MOBILE LEARNING IN MEDICAL CODING COURSE

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Abstract
Medical coding comprises the assignment of appropriate ICD-10 codes to patient diagnoses through coding exercises. However, due to their lack of knowledge, students often commit coding errors, resulting in incorrect code assignments. The purpose of developing Medical Coding Simulation (MedCoS) is therefore to help students improve their motor and technical skills in challenging environments. This research aims to predict how likely students are to use MedCoS by analysing their attitudes (AT), subjective norms (SN), and perceived behavioural control (PBC). In order to achieve this objective, descriptive, reliability, and multiple regression analyses were conducted using SPSS. The study involves students from the fifth and sixth semesters who took both courses. The majority of respondents (90.2%, n = 102) were between the ages of 23 and 24. The findings suggest that the attitudes and perceived behavioral control of students can predict their intention to use MedCoS. This significant result enables MedCoS to plan the next phase of application development in order to effectively enhance course performance.

Keywords: Mobile Learning; Theory of Planned Behavior; Intention to Use; Medical Coding; Technology

Research Highlights
- Studying medical coding requires a significant amount of practice time. MedCoS, a mobile learning application, offers extensive coding activities based on the World Health Organization’s ICD-10 code list. The purpose is to reduce the likelihood of medical coding errors.
- Three components of the Theory of Planned Behavior can predict whether or not a student will use a mobile learning application. User expectations for the medium may shape attitudes about the implementation of technology. Subjective norms consider the views of others while deciding to participate in the use of technology. For perceived behavioral control, it assessed how easy it was to believe that using the technology would be.
- There was a positive attitude and perceived behavioral control score for using MedCoS among students of all gender and educational backgrounds. With the help of learning technology, students will develop better judgement, critical thinking, and self-directed coding skills.

Research Objectives
Medical coding is a subject in which students must assign appropriate ICD-10 codes to patient’s diagnosis through coding exercises. However, due to students’ lack of expertise, wrong codes are assigned to situations, resulting in coding errors. Thus, the goal of developing Medical Coding Simulation (MedCoS) is to assist students in strengthening their motor and technical abilities in difficult settings. The goal of this study is to predict students’ intent to use MedCoS using attitudes (AT), subjective norms (SN), and perceived behavioural control (PBC).
Methodology

Cross-sectional survey research is used in this study. Students in the Health Administration bachelor’s degree program at Universiti Teknologi MARA (UiTM) were included in this study, as were students in Semesters 5 and 6 who had completed a medical coding course. This study received responses from 167 students in total. To evaluate the research aims, a questionnaire was utilized to measure Theory of Planned Behavior categories of attitude, subjective norms, perceived behavioral control, and intention to use. The questionnaire contains 15 questions on a five-point Likert scale. The questionnaire was divided into three sections: (a) four items identifying respondents’ backgrounds; (b) 11 measures accessing attitudes, subjective norms, and perceived behavioral control; and (c) four items measuring respondents’ intention to use the MedCos. Each response was scored on a five-point scale, with 0 indicating “Strongly Disagree” and 5 indicating “Strongly Agree.” (Salleh & Albion, 2004). Students have one week to complete the survey before moving on to the next level.

Results

This study revealed that the majority of respondents strongly agree or agree with the intention to use this application to improve subject knowledge (n=120; 93.7%), decision-making skills (n=120; 92.8%), prepare for future learning independently (n=118; 92.1 %), and use the MedCos application during studies (n=114; 89.1%). In terms of attitudes, the majority of respondents strongly agree or agree that they will incorporate MedCos applications into their studies more frequently (n = 116; 90.3%), make the studies more engaging (n=72; 86.7%), that the MedCos will help them deliver better practices in the studies (n = 116, 90.9%), and that they look forward to learning with MedCos applications (n=79; 95.1%). The students also scored strongly agree and agree for perceived behavioural control, indicating that the availability of resources such as technology and physical (n=116; 75.9%) are important when using the application, opportunities for career advancement through use of the application in education (n=116; 90.6%), and the MedCos is of good quality (n=112; 87.5%). Few respondents, however, strongly agree or agree that the decision to adopt the MedCos application will be impacted by the medical coding course itself (n=73; 57.1%), faculty (n=68; 53.2%), and lecturers’ perspectives (n=104; 81.1%).

Findings

Positively, student intention to use MedCoS is excellent. They want to use the software to increase knowledge, decision-making, and self-learning. They discovered in Spain, results from several universities were extracted in about 73% of cases due to the usage of mobile learning, which can regularly implement educational innovation (Romero-Rodriguez et al., 2020). Students were optimistic that MedCoS will be more interesting, understandable, and enjoyable to use. This matches a Pakistani study on students’ mobile learning aspirations during COVID-19 (Abdelwahed & Soomro, 2022). Learning autonomy, perceived ease of use, perceived utility, reported enjoyment, and mobile device self-efficacy affected students’ perceptions. Perceived behavioral control, like attitude, influences students to use the app. A Ghanaian study found a favorable association between perceived personal sufficiency
and student control over technology to achieve goals by setting an intention and acting on it (Arkorful et al., 2022). This study showed students' independence, good attitudes, and readiness to utilize technology without persuasion, despite subjective norms' less significant results. Teo et al., (2016) found that technology use by instructors was negatively affected. Because teaching experiences do not affect teachers' use of the system.

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References


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