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THE LEVEL OF FINANCIAL LITERACY OF UNIVERSITY STUDENTS: THE NEED FOR FINANCIAL EDUCATION

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Abstract

The prime purpose of this research was to determine the level of financial knowledge, behavior and attitude of the target population – first year students of one state university. A standardized questionnaire, developed by the International Network in Financial Education for the Organization for Economic Cooperation and Development (OECD) was adapted for this study. Using the questionnaire, the level of financial knowledge, behavior and attitude of the target respondents was measured. The findings revealed that majority of the students have average level of financial knowledge, financial behavior and financial attitude. It was also found out on this study financial knowledge, behavior and attitude are related with one another using correlation analysis. Analyses of the data gathered led the researchers to develop training modules with the purpose of improving the overall financial literacy of the students.

Keywords: *financial literacy, financial knowledge, financial behavior, financial attitude, micro business*

Introduction/Rationale

It is a fact that financial education concerns all ages. However, the education of the younger generation on financial issues has become more important since they will likely bear more financial risks and be faced with increasingly complex and sophisticated financial products than parents do. The young people have access to, and are being offered, financial services at earlier ages through pocket money, cell phones, bank accounts, or even credit cards and yet, the most recent surveys show worrying low levels of youth financial literacy and capability and, in many cases, significantly lower levels than older generations.

According to the National Financial Educators Council (2013), people are considered financially literate when they possess knowledge and skills in finance which let them assertively take

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effective action that best fulfill their personal, family and global community goals. Similarly, Government Accountability Office (GAO) agrees that financially literate people can make judgments and decisions based on their financial knowledge, and they skillfully act according to that knowledge. Being knowledgeable implies that one can fully grasp the implications of their financial choices such that they spend wisely, plan for the future and manage the perplexities and hardships that may arise in events such as retirement, job loss, continuing education, education of dependent(s), etc.

Jumpstart (2015), discusses financial literacy as a competence that continually evolve asserting that, as people move through life's continuum, considering their age, family, culture and residence, their financial literacy also evolves in order to respond effectively relative to their changing personal and economic circumstances. The National Standards in K-12 Personal Finance Education published by Jumpstart agrees that financial literacy is the ability of people to use knowledge and skills that continually evolve through a continuum thus allowing them to manage their finances effectively for lifetime financial security.

Additionally, Atkinson and Messy (2012) adopted the definition of the Organization for Economic Cooperation and Development (OECD) for financial literacy. It has been defined as "a combination of awareness, knowledge, skills, attitude and behaviors necessary to make sound financial decisions and ultimately achieve individual financial wellbeing". This definition makes clear that financial literacy is more than just knowledge; it also includes attitudes, behaviors and skills. It stresses the importance of decision making –applying knowledge and skills to real life processes – and it indicates that the impact should be improved financial wellbeing.

A financially literate person will have some basic knowledge of key financial concepts and the ability to apply numeracy skills in financial situations (Atkinson and Messy, 2012). These key financial concepts include fundamental mathematical operations – addition, subtraction, multiplication and division, time value of money, interest paid on a loan, calculation of interest plus principle, compound interest, risk and return, inflation and diversification.

The second aspect of financial literacy is financial behavior which is another essential element and arguably the most important. The positive outcomes from being financially literate are driven by behavior such as planning expenditure and building up a financial safety net; conversely, certain behaviors, such as over-using credit, can reduce financial wellbeing (Atkinson and Messy, 2012).

Another important aspect of financial literacy is attitude. Attitudes are evaluative statements or judgments concerning objects, people or events (Robbins and Judge, 2007). Furthermore, Atkinson and Messy (2012) contended that if people have a rather negative attitude towards saving for their future, for example, it is argued that they will be less inclined to undertake such behavior. Similarly, if they prefer to prioritize short term wants over longer-term security then they are unlikely to provide themselves with emergency savings or to make longer term financial plans.

International comparable surveys conducted on the different schools and universities find that financial literacy is low everywhere, though still lower in low-income countries and that it follows an inverted-U shape with respect to age (Xue and Zia, 2012).

In general, the literature gives young people low levels of financial literacy and ability to manage their own finances. Lusardi et al. (2010) find that less than a third of American teenagers (ages 12-17) possess basic knowledge of interest rates, inflation, and risk diversification. Women, African-Americans and Hispanics, and those with lower educational attainment are associated with lower levels of financial literacy. Other studies even show evidences that youth financial literacy has been declining since the late 1990s (Xue and Zia, 2012). In the survey conducted by OECD & INFE (2011), only 2% of young adults who chose a financial product with the benefit of sound advice. In South Africa, 15% of young adults could not divide 1000 Rand equally between 5 people. About 96% of teenagers in United Kingdom worry about money on a daily basis. Furthermore, in Denmark, 73% of young adults have little or no knowledge of interest rates.

In the Philippines, the Bangko Sentral ng Pilipinas (BSP) has recently released the results of the Consumer Finance Survey (CFS). CFS is a nationwide quadrennial survey on consumer finances among Filipino households. It generates data on the financial conditions of households, including what they own (financial and non-financial assets) as well as from whom and how much they borrow (sources of credit and level of indebtedness). It also generates data on the income, spending and insurance coverage of households.

The 2014 CFS has a sample size of 18,000 households covering all regions in the country. For the purpose of this study, the following results from the survey are highlighted. About eighty six percent (86%) of households are unbanked. For those who have bank deposits, the median outstanding balance of peso deposit accounts is P 5,300.00. It is also notable in the survey that a very small percentage of households have investments in mutual funds and stocks. Further, the survey results showed that the percentage of respondents that had at least one retirement or insurance plan from both/either the government and/or private companies stood at 24.2 percent in 2014. There is also about one in seven households that avail of other loans such as personal, salary, multipurpose, and business loans in which "Sangla ATM" is the most popular collateral being used by borrowers.

Most of the household surveyed, salaries and wages is their main source of income. It is good to note that the percentage of respondents with inclination towards saving money and putting it in the bank (if they have surplus money) increased. However, most respondents would not risk their income to undertake risk-taking activities that could possibly increase their current level of income.

Consumers, in general, based from the survey results, show amateurish management or handling of finances.

Scholars like Cesarini et al (2009), Meier and Sprenger (2008), Lyons (2007), Rapp and Aubert (2007), Lusardi (2003), examined the influence of education level toward individual's saving behaviors and the net wealth accumulation. According to Lusardi (2003), household with lower education holding low financial net worth while household with at least college level education background tend to have more than twice the wealth of households with high school education. Furthermore, Lusardi (2003) found those households which precede at least high school education level tend to be holding stocks and bonds. However, Meier and Sprenger (2008) argued that the higher education level of respondents, the greater chances the corresponding person will join the voluntary financial education program.

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Looking at the Philippines' Financial Literacy Program, as presented by Undersecretary Gil Beltran in the 10th Financial Literacy Summit held last April 20, 2016: *"Financial literacy is the most important component of the Philippines financial inclusion policy. The Philippine financial literacy program is comprehensive; it covers all sectors from policymakers, regulators, microfinance providers down to the clients. It is a continuing activity for many government institutions*". He furtherly stated that indeed, the financial literacy program should cover everyone, all from ages 5 to 100. It is therefore understood that the government is making initiative through various activities to educate the public financially. However, in the academe, this initiative is not manifested. Few courses have integrated financial education on their discussion of the subject matter. Further, new research from The London Institute of Banking and Finance (LIBF) showed that 58 per cent of students aged between 15 and 18 did not receive any form of financial education. Turner (2016). Majority of the young people, not just in the Philippines, but across countries do not receive any financial education in school or college. In this regard, there should be a move on the part of educational institutions to address the issue.

Applying the famous Chinese Proverb - "*give a man a fish and you feed him for a day; teach a man to fish and you feed him for a lifetime"*. Personal finance education will equip young people to manage their own money for their own future. Financial decisions often do not have a right answer, but depend on the preferences and circumstances of the individual making them. The young are the key target for financial education as they go from financial and economic dependency to independence and will be called soon to take on new responsibilities to get access to financial services including credit, savings and insurances. Financial education should be more than an information session, a glossy brochure or fancy tools on a website. OECD (2006), in its "Recommendation on Principles and Good Practices for Financial Education and Awareness", proposed that financial education should start at school, for people to be educated as early as possible. Also, BSP, as a result of their latest Consumer Finance Survey strongly recommends the institutionalization of financial education in the country's school system. But as of to date, no evidence of the initiative has been established in various educational institution. It is in this regard that this research is indeed relevant and timely to initiate action among educational institutions.

Objectives

The conduct of the research achieved the following objectives:

General Objective: To develop financial education training modules for students

Specifically, the research revealed the level of financial capabilities of DHVTSU first year students. Results from the different colleges were compared to come up with financial education modules that are oriented towards financial capacity building. This allowed the researcher to develop modules appropriate to specific groups and be made as personalized as possible. Ultimately, the module that was developed aims to deliver financially capable school leavers, i. e. young people who have the knowledge, skills, attitudes and behaviors to manage their money well and become responsible consumers and citizens.

The above stated objectives were achieved using the following conceptual paradigm:

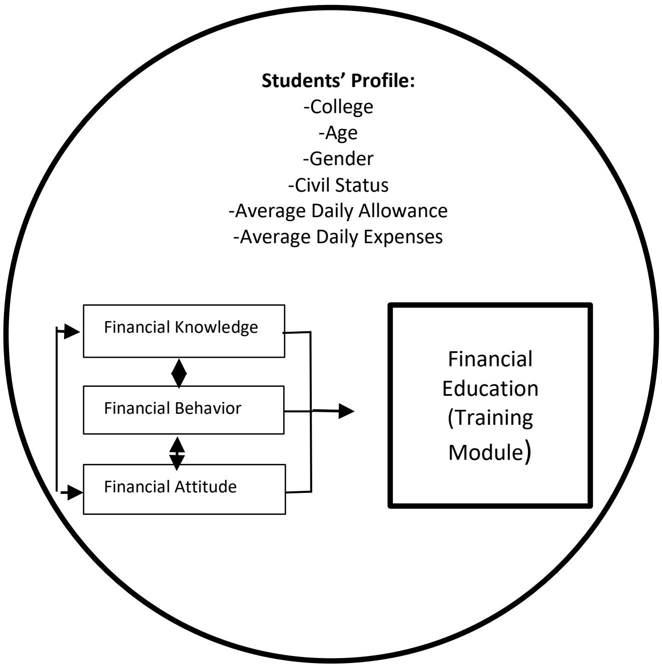

Figure 1: Conceptual paradigm of the study

Methodology

A cross sectional (Kurtz and Boone, 2007) descriptive method (Polit and Hungler, 2009) was used in this study. In this case, the researcher made use of a quantitative method. The respondents were only asked to answer same questionnaire and at almost the same time.

The instruments used to obtain data in descriptive studies include questionnaires, interviews (closed questions) and observation (checklists, *etc*.). In this research, the level of financial literacy of the students was measured using survey questionnaire.

As have been mentioned, in particular, this research made use of a questionnaire which was based on an adaptation of the OECD Financial Literacy questionnaire developed by the International Network in Financial Education (INFE). The use, reproduction and distribution of the questionnaire is permitted on the condition that it will be properly referenced. The questionnaire is divided into four (4) parts. Part I includes the respondent's demographic profile. Part II will be the questions for financial knowledge. Part III is for financial behavior questions and Part IV is intended for assessing financial attitude.

Furthermore, in terms of population and sample, probability sampling, specifically stratified random sampling technique was used in the selection of actual respondents. In obtaining a stratified random sample, the population was divided into their respective colleges. Appropriate number of students per college were then selected to ensure that the research will have adequate respondents from each college in the final sample. Included as respondents are the first-year students from various colleges of a State University. The population of first year students per college for the current academic year was gathered through the office of the Registrar of the university. Sample size was determined using Raosoft sample size calculator.

Table 1 reflects the population and recommended sample size per college.

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Table 1: Population and Sample Size

College	N	%	N
1	116	2	6
2	1159	18	64
3	783	12	43
4	921	14	51
5	1798	27	99
6	542	8	30
7	812	12	45
8	450	7	25
Total	**6581**	**100**	**364**

Results and Discussions

Results and discussion were divided into three parts- demographic profile, level of financial knowledge, behavior and attitude and the relationship among the variables.

Students' Demographic Profile

In terms of the demographic profile, the following were the results of the study:

Table 2: Demographic profile of the students

Profile	Items	f	%
College	1	13	3
	2	62	16
	3	43	11
	4	96	25
	5	34	9
	6	52	14
	7	51	14
	8	26	7
Age	18	165	44
	19	176	47
	20	30	8
	21	6	2
Gender	Male	169	45
	Female	208	55
Civil Status	Single	377	100
	Married	0	0

Continued Table 2

Profile	Items	f	%
Average Daily Allowance	Less than P 100	26	7
	P 101 – P 150		
	P 151 – P 200		
	P 201 – P 250		
	P 251 – P 300		
	More than P 300		
Average Daily Expenses	Less than P 100	155	41
	P 101 – P 150	146	39
	P 151 – P 200	62	16
	P 201 – P 250	8	2
	P 251 – P 300	1	0
	More than P 300	5	1

It can be noted in Table 2 that majority of the respondents are 18-19 years of age (91%), female (55%) and single (100%). Moreover, in terms of their average daily allowance, almost half (48 %) of the respondents have 101 to 150 pesos. On the other hand, many of them have less than 100 pesos as their average daily expenses. When asked about the details of their expenses, the most common responses include food, transportation, photocopies, cellular load, school supplies, projects, personal expenses like cosmetics, etc.

Level of financial knowledge, behavior and attitude

Moreover, in terms of their level of financial knowledge, behavior and attitude, the following were the findings:

Table 3: Level of financial knowledge, behavior and attitude

Variable	Level	F	%
Financial Knowledge	High	76	20
	Average	**273**	**72**
	Low	28	7
Financial Behavior	High	126	33
	Average	**234**	**62**
	Low	17	5
Financial Attitude	High	103	27
	Average	**260**	**69**
	Low	14	4

It was revealed from the study that majority of the respondents have average level of financial knowledge, behavior and attitude with corresponding percentages of 72, 62 and 69, respectively. This was supported by the computed mean of the responses as reflected on the following table. Results shows that the average responses for financial knowledge, behavior and attitude are 5.28, 5.74 and 2.3 respectively. The results are remarkable because studies in the United States revealed low levels of financial knowledge among youth (Charles Schwab & Company, 2011; Lusardi, Mitchell, & Curto, 2010; Mandell, 2008). Further, the study made by Masud (2004), showed that some students are involved in impulse spending, supported by the data on financial problems faced by students and may be involved in 'low priority' unnecessary purchases.

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Table 4: Computed mean of financial knowledge, behavior and attitude

Variable	Mean	Interpretation
Financial Knowledge	5.28	Average
Financial Behavior	5.74	Average
Financial Attitude	2.30	Average

Responses to financial knowledge

In addition, the knowledge aspect of financial literacy was further analyzed by tallying the correct responses per question to determine which of the basic financial literacy concept should be given more attention. The following table is the summary of responses per item in the financial knowledge aspect.

Table 5: Summary of responses on financial knowledge

Variable	Question No.	Concept	f	%
Financial Knowledge	1	Arithmetic/Basic Mathematic operation	335	89
	2	Time Value of Money	247	66
	3	Simple Interest	243	64
	4	Simple Interest	208	55
	5	Compound Interest	135	36
	6	Risk and Return	299	79
	7	Inflation	344	91
	8	Diversification	196	52

It is evident in Table 5 that many (91%) answered correctly on question pertaining to inflation. However, in terms of computation of interest only 55 % and 36 % scored correctly on the questions related to simple and compound interest, respectively. The results were consistent with the study made among students in India by Jayaraman and Jambunathan (2018) where the percentage correct score on the basic financial literacy questions was only 45 %.

Relationship of the financial variables (knowledge, behavior and attitude)

Positive linear trends between financial knowledge, financial behavior and financial attitudes was established among the variables. Results indicate that there are significant positive linear relationships between financial knowledge and financial behavior; financial knowledge and financial attitude; and financial behavior and financial attitudes This is consistent with the findings of Atkinson and Messy (2012) in their working paper titled "Measuring Financial Literacy". Findings reveal that respondents with higher level of financial knowledge exhibit more positive behavior and attitude. Similarly, respondents with positive attitude exhibit more positive behavior.

Further substantiating this inference is the relatively low Pearson coefficient of correlation (r) 0.224 of knowledge and behavior, (r) 0.244 of knowledge and attitudes, and (r) 0.224 of attitude and behavior as presented in Table 6. These coefficients are significant at .01 level.

Table 6: Pearson Correlation Coefficient between financial knowledge, behavior and attitude

Bivariates	R	r^2	Verbal Interpretation
Financial knowledge and behavior	0.224**	0.05	Low positive correlation
Financial knowledge and attitude	0.244**	0.05	Low positive correlation
Financial behavior and attitude	0.224**	0.06	Low positive correlation
**Correlation is significant at the 0.01 level (2-tailed)			

Literature shows that it is likely that the different dimensions of the financial literacy could be related to each other. For instance, high financial knowledge could influence both the financial behavior and attitude. Alternatively, poor financial attitude could lead to less desirable behavior. These relationships are examined to gain more insights about how the different aspects of financial literacy influence each other. Agarwalla et al. (2012), provides some support on the notion that high financial knowledge leads to more positive financial behavior. However, the attitude appears to be almost unaffected by the financial knowledge which contradicts the result of this study. This might imply that focusing on financial numeracy skills may not lead to the desired change in attitude towards money among individuals. Atkinson and Messy (2012) confirmed the positive relationship of financial knowledge and behavior based on the study made across different countries, higher knowledge scores are associated with higher behavior scores; although, relationship somehow varies. Furthermore, results indicate the positive association of attitude and behavior but there appears to be a very little relationship.

Conclusion

The following conclusions were drawn from the study:

1. Majority of the respondents are 18-19 years of age, female, single, have average daily allowance of 101 to 150 pesos and an average daily expense of less than 100 pesos.
2. Many of them have average level of financial knowledge, behavior and attitude.
3. In terms of the basic financial concepts, many score high on question pertaining to inflation. Whereas, low percentage scored correctly on questions connected to interest rates.
4. Test of relationship showed that financial knowledge is positively related with financial behavior and attitude, as well as financial behavior and financial attitude.
5. A training module to improve financial literacy of students was developed.

Recommendations

Results of the study provide evidences from which the concerned entity can identify needs and gaps to develop appropriate financial planning programs and strategies. In this study, there is a need to address deficits on financial knowledge, behavior and attitude. Fortunately, knowledge deficiencies are easier to remedy than

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problems on behavior and attitude. But with the result of the correlation, it can be noted that financial knowledge can affect behavior and attitude. To address issues on the various aspects of financial literacy of the students, the following are suggested:

1. The overarching goals of the introduction of financial education in the school setting should be set through the nationally coordinated strategy and based on relevant education principles. The introduction of financial education as a stand-alone subject or module would in principle ensure that sufficient time and resources were devoted to its teaching.
2. Have a structured learning program which may include topics on financial planning and concepts which can help increase level of financial knowledge. To do so, the researchers recommend financial education that is not only presented in pieces of fancy paper, or website. They propose a type of education where the target audience can apply what they have learned not just in the conduct of their business, but also in their daily life. A lot of times, simply having people read a material will not result in change of attitude or behavior.
3. The instructors of the College of Business Studies handling finance subjects may be tapped to conduct some financial literacy seminar/workshop/courses using the module that was developed.
4. Financial education, to become more holistic, including it in the secondary and college education standards, accepted curricula and outcomes assessment. This may help the public develop good financial habits at an early age which in turn may help develop good financial attitude.
5. More researches on financial literacy are encouraged particularly in the following areas:

   5.1. Variances of financial knowledge, behavior and attitude on the basis of the socio demographic profile for a more customized programs based on the profile of the target population.

   5.2. Understand deeply the relationship of variables – financial knowledge, behavior and attitude in such a way that results may indicate causation and not simply association.

   5.3. Other topics of financial literacy such as record keeping, budgeting, personal finance and savings should be included in future researches.

   5.4. Similar study should be conducted to other segments of population such as non-working parents, workforce, ofw families, etc.

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