Chapter 12

MoneyWise Personal Cash-Flow Simulation

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ABSTRACT
MoneyWise Personal Cash-Flow Simulation Module (MoneyWise) has been developed to facilitate students in understanding the elements of personal financial management. The simulation enables students to experience the essentials of budgeting, record-keeping, and other related activities in money management. The module also provides useful tools and tips for students to plan and manage their cash flows and financial requirements. In the simulation, students assume the role of an individual who have a monthly salary for his or her chosen career and family scenario. Based on certain assumptions and events, students are required to prepare their family budget and record daily cash flows for a specified period. During the simulation cycle, students are able to view and analyse the status of their financial position in various reports, such as the budget template, cash flow statement, and cash requirements report. In addition, MoneyWise also features other financial tools, such as one-million planner, loan calculators, and other references on financial literacy and money management. The MoneyWise simulation system is expected to enhance students’ potentials to obtain excellent grades in personal financial planning course and elevate their knowledge, skills, and readiness to face with the actual real-life situation when they are working and having a family in the future. The latest version of MoneyWise has been upgraded to meet the needs of learners and actual users. The system not only functions as an e-learning material but is also useful for individuals to record and manage their day-to-day financial transactions. MoneyWise is a great e-learning innovation and a relevant financial tool in an effort to elevate the level of financial literacy of society, which is in line with the National Strategy for Financial Literacy 2019-2023 (National Strategy).

Key Words: e-learning, planning, literacy, financial, simulation
1. INTRODUCTION

In line with the National e-Learning Policy (DePAN) and the National Financial Literacy Strategy 2019-2023 (Strategi Kebangsaan), the Faculty of Business and Management of University Teknologi MARA Cawangan Terengganu has produced a teaching and learning (T&L) innovation known as MoneyWise Personal Cash-Flow Simulation (MoneyWise). This T&L innovation has been developed based on simulation methods used as one of learning resources for the Personal Financial Management Course (FIN533) in an effort to improve T&L delivery methods and promote financial performance and literacy among students.

2. LITERATURE REVIEW

Financial well-being refers to an individual's ability to meet current and future financial responsibilities, feel secure with his or her financial future, and make choices that enable him or her to enjoy life (Financial Education Network, 2019). According to surveys conducted by Bank Negara Malaysia and the Credit Counselling and Management Agency, known as Agensi Kaunseling dan Pengurusan Kredit (AKPK), the level of financial literacy among the community can still be further improved. The surveys have also revealed some concerns expressed by Malaysians particularly regarding the level of knowledge and skills in managing personal finances.

Among factors contributing towards the high levels of debt and bankruptcy problems among youths are low financial literacy, failure to manage financially well, and the burden of debt(s) borne after graduation. According to a report released by the Insolvency Department of Malaysia, or Jabatan Insolvensi Malaysia, 100,610 people have been declared bankrupt since 2013 to 2017 and 60 per cent of them have been between 18 and 44 years old. It is very surprising to know that those declared bankrupt are as early as 18 years old. In fact, this issue is nerve-wracking as it can negatively impact not only on the societal aspect but also have the potential to distort the long-run macroeconomic growth. According to the AKPK Chief Executive Officer, those who have been declared bankrupt have acknowledged that the main cause of their failure to control their finances has been due to the lack of good education and smart financial planning. According to the Malaysian Insolvency Department records, supported by a findings generated by a study conducted by the Asian Institute of Finance (AIF), some important measures which should be kept in mind in order to avoid getting trapped in this financially stressful problems are finding out the level of financial position, comparing income with expenses, equip oneself with financial wisdom, performing good financial management, and investing wisely.

3. METHODOLOGY

Among the key objectives of the UiTM Transformation Plan (TRANS4U) and the university’s highest management mandate are the innovation culture to enhance the
effectiveness of the T&L process and the involvement of university community in new learning approaches framedwork in Education 5.0@UiTM. In support of the aspiration, the FBM East Coast (FBMEC) Group has taken an innovative initiative to improve the delivery method for the teaching of Personal Financial Planning (FIN533) Course. The Faculty of Management and Business of UiTM Cawangan Terengganu has offered the course, which aims at enhancing students’ knowledge and skills in individual financial-management elements, such as preparing budgets, recording financial transactions, generating reports, and systematically monitoring personal financial position. A preliminary analysis on students’ achievements for this course indicates that there is still margin for improvement in boosting students’ achievements to the maximum. Hence, the FBMEC has selected the MoneyWise project as an effort to facilitate lecturers to prepare course materials and assessments, add variations to their existing T&L materials, and enhancing students’ achievements for the FIN533 courses by applying the concepts of blended learning, e-learning, and simulation methods.

Blended learning is a method of learning where the delivery method is not only done face-to-face but is also handled through other means. The CAP e-Learning Committee of the Ministry of Education Malaysia has defined blended learning as “courses that offer a combination of online and face-to-face modes of learning with 30% to 80% of their contents and activities are conducted online either to support or replace a face-to-face learning approach.” The scope of e-learning is a form of teaching and learning instruction conducted via electronic media, which aims at enhancing the effectiveness of the T&L process and supporting it. One of the strategies which can be implemented as a learning tool is by using a simulation, a medium used in the T&L process in which students have the opportunity to exercise financial management theories in reality, as if they are in a real-life situation, by getting engaged in activities associated with topics covered in the FIN533 course syllabus.

The development of MoneyWise module has begun with data collection and analysis of final-exam results of students taking the FIN533 course. Figure 1 shows the analysis of students’ achievements by grade from 2012 to 2017 for the course. About 50.7 per cent of students from the BM242 programme of the whole UiTM system and 58.6 per cent of the students of UiTM Cawangan Terengganu have obtained a B+ grade. A further analysis has been performed by examining final-exam scores obtained by students in Part A of the course’s past-semester question paper, which is associated to the management of individual financial statements. The maximum scores achieved have been only 32 per 40 with the average overall score of Part A being 27.9 per 40 or 69.7 per cent. These achievements are considered modest and, therefore, need to be improved. In order to increase the overall scores of the FIN533 course to 80 per cent, the Section-A scores must exceed 32 marks at least. The number of students getting a B+ grade are believed to increase to 80 per cent by applying the MoneyWise simulation system.
Chapter 1: Student-achievement Analysis for the FIN533 Course (Based on the Overall UiTM System)

The 5W1H method has been used to get an early picture of the problem encountered. There are five (5) key factors, which are people, tools, environment, materials, and methods, that need to be taken into consideration which might have resulted in the FIN533 final-examination results being moderated. The results of the discussion and more detailed studies have shown that only three (3) contributing factors could be addressed by the FBMEC, which are methods, materials, and people (Figure 2). Driven by the factors identified, the researchers have developed a solution plan by providing a comprehensive T&L material and enhancing techniques and variations of teaching by using the MoneyWise system.

The development of the system has been done according to the methodology of the development of the information technology system introduced by the Waterfall System Development Life Cycle (SDLC), which has been recognised by many system researchers and developers (Mohamed, 2012). Based on the system development methodological phase, the researchers have analysed the system specifications, provided necessary software and hardware, and made a preliminary sketch of the system. The system design has been reviewed to ensure that each component and element loaded meets users' requirements.

In the meantime, the coding process has been commenced and then followed by a runs test by potential users; the students themselves. According to the users, the system is engaging, creative, user friendly, easy to understand, facilitates the T&L process, and meets the needs of the FIN533 course. All feedback and suggestions made by the users have then been taken into account for continuous improvement of the system. The implementation of the system has begun with the use of the module at the...
programme level, followed by the recommendation of the utilisation of the module in all programmes of the Faculty of Business Management at Universiti Teknologi MARA Cawangan Terengganu.

For a broader integration and implementation purposes, the MoneyWise simulation module has been upgraded from the Excel-based to the web-based system. The latest version of MoneyWise is now more user-friendly and easy to access. MoneyWise, which has initially functioned as a T&L tool, can now be used by real users to record their daily financial transactions. To give more confidence to students and prospective users, MoneyWise has received intellectual-property (copyright) approval on July 17, 2018. In addition to the recognition given by the top management of the faculty and UiTM Cawangan Terengganu per se, the MoneyWise Simulation Module has also been endorsed by two professional evaluators, namely Mr. Zamri Musa, the Registered Financial Planner, and Mr. Saidi Ya'acob, the Head of the Credit Counseling and Management Agency, Kuantan.

4. RESULTS & DISCUSSION

The MoneyWise Simulation Module first came into use at the Faculty of Business and Management of UiTM Cawangan Terengganu in March 2018. The final-examination analysis has shown that the Part-A average scores have increased from 69.7 per cent to 76 per cent. Therefore, it is wise to say that the researchers may expect a steady increase of up to 80 per cent next semester. This is because the existence of the MoneyWise system has benefited many and is in line with the university aspiration and the national agenda. For students, the system can enhance their potentials in obtaining...
better grades for the Personal Financial Management Course and be very relevant for the real-time use in the future. For lecturers, the existence of MoneyWise gives them the option to use the interactive, appealing, and easy-to-understand teaching aid.

5. CONCLUSION & RECOMMENDATION

Managing money wisely is one of the most important skills that everyone should have in order to ensure that his or her financial affairs are well-managed and systematically handled. In support of university policies that promote the use of blended learning and the latest teaching aids which are appropriate with student needs, the MoneyWise Simulation Module has been successfully developed. MoneyWise not only can be used by both local and international students of public and private institutions of higher learning but is also suitable for public use (Figure 3).

![Figure 3: Project Impact](https://example.com/figure3.png)

REFERENCES