of students majoring in accounting is good.

Hypothesis 2 (H2). H2 states that financial behavior can affect the financial literacy of accounting students. The test results in table 4.6 above show that the t-statistics value for the second hypothesis is 2.667 (> 1.96) so it can be concluded that H2 = Accepted. The results of testing the second hypothesis indicate that the financial behavior shown by students affects student financial literacy. Responsible behavior for personal financial management and careful behavior in using money shown by accounting students can be an indication that the financial literacy of students majoring in accounting has been good.

Hypothesis 3 (H3). H3 states that financial technology can affect student financial literacy. The test results in table 4.6 above show that the t-statistics value for the third hypothesis is 0.234 (<1.96) so it can be concluded that H3 = Rejected. The results of testing the third hypothesis indicate that financial technology does not affect the financial literacy of accounting students. This proves that the development of financial technology is not an indicator of the level of financial literacy of FEB Mulawarman University accounting students.

Discussion of the Effect of Financial Attitude on Financial Literacy

The financial attitude referred to in this study is a state of mind, opinion, and judgment about finances. Financial attitude is a pattern of discipline in how a person manages his money. The relationship between financial attitudes and financial literacy can be explained by behavioral financial theory. According to behavioral finance theory, an individual's attitude is an internal factor that comes from a habit that has been formed in the individual in financial management.

The results of testing the first hypothesis obtained empirical evidence that financial attitudes affect the level of financial literacy of students in the Accounting Department. This shows that the careful attitude and personal financial budgeting carried out by students of the Accounting Department is an indication that financial literacy among Accounting students has been well-formed. Careful and careful attitude in managing finances shows that students of the Accounting Department FEB Mulawarman University have understood good and correct financial management. This assumption

is supported by the results of research by Atkinson & Messy, (2012) and Kardinal, (2017) which also show that financial attitudes affect financial literacy.

So, it can be concluded that financial attitudes are shown by being careful, careful, and consistent in managing personal finances where it means that student literacy related to financial management has been well understood and applied. This means that the learning objectives of the Financial Accounting and Management Accounting courses have been achieved. However, the active role of lecturers and departments is still needed to be able to teach a careful and careful attitude in managing finances so that it can become a good habit.

Discussion of the Effect of Financial Behavior on Financial Literacy

The financial behavior referred to in this study is the individual's financial responsibility related to the way that individual manages his finances. Financial responsibility is a productive process of managing money and assets. According to behavioral finance theory, the behavior shown by individuals in financial management can improve financial literacy, meaning that students believe in the importance of good and correct financial management so that students' understanding of finance will automatically increase.

The results of testing the second hypothesis obtained empirical evidence that financial behavior affects the level of financial literacy of students in the Accounting Department. This shows that responsible behavior, priority needs, and prudence in managing finances among students of the Accounting Department FEB Mulawarman University are formed from good financial literacy. This assumption is supported by the results of research by Lusardi & Mitchelli, (2007) and Putri & Rahyuda, (2017) which also show that financial behavior affects financial literacy.

So, it can be concluded that financial behavior shown by being responsible for personal finances, being able to make a priority scale related to personal needs, and being careful in buying something is the dissemination of financial literacy that has been well understood obtained from learning. However, it is still necessary to have an active role from lecturers and departments to be able to instill good habits in managing finances because if they are proficient in managing personal finances, students will also be able to manage company or business finances well.

Discussion of the Effect of Financial Technology on Financial Literacy

Financial technology referred to in this study is the implementation of the use of information technology related to finance. So financial technology in this study is about the extent of student knowledge related to the use of financial technology in everyday life. According to behavioral finance theory, the use of fintech can improve financial literacy, meaning that students understand how to manage finances by maximizing the use of fintech in everyday life.

However, the results of testing the third hypothesis obtain empirical evidence that fintech does not affect the level of financial literacy of students in the Accounting Department. This shows that the very rapid development of financial technology cannot be utilized properly by students of the Accounting Department FEB Mulawarman University to be able to improve their financial literacy. This is also evidenced by the respondents' answers regarding what fintech applications they often use in financial management. Most of the respondents have only used digital money such as Gopay, OVO, Dana, and others. Even though financial technology is not only limited to that, there are still P2P Lending, Crowdfunding, and Aggregators. This is of course not very unfortunate because financial technology is a tool that can help in financial management.

From these results, it can be said that the level of financial literacy of students in the Accounting Department of FEB Mulawarman University is still at a sufficient literate level, which means that students already understand the theory of financial management but have not been maximal in its application. This assumption is supported by the research results of Muzdalifa *et al.*, (2018) which also found that fintech does not affect financial literacy. Therefore, it is better if the Financial Accounting and Management Accounting curriculum can be upgraded by adding an explanation of the functions and types of fintech and the practice of using fintech in managing personal finances in order to increase student competence and become value-added for students of the Accounting Department FEB Mulawarman University.

CONCLUSION

The empirical results of this study indicate that the financial literacy of Accounting Department students is influenced by financial attitudes and behavior. The results also show that financial attitudes have a more dominant and significant influence on the financial literacy of Accounting Department students in financial management. In addition, fintech is not able to affect financial

literacy. Financial literacy among Accounting students has been implemented well, which is indicated by a careful, careful, and consistent attitude in managing the students' personal finances. This of course proves that financial attitudes and financial literacy are interrelated in forming a character for students of the Accounting Department, FEB Mulawarman University. Meanwhile, responsible behavior, placing a priority scale in financial management, and being careful in buying things to suit their needs are indications that financial literacy has made students behave carefully in managing their finances. However, to be able to improve the competence of students of the Accounting Department FEB Mulawarman University, it is necessary to add an understanding of the importance of fintech in everyday life so that students can maximize technology in managing finances so as to increase the value of Accounting students in the eyes of graduate users.

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