

## Relationship Between Learner Motivation and Perceptions of an e-Learning Platform among Undergraduates

Kiran Ravinasha Raveenthiran and Lilliati Ismail  
Faculty of Educational Studies, Universiti Putra Malaysia, Selangor, Malaysia

---

**Abstract:** This study investigated the relationship between learner motivation and perceptions of an e-Learning platform among undergraduates in a university in Malaysia using the university's e-Learning platform, PutraBLAST. 125 respondents were selected from undergraduates in the Faculty of Educational Studies. Data were collected using a questionnaire. Descriptive and inferential statistics were used to analyse the data. Findings from the descriptive analysis showed that respondents were moderately motivated when using PutraBLAST. Respondents were also satisfied with the e-Learning environment using PutraBLAST. A moderate positive relationship was found between motivation and perceptions of the e-Learning platform ( $r = 0.632$ ). This study suggests for the need to incorporate features in PutraBLAST that would enhance motivation as it is positively correlated to perceptions of the e-Learning experiences using the e-Learning platform.

**Key words:** Motivation, e-Learning, higher education, blended learning, learning management system, PutraBLAST

---

### INTRODUCTION

Educational applications developed via the internet are often referred to as e-Learning platforms. They have the advantage of delivering educational information through the internet, encouraging on-line interaction for educational purposes and they offer flexibility in the learning process. Students can access learning contents and engage in online discussions anytime and anywhere as long as they have telecommunication devices and access to the internet. e-Learning platforms can therefore, support distance education as well as on-campus education.

Self-motivation is imperative when using an e-Learning platform. Students need to be motivated to access the e-Learning platform at their own time and read the learning contents or engage in the tasks set by the instructor. In addition, students need to be highly responsible, disciplined and independent when accessing an e-Learning platform (Terzieva *et al.*, 2009).

In Malaysia, e-Learning is becoming more widespread in higher learning institutions (Abubakar *et al.*, 2009). Putra Blended Learning Assistive System and Technology (PutraBLAST) is an e-Learning platform developed internally in collaboration with the Centre for Development of Information and Communication (IDEC) in Universiti Putra Malaysia (UPM). This e-Learning platform allows instructors to share course content and engage learners in activities and assessment tasks such

as online forums and quizzes. To ensure that the use of PutraBLAST is successful, there is a need to gauge whether there is a relationship between learner motivation and perceptions of the e-Learning platform.

### MATERIALS AND METHODS

**Learning Management System (LMS):** An LMS is needed in modern higher education to assist teaching and learning processes (Dewanto *et al.*, 2004). Wichadee (2014) referred to an LMS as server-based softwares that deliver learning materials via web browser while Macfadyen and Dawson (2010) referred to LMSs as web-based platforms that provide teaching materials and teaching tools to support learning. In a similar vein, Black *et al.* (2007) defined an LMS as a web-based system with synchronous and asynchronous technologies to provide learning at anytime from anywhere. Dalsgaard (2006) suggested that an LMS is used to organise and manage integrated system in e-Learning using features such as forums, file sharing, management of assignments, lesson plans and other materials published in an LMS.

Thus, an LMS provides opportunities for instructors to explore new teaching and learning methodologies (Barret *et al.*, 2012; Costa *et al.*, 2012). Furthermore, the features provided in an LMS such as interaction, feedback and conversation allow instructors to create, organise and deliver collaborations and assessment activities effectively (Costa *et al.*, 2012). In addition, an LMS

improves student's satisfaction towards learning courses and student's interaction with their instructors (Benta *et al.*, 2014), allows instructors to monitor, evaluate and manage the learning activities (Costa *et al.*, 2012) and provides options for institutions to choose the features based on their requirements (Bedi, 2011). In addition, an LMS was identified to have more flexibility in teaching and learning processes compared with traditional classes (Black *et al.*, 2007).

Pedagogical and course administration tools in an LMS create a virtual learning environment for campus-based students and virtual universities (Coates *et al.*, 2005). However, student's perspective and strategies towards e-Learning using an LMS as one of the technologies in learning seem unclear (Barrett *et al.*, 2012). Besides, introduction of an LMS in education institutions raised issues of the adaptation and diffusion of technology related to teaching and learning (Benson and Palaskas, 2006).

Many institutions of higher learning in Malaysia have implemented LMSs to support their e-Learning; These include MyLMS at Open University Malaysia, learning cube at Universiti Tenaga Nasional, learning zone at Universiti Utara Malaysia (Kung *et al.*, 2012), SmartUMS at Universiti Malaysia Sabah, i-Learn at Universiti Teknologi MARA and PutraBLAST at Universiti Putra Malaysia (UPM). Hashemyolia *et al.* (2015) in a study to evaluate student's motivation and self-regulated learning strategies in PutraBLAST among 436 undergraduates in Malaysia, identified that quality of learning contents and quality of system significantly predicted student's perceived motivation in using PutraBLAST. Also, the findings from this study showed that students were more responsible for their own learning process if they perceived the learning contents as interesting and they were satisfied with the tasks given by their instructors in PutraBLAST.

In a study among 148 students in Finland, Islam (2014) found that students would be more satisfied with an LMS if they perceived that it is easy to use and has adequate functionality to fulfil their requirements. Wang *et al.* (2014) carried out an experimental study to evaluate their learning support system among 90 students in China. They identified that students who used their learning support system performed better compared with students who studied using only textbooks. Similarly, Gecer and Dag (2012) carried out a study with 67 students in Turkey to evaluate their perceptions of an LMS to assist face-to-face class. Their findings revealed that students perceived that the application and activities in the e-Learning course was beneficial to them. Besides, the assignments and group projects included in the e-Learning environment increased their learning responsibilities and therefore, they could manage their learning progress in the e-Learning environment.

**PutraBLAST:** With various benefits offered by an LMS, Universiti Putra Malaysia (UPM) revitalised the university's LMS and re-named it PutraBLAST in 2015 to support e-Learning activities at the university. PutraBLAST was developed by the Centre for Development of Information and Communication (IDEC), UPM to enhance the effectiveness of teaching and learning and it encourages sharing of learning materials among instructors using a single integrated database.

Features of PutraBLAST include course management functions such as uploading files and exporting and importing course materials, class management functions such as student's assessment marks and progress reports, evaluation functions such as online quizzes and online assignments and teaching activities such as discussions, forums and online chat. These functions would, among others, encourage student's interaction with their instructors and peers synchronously or asynchronously.

**Research questions:** The research sought to answer the following questions:

- What is the level of learner motivation when using PutraBLAST?
- What are the learner's perceptions of PutraBLAST's e-Learning environment?
- Is there a significant relationship between learner motivation and perceptions of the e-Learning experiences using PutraBLAST?

**The study:** A correlational research design was used in this study to determine the relationship between motivation and e-Learning experiences among undergraduates at the Faculty of Educational Studies at UPM. A questionnaire was used to collect data.

In this study, the sample size was obtained using Krejcie and Morgan (1970)'s sample size determination table. The target population of this study consisted of 185 second year undergraduates from 5 different programmes in the Faculty of Educational Studies. Based on the target population, the sample size determined was 125. The programmes involved are shown in Table 1.

Twenty-five students from each chosen programme in the Faculty of Educational Studies programme were randomly selected. The total sample consisted of 39 (31.2%) male students and 86 (68.8%) female students, aged between 20-24 years old.

**Instrumentation and scoring:** The questionnaire used in this study was adapted from two questionnaires which are the Situational Motivation Scale (SIMS) developed by Guay *et al.* (2000) and the e-Learning

**Table 1: Selected programmes**

Faculty/Programme chosen	No. of students
<b>Faculty of educational studies</b>	
Bachelor of Education (Home Science)	42
Bachelor of Education (Physical Education)	41
Bachelor of Education (Teaching of English as a second language)	38
Bachelor of Education (Teaching of Bahasa Malaysia as a first language)	39
Bachelor of Education (Guidance and Counselling)	25
Total	185

**Table 2: Questionnaire sections**

Section	Construct	No. of items	Sources
A	Demography	4	The Situational Motivation
B	Motivation	16	Scale (SIMS) by Guay <i>et al.</i> (2000)
C	Perceptions of the e-Learning platform	27	The e-Learning experiences questionnaire by Ginns and Ellis (2007)

experience questionnaire developed by Ginns and Ellis (2007). The sections and number of items for each section is shown in Table 2.

## RESULTS AND DISCUSSION

The data analysis was carried out using SPSS Version 22 Software. The respondent's level of motivation and perceptions of the e-Learning platform were analysed using descriptive and inferential statistics. Pearson correlation was used to determine the correlation between motivation level and perceptions of the e-Learning platform.

**Student's motivation in using PutraBLAST:** The overall mean obtained was 3.50. This implies that students obtained moderate level of motivation in using PutraBLAST as shown in Table 3. Respondents obtained high levels of intrinsic motivation, identified regulation and external regulation and moderate level of amotivation.

In this study, intrinsic motivation refers to the respondent's use of their own initiation to achieve pleasure and satisfaction obtained from their involvement in PutraBLAST. Items for this construct relate to whether respondents find PutraBLAST to be interesting, pleasant, fun and engaging. Meanwhile, identified regulation occurs when someone performs some activities at their own choosing. Items for this construct gauge the respondent's perceptions of whether PutraBLAST helps them to engage in their courses effectively and if using PutraBLAST is a personal decision. External regulation occurs when respondent's involvement is to avoid any negative consequences or punishment. Thus, items in this construct gauge whether respondents use PutraBLAST because they are required to use it, they do not have a choice and it needs to be done. Amotivation occurs

**Table 3: Descriptive data of motivation construct**

Dimensions	Mean	Category
Intrinsic motivation	3.69	High
Identified regulation	3.70	High
External regulation	3.98	High
Amotivation	2.61	Moderate
Overall mean	3.50	Moderate

**Table 4: Descriptive data of e-Learning experiences construct**

Dimensions	Mean	Category
Quality of teaching	3.55	Positive perception and satisfied
Student's interaction and engagement	3.34	Positive perception and satisfied
Clarity of goals and setting	3.48	Positive perception and satisfied
Quality of online resources	3.55	Positive perception and satisfied
Appropriate workload	2.92	Negative perception and less satisfied
Student management	3.27	Positive perception and satisfied
Overall satisfaction with online experience	3.59	Positive perception and satisfied
Overall mean	3.39	Positive perception and satisfied

when students are neither intrinsically nor extrinsically motivated to be involved in an activity. In other words, they lack motivation or intention to be involved in the activity. Thus, the items under this category were reverse-coded for data analysis purposes.

**Student's perceptions of the e-Learning environment using PutraBLAST:** The overall mean for e-Learning experiences was 3.39. This indicates that the respondents have a positive perception of PutraBLAST and are satisfied in using the PutraBLAST as shown in Table 4.

Results show that respondents have a positive perception of PutraBLAST and they are satisfied of most of the constructs in the e-Learning platform, except the amount of workload given.

Ginns and Ellis (2007) referred to quality of teaching as the level of satisfaction regarding the e-Teaching and e-Resources. In this study, items for this construct measure respondent's levels of satisfaction and perceptions of lecturer's guidance, input, feedback and online interactions with the respondents. Meanwhile, student's engagement and interaction refer to respondent's levels of satisfaction and perceptions of their involvement and interaction with other peers in PutraBLAST. In this study, the items in the construct "Clarity of goals and standards" measures levels of satisfaction and perceptions of the clarity of guidelines for using PutraBLAST, the goals and standards expected, and the information and content in PutraBLAST. Quality of online resources involves perception of the overall quality of teaching materials provided by the instructors. Appropriateness of workload relates to online materials, online activities and regularity of updates in an e-Learning environment (Ginns and Ellis,

Table 5: Pearson's correlation for motivation and perceptions of the e-Learning environment using putrablast

Variable	Perceptions of the e-Learning platform	Correlation interpretation
Motivation	0.632**	Moderate positive relationship

\*\*Correlation is significant at the 0.01 level (2-tailed)

2007). In this study, appropriate workload refers to appropriateness of the workload derived from online activities in PutraBLAST. Meanwhile, student's management refers to the support provided by the lecturers to students in using PutraBLAST. The three items used to evaluate student's management in PutraBLAST included announcement of test results, online lecture materials update and maintenance of the accessibility in PutraBLAST. Finally, overall satisfaction with online experiences refers to the student's satisfaction towards PutraBLAST. Satisfaction with e-Learning experiences was evaluated based on their satisfaction towards online learning materials, online activities and other features available in PutraBLAST.

**Relationship between motivation and perceptions of the e-Learning environment:** In this study, Pearson's correlation was used to ascertain the relationship between motivation and perceptions of the e-Learning environment (Table 5).

Pearson's Correlation results show a significant moderate positive relationship between motivation and perceptions of the e-Learning environment ( $r = 0.632$ ).

The results of this study indicate that learners who are motivated in using PutraBLAST would probably be satisfied with the e-Learning experiences. Thus, it is important to ensure that students are motivated in an e-Learning environment because those who fail to maintain their motivation might drop out of the e-Learning environment, thus, putting them at a disadvantage in their learning experiences compared to their more motivated counterparts. Therefore, the instructional design of an e-Learning course should integrate features that can promote student's motivation by making the e-Learning course more interesting and useful to them.

In this study, the respondents seem to attain a high mean in the extrinsic motivation constructs, implying that they are extrinsically motivated to use PutraBLAST. Meanwhile, a low mean in amotivation reveals that the respondents do not lack the motivation in using PutraBLAST. Thus, course instructors should provide more interesting activities in PutraBLAST to encourage student participation and enhance motivation. The respondents appear to be willing to adopt a new learning technology as long as this new technology caters to their learning needs and interests.

Results from the perceptions of the e-Learning environment showed that the learning materials uploaded in PutraBLAST have been designed according to the course outline and respondents are clear with the

contents of the courses in PutraBLAST. The results also indicated that the students are satisfied with the learning materials uploaded into the PutraBLAST. Similarly, the respondents perceived that their lecturer's feedback in PutraBLAST assists them in their learning and this encourages them to learn better. However, they were not satisfied with the workload and amount of feedback given to them. Thus, course instructors should probably provide more feedback and consider the amount of workload given to students to promote positive e-Learning experiences.

## CONCLUSION

Though this study was specific to an e-Learning platform in one university with respondents from only one faculty, it provides some insight into the relationship between motivation and perceptions of the e-Learning environment.

## SUGGESTIONS

It is suggested that e-Learning platforms that supplement face-to-face learning at tertiary level are well-received by students. However, for learners to be motivated in using these e-Learning platforms, the learning materials and activities must cater to the student's learning needs and interests, feedback must be provided promptly and sufficiently, amount of workload given must be carefully considered and students should be able to get help from the course instructors when necessary. Keeping motivation high among learners is important as there is a significant relationship between motivation and learner perceptions of the e-Learning platform.

## REFERENCES

- Abubakar, A.B., Y.I. Harandez and B. Magaji, 2009. E-learning in Malaysia and Nigeria: A bibliometric study. Proceedings of the 8th European Conference on E-Learning, October 29-30, 2009, University of Bari, Bari, Italy, ISBN:978-1-906638-52-8, pp: 1-5.
- Barrett, B.F.D., C. Higgaa and R.A. Ellis, 2012. Emerging university student experiences of learning technologies across the Asia Pacific. *Comput. Educ.*, 58: 1021-1027.
- Bedi, K., 2011. A methodology for integrating traditional classroom learning with contemporary online learning. Proceedings of the 4th International Conference on Hybrid Learning (ICHL'11), August 10-12, 2011, Springer, Hong Kong, China, ISBN:978-3-642-22762-2, pp: 30-39.

- Benson, R. and T. Palaskas, 2006. Introducing a new learning management system: An institutional case study. *Aust. J. Educ. Technol.*, 22: 548-567.
- Benta, D., G. Bologna and I. Dzitac, 2014. E-learning platforms in higher education: Case study. *Procedia Comput. Sci.*, 31: 1170-1176.
- Black, E.W., D. Beck, K. Dawson, S. Jinks and M. DiPietro, 2007. Considering implementation and use in the adoption of an LMS in online and blended learning environments. *Tech. Trends*, 51: 35-39.
- Coates, H., R. James and G. Baldwin, 2005. A critical examination of the effects of learning management systems on university teaching and learning. *Tertiary Educ. Manage.*, 11: 19-36.
- Costa, C., H. Alvelos and L. Teixeira, 2012. The use of Moodle e-learning platform: A study in a Portuguese University. *Procedia Technol.*, 5: 334-343.
- Dalsgaard, C., 2006. Social software: E-learning beyond learning management systems. *Eur. J. Open Distance Learn.*,
- Dewanto, B.L., H.L. Grob and F. Bensberg, 2004. Developing, deploying, using and evaluating an open source learning management system. *J. Comput. Inf. Technol.*, 12: 127-134.
- Gecer, A. and F. Dag, 2012. A blended learning experience. *Educ. Sci. Theor. Pract.*, 12: 438-442.
- Ginns, P. and R. Ellis, 2007. Quality in blended learning: Exploring the relationships between on-line and face-to-face teaching and learning. *Internet Higher Educ.*, 10: 53-64.
- Guay, F., R.J. Vallerand and C. Blanchard, 2000. On the assessment of situational intrinsic and extrinsic motivation: The Situational Motivation Scale (SIMS). *Motivation Emotion*, 24: 175-213.
- Hashemyolia, S., A. Asmuni, A.F.M. Ayub and S.M. Daud, 2015. Perceived learning management quality predictors to motivation and use of self-regulated learning strategies. *Mediterr. J. Soc. Sci.*, 6: 428-436.
- Islam, A.N., 2014. Sources of satisfaction and dissatisfaction with a learning management system in post-adoption stage: A critical incident technique approach. *Comput. Hum. Behav.*, 30: 249-261.
- Krejcie, R.V. and D.W. Morgan, 1970. Determining sample size for research activities. *Educ. Psychol. Meas.*, 30: 607-610.
- Kung, S.M., Y.F. Mat, W. Ishak and W. Hussain, 2012. The usage of LMS among undergraduate students. *Int. J. Comput. Inf. Technol.*, 1: 2279-2764.
- Macfadyen, L.P. and S. Dawson, 2010. Mining LMS data to develop an early warning system for educators: A proof of concept. *Comput. Educ.*, 54: 588-599.
- Terzieva, S., M. Ilieva and I. Radonova, 2009. Web-based learning and self-regulation of the learning. *J. Univ. Chem. Technol. Metall.*, 44: 409-412.
- Wang, J., T. Mendori and J. Xiong, 2014. A language learning support system using course-centered ontology and its evaluation. *Comput. Educ.*, 78: 278-293.
- Wichadee, S., 2014. Student's learning behavior, motivation and critical thinking in learning management systems. *J. Educ. Online*, 11: 1-21.