

Article 5

An Evaluation on Personal Finance Web System for University Students

Nor Azzyati Hashim, Nor Faridah Bani Omar, Romiza Md Nor
Faculty of Computer & Mathematical Sciences,
Universiti Teknologi MARA Perlis Branch

Abstract

The exposure of personal finance literacy among youth has started to get further attention worldwide on account of economic instability and rising cost of living. Knowing about personal finance as early as possible becomes important because being fit in money management is one of the factors that lead for better lifestyle and early financial freedom. A web-based system in a university setting is expected to help university students take advantage of this opportunity. This paper investigates the benefits of a web system called e-Personal Finance (e-PF) for bachelor degree students in Universiti Teknologi MARA (UiTM) Perlis Branch. e-PF is composed of three main sections; Financial Test, Budget Planner and Finance Calculator. Evaluation for this web system using usability testing involved 50 bachelor degree students from seven faculties and two finance lecturers cooperated to give their expert point of view and opinion. From the findings, it is discovered that e-PF can help students to improve their knowledge and attitude about personal finance. As a conclusion, e-Personal Finance is found to be relevant in becoming one of education medium to assist university students in personal finance literacy, planning and management.

Keywords: *personal finance, financial literacy, personal finance web system, usability testing, university students*

Introduction

A fluctuation in economic stability and rising cost of living make personal finance becomes more crucial now than before. Seddon (2012) referred personal finance as “individuals and household consumption possibilities, both now and in the future, and is therefore driven by both income and wealth” and its distribution. Basically, the area of personal finance covers financial planning, money management, insurance protection and investments management (Keown, 2010). Due to broad area of personal finance, the exposure of at least the basic such as financial planning and money management should be introduced at earlier age as possible.

When people are better informed about personal finance at younger age, they can develop improved financial literacy. Organisation for Economic Co-operation and Development (OECD) (2012) defined financial literacy as “knowledge and understanding of financial concepts, and the skills, motivation and confidence to apply such knowledge and understanding in order to make effective decisions across a range of financial contexts, to improve the financial well-being of individuals and society, and to enable participation in economic life.” According to Chen and Lope (1998), university students who had low financial knowledge tend to make wrong financial opinion that could cause incorrect financial decision. That is why improving financial literacy among university students is important because their financial knowledge and practices during this time will significantly influence their financial situation after graduation (Cude et al., 2006).

In Malaysia, knowledge about personal finance among university students is still considered at minimum level. A study found that students did not have adequate and appropriate financial knowledge and skills concerning that many of them depended on education loan (Jarrah et al., 2004). Another study revealed that students lack of financial literacy even on routine skills of money management (Ibrahim, et al., 2009). Furthermore, a research review on financial literacy among undergraduate students from four published studies in Malaysia has shown that lacking of financial knowledge requires national attention to provide financial literacy education to students (Ahsan, 2013).

There are many methods that can be used to offer financial literacy. Apart from seminars, pamphlets, newspapers, radio and television, informative website is considered as an efficient and cost-effective method to deliver information and educate about financial literacy (Toussaint-Comeau & Rhine, 2000; Cude, 2006). Thus, a web system development is applicable to achieve the purpose.

In light of the above, a web system called e-Personal Finance (e-PF) was developed to help university students to improve their financial knowledge and attitude that will lead to better financial literacy of financial planning and money management. Evaluation of a web system to measure its effectiveness, efficiency and satisfaction of users can be achieved with usability testing (ISO, 1998 as cited by Bevan, 2009; as cited by Hornbaek, 2006). For that reason, usability testing was conducted to evaluate e-PF web system.

Research Model

Figure 1 shows the research model that has been applied in the development of e-PF.

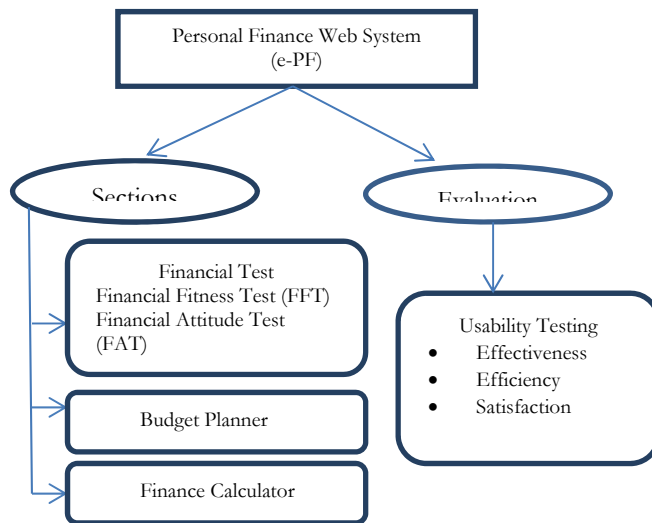


Figure 1: Research model for the development of e-PF.

e-PF focuses on three sections which are financial test, budget planner and finance calculator. Financial tests which were adapted from Financial Fitness Test (FFT) (Cameron et al, 2013) and Financial Attitude Test (FAT) (Ibrahim, 2009) to provide students evaluation about their financial knowledge and attitude. Budget planner acts as a financial diary for students to improve on

financial planning skills. It is developed in place of a financial diary for students to type their monthly income and anticipated expenditure. As for finance calculator, it can be used by students for money management. It is a tool to calculate the actual income and expenditure to encourage on savings. The development of all three sections is based on university students' environment in Malaysia. Usability testing is performed to evaluate the e-PF effectiveness, efficiency and satisfaction.

Methodology

In order to conduct the usability testing, bachelor degree students from Universiti Teknologi MARA (UiTM) Perlis Branch were selected randomly. In ensuring that the respondents come from different education background, students were selected from all seven different faculties in UiTM Perlis Branch. The respondents from each faculty were about four to ten students. Table 1 shows the classification of respondents.

Table 1: Classification of Respondents According to Field and Faculty

Field	Faculty
Science and Technology	Faculty of Applied Sciences Faculty of Computer and Mathematical Sciences Faculty of Architecture, Planning and Surveying Faculty of Sports Science and Recreation Faculty of Plantation and Agrotechnology
Business Management	Faculty of Accountancy Faculty of Business Management

Two types of usability methods were used in testing; questionnaires and expert review. The questionnaire and expert review questions were classified according to its measure and explanation as summarized in Table 2.

Table 2: Classification, Measure and Explanation of Usability Methods (Adapted from Current Practice in Measuring Usability (Hornbaek, 2006))

Classification	Measure	Explanation
Effectiveness	Experts' assessment Users' assessment	<i>Users' assessment of the outcomes of the interaction (quality of web system)</i>
Efficiency	Usage patterns	<i>Measures of how users make use of the interface to solve tasks</i>
Satisfaction	Perception of outcome	<i>Users' assessment of the outcomes of the interaction (assessment of own performance)</i>

Questionnaire questions regarding effectiveness measure users' assessment from their interaction with the quality of e-PF web system. Questions on efficiency measures users' usage patterns on how they make use of the interface to improve financial literacy and understand financial planning and management. As for satisfaction questions, users perception on the outcomes of their interaction with e-PF web system were gathered.

Expert review was used to only collect experts' assessment on the outcome of their interaction with the web system to analyze the effectiveness of e-PF as an education medium.

Results and Findings

A total of 50 students participated as questionnaire respondents. Respondents answered 18 questions to evaluate e-PF efficiency, effectiveness and users' satisfaction. The range response for each questionnaire question is between 1 (*Strongly Disagree*), 2 (*Somewhat Disagree*), 3 (*Neutral*), 4 (*Somewhat Agree*) and 5 (*Strongly Agree*). Table 3 tabulates the responses of the questionnaire.

Table 3: Responses to Questionnaire

No.	Efficiency	Mean Score
1	I know how to use e-PF.	3.94
2	The choice of words used is easy to understand.	3.88
3	Instructions for Financial Test, Budget Planner and Finance Calculator are clear and not confusing.	4.08
4	The questions in Financial Test are appropriate.	4.12
	Effectiveness	
5	The result that I got from Financial Test is acceptable.	4.04
6	My financial information that I put in Budget Planner is saved correctly and can be referred when needed.	4.20
7	Finance Calculator calculates accurately.	4.20
8	Finance Calculator calculates important financial activities for students.	4.24
9	All financial information in e-PF relate to students environment.	4.22
10	e-PF is effective to help students increase the understanding of personal finance.	4.32
	Satisfaction	
11	I am satisfy with financial information in all the sections (Financial Test, Budget Planner and Finance Calculator) in e-PF.	4.10
12	All the sections (Financial Test, Budget Planner and Finance Calculator) in e-PF are not complicated to use.	4.20

13	The sections (Financial Test, Budget Planner and Finance Calculator) are suitable for a new learner of personal finance.	4.14
14	The information in e-PF gives me new knowledge about personal finance.	4.16
15	e-PF helps me discover my behaviour in financial planning.	4.08
16	e-PF encourages me to change my attitude towards money management.	4.28
17	I am now more aware about my financial planning.	4.18
18	Besides using e-PF, I think personal finance subject should be taught to non-finance students.	4.28

The data collected shows that there were students *somewhat disagree* with the choice of words used in e-PF system because there were students who were not from Business Management field that were not familiar with some of the finance terminology. Consequently, that makes question 2 and question 3 responses slightly below mean score of 4. Nevertheless, from the overall questionnaire, it can determine that e-PF system is effective, efficient and fulfil users' satisfaction in helping them to increase financial literacy and thus improve their knowledge and attitude in financial planning and management. Interestingly, many of the students *strongly agree* that personal finance subject should be taught to non-finance students so that students from all fields and faculties can understand better about personal finance.

For the expert review, two finance lecturers participated to test the effectiveness of e-PF web system. Table 4 shows the expert review responses.

Table 4: Responses from Expert Review

Effectiveness – e-PF as an Education Medium	Mean
e-PF sections content (Financial Test, Budget Planner and Finance Calculator) are related with personal finance topic.	4.5
Questions in Financial Test are compatible with personal finance syllabus.	4.5
The result that I got from Financial Test is acceptable.	4.5
e-PF can be used as one of education medium to deliver financial literacy to students.	5.0

Both lecturers gave positive feedback towards the effectiveness of e-PF web system. One of the lecturer informed that e-PF is a good method for spreading about personal finance to university students. Another lecturer added that the combination of the three sections (Financial Test, Budget Planner and Finance Calculator) fulfils the personal finance requirements and specifications for students. As a result, both lecturers agree that e-PF can be used as one of the medium to deliver about personal finance to university students.

Conclusion and Future Works

The importance of personal finance literacy among university students becomes crucial because majority of the students are on education loan and have low money management skills. e-PF web system is developed to evaluate financial literacy of knowledge and attitude about personal finance among university students. Besides that, it functions to encourage financial planning and money management. These can be achieved through three sections consist of financial test, budget planner and finance calculator in e-PF web system.

From the findings, it can be concluded that using e-PF web system can help university students to improve their financial literacy towards better financial planning and money management. Many students agree that personal finance subject should be taught to all faculties. Significantly, expert reviews reach to an agreement that e-PF web system can be used as one of the education medium to provide financial literacy education to university students.

For future works, this web system can be improved by providing monthly and annually report summary on income, expenditure and savings. In addition, the report summary can be added with graphical presentation where students can visualize their integrated financial patterns. The web system functions can also be extended to include other areas of personal finance such as insurance and investment.

References

- Bevan, N. (2009). Extending quality in use to provide a framework for usability measurement. *In International Conference on Human Centered Design*, Springer Berlin Heidelberg, pp. 13-22.
- Chen, H. and Volpe, R.P. (1998). An Analysis of Personal Financial Literacy among College Students. *Financial Services Review*, 7(2), 107-128. Retrieved from <http://www.sciencedirect.com/science/article/pii/S1057081099800067>
- Cude, B. J., Lawrence F. L., Lyons, A.C., Metzger, K., LeJeune E., Marks L. and Machtmes K. (2006). College Students and Financial Literacy: What They Know and What We Need to Learn. *Eastern Family Economics and Resource Management Association 2006 Conference*, 102-109. Retrieved from https://www.cgsnet.org/ckfinder/userfiles/files/College_Students_and_Financial_Literacy.pdf
- Hornbaek, K. (2006) Current Practice in Measuring Usability: Challenges to Usability Studies and Research. *International Journal of Human-Computer Studies*, 64(2), 79-102. Retrieved from <http://www.sciencedirect.com/science/article/pii/S1071581905001138>
- Ibrahim, D., Harun, R., & Isa, Z. M. (2009). A Study on Financial Literacy of Malaysian Degree Students. *Cross-Cultural Communication*, 5(4), 51–59. Retrieved from <http://www.cscanada.net/index.php/ccc/article/viewFile/773/772>
- Jariah, M., Husniyah, A. R., Laily, P., & Britt, S. (2004). Financial Behavior and Problems among University Students: Need for Financial Education. *Journal of Personal Finance*, 3(1), 82–96. Retrieved from <http://childfinanceinternational.org/component/mtree/kb/global-platforms/financial-education/financial-behavior-and-problems-among-university-students-need-for-financial-education?Itemid=>
- Keown, A.J. (2010). Personal Finance: Turning Money into Wealth. Retrieved from <http://www.gbv.de/dms/zbw/799816930.pdf>

- Ahsan, M.H. (2013) Financial Literacy Research On Undergraduate Students In Malaysia: Current Literature And Research Opportunities. *International Journal of Education and Research*, 1(11). Retrieved from <http://www.ijern.com/journal/November-2013/35.pdf>
- OECD (2012). Financial Education: OECD PISA Financial Literacy Assessment. Retrieved from <http://www.oecd.org/finance/financialeducation/oecdpisafinancialliteracyassessment.htm>
- Cameron, M. P., Calderwood, R., Cox, A., Lim, S., & Yamaoka, M. (2013). Personal financial literacy among high school students in New Zealand, Japan and the USA. *Citizenship, Social and Economics Education*, 12(3), 200-215.
- Seddon, C. (2012). Measuring National Well-Being - Personal Finance. Office of National Statistics. Retrieved from http://webarchive.nationalarchives.gov.uk/20160105160709/http://www.ons.gov.uk/ons/dcp171766_278355.pdf
- Toussaint-Comeau, M., and Rhine, S. L. W. (2000). Delivery of Financial Literacy Programs. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.196.6645&rep=rep1&type=pdf>