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From Cells to Insights: Assessing the Impact of Hands-On Microsoft Excel Project in Enhancing Student Proficiency

Written by: Wan Aryati Wan Ghani, Haslinda Noradzan

In today's rapidly changing educational landscape, the demand for digital proficiency extends far beyond the field of IT and computer science. For non-IT students, mastering Microsoft Excel offers a gateway to practical skill development that goes beyond traditional disciplinary boundaries. MS Excel features cells as the fundamental building blocks that serve as versatile units where calculation can be performed, and data can be manipulated with precision. Cells in MS Excel can contain a variety of data types such as text and numbers as well as logical data. Using formulas, calculations and data analysis can be performed on the contents of the cells. According to a research article written by Kelly et al. (2023), combining financial accounting with MS Excel enhances learning while giving students digital workplace capabilities.

MS Excel has become an essential tool with broad applications that are often associated with data analysis and business applications, particularly in the era of big data, where the need for efficient data management and analysis is crucial. Data shapes decisions and information is valuable these days, MS Excel equips students with the ability to

navigate, analyze, and present data effectively. The practicality of this skill cannot be overstated, as it finds applications in everything from managing personal budgets to conducting research. Academia and industry are working together to ensure that business undergraduate students in general and accounting/finance students have a strong understanding of MS Excel skills (Ali & Fitzpatrick, 2022). They gain a competitive edge and foster analytical thinking, problemsolving skills, and a firm grasp of the digital tools that define modern academia and the professional world.

Management Information System (CSC408) is а compulsory course taken by undergraduate students in the Faculty of Administrative Science and Policy Studies. The course is designed to expose students to the fundamentals of information systems applied in business and organizational environments. Through this course, students are required to develop a simple information system and demonstrate how the system can support management and decision-making. Students are required to collaborate in groups of three to five members to complete this project, utilizing MS Excel as the main application.

In this article, a comprehensive approach is used to evaluate students' understanding of MS Excel and assess the significance of the software in its practical applications. After completing the group project assessment, a structured questionnaire was distributed to the students to evaluate their experience and level of satisfaction. The study aims to explore their experiences, perceptions, and skill development throughout the MS Excel projects. In total, 109 questionnaires were collected and analysed. By gathering firsthand feedback from these students, the following findings have emerged.

Figure 1 below shows the percentage of students' responses to the questions as stated. 43% of the respondents feel that they improved their MS Excel skills significantly through the group project assigned. The remaining 43% and 9% represent moderate and slight levels, respectively. This could be due to the fact that they were not exposed to MS Excel prior to enrolling in the subject.



Figure 1: Students' responses regarding proficiency in using MS Excel after completing the CSC408 project assignment.

However, the study's next finding concerns the students' confidence level in using MS Excel after completing the project. The result shows 75% of students are confident in their ability to use MS Excel.



Figure 2: Students' feedback on their confidence level in using MS Excel upon CSC408 project completion.

In this question, students had to determine if the course had given them practical skills they could use in the real world. It seeks to deduce whether the project had practical and real-world relevance. It also measures students' perception regarding the provision of the course and its impact on their future skills. Figure 3 indicates that 74.3% of the students strongly believed that the project significantly contributed to acquiring practical skills.



Figure 3: Students' perception of the practicality and real-world applicability of the project. In conclusion, the responses gathered from students offer valuable insights into the perception of their MS Excel skills. Additionally, it provides a comprehensive overview of how students assess their proficiency and confidence in using MS Excel, highlighting the impact of the project and the course on their skills and perception. This study can be enhanced by assessing students' skill and creativity in analysing and visualising data per se, using the existing data in the same project.

References:

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