ENHANCING ACCOUNTING LITERACY WITH SMARTACCXEL: AN INTERACTIVE EXCEL TEMPLATE

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ABSTRACT

Accounting is a fundamental skill essential for financial literacy, yet many pre-diploma students without prior accounting knowledge struggle to understand basic concepts, particularly the identification of debit and credit in transactions. Traditional teaching methods often fail to provide real-time feedback, making it difficult for students to recognize and correct their mistakes. To address this challenge, this project introduces SmartAccXcel (Smart Accounting learning with Excel) an innovative Excel-based interactive learning template designed specifically for non-accounting students. SmartAccXcel features an automated feedback system that validates student inputs, a step-by-step account classification guide, and an interactive approach to identifying debit and credit. By integrating these features, SmartAccXcel enhances students' learning experiences, allowing them to self-assess and correct errors instantly, ultimately improving their understanding of fundamental accounting principles. This innovation provides multiple benefits, including self-paced learning, reduced reliance on lecturers, and increased confidence in financial decision-making. Additionally, SmartAccXcel has strong commercialization potential, as it can be integrated into educational institutions, licensed to universities and training centers, or offered as a digital self-learning tool. With its ability to bridge the knowledge gap in accounting education, this project will help simplify accounting concepts for beginners, improve understanding and instil interest towards the accounting subject.

KEYWORDS: *Accounting Education, Automated Feedback System, Debit and Credit Identification, Educational Innovation, Excel-Based Learning Tool*

PROBLEM AND OBJECTIVE

Pre-Diploma Program is the Universiti Teknologi MARA (UiTM) initiative in providing a special academic path for Sijil Pelajaran Malaysia (SPM) graduates who unfortunately meet the basic academic requirements for direct university entry. After completing the Pre-Diploma program, these students will be applied to Diploma level studies at several faculties at UiTM according to their respective choices.

Student who enrolled in this special program will take preparatory courses to bridge the gap between secondary school and university-level studies. One of the courses is Introduction to Accounting (ACC030) which imparts a fundamental understanding of basic accounting concepts, principles and techniques of double entry system, procedures in preparing final accounts of a sole trader for merchandising and service enterprise. Many pre-diploma students find it challenging to study this course as they lack a background in accounting and struggle with computation.

Prior literature has demonstrated that non-accounting students believed accounting courses were tough, irrelevant to their field, and difficult to score (Amir & Shabri, 2022; Ismail & Kasim, 2011). Lack of relevant pedagogical design is one of the difficulties faced by non-accounting students which stem from the curriculum being tailored for accounting majors, leading to difficulties in understanding and engaging with the content (Padayachi, n.d.). Because of their inability to grasp accounting, many of them have lost interest and focus. According to the study by Hasbolah et al. (2020), students who did not major in accounting felt secure and eager to study accounting courses online if they are able to use the online resources effectively. The use of innovative technologies such as augmented reality has been demonstrated to improve the educational experience for non-accounting students by making classes more engaging and interactive (Zainuddin et al., 2021). Research by Mohamad et al. (2023) found that digital tools utilized in open distance learning (ODL) positively influence students' perceptions of course effectiveness. Thus, this emphasizes the necessity of tailored teaching methods that accommodate different kinds of learning needs.

The objective of this project is to bridge this learning gap by developing SmartAccXcel, an Excel-based interactive learning tool designed to help non-accounting students comprehend and apply accounting concepts through real-time feedback, guided practice, and self-assessment features.

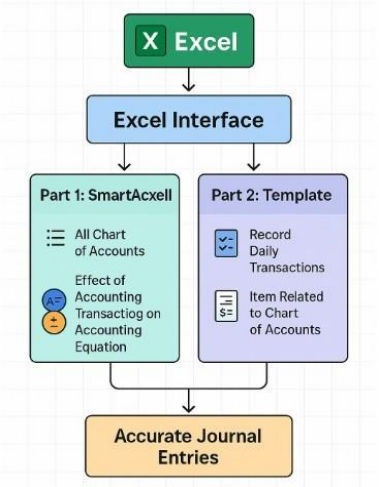
DESIGN DESCRIPTION

SmartAccXcel is an interactive, Excel-based learning template tailored to beginners in accounting. Designed primarily for pre-diploma and non-accounting students, the tool aims to simplify the process of identifying and classifying transactions into debit and credit. Key features include:

- Step-by-Step Classification Guide: Helps users identify accounts and their correct positions.
- Interactive Debit/Credit Interface: Engaging format that simulates real-life accounting scenarios.
- Automated Feedback System: Verifies entries instantly and highlights errors.
- Self-paced Learning: Enables students to practice frequently without external supervision.

The template requires no prior Excel or accounting knowledge, making it highly accessible. Its interactive format makes learning more engaging, while the automation enhances understanding through immediate correction and reinforcement.

VISUALS



The accounting process begins with an Excel interface that containing two main parts: SmartAccXel and Template. SmartAccXel provides a complete set of accounting charts, and it shows effect of business transactions on accounting equation, helping users understand accounting principles visually. The Template is designed for recording daily business transactions, where columns linked to the chart of accounts in SmartAccXel part for easy and accurate entry. These two parts guide users towards making accurate and correct journal entries.

NOVELTY AND UNIQUENESS

A dynamic, real-time feedback system is made available by SmartAccXcel, which incorporates directly into the commonly used platform of Microsoft Excel, in contrast to static templates or typical accounting teaching methods. This eliminates the need for additional software, reduces costs, and maximizes accessibility. Students can instantly and independently revise what they have learned as to the tool's automation, adaptability, and simplicity that distinguish it apart from other educational resources. The design also accommodates hybrid and offline learning settings.

BENEFITS TO MANKIND

SmartAccXcel empowers students with essential financial literacy skills, enabling better personal and professional financial decisions. By making accounting accessible to all, particularly those without a background in accounting, it would lessen gaps in education and boosts confidence in managing accounting and finances.

COMMERCIAL POTENTIAL

SmartAccXcel has broad market potential across secondary schools, higher education institutions, and training centers. It can be licensed to universities as part of their foundation or introductory accounting modules, offered as a digital self-learning tool, or packaged for online platforms. It is scalable and competitive in the market for education technology due to its affordable cost model and compatibility with current software.

CONCLUSION

SmartAccXcel addresses a critical gap in accounting education by offering an engaging, self-paced, Excel-based learning tool for beginners. Through features such as real-time feedback, interactive transaction classification, and guided learning, it transforms a traditionally difficult subject into an approachable and enjoyable experience. The tool’s design not only enhances student comprehension but also promotes independent learning and confidence. In the future, SmartAccXcel could potentially be extended to encompass higher-level accounting topics, integrate gamified components for greater user engagement, and offer multilingual support to make it accessible to a wide audience.

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