

AN ADOPTION MODEL FOR CLOUD-BASED COLLABORATIVE LEARNING
APPLICATIONS FROM TOP MALAYSIAN UNIVERSITIES' EXPERIENCE

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Specially Dedicated to...

My Parents

My Lovely Brother and Sister

*My love to you will always remain and thank you for your
Support, Guidance, Patience, Joyfulness to make this experience complete.*

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ABSTRACT

Cloud-based collaborative learning applications are new computing paradigms which facilitate collaborative activities in a centralized location. These applications offer various benefits to higher education. However, even though previous research have discussed cloud computing in general, there is still lack of studies considering students' intention to adopt cloud-based collaborative learning applications in university settings especially in the context of Malaysian universities. Therefore, this research aims to develop and test an adoption model for cloud-based collaborative learning applications for Malaysian universities by integrating Unified Theory of Acceptance and Use of Technology (UTAUT) and Task Technology Fit (TTF). A preliminary investigation using face-to-face interviews with directors of Information Technology centers and administrators of students email in four selected top Malaysian universities was conducted to understand the current adoption status of cloud-based collaborative learning applications. Next, using purposive sampling, a survey which involved 209 students was conducted to collect data from students who have had experience in using cloud-based collaborative learning applications such as Google Apps and/or Office 365. Partial Least Squares (PLS) method based on Structural Equation Modelling (SEM) was used for analyzing the survey data. Smart PLS 2.0M3 was applied to validate the research model. The overall analysis results showed that characteristics of cloud computing and collaborative task significantly predict the fit between these constructs. Furthermore, Task Technology Fit together with, Performance Expectancy, Social Influence, and Facilitating Conditions significantly influenced intention to adopt cloud-based collaborative learning applications. Findings confirmed that individual and group characteristics were significant drivers of Performance Expectancy and Effort Expectancy. Finally, this research develops a Cloud-Based Collaborative Learning Applications Adoption Model that can serve as a tool to assist the Ministry of Education, university administrators, and cloud service providers to plan their strategies and provide supportive adoption environment for cloud-based collaborative learning applications in universities.

ABSTRAK

Aplikasi pembelajaran kolaboratif berasaskan awan adalah satu paradigma komputeran baru yang memudahkan aktiviti kolaboratif di sesebuah lokasi berpusat. Aplikasi ini menawarkan pelbagai kelebihan kepada pengajian tinggi. Namun, walaupun kajian sebelum ini telah membincangkan tentang komputeran awan, masih terdapat kekurangan kajian terhadap penerimaan aplikasi pembelajaran kolaboratif berasaskan awan di kalangan pelajar universiti, terutamanya dalam konteks universiti di Malaysia. Maka, kajian ini bertujuan untuk membangunkan model adaptasi aplikasi pembelajaran kolaboratif berasaskan awan untuk universiti di Malaysia, dengan mengintergrasikan Teori Penyatuan Penerimaan dan Penggunaan Teknologi (UTAUT) dan Teori Kesesuaian Teknologi Tugas (TTF). Satu kajian awal menggunakan temubual bersemuka dengan Pengarah-pengarah Pusat Teknologi Maklumat dan pentadbir-pentadbir emel pelajar di empat universiti terkemuka di Malaysia yang terpilih telah dijalankan untuk memahami situasi semasa penggunaan aplikasi pembelajaran kolaboratif berasaskan awan. Seterusnya, menggunakan persampelan bertujuan, satu tinjauan melibatkan 209 pelajar telah dijalankan terhadap pelajar yang berpengalaman dalam menggunakan aplikasi pembelajaran kolaboratif berasaskan awan seperti aplikasi Google dan / atau Office 365. Kaedah Kuasa Dua Terkecil Separa (PLS) berasaskan Model Persamaan Berstruktur (SEM) digunakan untuk analisis data tinjauan. Smart PLS 2.0M3 digunapakai untuk validasi model kajian. Keseluruhan hasil analisis menunjukkan bahawa ciri-ciri komputeran awan dan tugas kolaboratif secara signifikan meramalkan kesesuaian antara konstruk tersebut. Seterusnya, teknologi tugas yang sesuai bersama jangkaan prestasi, pengaruh sosial, dan pemudahan syarat, secara signifikan mempengaruhi kemahuan untuk penerimaan aplikasi pembelajaran kolaboratif berasaskan awan. Dapatan mengesahkan bahawa ciri-ciri individu dan kumpulan menjadi pendorong bagi jangkaan prestasi dan jangkaan usaha jaya. Akhir sekali kajian ini membangunkan model Penerimaan Pembelajaran Kolaboratif Berasaskan Awan aplikasi yang boleh dijadikan satu alat dalam membantu pihak Kementerian Pendidikan, pentadbir universiti, penyedia perkhidmatan komputeran awan untuk merancang strategi mereka dan memberikan persekitaran yang menyokong adaptasi aplikasi pembelajaran kolaboratif berasaskan awan.