

**FACTORS INFLUENCING STUDENTS' SATISFACTION
IN BLENDED LEARNING AT PUBLIC HIGHER
EDUCATION INSTITUTIONS IN KLANG VALLEY**

BY

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**A dissertation submitted in fulfilment of the requirement for
the degree of Doctor of Philosophy in Education**

**Kulliyyah of Education
International Islamic University Malaysia**

JULY 2020

ABSTRACT

This study explores the relationship between three factors namely Instructor's management, Administration's Management and Student's Learning Process and investigates whether these factors influence Student's Satisfaction in Blended Learning. A sample of 529 undergraduate students from five selected public universities in the Klang Valley participated in this survey. However, a total of 28 sample were excluded due to incomplete answers. The statistical techniques employed in this study involved descriptive statistics using SPSS version 21.0, Confirmatory Factor Analysis (CFA) and a full-fledged Structural Equation Modelling (SEM) with Analysis of Moments Structures (AMOS) software version 21.0 to address the research questions and to test the research hypotheses. After performing CFA, the results demonstrate that the construct of the Instructor's Management is presented by seven items, Administration's Management is presented by six items and Student's Learning Process is presented by eight items while student's satisfaction by 9 items. The results also found the evidence of construct of validity and reliability concerning the factors that constituted the three constructs. The proposed model of IASS (Instructor's Management, Administration's Management, Student's Learning Process and Student's Satisfaction) was tested through the application of the SEM technique and the generated results show that there are strong relationship between Instructor's Management and Administration's Management, Instructor's Management and Student's Learning Process, Administration's Management and Student's Learning Process while Student's Learning Process positively influences the Student's Satisfaction in Blended Learning. However, the results revealed that Instructor's Management was statistically insignificant due to its path coefficient between Instructor's Management and Student's Satisfaction was relatively low (-0.2). The study also found that there was a significant difference between Administration's Management and Student's Satisfaction as its path coefficient was very low too (0.08). The study also conducted invariant analyses of gender and area of study. Both gender and area of study were found to have no moderating impact on the full-fledged structural model of IASS. There are some implications for the study which the University Authority should embrace. As this research focuses on the student's satisfaction in blended learning, this outcome should be one of the most important agenda for the University to produce quality teaching of academic staff, to maintain quality management of administrative staff as well as to support academic development of the student. This study would also recommend more researches on the additional underlying constructs to authenticate the developed model of IASS.

خلاصة البحث

تهدف هذه الدراسة إلى الكشف عن العلاقة بين ثلاثة عوامل وهي إدارة المعلم وإدارة الإدارة وعملية تعلم الطلبة. كما تهدف إلى الكشف عن مدى تأثير هذه العوامل على قناعة الطلبة في التعلم المدمج. شاركت عينة مكونة من 529 طالبًا وطالبةً من خمس جامعات حكومية مختارة في وادي كلانج للإجابة على استبانة الدراسة. تم استبعاد مجموعة مكونة من 28 حالة بسبب عدم اكتمال الإجابات. واستخدم الإحصاء الوصفي باستخدام SPSS الإصدار 21.0 وتحليل العامل التوكيدي (CFA) ونموذج المعادلات الهيكلية الكامل (SEM) باستخدام (AMOS) الإصدار 21.0 للإجابة على أسئلة البحث واختبار فرضياته. بعد إجراء CFA، تبين أن إدارة المعلم تمثلت بسبعة فقرات، وإدارة الإدارة بستة فقرات، وعملية تعلم الطلبة بثمانية فقرات، ورضا الطالب بتسعة فقرات. قدّمت النتائج أدلة على صدق البناء وموثوقية العوامل التي شكّلت الهياكل الثلاثة قيد الدراسة. تم اختبار النموذج المقترح ل IASS (إدارة المعلم، وإدارة الإدارة، وعملية تعلم الطلبة ورضا الطلبة) من خلال تطبيق تحليل SEM. أظهرت النتائج علاقة قوية بين إدارة المعلم وإدارة الإدارة، وإدارة المعلم وتعلم الطلبة، وإدارة الإدارة وعملية تعلم الطلبة، وكذلك تأثير عملية تعلم الطلبة بشكل إيجابي على رضاهم في التعلم المدمج. ومع ذلك، أظهرت النتائج أن إدارة المدرب كانت غير دالة إحصائياً لأن معامل المسار بين إدارة المدرب ورضا الطلاب كان منخفضاً نسبياً (-0.2). ووجدت الدراسة أيضاً أن هناك فرقاً كبيراً بين إدارة الإدارة ورضا الطلبة حيث كان معامل المسار الخاص بها منخفضاً جداً أيضاً (0.08). وأجرت الدراسة تحليلات لمعرفة تأثير جنس الطالب والتخصص على هذه العلاقات، حيث تبين عدم وجود تأثير معادل للجنس والتخصص على النموذج الهيكلي الكامل IASS. وضعت الدراسة بعض التضمينات التي ينبغي أن تتبناها إدارة الجامعة. ونظراً لتركيز هذا البحث على قناعة الطلبة في التعلم المدمج، ينبغي أن تكون هذه النتيجة واحدة من الأجندة المهمة بالنسبة للجامعة لإنتاج جودة في التدريس لأعضاء هيئة التدريس، والحفاظ على إدارة الجودة للموظفين الإداريين، وكذلك لدعم التطوير الأكاديمي للطلبة. كما توصي هذه الدراسة أيضاً بإجراء المزيد من الأبحاث لدعم النموذج المطور IASS.

..

APPROVAL PAGE

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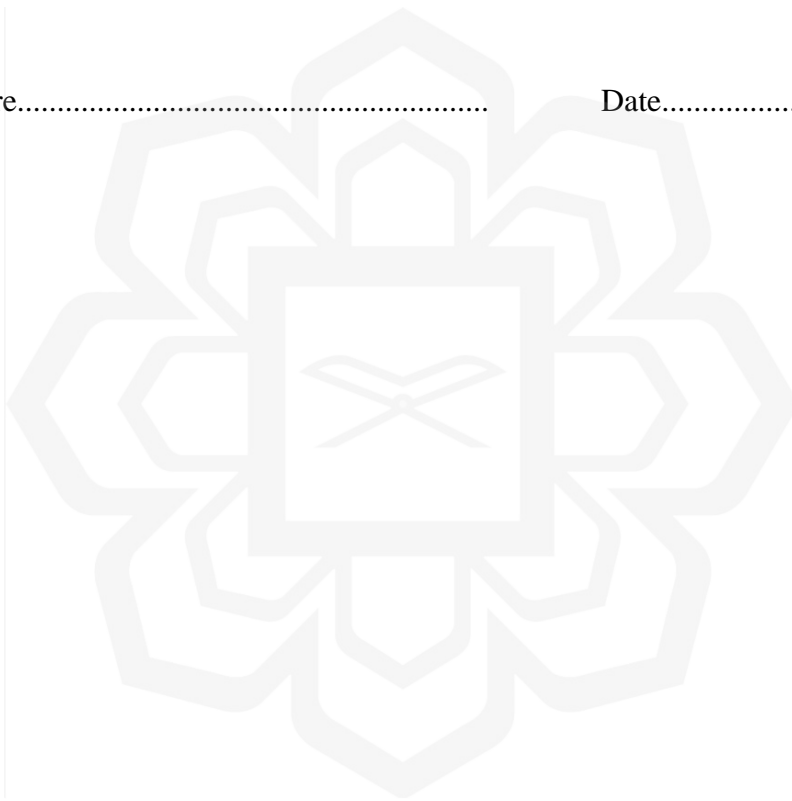
DECLARATION

I hereby declare that this dissertation is the result of my own investigation, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at the IIUM or other institutions.

Raja Noor Ashikin Binti Raja Alias

Signature.....

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This research is dedicated to:

My late father; Raja Alias bin Raja Nordin, for his love and support,

My beloved mother; Saudah binti Megat Ismail for her unconditional love,

*My beloved husband; Raja Norzaharman bin Raja Sahadan for his support, courage,
love and patience,*

*My beloved daughter; Raja Nur Aneesa binti Raja Norzaharman for always making
me smile.*

ACKNOWLEDGEMENTS

In the name of Allah, Most Gracious Most Merciful

All praises to Allah S.W.T. the Lord and Cherisher of the Universe. May the highest of His Blessings be showered upon His Prophet Muhammad *P.B.U.H.*

First of all, *syukur* to Allah S.W.T. for giving me the opportunity to go on this meaningful Ph.D. journey. This research would not have been possible to complete without the support and assistance from several dedicated people and individuals to whom I am very grateful. I sincerely thank my supervisor, Assoc. Prof. Dr. Mohd Burhan Ibrahim for his excellent supervision, guidance, patience and dedication as well as his support towards the completion of my thesis. I would also like to express my gratitude to my two co-supervisors, Assoc. Prof. Dr. Sueraya Che Haron and Dr. Sulaiman Hashim for their support and constructive feedbacks.

Special thanks to KOED family especially Prof. Dr. Nik Ahmad Hisham Ismail, Prof. Dato' Dr. Mohamad Sahari Nordin and Prof. Dr. Hairuddin Mohd Ali for always providing constructive feedback and encouraging me to complete this research. The other academic staff to acknowledge here are Prof. Dr. Ismail Sheikh Ahmad, Assoc. Prof. Dr. Zainurin Abdul Rahman, Assoc. Prof. Dr. Suhailah Hussien, Assoc. Prof. Dr. Nik Suryani Nik Abd. Rahman, Assoc. Prof. Dr. Siti Rafiah Abd. Hamid, Assoc. Prof. Dr. Tunku Badariah Tunku Ahmad, Assoc. Prof. Dr. Sharifah Sariah Syed Hassan and Dr. Nik Md. Saiful Azizi Nik Abdullah. My special appreciation goes to administrative staff of KOED for their continuous support and assistance; Sr. Azura Hamzah, Br. Muhamad Azmi Ibrahim, Sr. Fajariah Mohd Yusof, Sr. Aisah Marikun, Br. Mohd. Lukman Muda, Sr. Norsiah Yahya, Sr. Sharini Kaur @Nisha Kamal and Br. Firdaus.

I should never forget the other academic staff of IIUM for their guidance and support through the process of writing this thesis; Assoc. Prof. Dr. Gairuzazmi Mat Ghani, Assoc. Prof. Dr. Norsaremah Salleh, Assoc. Prof. Dr. Mohd. Feham Md. Ghalib and Dr. Norillah Abdullah.

Most importantly, I would like to express my deeper gratitude to my family; my mother, my brothers and sisters and all to my family members for the support given through this journey.

I would also like to thank all my friends for their presence, unlimited supports and friendships; Dr. Norzainiyah Norita Mokhtar, Dr. Siti Kholijah Kassim, Dr. Shahrul Fhaizal Shabu, Dr. Syima Arshad, Br. Mohd Fhadhil Ab. Rashid, Br. Azlan Mohamed Zain, Sr. Norashikin Jaafar, Sr. Noorasyikin Asrorie, Sr. Siti Khadijah Daud, Sr. Mahani Alang, Nor Amelia Mohamad, Zuraida Ariffin, Marina Saat and Dezerin Abdullah. May Allah S.W.T. grant them Jannah. Ameen.

To all whom I have not mentioned, I pray to Allah S.W.T. to reward and shower His blessing upon you all and the entire Muslim Ummah. Ameen.

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

It is without a doubt that the deployment of Information and Communication Technology (ICT) has played essential role in supporting teaching and learning process. Ranging from content management system software to applications of Web 2.0, these digital technologies promote and improve innovative teaching methodology and lead to learning engagement. The flexibility of these technology applications encourage people, particularly in educational context, to adopt the blended learning approach into meaningful (Ju, 2018) and interactive (Malik, 2010) teaching and learning activities. The blended learning concept or also known as hybrid learning quickly has become part of instructional method at present, especially in higher learning institution, as it facilitates and enhances teaching and learning process through the use of devices based on computer and communication technology in and outside the classroom.

Many practitioners in the higher learning of institutions were attracted with this blended learning since it became the solution for flexible teaching and learning process either to adopt in the classroom or to support beyond classroom (Faraziha, 2010; Zacharis, 2015). Blended learning is the integration of the traditional learning i.e. face to face (F2F) method and e-learning in which to create an interactive and a meaningful learning environment not only for distant learning but also for mainstream classroom. Blended learning concentrates on perfectly realizing learning objective by utilizing the suitable personal learning method to watch the best learning style and to

transfer the appropriate learning skills to potential student at the right time (Singh, 2003). A few scholars have outlined the definition of blended learning as a desirable e-learning environment with traditional learning (Graham, 2006; Michinov, 2008; Namahn, 2010; Tayebinik & Puteh, 2013; Rao, 2019) which can take advantage of various delivery methods to perfectly achieve the course objectives (Akkoyunlu & Soyulu, 2006). It can also be referred to as a pedagogical approach that combines multiple learning delivery means with traditional classroom teaching to perfect teaching efficiency and effectiveness (Wu & Liu, 2013).

As we can see, F2F concept requires the interaction between instructor and learners (I-L) as well as interaction between learners and learners (L-L). Normally F2F obliges 14 weeks of attending classes, listening to lectures and doing some learning activities given by the lecturers. Both instructor and learners need to follow the class schedule arrangement with the stipulated time given. Since attending classes are compulsory, failure to do so may lead to a penalty enforced by the university management such receiving a warning letter for not attending classes or being barred from sitting in the final examinations. As for the instructors, they need to prepare teaching materials and make the class lively to attract learners to participate in class. Besides, the classroom should be equipped with physical facilities and equipment such as audio-visual equipment, computer labs, whiteboard, LCD screen and other relevant equipment so that the teaching and learning process could be carried out effectively. In relation to this, e-learning has become an essential component in the teaching and learning process. With e-learning, instructors can prepare the lessons or class materials or prior to f2f such as using flipped classroom. Flipped classroom is a pedagogical method used by instructors whereby they prepare the lessons for lecture and make it accessible through online and the students are required to view the lecture

online as a preparation for the next class (Roehl, Reddy & Shannon, 2013; Leis, 2018). Thus, students can have more preparation in understanding the lessons before coming to class and it would be easy for them to ask questions or share their ideas in class. Moreover, using flipped classroom for learning activities can support the students in developing new skills such as critical thinking, creativity, communication and collaboration (Chris, Moldovan, Murphy, Pathak & Muntean, 2018).

E-learning is a popular tool in addition to traditional learning methods (Ebojoh & Xu, 2007). It involves the process of learning via online i.e. information delivered electronically through sending and receiving emails, online courses, online discussions, forums, video conferencing, CD Rom, etc. (Cappel & Hayen, 2004; Ajegbomogun, Okunlaya & Alawiye, 2017). E-learning facilitates and enhances learning in educational institutional with the use of ICT and offers the learners the flexibility of place and time of delivering or receiving learning information (Al-Adwan & Smedley, 2012; Regmi & Jones, 2020).

Since e-learning has been considered as essential part of teaching and learning process for higher learning Institutions, it becomes the key focus of activities (Macgregor, 2009) as it is used by many universities in the world. Macgregor has identified key focus of activities as lecturers in higher education use e-learning approach to deliver flexible course that can meet the needs of part-time study and lifelong learners. However, other activities that give benefit of using e-learning are lecturers and students can communicate online at anytime and anywhere across the border. The students do not have to be present in class or to have a F2F communication with their lecturers or colleagues. Thus, through e-learning they can create a social interaction between lecturers and learners, colleagues, management and others. More importantly, e-learning could lead to facilitate pedagogical improvement

for lecturers. For instance, they can communicate with each other using Social Networking Sites (SNS) such as Facebook, Instagram, Twitter, LinkedIn or currently most people are now interacting with their smartphones via applications such as WhatsApp, WeChat and Telegram Messenger.

Many e-learning systems were introduced as a platform via internet to manage learning. A Learning Management System (LMS) is a web-based platform which provides learning environment by enabling the management, delivery and tracking of learning (Cavus, Uzunboylu & Ibrahim, 2006). Other terms used for this system are Virtual Learning Environment (VLE) (Embi, 2011; Panjaitan, & Tambunan, 2019) and Learning Content Management System (Berking & Gallagher, 2013). Even though many scholars call LMS with different names, those terms still bring the same meaning and same purpose i.e. being used to manage learning and delivery of courses (Basioudis, Lange, Suwardy, & Wells, 2012). There are two types of LMS: proprietary and open source. Institutions of higher education can choose either to adopt open source or proprietary. Open source is offered free and can be modified while proprietary is a license that is used by the institution. Open source requires a person to have skills to manage services, update and support the system while proprietary needs to get support from a vendor to run the system. The example of the proprietary are Blackboard and Joomla while Moodle and Sakai are example of open source.

Another new digital technology embarks in teaching and learning is Massive Open Online Course (MOOC). MOOC provides access of high quality education all over the world. It covers a wide range of discipline such as instructional technology, economics and management sciences, Islamic revealed knowledge, human sciences, engineering, architecture, informational technology, computer science and any other

disciplines that bring interest to the students and educators across the countries. MOOC offers free enrollment and any students and educators can access this open online course at any time and any place. In fact, it is an opportunity for users to learn from the best educators from top universities that have developed this MOOC.

The usage of LMS has been popularly used by the higher learning institutions as it is becoming more acceptable in the education field. Many higher learning institutions are using the concept of knowledge sharing by implementing the e-learning approach for their students and lecturers. The example of LMS being implemented by the higher learning institutions are Universiti Perguruan Sultan Idris (UPSI), Universiti Kebangsaan Malaysia, International Islamic Universiti Malaysia and Universiti Sains Islam Malaysia (USIM). Many higher learning institutions prefer to brand their LMS to other names as this would ensure the users are more attracted to use the system or to customize according to the needs and preferences of the users. UPSI has named its LMS as MyGuru3 while UKM uses the catchy name as iFolio. IIUM has created its own brand name of LMS as iTa'leem while USIM has named its LMS as GOALS. Even though, those universities labelling it with different names, LMS provides the applications to support and facilitate the teaching and learning process.

Although e-learning approach is becoming more widespread in teaching and learning context, there exists some setbacks. The instructors and the practitioners are enthusiastic to seek better and more effective learning environment that could integrate the concept of traditional teaching and e-learning to enhance quality teaching and learning.

If F2F has its own strength and limitations, the same exist with e-learning. The lack of interactions between instructors and learners and the difficulties to understand

the subject matter or content materials from the mobile technologies may lead to unsatisfactory learning. The emergency of e-learning, specifically with the new applications of mobile learning allowed more diverse of teaching and learning. Thus, the combination and integration of F2F and e-learning are a current approach in adopting blended learning which can be an effective delivery method of learning.

Nevertheless, the success of the blended learning approach depends on the effectiveness and acceptance of the students, instructors and also the management of the respective institutions of higher learning. Previous studies have shown that the results of student's satisfaction are triggered by several factors such as effective instructor (Cabero, Llorente & Serville, 2010; Banerjee, 2011; Naaj, Nachouki & Ankit, 2012; Nor Fadilah, Rashidah, Nur Huda, Nur Diana, Safura Adeela & Zuriati, 2013; Zhu, 2017; Kerzic, Tomazevic, Aristovnik & Umek, 2019; Ramly, Yunus, Yusof, Rahman, Aziz, Fadzillah, 2019), level support from the management (Nor Fadilah, Rashidah, Nur Huda, Nur Diana, Safura Adeela & Zuriati, 2013), students' involvement in learning activities (Cabero, Llorente & Serville, 2010; Nor Fadilah, Rashidah, Nur Huda, Nur Diana, Safura Adeela & Zuriati, 2013; Freeman, Antwi-Boampong & Agyemang, 2019) and technology (Banerjee, 2011; Cabero, Llorente & Serville, 2010; Naaj, Nachouki & Ankit, 2012; Nor Fadilah, Rashidah, Nur Huda, Nur Diana, Safura Adeela & Zuriati, 2013; Ramly, Yunus, Yusof, Rahman, Aziz, Fadzillah, 2019).

Furthermore, satisfaction also are produced to the student success such courses or programmes followed by the learners (Banerjee, 2011; Alshehri, 2012; Naaj, Nachouki & Ankit, 2012; Nor Fadilah, Rashidah, Nur Huda, Nur Diana, Safura Adeela & Zuriati, 2013; Ramly, Yunus, Yusof, Rahman, Aziz, Fadzillah, 2019), interaction (Wu, Hsia, Liao & Tennyson, 2008; Banerjee, 2011; Kioumourtzoglou,

Giannousi, Vernadis, Michalopoulos & Zetou, 2011; Naaj, Nachouki & Ankit, 2012; Ramly, Yunus, Yusof, Rahman, Aziz, Fadzillah, 2019), learning culture and environment (Wu, Hsia, Liao & Tennyson, 2008; Banerjee, 2011; Wu & Liu, 2013). Hence, there is a need to study the main factors affecting the level of satisfaction towards blended learning approach. It is essential that the level of satisfaction from the students' experience should be considered in determining the quality of blended learning. Thus, the main concern of this study is to propose a model of blended learning factors in predicting students' satisfaction based on their experience using blended learning in Malaysian Higher Learning of Institutions.

There is a growing concern of providing quality teaching and learning activities in Malaysia higher learning of institutions. It is understood that quality is something that can be improved (Michalska-Cwiek, 2009) for whatever procedures, processes and services that have been carried out by the particular higher learning institutions. Since the study focuses on blended learning, which is part of quality teaching and learning, therefore, it is essential for each university to synchronize their quality of teaching and learning process with Malaysia's Ministry of Education's requirement.

The aim of MOE is to develop a world class quality education system which will realize the full potential of the individual of the Malaysian nation. It shows that the MOE's commitment in providing the best quality of teaching and learning as to ensure that its people are well equipped with quality education. Thus, it is part of MOE's requirement to develop Key Result Area (KRA) and also the Critical Agenda Projects (CAP) under the National Higher Education Strategic Plan (PSPTN) (Mohamed Amin Embi, 2011). MOE has clearly emphasized that e-learning has to be integrated in KRA and CAP. To ensure the process of KRA and CAP are aligned

with MOE's requirement, the National E-Learning Policy (DePAN) has been formed whereby every public university in Malaysia need to address and implement e-learning into the teaching and learning process. In DePAN, it requires that e-learning should be established to oversee the e-learning activities at the university. However, MOE also has indicated that the traditional classroom or F2F method should remain eventhough e-learning has become a major method of learning. Taking into consideration of maintaining the F2F method and at the same time implement e-learning, MOE has promoted the integration of F2F and e-learning as a mode of blended learning.

Blended learning is a tool being used recently in higher education. It has been used popularly by the learners as they can receive and update information at any place anytime via hand phone (Ismail, Gunasegaran, Koh, & Idrus, 2010). Many universities have been identified to use blended learning mode to their students and lecturers such as Universiti Perguruan Sultan Idris (UPSI), Universiti Kebangsaan Malaysia (UKM), International Islamic Universiti Malaysia (IIUM), Universiti Putra Malaysia (UPM), Universiti Sains Islam Malaysia (USIM), Universiti Sains Malaysia, Open Universiti Malaysia (OUM) and Universiti Tun Abdul Razak (UNIRAZAK).

Since blended learning is considered as an advanced technology and is becoming more acceptable in the education field, it is wise to investigate the effectiveness of using blended learning mode in this present study. It is believed that a good combination of F2F and e-learning will create more interactive learning environment to learners and could contribute to the effectiveness and efficiency of teaching and learning. Apart from looking into the essential of blended learning, factors influencing students' satisfaction on blended learning should also be taken into consideration. The factors influencing students' satisfaction may lead to the