

Perspectives of Students at Institutions of Higher Education Toward Open Distance Learning

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Abstract: *Open and Distance Learning (ODL) is a way of learning remotely without being in regular face-to-face contact with an instructor in the classroom. Students learn the content using instructional materials that are uploaded on online platforms. Despite the convenience of the learning method, there is a need to assess students' awareness and intention to use these platforms. This paper evaluates whether perceived usefulness (PU), perceived ease of use (PEU), and perceived self-efficacy (PSE) can influence students enrolled at an institution of higher education (IHE) to choose open distance learning (ODL). The Technology Acceptance Model (TAM) has been identified to support the research framework of this study. A research framework was proposed and three hypotheses were developed. Data were obtained from 125 respondents enrolled in the ODL Program using convenient sampling. Data were analyzed using the SPSS statistical program on descriptive statistics, factor analysis, and regression. The results revealed that PU and PSE have direct relationships with the behavioral intention to choose ODL. Therefore, PU and PSE influenced the students to choose ODL. Meanwhile, PEU has no direct relationship with behavioral intention to choose ODL. Therefore, PEU cannot attract the interest and attention to influence the students to use ODL. The study helped uncover a significant understanding of students' acceptance of ODL for IHEs to develop further ODL programs related to Islamic Finance and Banking courses under Massive Open Online Courses (MOOC). Also, ODL provides opportunities for interactions and communications between students and lecturers through information and communication technology (ICT) and multimedia. This study provides further empirical support that behavioral intention is able to be influenced to choose ODL.*

Keywords: Technology Acceptance Model, Perceived Usefulness, Perceived Ease of Use, Perceived Self-Efficacy, Behavioural Intention, Open Distance Learning

1. Introduction

Education is important in a person's overall development and is a most efficient catalyst for social change. Education has proven as the most effective medium to elevate economic status and improve the overall standard of living. Educational institutions are at the forefront and are enormously tasked to edify and disburse knowledge to the public. The advent of a slowing global economy, especially following the outbreak of the Covid-19 pandemic, has affected many institutions of higher education (IHEs). They are now burdened with the challenges of

recruiting students for income from fees. Government-funded IHEs become entrepreneurial to source additional financial resources to supplement the reduced government funding allocation. The viral scare brought about ‘work-from-home’ (WFH) for many in the working population and organizations, as well as ‘online classes’ for schools, colleges and universities. These situations presented a powerful introduction to the public, especially those not so savvy in the usage of computers and electronic media, as to what online learning is all about.

Information and communication technology (ICT) is the way to a brighter and better future. Malaysia has been immersed in ICT since the 1990s when the government took the initiative to invest in the structures, both software and hardware, and manpower resources to catch up with the North Americans, Western Europeans, and Japanese as well as the Asian Tigers (Hong Kong, Singapore, South Korea, and Taiwan). In 1996, the government established the Multimedia Super Corridor or MSC (now known as MSC Malaysia) to drive the country’s high-speed entry into the Digital Economy. MSC Malaysia’s status comes with a wide range of incentives, rights, and privileges to promote continued growth in the Digital Economy (MDEC, 2019). It provides guarantees and benefits to spearhead ICT development and ensure successful implementations of the plans. ICT has taken the country into the fifth generation (5G) in telecommunication technology standard, where devices are connected by radio waves giving us faster and more powerful connections, as well as better flexibility and ability for the communication devices to accommodate numerous useful applications for group online meetings and discussions, including but not limited to Skype, Zoom, Webex, Hangout, Google Classroom and Google Meet.

Though once prohibitive, the readily available electronic communication devices and networks are now more reasonably priced to the masses as a fillip to information overflow over the borderless internet. Advances in the development of information and electronics technologies offer invaluable opportunities for IHEs to provide excellent platforms for online teaching and learning. Notwithstanding, many IHEs have, for some time now, been offering online classes for selected subjects to off-campus students. ODL opens up another possibility for the working public to continue with their studies and earn university degrees while at the same time not committing to the rigorous and rigid schedules that usually come with the standard enrolment at universities. It takes away the time and place constraints. IHEs, lecturers, and students do not have to sacrifice quality, ease of access, and effectiveness in ODL.

Universiti Utara Malaysia (UUM) provides two types of ODL classes, namely on-campus and online. ODL method provides flexibility to UUM in the delivery of good quality education. The main objective of ODL is to make available opportunities and to give access to all to further their studies, especially while working. In addition, UUM had earlier undertaken initiatives to offer selected subjects under MOOCs, where the format was utilized to enable students to access information and research materials quickly and effectively. MOOCs provide access to world-class learning materials and knowledge and create knowledge depositories without boundaries for lecturers and students to internet surfing (MOE, 2015).

Islamic Business School (IBS) of UUM initiated collaboration with Yayasan Bank Rakyat (YBR) to deliver ODL to Bank Rakyat staff; all of whom are sponsored by YBR. ODL provides the best approach to instilling good teaching and learning processes, with no absence from work. Bank Rakyat made available training facilities at Menara Bank Rakyat in Kuala Lumpur as classrooms for participating staff from its Head Office and branches. The objective is to provide a conducive and comfortable place to allow for the best learning environment and experience, uninterrupted by work and family commitments. ODL fulfills the requirement of

YBR. However, ever since the introduction of UUM ODL to Bank Rakyat during student intake of 2015/2016, no study has been done to investigate the perception of the students toward ODL. Thus, this study shall examine the perception of the students toward ODL. In this case, ODL was tailored for YBR-sponsored Bank Rakyat staff.

This study shall be looking at whether:

- Perceived Usefulness (PU) influences Bank Rakyat staff to choose ODL in their UUM *PJJ Program* (Long Distance Learning Programme);
- Perceived Ease-of-Use (PEU) attracts the interest and attention to influence Bank Rakyat staff to choose ODL in their UUM *PJJ Program*;
- Perceived Self-Efficacy (PSE) affects Bank Rakyat staff to choose ODL in their UUM *PJJ Program*;

2. Literature review

ODL differs from the traditional teaching and learning processes. In recent years, online learning has emerged as part of the teaching and learning processes with attractive features for IHEs. According to Paliwal (2019), ODL has been successful in realizing its objective, reaching the unreached by spreading education in remote and far-flung areas through its study centers located in various locations. There are many studies focusing on online learning. A study by Guha & Maji (2008) mentioned that online learning offers distance learning through the internet and gives students an interactive educational experience. In addition, online learning gives opportunity to students to study through accredited learning providers.

New technologies have made open learning more transferable, not just within its educational origins, but also to the larger area of vocational training and development, particularly the management development field (Davis, 1996). Thus, Guha and Maji (2008) suggested that online learning makes a definitive impact on the young and old alike, creative writers and the community as a whole.

The use of technology in education has taken forward both learning and teaching to the next level. ODL involve innovative methods that have been transformed by the integration of technology in the teaching and learning process. Distance education contributes a lot to providing equal opportunities in education such as individuals being aware of their roles in the process of accessibility, institutional support, technological infrastructure, the support provided for students, learning-teaching environments, and evaluation of distance education programs based on equality and life-long learning (Altinay *et al.*, 2019). ODL is a good platform for knowledge management and sharing that indicates the role of course coordinators and digital technology are capable of transforming the lessons.

The developments and progressions of digital technologies, especially following the outbreak of the Covid-19 pandemic, have served IHEs with no other option but to dive into ODL in full force. IHEs have to go to the students rather than wait for the students to return to the campuses and the classrooms. Online platform are important tools that beg to be extensively and responsibly exploited, which would expand and enhance IHEs reach to more students in order to provide good and quality education.

The noted advantages of digital technologies come with their fair share of problems in the acceptance and usage of innovations in ICT and multimedia. Among the problems identified in past studies were communication difficulty, competency in the usage of the required

technology, and belief in traditional face-to-face learning. Students' acceptance and satisfaction, to an extent, determine the success of ODL (Ramayah, et al., 2010; Song, 2010). In the last quarter of 2011, a major flooding destroyed much of the physical infrastructure and facilities at the universities, especially in the central region of Thailand. The universities had to resort to the hybrid open-source Learning Management System(LMS) as well as the wider version of the blended learning model called Hybrid Instruction Model (HIM) to continue operating.

Kanthawongs & Kanthawongs (2013) found that Thai students, culturally submissive and unwilling to challenge the authority of the lecturers, were reluctant participants. They discovered that PU, in terms of higher homework outcome, learning effectiveness, and better productivity, was a determinant factor in the usage intention of LMS. At the same time, PEU was not, as the students preferred traditional face-to-face interactions. A study at the University of Missouri at Columbia in the USA by Shen *et al.* (2006) found that instructors and mentors influenced the students on their PU of the course. However, the mentors, as the persons more involved with the students and providing the necessary support and assistance to them, were significant influencers in the students' PEU of the learning system.

Perceived Usefulness (PU)

Perceived means becoming aware or conscious of something or coming to realize or understand; whereas usefulness means the quality or fact of being useful (Oxford Languages, 2021). As such, PU means awareness or consciousness of the quality of being useful. Davis (1989), Chang & Tung (2008), and Sun *et al.* (2008), summed up PU as the degree of a person's belief in the expected improvement or enhancement of work performance. In the context of PU of ODL, this study assesses the respondents' perceptions of the suitability and ability of technology to serve the respondents during the course of ODL, and the respondents' awareness of ODL that influences a decision to choose ODL.

Perceived Ease of Use (PEU)

Perceived means becoming aware or conscious of something or coming to realize or understand; ease means absence of difficulty or effort or freedom from problems; whereas use means taking deploying or employing something to accomplish or achieve something (Oxford Languages, 2021). Therefore, PEU means conscious of the absence of difficulty or effort when employed to accomplish or achieve something. Davis (1989), Chang & Tung (2008), and Sun *et al.* (2008), noted that PEU is the degree of how effortless a person employs something as a means to accomplish or achieve goals. In the context of PEU of ODL, this study evaluates the respondents' perceptions on the degree of effortlessness of technology in serving the respondents during the course of ODL that attracts the respondents and influences a decision to choose ODL.

Perceived Self-Efficacy (PSE)

Self-efficacy refers to an individual's belief in his or her capacity to execute behaviors necessary to produce specific performance attainments (Bandura, 1982). Self-efficacy reflects confidence in the ability to exert control over one's own motivation, behavior, and social environment. According to Bandura, there are two factors that influence whether or not someone engages in a particular behavior: outcome expectancy and self-efficacy. In other words, the ability to achieve a goal or complete a task depends on whether to think that someone can do it (self-efficacy), and whether to think it will have a good result (outcome expectancy). This study measures the respondents' self-efficacy and whether it affects their perception in order to choose ODL.

Intention to use Open Distance Learning (ODL)

ODL is online teaching and learning utilizing the advances in ICT and multimedia to provide good and quality education and learning processes over the internet in the most convenient way for the students, the lecturers, and IHEs. Students gain access to information and research materials quickly and effectively. All parties are immersed in ICT and multimedia providing the latest in digital technologies and exposing new learning experiences with interactivity and engagement while providing opportunity and access to world-class learning materials and knowledge (MOE, 2015).

3. Research methodology

This study proposed a theoretical framework based on the Technology Acceptance Model (TAM). TAM was first devised by Davis (1989), based on the Theory of Reasoned Action (TRA) by Fishbein & Ajzen (1975). TRA posits that individual behavior is driven by behavioral intention where the behavioral intention is a function of an individual's attitude toward the behavior and subjective norms surrounding the performance of the behavior. In other words, it states that one's behavior and the intent to behave is a function of one's attitude toward the behavior and perception of the behavior. Therefore, behavior is the function of both attitudes and beliefs. TRA is illustrated in Figure 1 below.

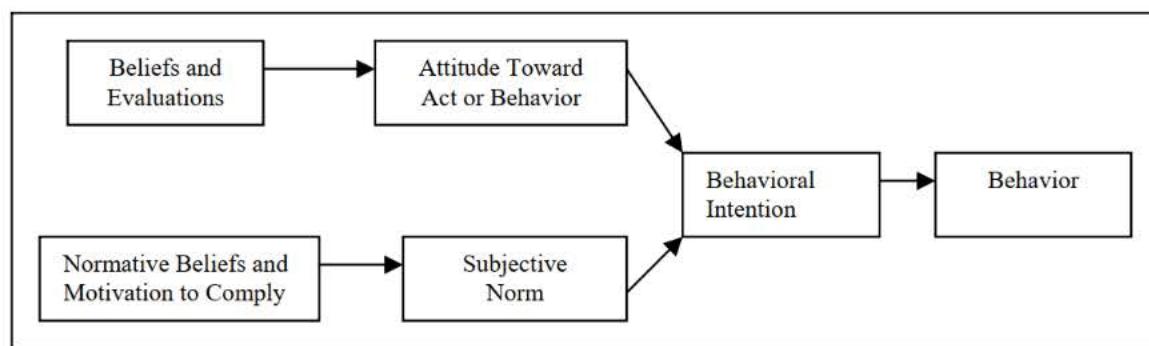


Figure 1: Theory of Reasoned Action (Fishbein & Ajzen, 1975)

Meanwhile, TAM as shown in Figure 2, deals more specifically with the prediction of the acceptability of an information system. The purpose of this model is to predict the acceptability of a tool and to identify the modifications that must be brought to the system to make it acceptable to users. This model suggests that the acceptability of an information system is determined by two main factors, namely PU and PEU. PU is defined as the degree to which a person believes that the use of a system will improve his performance. PEU refers to the degree to which a person believes that the use of a system will be effortless.

TAM has been applied in numerous studies testing user acceptance of information technology, for example, word processors (Davis *et al.*, 1989), spreadsheet applications (Mathieson, 1991), e-mail (Szajna, 1996), web browser (Morris & Dillon, 1997), telemedicine (Hu *et al.*, 1999), websites (Koufaris, 2002) and blackboard (Landry *et al.*, 2006).

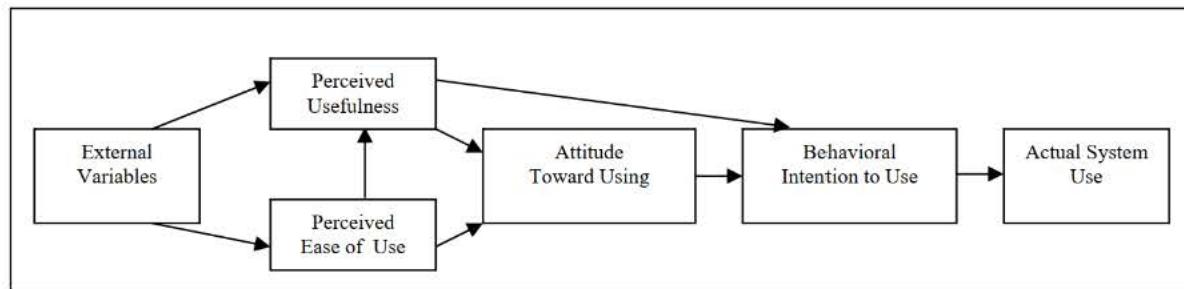


Figure 2: Technology Acceptance Model (Davis, 1989)

Figure 3 depicts the research framework employed. It is a reduced TAM model, excluding actual system use and attitude toward using constructs but behavioural intention to use related to ODL is applied as a dependent variable. The external variables constructs are also not included in the research model as there is no immediate intention to examine antecedents to PU and PEU. However, self-efficacy and effectiveness constructs as predictors are included.

According to Davis (1986) PEU also influences in a significant way the behaviour of an individual through two main mechanisms: self-efficacy and instrumentality. Self-efficacy is a concept developed by Bandura (1982) which explains that the more a system is easy to use, the greater should be the user's sense of efficacy. Moreover, a tool that is easy to use will make the user feel that he has control over what he is doing (Lepper 1985). Efficacy is one of the main factors underlying intrinsic motivation (Bandura 1982; Lepper 1985) and it is what illustrates here the direct link between PEU and behaviour. PEU can also contribute in an instrumental way in improving a person's performance. Due to the fact that the user will have to deploy less efforts with a tool that is easy to use, he will be able to spare efforts to accomplish other tasks (Davis, 1986).

Therefore, the research hypotheses are based on the application of TAM model in the context of the ODL.

- H1: PU has a direct relationship with Behavioural Intention to choose ODL
- H2: PEU has a direct relationship with Behavioural Intention to choose ODL
- H3: PSE has a direct relationship with Behavioural Intention to choose ODL

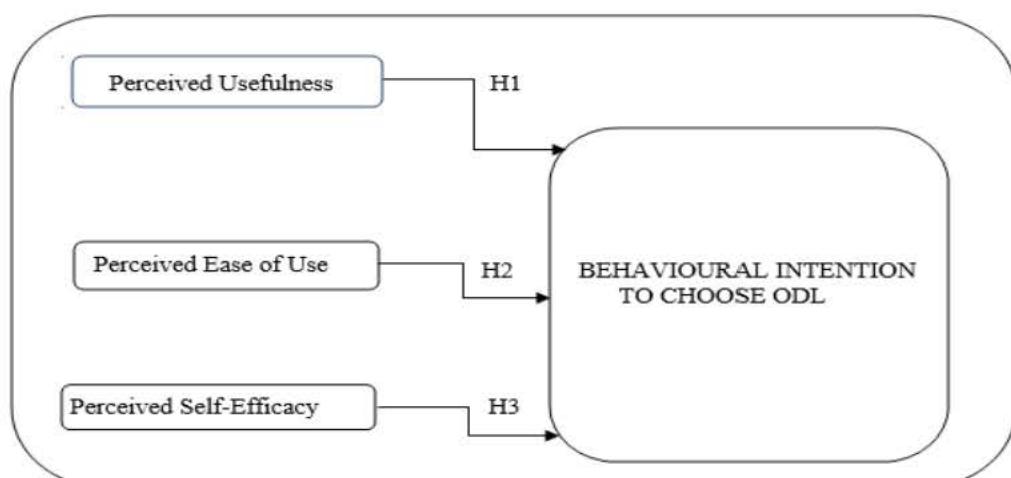


Figure 3: Theoretical Framework

A structured questionnaire method is used for data collection. The questionnaires were distributed to the respondents selected by using a convenient sampling method. The primary data are collected based on the questions established and answered by the respondents (Sekaran & Bougie, 2010). Convenience sampling is frequently used in quantitative research, where the researcher selects subjects that are more readily accessible. Self-administered questionnaires are deemed the best method to collect the primary data for this study. Respondents are responsible to read and answer the questions according to the instructions on the questionnaires (Abd Aziz, 2016; Zickmund, 2003).

This questionnaire contained close-ended questions and was developed using the five-point Likert scale ranging from “strongly disagree” (1) to “strongly agree”. The questionnaire consisted of two sections, first section was about general questions on demographic profile, while the second section was related to the respondents’ PU, PEU, PSE, and effectiveness towards ODL behavioral intention to choose ODL. The questionnaire was developed based on four constructs consisting of 33 items. The constructs of PU, PEU, and Behavioural Intention to choose ODL, were adopted from TAM while PSE and Effectiveness were identified from the literature. 250 questionnaires were distributed to Bank Rakyat staff enrolled in the UUM *PJJ Program*. However, only 125 participated in the survey. The data was analyzed using the Statistical Package for Social Science (SPSS 23). This software is widely used by researchers as a data analysis technique (Zickmund, 2003).

4. Result and discussion

Multiple regression was performed to investigate the ability of perceived usefulness, perceived ease of use, perceived self-efficacy, and effectiveness to influence Bank Rakyat-sponsored staff enrolled in UUM PJJ Programs’ behavioral intentions to choose open distance learning (ODL).

The results of the analyses presented allow us to determine the hypotheses and answer the three research questions of the study. The summary of the hypotheses testing is as follows:

Table 1: Hypothesis testing using multivariate linear regression

Hypothesis	Relationship	Std. Beta	Std. Error	P-value	Decision
H1	PU>ODL	0.436	0.096	0.000	Supported
H2	PEU>ODL	-0.200	0.101	0.877	Rejected
H3	PSE>ODL	0.300	0.112	0.014	Supported

Perceived usefulness (PU) makes the largest unique contribution to the model ($\beta=0.436$, $p < 0.05$), thus significant at a 0.05 level of significance. Therefore, H1 is supported where perceived usefulness has a direct relationship with behavioral intention to choose open-distance learning. Hence, perceived usefulness influences Bank Rakyat staff enrolled in the UUM PJJ Program to choose ODL.

Perceive ease of use (PEU) makes the lowest unique contribution to the model ($\beta= -0.200$, $p > 0.05$), thus not significant at 0.05 level of significance. Therefore, H2 is not supported where the Perceived Use of Ease has no direct relationship with behavioral intention to choose open distance learning. Hence, perceived ease of use cannot attract the interest and attention to influence Bank Rakyat staff enrolled in the UUM PJJ Program to choose ODL.

Perceive Self Efficacy (PSE) makes the second lowest unique contribution to the model ($\beta = 0.300$ $p > 0.05$), thus not significant at 0.05 level of significant. Therefore, H3 is not supported

where perceived self-efficacy has no direct relationship with behavioral intention to choose open distance learning. Hence, perceived self-efficacy would not affect Bank Rakyat staff enrolled in the UUM PJJ Program to choose ODL.

5. Conclusion and recommendations

This research showed that Bank Rakyat staff enrolled in the UUM *PJJ Program* have positive intentions to choose Open Distance Learning in their studies.

Perceived Usefulness Influences Bank Rakyat staff to choose Open Distance Learning in their UUM *PJJ Program*.

Perceived Self-Efficacy affects Bank Rakyat staff to choose Open Distance Learning in their UUM *PJJ Program*;

However, Perceived Ease of Use does not attract the interests and attentions to influence Bank Rakyat staff to choose Open Distance Learning in their UUM *PJJ Program*;

The recommendation for this study are classes for distance learning should be more frequent than the current frequency of once a month, where they have 3-hour session for the day. The frequency should be increased to at least twice a month of 3-hour sessions. This is to prevent students from forgetting information from earlier classes and losing interest in their studies.

In a once-a-month session, the lecturer may be forced to rush in order to cover all the topics for that particular subject. However, by increasing the frequency of the classes to twice a month, the lecturer will have better control of the flow of topics to be covered, whereas the students will have more time and opportunity to learn and digest the information that they get for the day. With the increase in the frequency of the classes, the students will be more alert and disciplined and have a better understanding of the topics of their studies.

When choosing ODL, both lecturers and students should arm themselves with sufficient knowledge of the methods and applications available for online learning.

It is recommended further investigations into this subject matter. It would be interesting to examine the findings of similar studies in other states in Malaysia and other countries. Given the current findings concerning perceptions towards ODL, future studies should be undertaken with a bigger sample population to ensure better findings.

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References

Abd Aziz, N. (2016). The Perspective of Muslims and Non-Muslims towards Islamic Housing Financing: A Case Study of Hong Leong Bank and Hong Leong Islamic Bank Customers. PhD Dissertation, Universiti Sains Malaysia.

Altinay, F., Altinay, M., Dagli, G. & Altinay, Z. (2019). A study of knowledge management systems processes and technology in open and distance education institutions in higher

education. *International Journal of Information and Learning Technology*, 36(4), 314-321.

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37(2), 122-147.

Chang, S.C. & Tung, F.C. (2008). An empirical investigation of students' behavioural intentions to use the online learning course websites. *British Journal of Educational Technology*, 39(1), 71-83.

Davis, F.D. (1986). A technology acceptance model for empirically testing new end user information systems: Theory and results. Unpublished doctoral dissertation, MIT Sloan School of Management, Cambridge, Massachusetts, USA.

Davis, F.D. (1989). Perceived usefulness, perceived ease of use and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-339.

Davis, F.D., Bagozzi, R.P. & Warshaw, P.R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, 35 (1989), 982-1003.

Fishbein, M. & Ajzen, I. (1975). Belief, attitude, intention and behavior: An introduction to theory and research. Reading, Massachusetts, USA: Addison-Wesley.

Guha, A.S. and Maji, S. (2008). E-learning: the latest spectrum in open and distance learning. *Social Responsibility Journal*, 4(3), 297-305.

Hu, P.J., Chau, P.Y.K., Sheng, O.R.L. & Tam, K.Y. (1999). Examining the technology acceptance model using physical acceptance of telemedicine technology. *Journal of Management Information Systems*, 16(2), 91-112.

Kanthawongs, P. & Kanthawongs, P. (2013). *Individual and Social Factors Affecting Student's Usage Intention in Using Learning Management System*. Paper presented at the Social and Behavioural Sciences Symposium, 4th International Science, Social Science, Engineering and Energy Conference 2012 (I-SEEC 2012). Bangkok, Thailand. *Procedia – Social and Behavioral Sciences*, 88 (2013) 89-95.

Koufaris, M. (2002). Applying the technology acceptance model and flow theory to online consumer behaviour. *Information Systems Research*, 13(2), 205-223.

Landry, B.J.L., Griffith, R. & Hartman, S. (2006). Measuring student perceptions of blackboard using the technology acceptance model. *Decision Sciences*, 4(1), 87-99.

Lepper, M. R. (1982). *Microcomputers in education: Motivational and social issues*. Paper presented at the annual meetings of the American Psychological Association, Washington, D.C., USA.

Mathieson, K. (1991). Predicting user intentions: comparing the technology acceptance model with theory of planned behaviour. *Information Systems Research*, 2(3), 173-191.

Malaysia Digital Economy Corporation (MDEC) Sdn Bhd, (2019), blob:<https://mdec.my/abe86e8a-7a95-4407-92e2-1458973887c8> retrieved: 2 September 2023

Minister of Education, (2015), <https://www.moe.gov.my/en/muat-turun/laporan-dan-statistik/pendidikan-tinggi/buku-perangkaan/2015-1> retrieved: 2 September 2023

Morris, M.G. & Dillon, A. (1997). The influence of user perceptions on software utilization: application and evaluation of a theoretical model of technology acceptance. *IEEE Software*.

Oxford Languages, (2021). Oxford, England, UK: Oxford University Press.

Paliwal, D. (2019). Reaching the unreached through open and distance learning in India: With special reference to Kumaun region of Uttarakhand. [Asian Association of Open Universities Journal](#), 14(1), 39-49

T. Ramayah, Noor Hazlina Ahmad, May-Chiun Lo (2010). The role of quality factors in intention to continue using an e-learning system in Malaysia. *Procedia - Social and Behavioral Sciences*, 2(2), 5422-5426.

Sekaran, U. & Bougie R. (2010). *Research Method for Business: A Skill Building Approach*. New York, New York, USA: John Wiley and Sons, Inc.

Shen, D., Laffey, J., Lin, Y. & Huang, X. (2006). Social Influence for Perceived Usefulness and Ease-of-Use of Course Delivery Systems. *Journal of Interactive Online Learning*, 5(3) 2006, 270-282.

Song, S.M. (2010). E-learning: Investigating students' acceptance of online learning in hospitality programs.

Sun, P.C., Tsai, R.J., Finger, G.F., Chen, Y.Y. & Yeh, D. (2008). What drives a successful e-Learning? An empirical investigation of the critical factors influencing learner satisfaction. *Computers & Education*, 50, 1183-1202.

Szajna, B. (1996). Empirical evaluation of the revised technology acceptance model. *Management Science*, 42(1), 85-92.

Zickmund, W. G. (2003). *Business Research Method* (7th ed.). Mason, Georgia, USA: Thomson South Western.

Davis, H.J. (1996). A review of open and distance learning within management development. *Journal of Management Development*, 15(4), 20-34.

Guha, A.S. & Maji, S. (2008). E-learning: the latest spectrum in open and distance learning. *Social Responsibility Journal*, 4(3), 297-305.