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Editors

# Innovation of Businesses, and Digitalization during Covid-19 Pandemic

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*Editors*

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# Improving Financial Management Literacy Among Undergraduate Students in East Coast Malaysia



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**Abstract** This study is conducted to analysed factors that influence financial management literacy among the undergraduate students. Among the factors examined are family background, financial management literacy, social influence and personal factor. Online questionnaires were distributed to undergraduates' students that are currently studying at universities located in east coast states in Malaysia. Using SPSS 24.0, descriptive analysis, bivariate analysis, and multivariate analysis were performed, and the data collected from 381 undergraduates. The results have demonstrated that financial knowledge has the highest and is positively significant relationship with financial management literacy among the undergraduate's students at east coast universities in Malaysia. This is followed with family background that shows significant positive relationship with financial management literacy. Looking at the results of correlation analysis, financial knowledge has higher impact on personal attitudes and vice versa, compared to all other independent variables. The findings of this study highlighted the importance of establishing financial knowledge to youth and it need to be demonstrated from home and continuously involving family, peers, and community. Furthermore, this study proved that knowledge is the beginning of a person to become literate of what he/she is doing.

**Keywords** Financial knowledge · Financial management literacy · Undergraduate

## 1 Introduction

In the aspect of our daily lives, money is considered valuable, especially to accommodate needs and wants in an increasingly complex modern world. Money may comfort the physiological needs. While pursuing tertiary education, undergraduate students require money to fulfil education needs as well as personal well-being. Undergraduate students need money to cover the cost of living in university life. Furthermore, day by day educational fees at public and private universities has increased (Ooi et al.

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2021). During university life, the costs are usually borne by the student dress and electronic gadgets, food and beverage, accommodation, books for reference and learning, tuition fees and travel expenses. Even during Covid-19 pandemic, the costs of living as undergraduates are still discerned. Having many items to plan and arrange, financial management literacy is important to ensure important student needs are met. The ability to make financial decisions will be limited if the individual is incompetent in managing its financial aspects. If a person is financial management literate, he/she can make informed financial decisions with confidence, manage personal prosperity with efficiency and increase financial competence to demand for better financial services by knowing financial literacy that had provide the necessary knowledge, skills and tools (Ali et al. 2015). An increased in financial management literacy and the ability to make decisions can change the planning and management of life events such as retirement, learning or better condition (Mahdzan and Tabiani 2013). Therefore, financial management literacy is obviously important because it affects the behaviour of individuals in managing their finances every day in addition to being highly effective guidance for developing the direction for improved financial. Exploring these aspects among undergraduates is an inquisitiveness matters that need to be examined.

Undergraduate students in local university in Malaysia are majority aged between 20 to 24 years old. During these ages, they survived monetarily mainly from study loans and family contributions. Among the contributors of funds for students are the *Perbadanan Tabung Pendidikan Tinggi Nasional (PTPTN)*, *Majlis Amanah Rakyat (MARA)*, *Jabatan Perkhidmatan Awam (JPA)*, state funds, zakat, parents and others. Some undergraduates work part-time in order to have sufficient pocket money during their studies. In today digital era, many opportunities to generate part-time income through online activities. Tuition fees and costs of living are getting higher. This is consistent with the standard of living in Malaysia and there are a handful of parents that cannot help their children to pay the tuition fees at university. This leads to the fact where students try to find other sources to cover their fees. This include having a part-time job. Debt is also famously debatable among youths nowadays. Bank Negara Malaysia reveal a report in March 2021, that 47% of Malaysian youths have high credit card debts. Finance Minister of Malaysia, Tengku Datuk Seri Zafrul Abdul Aziz also make a statement not long after that 40% of millennials spend beyond their means. Given the circumstances, starting younger age, especially undergraduates must learn to manage their expenditures and income. Examining the factors that will enhance financial management literacy among undergraduate students will provide better view of equipping out youths towards better financial stability. The findings of this study highlighted the importance of establishing financial knowledge to the youth surroundings and it need to be demonstrated from home and continuously involving family, peers, and community.

The next section reviews the previous literatures of each variable related to this study. Based on the literatures, hypotheses are developed, and research framework is formed to display the underlying structure of the study. This is followed by the explanation of methodology used to meet the research objectives that is to examine the relationship between family background, financial management literacy, social

influence and personal factor towards financial management literacy level. The results and findings are discussed thoroughly and future research plan are also recommended.

## 2 Literature Reviews

### 2.1 *Financial Management Literacy*

According to Jamaludin, Ismail and Md Radzi (2019), financial management literacy is a basic concept in understanding money and its use in daily life. This includes the way income and expenditure that should be managed carefully. Besides that, the financial management literacy is defined as knowledge of facts, concepts, principles, and technological tools that are fundamental to being smart about money (Garman and Gappinder 2008). Another researcher defines that financial literacy as exercising in real life situations the ability to make informed judgments and to take effective decisions regarding the use and management of money (Balatti et al. 2009). Cull and Whitton (2011) describe financial literacy to encompass knowledge in individual financial terms and actions. Financial management literacy is an important for financial decision-making, and many young people wish they had more financial knowledge. Earlier study by Peng et al. (2007) found that students with higher financial literacy will make a good spending decision in their life.

Jamaludin et al. (2019) indicate that financial management literacy level among undergraduates are moderate. They recommend the importance of financial education to be embedded in the university syllabus programme. Antoni et al. (2020) recommended that personal financial management courses should be implemented in university for all course as any field of study will involve financial matters that need to be managed. Annabi et al. (2018) also reveals the need to implement school-wide personal finance classes for non-business students. They also suggested personal finance workshops especially targeting minorities, women, first-generation students, and students who have a student loan. Arofah Purwaningsih and Indriayu (2018) added, undergraduates with high financial literacy have good financial behaviour, and undergraduates with low materialism can hold and persuade themselves from making impulsive buying. A study by Rahmatia (2019) in who conducted study in Kalimantan region, provide evidence that gender, income per month and education background has no positive significant effect on the awareness level of financial management literacy but past experience will contribute to literacy level. Whereas in Australia, Bamforth et al. (2018) find that students' approach to manage spending, income, saving, peer relationships and stress changes as they make progress in their studies.

The financial literacy program should be assertive in making the people knows the important and the effect of financial management for themselves. According to Lusardi et al. (2010), financial management literacy gives important implication for financial behavior. In Malaysia, people behaviors towards financial management

are worrying. The chances of living in debt is partly due to the level of financial literacy of an individual. Many financial institutions are providing loans with reasoning of easing financial burden. Nevertheless, if the loans are not well managed, it may contribute to worsen future. Bank Negara Malaysia has conducted numerous financial knowledge enhancement programs for children and youth. One famous program launched is accounting book and accounting website, [www.DuitSaku.com](http://www.DuitSaku.com) launched in the year 2011. In a situation where a person is in financial burden, several agencies are willing to provide consultation in helping to manage the person financial condition. Today, there are many non-profit organizations raise their hand to help the people who are troubles in manage their finance like *Agensi Kaunseling dan Pengurusan Kredit* (AKPK), Securities Industry Development Corporation and *Perbadanan Insurans dan Deposit Malaysia* (PIDM). For instance, the AKPK has provide financial education, debt management, and financial counseling for free or charge to society. These programs were aiming to empower their financial knowledge and lead towards increasing financial management literacy. The agency also teaches about managing income wisely and spend within means. Given these facts, there are many ways to avoid the debt and gain financial management literacy, however it requires positive mindset. In examining the financial management literacy level, the attributes that contribute towards improvement of understanding should be accelerate. People of this country, especially the young generations must be given awareness and financial management skills in managing debt and income.

### **3 Attributes to Financial Management Literacy**

#### ***3.1 Family Background***

As mentioned by Hira et al. (2013) that majority of the students turned out to be financially literate as the result of their parent's involvement in teaching them financial skills since early age. They added, parents' involvement needs to be consistent with the basis of social learning approach in views of influence on customer behavior. In era twenty-first century, home economics professionals view families as empowered participant influencing the world. Therefore, the need to have a well-positioned family is vital to better handle the increasing complex financial needs (Hira 2013). Consequently, parents must balance their career and family-life so that children can get significant financial exposure and education, both physically and mentally.

According to Esmael Alekam (2018) family member is also a factor that affect the positive development of financial-oriented matters of their family members. An old study by Bandura (1977) that is still relevant in today's perspectives, children learn by seeing his/her model. According to Ishikawa and Iushi (2019), the children should know more than their parents about the way to manage their money wisely. In other words, children always observe their parents' action, and they see parents as role model in managing financial hardship. Hence, this suggests that it is important for

parents to monitor their children financial knowledge and spending behaviour as well as also establish self-financial control environment. Arceo-Gomez and Villagómez (2017) examine the role of parents in developing their children's saving skill and competency in teenagers. For instance, to increase the financial awareness and the financial knowledge of a youngsters, the parent should teach on how to manage their money, mainly focusing on the pocket allowances that have been given. This maybe an example to teach the children's about saving ability that will increase their financial awareness and financial management literacy. Given the previous findings, the following hypothesis is generated:

- *H1: Family background has a significant positive relationship with financial management literacy.*

### **3.2 Financial Knowledge**

Huston (2010) contends that financial management literacy has two dimensions. Firstly, the understanding, where it represents the personal financial knowledge of financial education. Secondly, the use, which refers to the management of personal financial knowledge. In this context, the individual could have financial knowledge, but to be considered literate, they should have the ability and confidence to implement it when making decisions (Rai et al. 2019). Financial knowledge will give the big impact on the behaviour of financial management literacy among undergraduate students. Financial knowledge is a particular type of value acquired in life through learning the ability to manage income, expenditure and savings in a safe way (Delavande et al. 2008). It is impossible for someone to become literate without the knowledge (Fessler et al. 2020). The same goes with financial management because managing finance requires extensive knowledge in finance itself. Finance covers a wide range of aspects including investment, banking, business, travelling and many more. Financial knowledge is also essential to determine whether the individual financially literate, involving questions related to concepts such as simple and compound interest, risk and return, and inflation (Atkinson and Messy 2012). Study by Ibrahim et al. (2009) says that students lack with financial knowledge are facing higher risks experiencing financial difficulties in later years. By having scheduling targets of financial goals, it provide better quality of life and an improved lifestyle (Gholami and Tahoo 2021). The financial knowledge can be obtained whether formal or informal through parents, peers, schools, medias, and countless sources. With that, the following hypothesis is generated:

- *H2: Financial knowledge has a significant positive relationship with financial management literacy.*

### 3.3 *Social Influence*

In performing activities, there are phenomena that one is attracted to imitate their friend action or making the other as an example in their action. Guadagno and Cialdini (2010) define social influence as changes to the one's belief, behavior, and attitude due to external pressure. Some may have an attitude of quickly influenced to their surroundings and society around them, either via positive influence or negative influence. By saying positive, it means one's action that will drive them to the right path which is practicing good financial management. Thus, social influence is potent and has a powerful effect on behavior. Mpaata et al. (2020) has confirmed that social influence involves the exercise of social power by a person or group to change the attitude or behavior of other persons or groups in a particular direction. At the same time, the psychology research also defines that the social influence is change of individual's mind, thoughts or feeling as revealed by their interaction with other individual or groups of people (Scribner and Cole 2013).

In Malaysia, it was argued that the most obvious reason that spoiled the young adults in managing their financials was due to peer pressure (Jamal et al. 2015). Same goes to the arguments that were confirmed by Duflo and Saez (2002), where they found that individual with same preferences tend to belong into the same group, so that that creates a relationship between group and individual behavior. As the conclusion, they said that the peers or people around play the important role in savings and financial management literacy of students in university life. But then, research shows that most of students tend to spend their instant income such as PTPTN's loan or another financing loan towards their wants rather than save their money for their future (Pillai et al. 2010). Evidence also shows that university students spend their income on housing, education as well as other personal wants. Therefore, social influence helps the undergraduate students to understand the method of financial management and their financial will be more systematic and going on track of their budget. Based on the previous literatures, the following hypothesis is produced:

*H3: Social influence has a significant positive relationship with financial management literacy.*

### 3.4 *Personal Factor*

Financial management literacy may also relate to individual characteristics. Attitudes of student in managing money is also influenced by the level of knowledge of the individual (Ameliawati and Setiyani 2018). They added that students are more likely to save money rather than spend money if they had knowledge of financial management than those who have less knowledge about financial management. Garg and Singh (2018) shows that the attitude of students with higher academic achievement retrieved higher financial management literacy. For instance, in retirement planning, financial literacy is information that is important and necessary. It is because, with the



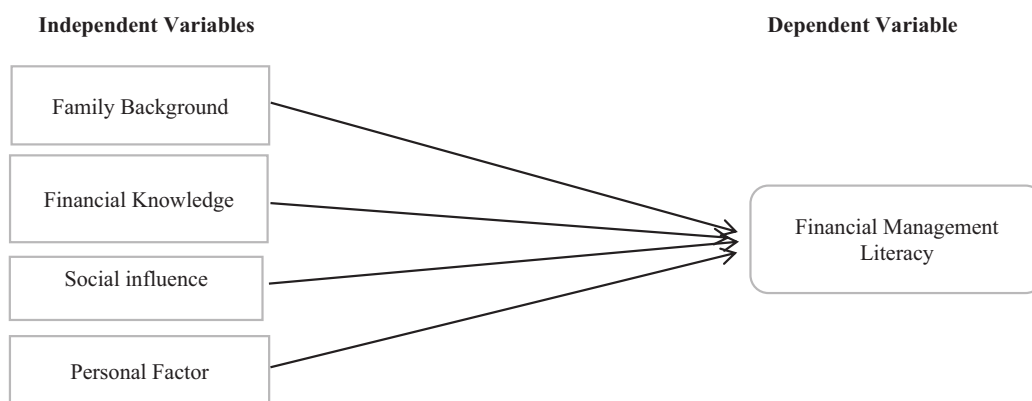
knowledge of financial literacy, they can save for retirement and wealth accumulation (Behrman et al. 2012). Results presented by Borden et al. (2008) suggest that the students that are responsible in their studies also are more likely to be responsible in managing their money. Individual who cares for saving are smart users in managing expenses properly according to personal means.

Additionally, undergraduate students agreed that possessing a sense of self control can help them to handle their finances in proper manners (Jorgensen et al. 2017). They also highlighted that self-control would delay their immediate gratification and thus avoid impulsive spending. Falahati et al. (2011) stressed that reckless attitude have positive effect on the financial problem. For example, the students that is not careful in spending, means they care less on financial management matters. These findings indicate that personal attitudes play an important role in developing mindset with financial management literacy. Given the previous literatures, the following hypothesis is:

*H4: Personal factor has a significant positive relationship with financial management literacy.*

Figure 1 demonstrate the research model performed for this study. Four (4) factors including family background, financial knowledge, social influence and personal factor are selected as independent variables. Financial management literacy is the dependent variable of the study. Therefore, the study will examine the effect of family background, financial knowledge, social influence and personal factor towards financial management literacy. This study also wants to confirm the following hypothesis:

*H5: Family background, financial knowledge, social influence and personal factor have a positive relationship with financial management literacy.*



**Fig. 1** Research framework

## 4 Methodology

The quantitative method analysis is used to achieve the objectives that are to evaluate the relationship between the independent variables which are family background, financial knowledge, environmental factor, and personal factor with the dependent variable which is financial management literacy. Online questionnaires were shared to collect the primary data source. This study aimed to determine the aspects that influence financial management literacy among undergraduate students studying in East Coast of Malaysia. A total number of 381 samples were collected and questionnaires were distributed online using Google Forms.

Questionnaires consists of 3 parts. Part A involving information of demography of the respondents, Part B is the independent variables and Part C is about dependent variables. Likert scales of 1 to 6 are used to measure the feedback from respondents for Part B and Part C. Scale number 1 reflecting strongly disagree and Scale number 6 as strongly agree. Part A consists of 10 items, Part B consists of 7 items for each independent variables and Part C consists of 10 items. All items are constructed to represent the mentioned variables. The 381-respondent feedbacks are analysed using Statistical Package for Science Social (SPSS) 25.0 in transforming the data into useful information.

## 5 Results

### 5.1 Descriptive Analysis

Part A of questionnaires is presented in Table 1. Nominal scales are used to identify possible attributes that may reflects financial management literacy among undergraduates in east coast universities in Malaysia. Questions include gender, state of university the respondent studying at, year of study, main financial resources, ever join financial management courses and age the respondent starts saving.

Referring to Table 1, the respondents were categorized into 2 genders which are male and female. Table 1 show that, the gender of the respondents in this research with the total 381 respondents. The targets of the respondent are undergraduates from universities located in east coast of Malaysia. It is show that the percentage of male respondents is 17.6%, while female is 82.4%. East coast of Malaysia is divided in 3 states, that are Kelantan, Terengganu, and Pahang. For each state, the percentage of respondents are 32.8%, 31.7% and 35.5% respectively. This study focuses on undergraduates that have enrolled for first year to fourth years. The highest respondent was from year 3 with 28.1%, followed by year 2 and year 4 with 27.3% each and lastly undergraduates from year 1 with 17.3%. Most of the undergraduates are using loans and family as their main financial resources in pursuing their studies. A percentage of 86.6% students has taken financial management courses at least once in their life. With regards to savings, 38.5% has started savings since primary

**Table 1** Profiles of the respondents

	n	%		n	%
<i>Gender</i>			<i>Main financial resources</i>		
Male	67	17.6	Loans	285	74.9
Female	314	82.4	Family	52	13.7
Total	381	100.0	Scholarships	19	5.0
			Part Time Work	20	5.1
<i>States</i>			Others	5	1.3
Kelantan	125	32.8	Total	381	100.0
Terengganu	121	31.7			
Pahang	135	35.5	<i>Taken financial management courses</i>		
Total	381	100.0	Yes	330	86.6
<i>Year of study</i>			No	51	13.4
			Total	381	100
Year 1	66	17.3			
Year 2	104	27.3	<i>Age started savings</i>		
Year 3	107	28.1	12 years old and below	147	38.5
			13 to 18 years old	132	34.6
Year 4	104	27.3	19 years old and above	67	17.6
Total	381	100.0	Never	35	9.3
			Total	381	100.0

school, 34.6% started savings in secondary school and 17.6% only started saving when they reached 19 years old and over. 9.3% undergraduates, however, is recorded never started any savings action.

## 5.2 Bivariate Analysis

Altogether, forty-eight (48) items were included in the questionnaires. The Cronbach's Alpha result for these questions was 0.775 which resulted as good. Thus, the coefficient obtained for the questions were valid. Therefore, the questionnaires had been accepted and valid. According to Pallant (2020), correlations strengths are measured between 0 value to 1, where 0 indicate no relationship and 1 as perfect relationship. The symbols of positive (+) and negative (-) reveals the direction of the relationship between the two variables. Table 2 represents the results of correlations analysis that reflects the answer for H1, H2, H3 and H4. The relationships of all variables also indicate a significant value of 0.000 which is lower than p-value

**Table 2** Pearson's correlation analysis

	Family background	Financial knowledge	Social influence	Personal factor	Financial management literacy
Family Background	1				
Financial Knowledge	0.395**	1			
Social Influence	0.335**	0.340**	1		
Personal Factor	0.397**	0.464**	0.378**	1	
Financial Management Literacy	0.482**	0.614**	0.315**	0.393**	1

\*\* . Correlation is significant at the 0.01 level (2-tailed)

0.05. which suggested the results able to be generalized to other related population focused on this study. As the rule for interpreting the correlation coefficient mentioned, the correlation between financial management literacy and family background, environmental factor, personal factors and financial education have a positive relationship among them because it has a positive value of correlations. It is consistent with the theory mentioned by the past researchers that there is the positive correlation between financial management literacy and family background, environmental factor, personal factors and financial knowledge. The positive relationships prove that all four independent variables are significant to the financial management literacy of an undergraduate's students in east coast Malaysia.

From the result presented in Table 2, the correlation between financial management literacy and financial knowledge (H2) shows the highest strength than others independent variable which has 0.614 correlation value. This indicates that the financial knowledge gives more effect to financial management literacy compared to other factors. This supported the hypothesis that is financial knowledge is positively related to financial statement literacy and it is a critical factor as mentioned by Huston (2010). The strength of relationships towards financial statement literacy then follows by the variable of family background (H1), personal factors (H4) and environmental factor (H3). Guadagno and Cialdini (2010) argues that social influence able to change one's belief, behavior, and attitude due to external pressure. Therefore, it is possible that social influence was the least impacted variable because when student have a good knowledge on financial management, they an able to manage their money although the social influence (e.g.: sale or carnival) disturbs their financial stands. It is not shocked however financial knowledge and personal factors create highest strength of relationship between each other among all independent variables. This is consistent with Rai et al. (2019) findings that financial knowledge lead individual actions towards their spending behaviours.

### 5.3 *Multivariate Analysis*

R-square value, also known as Coefficient of Determination, tells you how much variation is explained by the research model. This study provides R-square value of 0.45 which means the variables consist in the research model explains 45% of variation within the data. The rule of thumb does advocate that the greater R-square the better the models are. With R-square value 0.45, it indicates a moderate level of variations for the model. Frost (2019) advocates that study that attempts to predict human performance will tend to have R-squared values less than 50%.

Table 3 demonstrate further provide information on multiple linear regression analysis performed on dependent variable of financial management literacy and independent variables family background, financial knowledge, social influences and personal factors (H5). According to the linear equation of this study, Family background and financial knowledge are positively significant towards financial management literacy among undergraduates studying in east coast with significant value is less than 0.01. Financial knowledge achieved the highest standardized coefficients at 0.377 compared to others independent variables followed by family background with the coefficient value of 0.244. This result is supported by Delavande et al. (2008) that highlighted financial knowledge is acquired through learning the ability to manage income, expenditure and savings systematically. The presence of parents and family as role models in terms of financial management may strengthened the financial literacy level of a person (Aleka 2018; Ishikawa and Iushi 2019; Arceo-Gomez and Villagómez 2017).

The other two independent variables, namely, environment and personal factor, do not have significant results significant value is more than 0.10. It is concluded that financial knowledge has the strongest predictor to financial management literacy

**Table 3** Multiple regression analysis

Variables	Unstandardized coefficient beta	Coefficient standard ERROR	Standardized coefficient beta	t-stat	Significant level
Constant	1.822	0.201		9.071	0.000**
Family Background	0.244	0.043	0.260	5.683	0.000**
Financial Knowledge	0.377	0.038	0.470	9.974	0.000**
Social Influence	0.037	0.035	0.047	1.055	0.292
Personal Factor	0.048	0.043	0.054	1.130	0.259
R2	0.450				

Note: \*\* Significant at the 0.01 level

among all the independent variables. The determinant of financial management literacy can also be summarized by the following equation:

$$\begin{aligned} \text{Financial Management Literacy} = & 1.822 + 0.244 \text{ Family Background} + 0.377 \\ & \text{Financial Knowledge} + 0.037 \text{ Social Influence} + 0.048 \text{ Personal Factor} + e \end{aligned}$$

From the equation, one can interpret that if one unit of financial knowledge increased, it will lead to an increase of 0.377 in financial management literacy. Whereas, if one unit of family background increased, it will lead to an increase of 0.244 in financial management literacy. While one unit of social influence increased, it will lead to a decrease of 0.037 in financial management literacy. Lastly, one unit of personal factor increased will lead to a 0.048 increase in financial management literacy. In conclusion, the multiple linear regression results show that there is significant impact on financial management literacy with family background and financial knowledge.

## 6 Discussion

Financial management literacy is important for undergraduate students to sustain an effective saving behaviour. From the study, it became clear that enhancing the financial knowledge will enable the undergraduate students to become literate in financial management and consequently able to manage their cash effectively. As most research has emphasized, financial education is the best way to enhance students' financial knowledge and skills. Therefore, it is important for policy makers to develop an effective education program based on the needs and financial literacy level of the students. The educational program should focus on improving the students' basic financial knowledge as well as spending and generating income skills. However, not all the programs in university have included financial courses especially non-business programs. Hence, organizing seminars or workshop can be an alternative manner for improving the students' financial knowledge, attitudes and behaviour. With Covid-19 pandemic, financial management literacy is still an important agenda in student's life. Online webinars can be an alternative to deliver knowledge and information. Consequently, students will be well equipped with essential skills to manage their income upon graduation and starting after university lifestyles. During working life, financial reward can motivate a person to improve lifestyle in a positive way (Ekhayemhe and Oguzie 2018). Therefore, establishing effective financial knowledge during university life could mitigate the bad financial habits and attitudes of the students at the same time also decrease the rate of default in repayment of study loans.

The policy makers and the ministries may also create events that promote financial socialization process to encourage young savers. With effective communication, observation and interaction with socialization agents such as parents and peers, financial management literacy can start sooner than later. Policy makers can actively

organize financial campaigns or webinars that involve parents to encourage communication of financial matters between them and their children in an effective manner. Besides, developers of educational program need to recognize that self-control in spending is an important skill for students to perform sound financial management. Hence, such programs should focus on how to help the students develop strategies to maintain self-control. Events should also highlight the habits of generating income from the expenses made. Youngster should also be encouraged to have the mentality of investment, meaning that the money spend should generate more money and later the financial income received should be managed with literacy. Parental performing good financial literacy also able to influence their children's financial knowledge and saving behaviour. Parents or guardian need to play the central role in facilitating and promoting their children to become financial management literate. Good examples will be able to influence the young minds to maintain a sound saving and spending behaviour. The findings of this study enlighten the parents on how they can encourage saving among their children and eventually impact on their future life and personal well-being.

## 7 Conclusion and Future Recommendations

To conclude, improving financial management literacy among undergraduates need effort not only from the individuals. Peers, communities, teachers and family a part of the environment that contribute financial knowledge and making an individual that are financial management literate. As undergraduates, they should take the learning opportunities as those around them provide financial information and experience from various angles in making them to have better financial management literacy than others. Based on today situation, many has expressed they are facing difficulties to manage their money and possible overspending that might be due to the lack of financial management exposures. By reading this article, it is hope that undergraduate students will enlighten the real function of financial management literacy and useful inputs that can be practiced in their life.

In this research, there are independent variables that do not achieved significant results. Although this study is reflecting the sample, having all variables that can be generalized to the population would be better and improved. We suggest future studies to expand the scope of the studies to other regions in Malaysia. One can also target certain groups of respondents such as non-financial undergraduates' programs or focusing on financial related undergraduates' programmes and examine the level of financial management literacy between these clusters of potential respondents.

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# The Use of Facebook and Technology in E-Learning Process



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**Abstract** This study aimed to reveal the reality of using social networks for educational purposes. The results of the study revealed that the increasing use of social networks and their entry into various fields, including education, led to a change in educational philosophy; So, what is known as education through social networks officially appeared, and many faculty members in international and Arab universities and schools began using education through social networks as a method to create an interactive learning environment in which the student is an active element participating in educational responsibility, and the results revealed that Facebook is one of the alternative means for shy students to be able to express their ideas inside and outside the classroom and allows students to collect and express their ideas in writing before committing in their own words.

**Keywords** Social networking sites · Facebook · Educational process · Technology

## 1 Introduction

The generation that witnessed the emergence of the web depends entirely on technology in communication, social interaction, and education, and they consider the web an integral part of their education process, and despite its importance to them, there is a great scarcity to talk about this subject due to the scarcity of opinions and viewpoints about integrating digital media with classroom education, especially in the department that looks at social learning that has become a part of everyone's daily life, and students usually need to have sufficient awareness about their behaviors in using the Internet as a tool for interaction, collaboration, information sharing, and elements that help in this educational process; In order to successfully integrate technologies with learning strategies, the Facebook application is a great tool for learning and teaching, because it allows students to communicate continuously, smoothly and

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quickly between them and teachers, due to their daily use of the Facebook application, as the use of Facebook for learning purposes has proven successful because it allows instant sharing of information and discussions (Dintoe 2018).

Facebook contributes to e-learning through its multiple applications that contribute to enriching the educational process, as the teacher can add exercises and display content with the so-called Flash Card application, and students can also, through the Book Tag application, exchange and lend books among themselves and the Courses application, which is important for the teacher in particular. Especially because it provides a set of important services for managing the study material, such as the ability to add courses, announcements and assignments, and the formation of discussion panels and study groups, in addition to many applications that can be employed in the educational process (Niu 2017).

The education sector is among these areas that have known a great deal of change and being affected by these developments, and distance education is not far from these effects, especially after the increasing use of social networking sites, as it is one of the most important ways and methods that represent an opportunity for universities to exploit because of the flexible virtual environment it provides (Liccardi et al. 2017). Through which the parties to the educational process communicate, with the provision of educational models based on strategies that allow them to obtain information and knowledge and exchange ideas, not to mention the preparation of a generation of teachers and learners who possess the skills to deal with technologies and help spread them in society and provide a rich educational environment and open the field of education democracy that It is based on distance education, including self-learning, taking into account individual differences, in order to achieve lifelong learning (Liccardi et al. 2017).

### ***1.1 The Importance of Using Facebook in Education***

There are many ideas that can use in various disciplines of teaching, including the following:

- **Follow-up on developments in the specialization:** where the teacher can assign his students to search for the latest studies and research in the field of the scientific subject he is studying, thus maintaining the students' connection with the new information in the specialization in Arab, or even foreign universities (Coman et al. 2021).
- **Collaborative research:** Students and teachers can review the research together by sending it to students in the same specialization for review, and then the teacher asks the students to write what they have benefited from the research on Facebook, such as forming groups of students who search together for certain topics (Rahmi et al. 2018).
- **Educational games:** can be used to improve students' reading and writing skills (Saini and Abraham 2019).

- **Opinion polls:** the teacher uses them as an effective educational tool and also to increase communication between the course students on Facebook and students of the same specialization to see their opinions about the course (Doğan and Gülbahar 2018).
- **Teaching other languages:** where students can communicate with other native speakers, for example English or French, through groups or networks (Greenhow and Askari 2017).
- **Follow up on new news:** by following groups for new news on international websites, such as weather news, natural disasters, and others (Rapp et al. 2016).
- **Instilling ambition in the hearts of students and increasing motivation:** by encouraging them to create and design new applications on Facebook that serve the educational material and publish it among learners to benefit from it, as many students present their practical applications to it (Keller et al. 2020).
- **Challenge participation:** where the teacher can involve students in activities that show their abilities and talents, for example, in preparing graduation projects or promoting their educational institution (Coman et al. 2021).
- **Use of multimedia:** The teacher can use video or multimedia and send it to his students to facilitate the learning process (Liccardi et al. 2017).
- **Diversity in the educational process:** through Facebook; By asking all students to add topics for dialogue, discuss them, share short information, photos, videos, links, or comment on them in a group or article page on Facebook (Lau 2017).
- **Helps make teaching and learning more enjoyable,** lively and live all day long through Facebook (Lau 2017).
- **Encouraging the use of technology,** the Internet and social networks (Dintoe 2018).

## ***1.2 The Role of Facebook in Promoting Distance Education***

Facebook has changed the rules of communication in higher education institutions, and university students have become the most widely used demographic mass for social networking sites, especially Facebook, due to its many characteristics, both in terms of social communicative knowledge, or in the scientific field (Dela Fuente 2021).

There is no doubt that the characteristics prompted learners to use the social network “Facebook”, to contribute in one way or another to the learner’s field of knowledge, which is confirmed by recent statistics, as the number of Facebook users reached 1.3 billion users, and 680 million users on Facebook (Zachos et al. 2018). The mobile phone in 2014, which confirms the necessity of exploiting Facebook in the educational role as follows:

- The teacher or student creates a group or page for a course or educational topic and invites students to participate in it (Chowdhry 2017).
- Publishing pictures and educational videos appropriate to the subject, exchanging them among students, and discussing about it (Nasir et al. 2018).

- Collaborative review of books and research (Zachos et al. 2018).
- The opinion poll on Facebook, which the professor uses as an effective educational tool to increase communication between students.
- Learn foreign languages, so that Facebook allows dialogue with different people around the world (Niu 2017).
- Designing and presenting new applications that serve the educational material and benefiting from it (Raza et al. 2017).
- Creating a participatory education through Facebook by asking to publish topics for dialogue and discussion (Filipe and Mack 2019).

These characteristics and uses are only a description of the electronic environment and its exploitation as an educational environment, and despite the advantages it provides, traditional education cannot provide them (Duncan and Barczyk 2016). However, the parties to the educational process may face a number of obstacles, including:

The delay in the appearance of replies sometimes, as well as the network interruption at other times (Zachos et al. 2018).

Absolute freedom, which leads to the annoyance of messages to unknown persons.

Receiving viruses and malicious codes (Chaka and Govender 2017b), which lead to account closure or information theft...etc. (Duncan and Barczyk 2016).

### ***1.3 How do We Use Facebook as an Educational Tool?***

Here are some ways to take advantage of the advantages of Facebook and use it to make teaching and learning more effective, and even endearing them to students:

#### **1. Create a Facebook page**

It is the first thing that may come to mind when using Facebook, a page related to some academic content (for example, a historical figure), then students search for information related to it and add it (Peruta and Shields 2016).

#### **2. Cooperative learning**

Facebook is a very suitable opportunity and tool that teachers can invest in supporting collaborative learning, where students are divided into groups, each of which has its own page or group on Facebook, and the members of each group coordinate with them through the same network of communication to accomplish the task that they have been assigned, whether it is research or providing answers or otherwise. We note that this method is also suitable for project-based learning (Chaka and Govender 2017b).

#### **3. Take advantage of the places tool**

A tool that can be employed in order to locate certain countries or regions, and it is an opportunity to make learners deal with maps, such as locating nearby places and even neighboring countries. It is a tool that can be accessed from here (Salarzadeh Jenatabadi et al. 2017).

#### 4. **Communicate and be informed of the new**

As a leading social networking site, as well as a great arena for discussion and dialogue, and a meeting point for multiple cultures in different languages and customs, Facebook provides enormous potentials that we - as teachers, students, parents and administrators... - can benefit from and invest in improving teaching and learning, and these are some of the ways, to name a few (Popa et al. 2020). To ensure stronger and better communication, including better learning outcomes:

Create a private group or page related to a study material, educational topic, or students of a specific class or stage, and then invite students to participate in it with the aim of exchanging information and ideas, publishing and exchanging links to websites, pages, videos, photos and everything related to the topic or material (Salarzadeh Jenatabadi et al. 2017).

After each lesson, the teacher can use Facebook and add clarifications, notes or reviews that he did not have time for the class to address.

Students comment on a picture, post, or video related to a particular lesson, which is a feature that can be invested in identifying learners' representations regarding specific educational content that the teacher may be preparing and preparing for (Popa et al. 2020).

Facebook as a means of discussion and exchange of ideas, whether before or after the class (Rezeanu et al. 2015).

Facebook as a means of continuing the relationship between graduates of a particular cohort to maintain communication and continue self-development and learning (Çakiroğlu et al. 2020).

#### 5. **Ads**

Facebook can be used very easily as a tool and a means to spread ads, for example:

- Inviting students and others to attend various educational events: lectures, meetings, trainings ... (Filipe and Mack 2019).
- Postponement of the test (Liccardi et al. 2017).
- Asking for an assignment or assigning a task, such as summarizing important points from the lesson (Todorovic et al. 2020).

#### 6. **Take advantage of the Events tool**

It is a feature provided by Facebook, which the teacher can use to alert, for example, the date of a test, the date of bringing a certain assignment, or the time to complete a task (Nasir et al. 2018).

#### 7. **Learn foreign languages**

Through Facebook, students can join groups or like pages related to language learning, to have the opportunity to communicate with native speakers of the language they want to learn, not to mention benefit from the educational content provided by these groups and pages. In addition to the possibility of benefiting from the Facebook applications prepared for this purpose, such as the application (Giannikas 2020).

#### 8. **Supporting modern strategies in teaching**

In addition to many other communication networks, Facebook is an opportunity to diversify teaching methods and a learning platform through which many modern strategies can be used in teaching, such as problem solving, project-based learning, brainstorming, discovery learning, and others. It is a way to deal with various types of media, files, tools and environments. necessary for modern teaching methods (Liccardi et al. 2017).

9. **A tool for brainstorming**

Where the teacher asks the students to present their ideas and information about a particular topic or project, in order to invest it later in the lesson (Gettman and Cortijo 2015).

10. **Follow up on developments and news**

On Facebook, teachers can follow their majors and stay in touch with fellow professionals from all over the world (Chowdhry 2017).

11. **Facebook educational applications**

The site provides a large number of educational games and applications that it is recommended to employ in order to entice students to study and access to more enjoyable learning (Lau 2017).

12. **Feedback**

Feedback is of great importance to learners. It is required to install the correct information, or correct it if it is wrong, and Facebook is a very suitable tool for this, whether through comments, shares or likes, as it maintains communication (synchronous and asynchronous), which is something that positively affects the hearts of students (Chaka and Govender 2017b).

13. **Communicating with parents**

It is not hidden from anyone about the importance of communication between educators and parents, and we have previously on the blog and more than once have touched on the importance of that, and we have highlighted the most important means and tools to help link this communication, of which Facebook is one of them, as it can be used in:

- Share videos, photos, activities, details of trips and excursions...
- Request for opinion.
- Sending invitations to attend (Liccardi et al. 2017).

14. **Facebook for sharing, sharing and exchanging information**

Facebook has huge technical and technological capabilities that the teacher should not be negligent in investing it through:

- Publishing educational images and videos appropriate to the material and sharing them with students and those interested, to comment on and discuss its content (Chaka and Govender 2017a).
- Exchanging experiences and information with those interested from all over the world in an educational topic (Moussa 2018).
- Publishing and sharing e-books (a new education page on Facebook as a model) (Skendžić and Devčić 2017).

- Publish and share useful websites and media to enhance students' information and broaden their horizons (Çakiroğlu et al. 2020).

**15. Motivating students and developing motivation towards learning**

Facebook with its positives, capabilities and powerful tools will inevitably contribute to raising the level of motivation among students, which is necessary for every effective learning to make more effort, interaction and communication, which will have positive results on learning (Dintoe 2018).

**16. Employing the timeline for Facebook**

It is very suitable for teaching history, and here are some good examples of integrating this idea into education:

- History of the Soviet Union.
- Magellan's Journey.
- Inventions of the twentieth century (Saini and Abraham 2019).

**17. Voting and opinion polls**

Students may have different opinions about a particular topic, which requires a decision. In this case, in keeping with the spirit of democracy that should prevail in our classrooms and to increase communication, the teacher can make use of the voting feature provided by Facebook (Coman et al. 2021).

To conclude, the above methods and ideas are not the only ones to use Facebook as an educational tool, as the ideas are difficult to limit, as the field of creativity always remains open, especially in light of this technology that surrounds us from all sides (Salarzadeh Jenatabadi et al. 2017).

## ***1.4 How to Use Facebook in Education***

Sharing educational content directly, as the Facebook application will facilitate the sharing of materials, items, and research related to lectures and class sessions. Information provided in class, as well as books and summaries that will benefit your students (Keller et al. 2020).

Create groups on the Facebook application for classes, and for sub-groups that bring together your students (Greenhow and Askari 2017). These groups will facilitate the sharing of information and reports, and will provide smooth and fast communication, while ensuring the privacy of all the information you share with students in these study groups (Chowdhry 2017).

Follow up on students' lectures through the live broadcast feature on the Facebook application (Giannikas 2020). This tool will allow you to record videos, which will enable your students to attend your lectures at the broadcast time you chose or at any later time as well, and this will be useful especially in cases of difficult lessons that are difficult for Students understood it from the first time (Nasir et al. 2018). Having videos available even after the live broadcast allows students to repeat them again for better understanding (Liccardi et al. 2017).



Dividing the electronic educational content in the form of short and simplified publications on the Facebook application, such brief publications will get more shares and likes in the comments than interaction on the long educational content (Duncan and Barczyk 2016). This content will help in encouraging effective participation between the teacher and students through a series of information and short lectures that It will make it easier for them to focus and retain the information, make sure that the publication is useful and attractive that does not get tired of its length or does not take advantage of the limited information and words (Rapp et al. 2016).

Take advantage of the notification services provided by the Facebook application, such as helping and reminding you through notifications of the specific dates of exams, for example, the times when students submit research and reports, and seeing their assessments and results in a timely manner (Skendžić and Devčić 2017).

The focus in the publications of Facebook in the educational journey is on visuals, such as images and videos, as they are more attractive than written texts, as the visual content is more attractive and will increase focus, be creative and accurate in balancing and synchronizing images and supporting them effectively and purposefully to reach the goals of e-learning (Greenhow and Askari 2017).

The ability to communicate with people abroad easily and quickly, which is a great way to exchange experiences and information between teachers and students from all over the world (Skendžić and Devčić 2017).

### ***1.5 The Role of Social Facebook in the Flow of the Work of the Educational Administration***

Facebook is interactive contributions to the development of education, transforming the school from an educational environment confined to its walls to going outside its walls, in order for education to transcend the limits of time and place, in addition to involving all parties of the educational process with the community with its parents and its multiple institutions, and to give the education process a social aspect (Liccardi et al. 2017).

Facebook increases the possibility of communication opportunities, raise the level of communication skills and dialogue among students, and they work to raise the levels of social development for students, through the student's participation of all social groups in his virtual community within social networking sites, and eliminating the problems of shyness and introversion. Through the real opportunity for virtual communication, and the development of the student's social skills (Doğan and Gülbahar 2018).

Facebook has become one of the important educational and social electronic institutions that play an important educational role in raising students and providing them with sound scientific knowledge, customs, and traditions if they are well managed (Giannikas 2020).

It also contributes to the development of several aspects of the student's personality, whether academic, social or psychological. The educational process is not just an indoctrination, or a book that teaches, but rather an interactive and participatory science that aims to build the integrated personality of this student (Rahmi et al. 2018).

### ***1.6 Disadvantages of Using Facebook in Education***

There is no doubt that there is nothing perfect in life. Everything has its negatives as well as its positives. However, the matter approaches idealism if its positives outweigh its negatives. Among the negatives of using the Facebook application in education are the following:

Distraction and distraction of students, this wide application, which allows the user the freedom to perform more than one operation through it at the same time, may cut students' focus and distract them from the educational process in the virtual classroom based on this platform. Online bullying, the application may be used as a weapon for bad behavior, and up to students bullying other colleagues, or sometimes even teachers, as social media facilitates cases of bullying, so teachers should monitor students, and prevent this from happening as much as possible (Chaka and Govender 2017b).

The quality of posts published by students, as the application allows publishing and receiving some inappropriate and inappropriate content for viewing by students, and it will be very difficult to monitor how students use social media and deter them from publishing harmful content, which will distract their attention and harm the educational process they receive (Dela Fuente 2021).

Lack of direct communication between teachers and students, as we mentioned earlier, Facebook provides a feature to hold live broadcasting episodes, which may create a feeling of safety for learners to express themselves and their opinions and share their inquiries with their colleagues and professors, but students will miss real lessons that gain them valuable skills through direct communication, which will benefit them in their future lives, whether in terms of personal relationships or social life, so it is necessary to monitor and emphasize students by teachers at the points of participation to be effective with their other colleagues (Dela Fuente 2021).

### ***1.7 Experiences of Using Facebook in Teaching***

1. In Canada and in Saskatoon, Angela Primary School is located, where sixth-grade students use Facebook to communicate with other students in Brazil, England and South Africa in the geography course, where they cooperate in solving assignments, asking questions and discussing between them, and

- preparing video reports, where it is placed on the page dedicated to the course (Coman et al. 2021).
2. Teacher Sar Remayne is a history teacher in America. She teaches her students the history course. She works with her students in a traditional way by assigning students projects, then they collect information and prepare a PowerPoint presentation about the project, then each student performs his presentation in front of his colleagues. The teacher thought of how to use Facebook to display the sequence of historical events, she asked each student to create a page on Facebook and choose a specific character, then the students search for information about this character, and put it on his personal page, including his personal and family photos, some students even put pictures of his birthplace This character, and the house in which he grew up. They find even minute details of their lives and then put that information into the personal pages of these celebrities (Çakiroğlu et al. 2020). One of the students chose the character of Samuel Morris, the inventor of the telegraph in the early nineteenth century, and the student updated his status with the same Morris tokens on Facebook. After completing the projects, each student enters the page created by his colleagues and provides a comment on the information contained therein, until there is a large amount of discussions that took place in the classroom (Raza et al. 2017).
  3. At Amsterdam High School, Facebook was used to teach a history course; Four topics are discussed: the rise and fall of the Soviet Union, fashion from 1950 to the present, inventions of the twentieth century, and Magellan's voyage (Chaka and Govender 2017b). Where students benefited from the Timeline tool. Where the students created four pages, each page concerned with a specific topic from the four topics, where the students start with the beginning of the event, they collect the most important events that occurred on that date through the Timeline tool and then move to the other date and write the most important events that occurred on that date as well, until it ends These events, accompanied by accompanying discussions, and adding images, videos or audio related to each of the events (Duncan and Barczyk 2016).
  4. The experience of the United Arab Emirates: Having proven its feasibility in effective education, the Abu Dhabi Education Council has begun to expand the use of social networks in the educational process. These networks have become an integral part of learning Students and strengthening their connection with the local and regional environment and the world as a whole, and made them aware of all the technical, scientific and cultural developments that the world is witnessing, so there is a strong trend to equip all schools with advanced technical and educational means (Todorovic et al. 2020).

These media can achieve their educational goals, as it enables social networking activities to focus on research, data collection and communication with experts, and that blogs can be used to stimulate discussions and constructive dialogues, and mutual cooperation in electronic knowledge sites, and in general all these social media provide easy access to support And the exchange of experiences, professional

development, and the best practices followed within the professional and scientific community (Nasir et al. 2018).

## 2 Conclusion

Having overlooked theoretical sources, the rise of social media use appears to underline the central importance of learners and their attitudes toward learning. Students' positive attitudes lead to independent actions to discover new ideas, and to study without any stress. Facebook seems to be one of the most attractive tools nowadays to build our own approach in order to improve future results.

Using Facebook can engage students in meaningful language-based activities. We can use Facebook as a complementary virtual educational tool as a great opportunity for students to facilitate the learning process. However, Facebook cannot completely replace real class attendance and teachers' lectures. We shouldn't make our teachers stop lecturing and just start letting students learn for themselves. Perhaps using Facebook and with the help of their teachers the students will explore and become managers of their learning of the different approaches.

We can say when learners use Facebook, it motivates them. The more motivated teachers are, the more independent they become, which affects their ability to learn the language better. The relationship between autonomy and motivation is well established on a theoretical level. Moreover, students are more committed to it when they can decide what to do because they decided to do so. Also, if learners understand why they are doing something, they will become more motivated, and more willing to do what is necessary to achieve their goals.

We can conclude that learners should be given a lot of freedom to develop their own style and take responsibility for their own learning. Learners should not rely exclusively on the teacher for their learning outcomes. In fact, Facebook is a very important tool for a teacher to help students be more independent and develop their own strategies.

## 3 Recommendations

There is no doubt that the Facebook site has been established to serve the users of those networks and provide them with means of convenience in various aspects of life, including education, as technology has become an integral part of our daily life, and the study recommends.

1. Encouraging students, teachers and everyone who has an active role in the educational process to conduct more studies and research on social networks in education, due to the lack of studies in this field and its importance.

2. The importance of the concerted efforts of educational, educational, civil and governmental institutions and the development of mechanisms to determine the needs of children in order to reach the optimal use by them of social networks.
3. Encouraging students and teachers to employ technology in education through social networks because it has a prominent impact on the effectiveness of the educational process and to keep pace with development in technology and there is no separation between technology, education and development.
4. Awareness and education of young people that behavior on the Internet must be responsible, as if it were in the real world.
5. Not to be preoccupied with participating in social networking sites while driving a car or performing dangerous work.

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# E-Learning and Understanding of Accounting During Covid-19 Pandemic: Literature Review



**Amal Abdullah Isa, Fatima Jamal AlYaqoot, Tahera Sayed Ahmed, Yara Tareq AlArabi, Allam Hamdan, and Bahaaeddin Alareeni**

**Abstract** E-Learning has been introduced in the economy after the revolution of technologies that increased in many sectors and that has become a necessity in the current period of life specially during the COVID-19 pandemic. E-learning is illustrated in using the electronic communication to deliver education between educators and learners which helped institutions and universities to implement innovative features and techniques in order to enhance interactions between students and educators and make it more flexible in time and place for both. In this research paper, we have examined and investigated the implementation of E-learning during the COVID-19 pandemic and how that has affected the E-learning process, explaining the significance of E-learning and specially in understanding accounting. Furthermore, this research study obtained to one more objective that is identifying some of the major challenges while understanding accounting through E-learning particularly during COVID-19 crisis. This study's design was to adopt the examination of the implementation of E-learning during COVID-19 on the dependent variable which is understanding and studying accounting. The findings of this research study that the E-learning during COVID-19 has been increased and more consumed by many sectors, resulting from the need of minimizing direct contacts between educators and learners. Besides that, there was found that there might be some various challenges facing E-learning during COVID-19 and specifically in understanding accounting.

**Keywords** E-Learning · Accounting · COVID-19 pandemic

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## 1 Introduction

The spread of the recent growth and development of technologies has been increased in a wide range in the whole economy (Maffey et al. 2015). Many sectors of the economy are now depending almost entirely on information technology and its development and innovation (Caliskan 2015). In education sector and specially during the COVID-19 pandemic, those technologies and the internet have played a great role. Reflecting its innovation in the E-learning, which is about the use of electronic media and information in addition to the enhanced technologies that are present in the communication of education to be applied in accessing the educational classrooms online anywhere but not in the traditional classrooms (Najim and AlNoori 2020). The concept of E-learning is growing to be more popular that made it attractive for many big organizations to invest in (Goyal 2012). Moreover, as E-learning is used by corporates, schools and institutions, it is highly needed to be kept up with advanced and recent information and communication technologies for the reason that it provides educators and students time and place flexibility which will enhance the learning process's efficiency (Arkorful and Abaidoo 2014).

There is an agreement that one of the most significant domains that got impacted by the COVID-19 crisis is education. Universities were forced to shut their doors down to minimize the levels of learners' physical attendance so as to apply the precautionary measures. These measures that were actually meant to increase social distancing. The only and most solution for the purpose of continuing the educational process and to allow students to go on acquiring knowledge was to apply e-learning or distance learning. E-learning represents an opportunity for learners to be educated safely and remotely through the internet applications (Crețan and Light 2020). Accounting students in the accounting and business high education institutes were no different from other university students. They were required to have access to their lectures online and to set for their exams on university websites. E-learning is one of the tools that accounting universities were required to make use even before the COVID-19 pandemic. This is actually attributed to the fact that accounting students have many applications that can be used for doing their accounting on the internet. This is one of the outcomes of the rise of the internet accounting concepts and implications in the past few years (Favale et al. 2020).

The preference and implementation of E-learning have increased over the years. During the COVID-19 pandemics, man governments suspended physical learning in institutions forcing schools to shift to online learning. The move contributed many benefits to students, institutions, and lecturers (Sigroha 2020). E-learning is a new phase for introverts who enjoy studying privately. It enables students to learn with a comforting and self-structured pace and timetables, enabling them to undertake other activities (Al-Fraihat et al. 2020). It also provides enhanced studying through graphical and video explanations, which is enjoyable and promotes understanding to students at a cheaper cost. Technical aspects such as accounting may be difficult to deliver through online platforms because of their complex nature.



In this study, the researchers explore the available literature about the implementation of e-learning and its contribution to enhancing the accounting students understanding of the account curricula during the COVID-19 pandemic. This includes sub-sections that investigates the definition of e-learning; features of e-learning; theories that explain using e-learning in understanding of accounting; significance of e-learning; e-learning in understanding accounting during COVID-19 pandemic; and challenges of e-learning in understanding accounting during COVID-19 pandemic.

### ***1.1 Research Problem***

Our study problem is to recognize the main consequences that are resulted from the effect of COVID-19 pandemic on accounting E-learning and understanding accounting. Specifically, nowadays with the existence of such pandemic, numerous numbers of new technologies have been implemented. How this pandemic has affected the process of E-learning in accounting?

### ***1.2 Research Objectives***

- To examine the level of COVID-19 impact on E-learning and Understanding of Accounting.
- To investigate the various challenges of Accounting E-learning during COVID-19.

### ***1.3 Research Questions***

- What is the impact of COVID-19 on Accounting E-learning?
- What are the challenges of E-learning in Accounting during COVID-19?

### ***1.4 The Purpose of the Study***

In this research paper we will be focusing on the E-learning and understanding of Accounting during COVID-19 pandemic. Our findings will identify the principal impact of COVID-19 pandemic on E-learning and understanding of Accounting and will eventually identify the various challenges that are facing Accounting E-learning during the COVID-19 pandemic.

## 2 Literature Review

### 2.1 Definition of E-Learning

E-learning is one of the concepts that has been confronted with many constraints to reach an agreement on one comprehensive definition; however, no agreement was reached. This is in fact understood in light of the nature of the concept of learning itself which is a complicated one. Complexity related to the definition of learning stems from the nature of the learning process which witnesses ongoing changes, and which is impacted by the overall atmosphere in each community. Learning is basically related to the human nature of the learners which is also a non-stable issue. So, one definition for the concept of learning refers to it as “the process of acquiring new understanding, knowledge, behaviors, skills, values, attitudes, and preferences” (Karban 2015). Since learning takes place through acquiring skills, knowledge, understanding, etc., this can happen via different tools. The rise of the internet provided opportunities for learners to do this virtually from the comfort of their homes or from remote distances from their learners. This paved the route for the introduction of e-learning (Chan and Ngai 2012).

One of the multiple definitions that were introduced for the concept of learning refers to it as “Using information and computer technologies and systems in order to build and design learning experiences” (Almarzooq et al. 2020). Another definition refers to e-learning as “Transferring knowledge and education by utilizing various electronic devices” (Koohang and Harman 2005). A third definition describes the process of e-learning as “The integration of technology in the pedagogical process to meet the needs of the learners through the internet platforms” (Gel et al. 2014).

### 2.2 Feature of E-Learning

Based on the multiple definitions for the concept and practices of e-learning, it can be assumed that e-learning is distinguished from traditional learning. This is obvious through the numerous features that e-learning enjoys. For one thing, e-learning is featured by availability. This is recognized in light of the fact that e-learning offers numerous opportunities for knowledge and information sharing since the education institutes upload the materials to be learned in different forms (documents; videos, PPT presentations; photos; graphs; etc.) on their websites where learners can access these materials while lecturers give live lectures or later on from any place and at any time. This is a major source for facilitating the learning processes (Kapasia, et al. 2020). Another feature is variety. Variety in this context means that through the web-based platforms that universities possess, accounting academicians for example are able to develop many types of strategies for learning the accounting students. They are also likely to make use of different forms accounting materials. Learning games grow more likely to be applied in the accounting virtual classes where accounting learning

can learn individually or in virtual groups. Assimilation is one of the various types of e-learning that can be employed. Mobile learning is also applicable (Donnelly et al. 2021). A third feature is interaction. E-learning creates more opportunities for learners to be more interactive than traditional learning. Learners in this type have to show their own abilities to present some topics. They are required to adopt more research-based learning. They have always to be part of the learning discussions on while they are being taught. This is to say that e-learning represents a real shift towards student-centered education (Zaman 2021). A fourth feature that distinguishes e-learning from traditional learning is the integration of information technologies. This is actually the most prominent feature. The majority of the e-learning practices take place through the internet applications. The cloud teaching is thus a major component of the learning process. For example, accounting academicians upload the learning material on the cloud. Tests are carried out through the cloud. Thus, laptops, mobiles, PCs, internet, etc. are all integrated in the learning process (Wajtrakul 2020a, b). A fifth feature is responsiveness. Through e-learning students do always expect to collect instant feedback from their academicians. This is instant feedback can be automatic through some online forms that include instant answers for their questions, or through the auto correction techniques that help students know their degrees once they are done from their tests (Yu 2021).

### ***2.3 Theories Explaining E-learning***

#### **Technology Acceptance Model (TAM) and Understanding Accounting**

When it comes to show the extent to which students are ready to accept the implementation of technology in the education domain, no other model is better than TAM to be used. This is because the Technology Acceptance Model is one of the earliest models that involves and explains the peoples' cognitive factors which are expected impact their acceptance of any specific type of technology when doing different types of tasks especially while acquiring knowledge and / or resolving problems. Furthermore, this model has been known to reflect the relationship between information technology and humans through two aspects: Perceived Usefulness and Perceived Ease of Use (Almarzooq et al. 2020). Perceived usefulness show the users recognition of the amount of the benefits that can be reaped from the usage of the technology in the educational domain for example as this is the case being focused on. It also reflects the degree of confidence of the technology user concerning the extent which information technology can enhance and improve their educational outcomes. Concerning ease of use, the model shows that students' acceptance of the accounting material being offered and explained through e-learning is determined in accordance to their recognition of how easily these materials are accessed and used (Walker et al. 2020).

### **Emotional Intelligence Theory and Understanding Accounting**

There are assumptions ensuring that emotional intelligence constitutes a significant model that explains the relationship between e-learning and accounting understanding especially under the current circumstance of the covid-19 pandemic. Through emotional intelligence students learn how to possess more control on themselves and learn how to increase the level of mood regulation when they experience times of crises as in Covid-19. This theory provides the accounting students with recommendations that help them overcome the feelings of failure, as well as how they can control their emotions and regulate the state of self (Nguyen et al. 2020). The outcomes of prior research as (Rinaldi et al. 2020) indicate that there are various components that make up emotional intelligence. These components involve: self-recognition; self-control; motivation; empathy; and social skills. All these components have been recognized to have a positive and significant impact on the level of accounting understanding (Reyad et al., 2019; Razzaque and Hamdan 2019).

### ***2.4 E-Learning Encourages Contribution by Introverts***

E-learning promotes equality in discussions allowing introverts engagement, unlike in traditional discussions. Introverts find it easier to present their ideas through non-social platforms such as typing without appearing before a physical audience. According to Lambregts (2020), introverts enjoy online discussions than extroverts because it helps them overcome their weakness by just typing their ideas. Their contribution enables their ideas to be considered with the same weight, unlike where they would be too shy or unwilling to defend their points in public. Additionally, e-learning has enabled discussions to continue despite the new protocols on social distancing and isolation. Students who understand better through group work than individual learning have benefited from this move (Ilgaz and Gulbahar 2017). Therefore, e-learning is significant in ensuring the inclusivity of all students in academic discussions and has enabled learning to continue with the impacts and rules of the Covid 19 pandemic.

### ***2.5 E-Learning Facilities of Self-paced and Flexible Learning***

E-learning facilitates self-paced and flexible learning and completion of studies that enable students to create time for other activities. It enables students to learn without physically availing themselves of the lecture, enabling them to learn at the comfort of their homes at their own time. The flexibility enables them to concentrate on their jobs, social life, and family roles. Ilgaz and Gulbahar (2017) discovered that learners preferred e-learning because it overcame location limits. They enjoyed the flexibility

of learning while away from school because of personal commitments. Research by Ilgaz and Gulbahar (2017) indicated that most graduate degree learners preferred eLearning because it enabled them to retain their jobs and undertake studies part-time. 90% of the graduate students in the research had full-time jobs, while others were married and raising their children. Therefore, e-learning benefits learning by enabling them to retain their jobs and spent time on other vital activities.

## ***2.6 E-Learning Improves Time Efficiency***

The nature of e-learning promotes time efficiency among learners and lecturers. The students have to log in to their portal to study at any place. It saves traveling time that would have been incurred in physical classes by the lecturers and the students. Studying through eBooks and videos is also more convenient and saves the time used in perusing book pages to find the desired topics. Ilgaz and Gulbahar (2017) discovered that physically challenged persons preferred e-learning to overcome the traveling and physical barriers that would delay their arrival in classes. E-learning platforms also save time by quick coverage of topics and better understanding, reducing the need for repetitive studying. Research by Elfaki et al. (2019) concluded that e-learning students performed better than traditional learners because they could cover more within smaller periods with at most concentration. They achieved this through self-timed sessions and breaks favorable for each person's concentration ability. Also, the students can use recorded lectures to preview aspects of their study area at times suitable for studying. Therefore, e-learning promotes time management for lecturers and students through quicker access to materials and recovery of traveling time that would have been spent to get to class.

## ***2.7 E-Learning is Cost Effective***

E-learning is cost-effective to institutions and learners. The physical absence of students in the school reduces the overall running cost of the institution. It enables one teacher to supervise the progress of several classes simultaneously, which is impossible through physical learning, which reduces labor costs (Ikeda and Ueda 2017). The cost cuts at institution levels translate to lowers school fee requirements which increases the affordability of education. Additionally, videos to illustrate machinery operation eliminate the cost of acquiring and maintaining such machinery. It eliminates the cost of traveling to school, buying books, and other personal expenses of physical learning for students. In the research, the use of tablets to access eBooks and online presentations of assignments was much economical compared to the use of physical materials (Al-Fraihat et al. 2020). The lower cost encourages undergraduate students to pursue graduate studies. Conclusively, e-learning provides cost

cuts to students and institutions, which increases affordability and access to higher education.

## ***2.8 E-Learning and Mass Enrollment***

E-learning enables a larger enrollment of students while maintaining standard quality of learning. The overall enrollment levels have increased in the past year due to increased distance learners through e-learning (Ilgaz and Gulbahar 2017). The number of students in traditional learning methods is limited by the classroom size and the lecturer's capacity to control within one class. Lecturers are forced to divide students into groups and give different lecturers for each group. Teaching large groups may influence the quality of education delivered to backbenchers, slow learners, and other disadvantaged groups. In e-learning, each student can capture every aspect of the topic at the desired pace and time. The number of online learners is unlimited and equal opportunities, and quality of education is delivered. It is also easier for the lecturer to monitor the students through the software than through physical checking of assignments and attendance rates. The low cost of e-learning also opens doors for more students to afford and enroll in higher education. Hence, e-learning improves access to education to more people and enables consistency in the quality of delivery.

## ***2.9 Results to Higher Concentration and Learning Experience***

Lastly, the use of video graphics and pictures in e-learning enhances students' concentration and learning capacity. Modern students demand customized multimedia content as part of their learning materials, especially in technical courses such as accounting and engineering. They include recorded audio, animated lessons, experiments, and illustrations. According to Liu and Elms (2019), video and animated cartoon use improves students' learning experience and promotes better understanding. Different groups may be motivated by videos and online tutorials through different features and benefits. Based on the research, female and young students preferred the use of animated videos because they made learning enjoyable.

On the contrary, male counterparts enjoyed learning through animated ideas because they were more efficient in explaining complex aspects. The use of videos also enables students to pause and refresh or get past a disturbance which maximizes concentration. All these benefits of using videos and online tutorials enhance learning efficiency and motivate students to learn.

## ***2.10 E-Learning Among Accounting Students***

Technical aspects such as accounting heavily rely on the teachers' efficiency of delivering the various aspects. Understanding balance sheets, cash flows, and other mathematical concepts may require consultation with teachers to capture the concept vividly. However, with the measures taken to curb the spread of Covid 19, physical classes and consultation were limited. In Saudi Arabia, research revealed that accounting students did not benefit from online studies as physical education. They preferred traditional learning because it provided a better platform to communicate with teachers on areas that need clarification (Ebaid 2020).

E-learning was quickly adopted in response to covid 19, which developed various challenges, especially to accounting students. The urgency of implementing e-learning did not provide institutions with adequate time to train their lecturers and students on how to operate digital learning platforms (Sigroha 2020). For example, accounting students in Saud Arabia complained of unfamiliarity with the systems and button icons in e-learning, undermining their understanding. Aini et al. (2020) discovered that accounting teachers were not given enough training on delivering technical aspects to students. The presentation of software notes was not enough for students to understand the concepts. This resulted in students seeking other channels such as YouTube tutorials to understand complex tasks that reflect low-quality delivery. According to this research, students preferred a blend of physical classes and learning rather than a fully digitalized approach. Another challenge of understanding accounting is difficulties related to network strength. According to Hermawan et al. (2021), most e-learning students fail to understand accounting because of poor network signals and speed. e-learning might be necessary during Covid 19, but it is not the best way to deliver accounting aspects to students.

However, some accounting students enjoyed learning through e-learning. They enjoyed the flexibility and the freedom of studying on their phones and laptops. (Hermawan et al. 2021) They concluded that accounting students were entirely motivated to study through e-learning during Covid 19. The freedom to do assignments at home and present them through digital platforms motivated many to adapt to e-learning. The research portrayed that majority of these students had high emotional intelligence and exercised self-control in time management and learning schedules. Therefore, some accounting students enjoyed eLearning during Covid 19 and even performed as compared to traditional classes. To maximize this outcome, the e-learning platforms should be easy to use, and students should be provided with some form of training before full endorsement of online learning.

The issue of the credibility of online studying of accounting has emerged. Hiring decisions in the future will be influenced by how the certification was achieved. Employers are likely to doubt the competency of an online degree holder and may be disadvantaged during interviews (Richards et al. 2018). It is realistic to doubt the practicality of implementing accounting methods acquired online at the workplace. However, according to Sun (2018), the internet era has added competency and diversity to accounting. The interaction with online tools familiarizes learners with virtual