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<tbody>
<tr>
<td>ATU</td>
<td>Attitude Towards Use</td>
</tr>
<tr>
<td>CGPA</td>
<td>Cumulative Grade Point Average</td>
</tr>
<tr>
<td>Colla</td>
<td>IS Quality to Facilitate Collaboration</td>
</tr>
<tr>
<td>CRIM</td>
<td>Centre for Research and Innovation Management</td>
</tr>
<tr>
<td>CSQ</td>
<td>Communication Satisfaction Questionnaire</td>
</tr>
<tr>
<td>CV</td>
<td>Curriculum Vitae</td>
</tr>
<tr>
<td>DD</td>
<td>Deputy Dean</td>
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<tr>
<td>DVP</td>
<td>Deputy Vice President</td>
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<tr>
<td>e-business</td>
<td>Electronic Business</td>
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<tr>
<td>e-commerce</td>
<td>Electronic Commerce</td>
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<tr>
<td>e-cuti</td>
<td>Electronic Leave System</td>
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<td>e-governance</td>
<td>Electronic Governance</td>
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<td>e-government</td>
<td>Electronic Government</td>
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<tr>
<td>e-learning</td>
<td>Electronic Learning</td>
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<tr>
<td>ELX</td>
<td>Electronic Labour Exchange</td>
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<tr>
<td>EOU</td>
<td>Ease of Use</td>
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<tr>
<td>eP</td>
<td>Electronic Procurement</td>
</tr>
<tr>
<td>e-Rep</td>
<td>Electronic-Repository (e-Penerbitan)</td>
</tr>
<tr>
<td>eservices</td>
<td>Electronic Services</td>
</tr>
<tr>
<td>e-SPEL</td>
<td>Electronic-Training Management System (Sistem Pengurusan Latihan)</td>
</tr>
<tr>
<td>GOE</td>
<td>Generic Office Environment</td>
</tr>
<tr>
<td>GRA</td>
<td>Graduate Research Assistant</td>
</tr>
<tr>
<td>GSS</td>
<td>Group Support System</td>
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<tr>
<td>HE</td>
<td>Higher Education</td>
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<td>Abbreviation</td>
<td>Full Form</td>
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<tr>
<td>HRMIS</td>
<td>Human Resource Management System</td>
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<td>IBIMS</td>
<td>Internet-Based Information System</td>
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<td>ICT</td>
<td>Information and Communication Technology</td>
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<tr>
<td>IF</td>
<td>Interactivity Features</td>
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<tr>
<td>IIUM</td>
<td>International Islamic University Malaysia</td>
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<tr>
<td>IMS</td>
<td>Information Management System</td>
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<td>IS</td>
<td>Information System</td>
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<tr>
<td>ISQ</td>
<td>Information System Quality</td>
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<tr>
<td>IT</td>
<td>Information Technology</td>
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<tr>
<td>ITU</td>
<td>Intention to Use</td>
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<tr>
<td>KM</td>
<td>Knowledge Management</td>
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<tr>
<td>KMO</td>
<td>Kaiser-Meyer-Olkin</td>
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<tr>
<td>KPI</td>
<td>Key Performance Index</td>
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<tr>
<td>LMS</td>
<td>Learning Management System</td>
</tr>
<tr>
<td>MA</td>
<td>Master</td>
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<tr>
<td>MIS</td>
<td>Management Information System</td>
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<tr>
<td>MOHE</td>
<td>Ministry of Higher Education</td>
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<tr>
<td>MRU</td>
<td>Malaysian Research University</td>
</tr>
<tr>
<td>MSC</td>
<td>Multimedia Super Corridor</td>
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<tr>
<td>NITA</td>
<td>National Information Technology Agenda</td>
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<tr>
<td>NITC</td>
<td>National Information Technology Council</td>
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<tr>
<td>OCS</td>
<td>Online Communication Satisfaction</td>
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<tr>
<td>PEOU</td>
<td>Perceived Ease of Use</td>
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<tr>
<td>PhD</td>
<td>Doctor of Philosophy</td>
</tr>
<tr>
<td>PMS</td>
<td>Project Monitoring System</td>
</tr>
<tr>
<td>PU</td>
<td>Perceived Usefulness</td>
</tr>
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R & D  Research and Development
R & I  Research and Innovation
RU    Research University
SKU   University Financial System (Sistem Kewangan Universiti)
SMPU  Research University Information System (Sistem Maklumat Penyelidikan Universiti)
SMS   Short Messages System
SOP   Standard Operating Procedures
SPIN  Interactive Teaching and Learning Management System
SPM   Malaysian Certificate of Education (Sijil Pelajaran Malaysia)
SPPB  Continuing Professional Development System (Sistem Pembangunan Profesional Berterusan)
SPSS  Statistical Package for the Social Sciences
STPM  Malaysian Higher School Certificate (Sijil Tinggi Persekolahan Malaysia)
TAM   Technology Acceptance Model
TRA   Theory of Reasoned Action
U     Usefulness
U.S.  United State
U3P   Research Management Centre Information System (Sistem Maklumat Pusat Pengurusan Penyelidikan)
UiTM  Universiti Teknologi Mara
UKM   Universiti Kebangsaan Malaysia
UM    Universiti Malaya
UMK   Universiti Malaysia Kelantan
UMP   Universiti Malaysia Pahang
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>UMS</td>
<td>Universiti Malaysia Sabah</td>
</tr>
<tr>
<td>UMT</td>
<td>Universiti Malaysia Terangganu</td>
</tr>
<tr>
<td>UniMAP</td>
<td>Universiti Malaysia Perlis</td>
</tr>
<tr>
<td>Unimas</td>
<td>Universiti Malaysia Sarawak</td>
</tr>
<tr>
<td>UniSZA</td>
<td>Universiti Sultan Zainal Abidin</td>
</tr>
<tr>
<td>UPM</td>
<td>Universiti Putra Malaysia</td>
</tr>
<tr>
<td>UPNM</td>
<td>Universiti Pertahanan Nasional Malaysia</td>
</tr>
<tr>
<td>UPSI</td>
<td>Universiti Pendidikan Sultan Idris</td>
</tr>
<tr>
<td>USA</td>
<td>Usability</td>
</tr>
<tr>
<td>USIM</td>
<td>Universiti Sains Islam Malaysia</td>
</tr>
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<td>USM</td>
<td>Universiti Sains Malaysia</td>
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<tr>
<td>UTeM</td>
<td>Universiti Teknikal Malaysia Melaka</td>
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<tr>
<td>UTHM</td>
<td>Universiti Tun Hussein Onn Malaysia</td>
</tr>
<tr>
<td>UTM</td>
<td>Universiti Teknologi Malaysia</td>
</tr>
<tr>
<td>UUM</td>
<td>Universiti Utara Malaysia</td>
</tr>
<tr>
<td>VC</td>
<td>Virtual Community</td>
</tr>
<tr>
<td>VIF</td>
<td>Variable Inflation Factor</td>
</tr>
<tr>
<td>WCM</td>
<td>Web-based Communication Mode</td>
</tr>
<tr>
<td>WKCs</td>
<td>Web-based Knowledge Communities</td>
</tr>
<tr>
<td>WWW</td>
<td>World Wide Web</td>
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Abstract

The acceptance and adoption of Internet applications or online systems such as Internet-based Information Management Systems (IBIMS) relies not only on just technological judgement, but includes significant social and organisational factors. The purpose of this study is to investigate, explore and understand the use of IBIMS by employees in Malaysian research universities. This study examined the effects of the perceived usefulness, ease of use, interactivity features, usability and information system (IS) quality on employees’ online communication satisfaction (OCS) toward use of IBIMS. It meant measuring their satisfaction with online communication in using systems. This study makes significant contributions and adds new knowledge to the subject of technology acceptance, adoption and its usage, especially the empirical and practical implications for employing IBIMS in Malaysia’s higher education and research-based university.

A mixed method research approach was used (combining quantitative and qualitative method) to provide a wider perspective on the topic being studied. This method comprised a survey, an in-depth interview and open-ended questionnaire to collect data from two employee groups (academics and administrative staff) in four pioneer Malaysian research universities (MRUs). The aim is to validate the theoretical framework and hypotheses empirically using a survey and in-depth interview analysis. These methods were important for a triangulation strategy concerning IBIMS. Furthermore the open-ended questionnaire added rich data that enhances an understanding of the adoption of IBIMS in the research context, especially by academic staff.

This study revealed the importance of using the mixed method approach to understand the employment of IBIMS in Malaysian research universities. Usefulness, ease of use, interactivity features, usability and IS quality significantly influence employees’ perceptions of OCS and just how successful IBIMS is. The results showed that OCS does
contribute to enhanced employees’ attitudes and intention to use IBIMS. However, the qualitative findings described not only the technological importance of enhancing users’ OCS, but also highlighted several human and social factors and organisational initiatives. Then, in the research university, IBIMS are important to academics or researchers for managing their research work such as research input (e.g., people, financial matters), research processes (e.g., collaboration) and research output/outcome (e.g., publications, patents, inventions). Therefore indentifying factors involved in successful uptake are important, not just for individual universities but for the national agenda.

The findings in this thesis provide significant and valuable information on technology acceptance, especially to scholars, information system consultants, information technology managers, senior management of MRUs, and ultimately the Ministry of Higher Education in Malaysia. This study has sought to explain the use of Internet-based systems and online systems in the higher education sector with the objective of making recommendations on technology being implemented in administration, teaching, learning, and research.

Finally, this study is the first empirical analyses to examine and understand the success factors that shape OCS concerning IBIMS in MRUs. The significance, implications and future research directions are also discussed in this thesis.
Declaration

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint-award of this degree.

I give consent to this copy of my thesis, when deposited in the University Library, being made available for loan and photocopying, subject to the provisions of the Copyright Act 1968.

I also give permission for the digital version of my thesis to be made available on the web, via the University’s digital research repository, the Library catalogue and also through web search engines, unless permission has been granted by the University to restrict access for a period of time.

Signed:

Mohd Azul Mohamad Salleh

Date:
Acknowledgement

I would like to express my gratitude and appreciation to the many people who helped me during my long journey and years of study. Without all of you, this wonderful journey would not be completed.

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List of Publications

Journal and Chapter in Book


Conference Papers


Seminar Paper