

A Model of Factors Influencing E-learning Usability in Toastmasters International

Ayu Ratna Lalitya Sudjana, Sfenrianto

Abstract: *E-Learning has become the latest teaching methods and slowly began to be implemented in various institutions in all corners of the world. Judging from its profits, E-Learning can be accessed by everyone using the internet, the material is instantly available and accessible online, saving the cost of study materials and no need to pay the shipping costs. It is becoming one of the factors that reinforce the use of E-Learning in Toastmasters International institution. The research will focus on proposed a model of factors influencing E-learning usability in Toastmasters International. The model will use based on if the following four factors namely Learning habits, User Satisfaction, Loyalty User, and Ease of User Interface has Usability effect on E-Learning in Toastmasters International. The results of this study suggest that four of these factors affect the usefulness of e-Learning. Therefore, the results of these recommendations will be recommended to the Toastmasters International for the development of E-Learning do better in the future.*

Keywords: *E-learning, learning habits, user satisfaction, user loyalty, ease of user interface, e-learning usability.*

I. INTRODUCTION

Over the years, the institution needs to keep abreast of the times to survive. One of them by following the technological developments in the digital age. Although there remains a face to face class that brings teachers and students, the Internet technology still considered useful to know the progress on the outside.

The development of technology that can be used to support educational activities is by providing learning materials which is accessible via Internet so that the benefits can be felt by all the education institutions. This material may be prepared based on the curriculum where there are written and visual materials, as well as a feature to download and upload project for each of the parties that have been registered formally in this education institution. This Internet-based learning materials commonly called E-Learning.

Therefore, as a non-profit institution of public communication, Toastmasters International, an organization that lived 113 years and has a mission "We empower individuals to become communicators and leaders more effective", needs to adapt in order to survive. One of them is by implementing changes in education, change their

curriculum which the previous style of reading books into e-learning that can be accessed via the internet.

This is done because the old curriculum methods which use the books sent from the headquarter to all around the world, often encountered obstacles where the books didn't receive well by the members so that members who are ready to learn has no choice than to use the other member's book to learn. These findings were quite disappointing because of complaints continue to rise and it is usually directed to the Post Office of each country. In order to avoid this, and to avoid spending on printing and book delivery to member's address, the changes made using the E-Learning curriculum which is considered effective and efficient because all members would be able to access Toastmasters International website anywhere and anytime.

E-Learning Implementation at Toastmasters International was relatively new, since it was recently conducted in July 2017 and in line with its development, many new members and old members are still seen stuttering while studying it. Data released from Toastmasters.org recorded a total of Toastmasters International member from 1 July 2017 until June 30, 2018 was 357.000 members, while the registered members who are already using E-Learning system was 127.500 members, approximately 35.71% of members.

The problem of the condition of members or students who do not understand the use of E-learning methods, that are relatively new, makes e-learning usability becomes less than optimal. The usability of e-learning is defined as the extent to which the E-learning system is easy to use, easy to learn and allows users to achieve specific goals effectively and efficiently [1].

Learning habit is generally understood as repetitive learning to become an automatic reaction that is able to obtain certain goals or the final status [2]. To make changes of the conventional way of learning to e-learning requires a rather long-time adaptation to learners. Therefore, it is necessary to have useful learn habits regarding the introduction of e-learning.

User satisfaction is the response and feedback that is showed by user after using the information system. The user's attitude towards the information system is the subjective criteria of how users like to the system that is being used [3]. Satisfaction is determined by the subjective experience of the user. E-learning system can ensure the effectiveness and efficiency but if the user feel uncomfortable and emotionally not positive to use, the potential of the system will not be fully utilized [1]. Satisfaction for users of e-learning can provide a good and comfortable experience in the use of e-learning and this can feel the usefulness of e-learning within a period long enough.

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* Correspondence Author

Ayu Ratna Lalitya Sudjana, Information Systems Management Department, BINUS Graduate Program-Master of Information Systems Management, Bina Nusantara University, Jakarta, Indonesia 11480, Jakarta, Indonesia. Email: tyasudjana@gmail.com

***Sfenrianto**, Information Systems Management Department, BINUS Graduate Program-Master of Information Systems Management, Bina Nusantara University, Jakarta, Indonesia 11480, Jakarta, Indonesia. Email: sfenrianto@binus.edu

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User loyalty is the loyalty from users to access e-learning continuously. With the influx of the new e-Learning system, there will be a change where members who have joined since long time ago, would have to urge themselves to learn a new system, where it will make their experiences with E-Learning in the same level with those new members who join Toastmasters International. It also affects the loyalty of the old members, whether they stay abreast of new systems or did not want to learn.

The user interface is designed to improve the attractiveness and increase student interest or intention to use the system and engaged in the learning experience [4]. E-learning system is basically a software product that is interactive and collaborative. Therefore, user interface role is very important in the reception and sustainable use of the online system collaborative or interactive. It is a front end or a portal for students to take advantage of e-system [5]. Based on the above research, to improve E-learning usability is then necessary to evaluate the E-Learning as seen from the user side to focus on the variables learning habits, user satisfaction, user loyalty and ease of user interface.

The purpose of this study was to investigate and analyze: (1) The influence of users learning habits towards e-learning usability in Toastmasters International; (2) The influence of user satisfaction towards e-learning usability in Toastmasters International; (3) The influence user interface towards e-learning usability in Toastmasters International; and (4) The influence of user loyalty towards e-learning usability in Toastmasters International

II. LITERATURE REVIEW

A. E-Learning

Learning theories have proved useful in conceptualizing initiatives Distance Education (DE) like Massive Open Online Courses (MOOCs), which deliver higher education to the doorsteps of people through the Internet, particularly in developed countries [7]. In Goleman's theory explains that emotional intelligence capabilities also determine the success factors of integrated learning [8].

Table I: Goleman's Framework [8]

	Self – Personal Competence	Other – Social Competence
Recognition	Self- Awareness - Emotion self – awareness - Accurate self – assessment - Self – confidence	Social Awareness - Empathy - Service orientation - Organizational awareness
Regulation	Self-Management - Self- Control - Trustworthiness - Conscientiousness - Adaptability - Achievement drive - Initiative	Relationship Management - Developing others - Influence - Communication - Conflict management - Leadership - Change catalyst - Building bonds - Teamwork & Collaboration

The development of computer systems over a network is increasing. The Internet is a public network. Its presence is indispensable both as a medium of information and

communication is done freely. One use of the Internet is at the distance learning system through electronic learning, or better known as E-Learning.

Web-based learning is a learning activity that utilizes media sites (websites) which can be accessed through the Internet. Web-based learning is one of the implementations of electronic learning (e-learning) [9].

E-learning in conducting a self-assessment needs to be done before and after completing the project. Self-assessment is a qualitative assessment of the learning process, and the end product, is realized based on predefined criteria [10].

B. E-Learning Usability Factor

Usability is the ease that you can use the system and used to promote learning and, therefore, is important in the design of user-centered interface [11]. There are other studies that conducted a study on Online Education Resources inhibiting factor where there are five categories that can affect student to learn E-learning [12]: (1) Additional motivation; (2) The relationship between general knowledge and personal experience; (3) Relevant learning activities; (4) Focus on attention; and (5) Input that are oriented towards the goal.

C. Learning Habits Factor Towards E-Learning

The purpose of this study to describe the learning type of bachelor's degree students in E-Learning and to investigate the relationship in the results of their study in one semester. The results show that regular learning (for example, form a habit of learning) can improve the effectiveness of learning and leads to better learning outcomes in E-Learning [13]. Learning habit is generally understood as repetitive learning to become an automatic reaction that is able to obtain certain goals or the final status [2].

D. User Satisfaction Factor Towards E-Learning

In a satisfaction survey that was made related to concerns over the use of technology, and with additional interviews with some students and teachers in the experimental group. The results of the interviews and satisfaction surveys show that technology, when combined with field work, will result in an increase in the effectiveness of teaching and learning activities [14].

In addition, interactive web-based applications for medical has introduced unique interaction elements with the learning content, which is specifically designed to train students to use medical equipment. The results of the student survey, which is conducted after the implementation, is visual and interactive features that are added to the application has the potential to increase positive user satisfaction [15].

E. User Loyalty Factor Towards E-Learning

The popularity of E-Learning today has increase because of the ability and speed of multimedia information exchange at low cost. In addition, the study results also suggest that the effects of satisfaction on loyalty is greater than the effect of E-learning service quality on loyalty [13].

Loyalty can be regarded as a non-random behavior, which is expressed from time to time, depending on the psychological processes and closeness with the brand's commitment. Loyalty has been regarded as a key factor for the success and sustainability of the company from time to time [16].

F. Ease of User Interface Factor Towards E-Learning

From the standpoint of educational research, the implementation of educational materials should be in line with the interaction between the system and the user (student). The system is required to provide a simple user interface display and can provide an explanation of the graphic [14].

E-learning system is basically an interactive and collaborative software product. Therefore, a very important role in the reception user interface and sustainable use of the online collaborative or interactive system to anything. It is a front end or a portal for students to take advantage of e-system [5]

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G. Related Research

The research conducted related E-Learning, one of them at a university in Japan that wanted to know the type of E-Learning learning habits of bachelor's degree students and investigate their relationship to their learning throughout the semester [17]. From the study of the first section of the 441 bachelor's degree students that have been analyzed, there are 7 types of habits that most identified: (1) delay, (2) learning habits, (3) random, (4) lack of motivation, (5) ready earlier, (6) the appropriate learning level, and (7) studied at the last minute. Then the second part of the study, analysis of data taken from 226 students. Results showed a significant relationship between the type of learning habits with good learning outcomes. Students who show the type of learning habits showed higher test results than students to learn the type of delay. So, the conclusion is that routine of learning activity (e.g. learning habit forming) can improve the effectiveness of learning and leads to better learning outcomes in E-Learning [13].

III. PROPOSED MODEL

Before explaining, proposed model, Figure 1 shows the Toastmasters International E-Learning website as an object of research. The research was carried out on members of Toastmasters International, in District 87, more specifically Division J clubs to analyze the implementation and the effectiveness of E-Learning in Toastmasters for new members who joined after July 2017 and old members who joined before July 2017. There are 181 data collection using questionnaires.

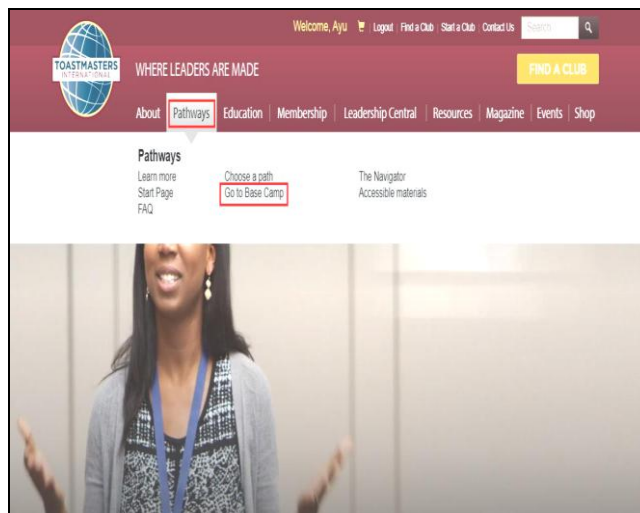


Fig. 1. Toastmasters International E-Learning Website.

This research will use the following variables: Dependent variables and Independent variables. Dependent variable is. members, which relates to e-learning usability. Independent Variable is a new curriculum, dealing with learning habits, user satisfaction, user loyalty and ease of user interface.

Relationships between these variables can be unique because of the implementation of E-Learning is based on the relationship of loyalty with learning habits, user satisfaction, user loyalty and ease of user interface in the field of education, more specifically E-Learning. The theory will be used as the descriptive framework is quantitative research, to uncover the facts, circumstances that occurred while doing the research. Issues examined in a descriptive quantitative research refers to quantitative studies, comparative studies, and can also be a correlation study of the elements together with other elements. To be eligible to be used by public, a system must be easy to understand, so it can support the learning process. In this breakdown of the proposed research framework that describes the relationship Learning Habits (KB), User Satisfaction (KP), User Loyalty (LY), and Easy User Interface (UI) to the E-Learning Usability (US).

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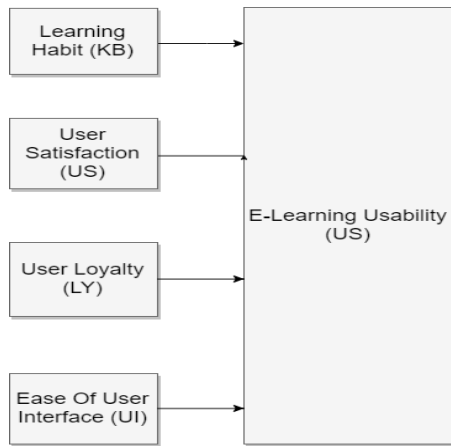


Fig. 2. A model of factors influencing e-Learning usability

User satisfaction will affect to the loyalty of members to one place where it is good to know and to identify the user satisfaction, user habits, user loyalty, and ease of user interface as a variable concept. Instrument variables in this study using several indicators: Indicators for Learning Habits consist of regular meeting, presenting, learning the material, competence; Indicators for User Satisfaction: ease of use, usefulness perception, system quality, information quality; Indicators for User Loyalty: program completeness, internet browsing, reminding, accessing material; Indicators for Ease of User Interface: easy access to project, ways to upload evaluation result, pathways display design, design development; Indicators for E-Learning Usability: technology study, user interface learning system, student role, learning content, computer interaction.

Table II: Variables and Indicators

Variables	Indicator	Reference
Learning habits (KB)	KB1: Regular meetings KB2: Presenting KB3: Learning the material KB4: Competence	[18]
User satisfaction (KP)	KP1: Ease of use KP2: Usefulness perception KP3: System quality KP4: Information quality	[19]
User loyalty (LY)	LY1: Program completeness LY2: Internet browsing LY3: Reminding LY4: Accessing material	[20]
Ease of User Interface (UI)	UI1: Ease access to project UI2: Ways to upload UI3: Pathways display design UI4: Design development	[21]
Usability E-Learning (US)	US1: Learning technology US2: User interface learning system US3: Student role US4: Learning content US5: Computer interaction	[22]

Hypotheses that are sorted in research about E-Learning Usability Toastmasters International are: H1: learning habits significantly affect e-earning usability; H2: user satisfaction significantly affect e-earning usability; H3: user loyalty significantly affect e-earning usability; and H4: ease of user interface significantly affect e-earning usability.

IV. RESULT AND DISCUSSION

The sample used in this research were 181 respondents with the characteristics based on gender, and region of Division J in which respondents were located in Jakarta, Tangerang and Bandung, which can be seen in table 3 below.

Table III: Respondents Characteristics

Characteristics	Category	Observation result				
		F	Jakarta (%)	Tangerang (%)	Bandung (%)	Total (%)
Gender	Male	96	24	17	12	53
	Woman	85	25	15	7	47
Total Respondents		181	49	32	19	100
Age (Years Old)	20-30	46	12	8	5	25
	31-40	57	14	11	8	33
	41-50	45	12	7	5	24
	> 50	33	8	6	4	18
Total Respondents		181	46	32	22	100

Based on observations as shown in Table 2 above that most of the respondents' gender were male (53%) from Jakarta (24%), Tangerang (17%) and Bandung (12%) and women (47%) from Jakarta (25%), Tangerang (15%) and Bandung (7%). Respondents' characteristics by age of the majority of respondents with age 31-40 years (33%), and age 20-30 (25%), age 41-50 years (24%) and lastly age over 50 years (18%).

A. Validity and Reliability Test

The validity test of questionnaire was conducted to determine whether the existing instruments in the research questionnaire has validity to be used as a research questionnaire. Based on the results of SPSS, the validity test results of each item statement variables: learning habits (X1), variable user satisfaction (X2), loyalty variable user (X3) and ease of user interface (X4) and e-learning usability (Y) are valid.

Then, reliability testing instruments on learning habits variable (X1), user satisfaction variable (X2), user loyalty variable (X3) and ease of user interface variable (X4) as well as the e-learning usability variable (Y) was performed using Cronbach Alpha formula, with conditions: (1). Then the reliability coefficient value (r) > 0.60, then the instrument variable is declared reliable; and (2) when the reliability coefficient value (r) < 0.60. Then the instrument variable is declared less reliable.

The tested reliability instrument is each item statement on each variable. The result of the calculation of the reliability test with SPSS presented (see Table 4). Variables have a value of reliability coefficient (r) > 0.60, thus all the variables can be said to have a reliable status.

Table IV: The Result of Reliabel Test

Variables	Cronbach's Alpha	Reliable status
learning habits (X1)	0.779	reliable
user satisfaction (X2)	0.752	reliable

user loyalty (X3)	0,711	Reliable
ease user interface (X4)	0.743	reliable
E-Learning Usability (Y)	0,795	reliable

B. Hypothesis Test

Table 5 show the result of hypothesis test. The value of the learning habit variable (2.390) is greater than ttable (1.973) then the learning habits variable has a significant effect on the usefulness of e-learning, user satisfaction variable (5.993) is greater than ttable (1.973) then the user satisfaction variable has a significant effect on e-learning usability, user loyalty variable (3.220) is greater than ttable (1.973) then user loyalty variable has a significant effect on e-learning usability, ease of user interface variable (6.260) greater than ttable (1,973), ease of user interface variables has a significant effect on e-learning usability.

Table V: The result of Hypothesis Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
(Constant)	1.028	.804		1.279	.202	
Y	X1	.165	.069	.140	2.390	.018
	X2	.376	.063	.306	5.993	.000
	X3	.268	.083	.210	3.220	.002
	X4	.418	.067	.351	6.260	.000

Dependent Variable: Y If $t_{test} > t_{table}$, then

C. Learning habits influence towards e-learning usability

Learning habit test results towards e-learning usability has showed significant results with ttest value is 2,390 which is eligible > ttable 1,973 with P value is 0,18 is eligible < 0,05. This means learning habits affects e-learning usability. Thus, the hypothesis 1 (H1) in this study is received.

Learning habit is generally understood as a repetitive learning to be an automatic reaction that is able to obtain certain goals or the final status [2]. While E-learning usability is the extent to which the E-Learning system is easy to use, easy to learn and allows users to achieve specific goals effectively and efficiently [13].

Member who joined Toastmasters International should actively follow a gradual learning and carried out repeatedly or continuously in order to become a learned habit. Learners who has learning habit has an impact on a deeper understanding of e-learning in Toastmasters International and eventually learner can acquire e-learning usability.

D. User satisfaction influence towards e-learning usability

User satisfaction test result towards e-learning usability has showed a significant result with ttest value of 2,754 which is eligible > ttable 1,973 with a P value of 0,000 is eligible < 0,05. This means that user satisfaction has positive influence and significant impact on e-learning usability. Thus, the hypothesis 2 (H2) is received in this study.

User satisfaction is a responses summary to the e-learning activities, and are encouraged by some focus aspects, such as the quality of content, user interface, learning community, customization, and performance learning. The logic is the same as traditional classroom-based instruction, which has many aspects that affect student satisfaction [23].

Learners as e-learning users in Toastmasters International can feel very satisfied if the e-learning program can provide ease of operation, get many benefits, supportive system quality and adequate information quality. This high user satisfaction will have an impact on the ease in understanding, convenience in accessing e-learning program in Toastmasters International. This high user satisfaction in the end can felt the e-learning usability. It can be concluded that user satisfaction has effect on e-learning usability.

E. User loyalty influence towards e-Learning usability

User loyalty test results towards e-learning usability has showed a less significant by ttest value of 3,220 which is eligible > ttable 1,973 with a P value of 0,002 is qualified < 0,05. This means user loyalty has positive significant impact on e-learning usability. Thus, the hypothesis 3 (H3) in this study was received.

User loyalty is the willingness of consumers or users to visit and buy from the website in question and consumer or the user will not switch to another website [16].

Learners or users who are loyal to e-learning program in Toastmasters International will be willing to follow all the stages and the existing regulations so that students feel the usefulness of e-learning.

F. Ease of user interface towards e-learning usability

Ease of user interface test result towards e-learning usability has showed significant results with ttest values of 6,260 which is eligible > ttable 1,973 with a P value of 0,000 is qualified < 0,05. This means that ease of user interface has positive significant effect on e-learning usability. Thus, the hypothesis 4 (H4) in this study was received.

E-learning system is basically an interactive and collaborative software product. Therefore, the user interface holds a very important role in the reception and sustainable use of the collaborative or interactive online system. It is a front end or a portal for students to take advantage of e-system [5].

User interface with an attractive design, can easily access the project, know how to upload, these are factors that make the learners feel comfortable, easy to learn and understand the e-learning program in Toastmasters International. The state of the user interface that display in accordance with the user's desire will have an impact on e-learning programs understanding and usability. From here, we can conclude that user interface has effects on e-learning usability.

V. CONCLUSION

From this research, there are several conclusions that can be presented, namely: (1) Learning habits has positively affects and has significant impact on E-Learning Usability in Toastmasters International; (2) User satisfaction has positively affects and has significant impact on E-Learning Usability in Toastmasters International; (3) User Loyalitas has positively affects and has significant impact on E-Learning Usability in Toastmasters International; and (4) Ease of User Interface has positively affects and has significant impact on E-Learning Usability in Toastmasters International.



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Based on the conclusion of the research, there are some helpful suggestions could be offered for Toastmasters International as follows:

- Learning habit has proven can affect e-learning usability in Toastmasters International. It is expected that learners can improve learning habits in Toastmasters International to learn with more effort in a routine base, can present learning outcomes, and can improve competence.
- User Satisfaction has proven can affect e-learning usability in Toastmasters International. It is expected that E-learning usability in Toastmasters International can be easy to use, has fast access, great systems quality and great information quality that can be used better.
- User Loyalty has proven can affect e-learning usability in Toastmasters International. It is expected that students will follow the lesson according to the stages scheduled by the program in Toastmasters International.
- Ease of user interface is proven can affect e-learning usability in Toastmasters International. The expected design for the user interface that is easy to gain access to the project, has the look of an attractive design, easy to upload the results of the evaluation and design development.
- For future researcher, it is expected to add several variables that can affect e-learning usability and expanding the research object in order to obtain the maximum results of the research.

REFERENCES

1. Grinberg, Maurice and Hristova, Evgeniya. (2012). *Sustainable Efficiency and Usability for E-Learning Systems*. Practical Guide.
2. Gunjan, B. (2012). A Study of Family Relationship in relation to emotional intelligence of the students of secondary level. *International Journal of Scientific and Research Publications*, 1-5.
3. Machmud, Rizan. (2018). *Kepuasan Penggunaan Sistem Informasi (Studi Kasus pada T3-Online)*. Gorontalo: Ideas Publishing.
4. Law, R., dan Leung, R. (2000). A study of Airlines' Online Reservation Services on the Internet. *Journal of Travel Research*, 39(2), 202-211.
5. Bleimann, U. (2004). Atlantis University: a new pedagogical approach beyond e-learning. *Campus-Wide Information Systems*, 21(5), 191-195.
6. Aktaruzzaman, M. and Plunkett, M. (2016). Adapting Structuration Theory as a Comprehensive Theory for Distance Education: The Astide Model. *European Journal of Open, Distance, and e-Learning*, 19(1).
7. Aktaruzzaman, M. and Plunkett, M. (2016). Adapting Structuration Theory as a Comprehensive Theory for Distance Education: The Astide Model. *European Journal of Open, Distance, and e-Learning*, 19(1).
8. Youde, Andrew. (2016). Tutor Emotional Competences Valued By Learners In A Blended Learning Context. *European Journal of Open, Distance, and e-Learning*, 19(2).
9. Rusman; Kurniawan, D.; and Riyana, C. 2012. *Pembelajaran Berbasis Teknologi Informasi dan Komunikasi; Mengembangkan Profesionalisme Guru*. Jakarta: Raja Grafindo Persada.
10. Ozarslan, Yasin. (2016). Self-Assessment Quiz Taking Behaviour Analysis In An Online Course. *European Journal of Open, Distance, and e-Learning*, 19(2).
11. Park, H., and Song, H. D. (2015). Make E-Learning Effortless! Impact of a Redesigned User Interface on Usability through the Application of an Affordance Design Approach. *Educational Technology & Society*, 18(3), 185-196.
12. Schmidt-Jones, Catherine. (2017). Offering Authentic Learning Activities In The Context Of Open Resources And Real-World Goals:

A Study Of Self-Motivated Online Music Learning. *European Journal of Open, Distance, and e-Learning*, 20(1).

13. Harrati, N., Bouchrika, I., Tari, A., and Ladjailia, A. (2016) Exploring user satisfaction for e-learning systems via usage-based metrics and system usability scale analysis. *Journal Elsevier. Computers in Human Behavior*, 61, 463-471.
14. Nagata, J., Martínez Abad, F., García-Bermejo Giner, J., and García-Peñalvo, F. J. (2017). Augmented reality and pedestrian navigation through its implementation in m-learning and e-learning: Evaluation of an educational program in Chile. *Computers & Education*, 111, 1-17.
15. Violante, M. and Vezzetti, E. (2013). Virtual Interactive E-Learning Application: An Evaluation of the Student Satisfaction. *Computer Applications In Engineering Education*, 23(1), 72-91.
16. Flavián, C., Guinalfú, M., and Gurrea, R. (2005). The Role Played by Perceived Usability, Satisfaction and Consumer Trust on Website Loyalty. *Information & Management*, 43(1), 1-14.
17. Goda, Yoshiko, M. Yamada, H. Kato, T. Matsuda, Y. Saito, and H. Miyagawa. (2014). Procrastination and other learning behavioral types in e-learning and their relationship with learning outcomes. *Journal Elsevier. Learning and Individual Differences*, 37, 72-80.
18. Wu, Wen-Chun and Yeng-Hong Perng. (2016). Research on the Correlations among Mobile Learning Perception, Study Habits, and Continuous Learning.
19. Hammouri, Q., and Abu-Shanab, E. (2018) Exploring Factors Affecting Users' Satisfaction Toward E-Learning Systems. *International Journal of Information and Communication Technology Education; an official publication of the Information Resources Management Association*, 14(1), 44 - 57.
20. Kilburn, B.; Kilburn, A.; dan Davis, D. (2016). Building Collegiate E-Loyalty: The Role of Perceived Value in The Quality- Loyalty Linkage In Online Higher Education. *Contemporary Issues in Education Research*, 9(3).
21. Farid, S.; Ahmad, R.; Alam, M.; Akbar, A.; and Chang, V. 2018. A Sustainable Quality Assessment Model for the Information Delivery in E-learning Systems. *Information Discovery and Delivery*, 46(1), 1-25.
22. Stiller, K., and Bachmaier, R. (2017). Dropout in An Online Training For Trainee Teachers. *European Journal of Open, Distance, and e-Learning*, 20(1).
23. Wang, Y.S. (2003). Assessment of Learner Satisfaction with Asynchronous Electronic Systems. *Information and Management*, 41(1), 75-86.

AUTHORS PROFILE



Ayu Ratna Lalitya Sudjana, received her bachelor double degree in Accounting and Information System from Bina Nusantara University, Indonesia in 2010 and she is currently with the Information System Management – BINUS Graduate Program Department – Bina Nusantara University for her Master of Information System Management. Her email is tyasudjana@gmail.com.



Dr. Sfenrianto, S.Kom, M.Kom is a Faculty Member of the Information Systems Management Department, BINUS Graduate Program – Master of Information Systems Management, Bina Nusantara University, Jakarta 11480, Indonesia. (e-mail: sfenrianto@binus.edu). With lecturing subject: Digital Business and E-Commerce Management. Research interest in Digital Business, e-Commerce, business intelligence, E-Learning, Information System, and Computer Science.