



(RESEARCH ARTICLE)



Moroccan students' acceptance and use of Learning Management Systems (LMS) platforms to enhance writing skills: Moulay Ismail University as a case study

Oumekloul Tariq* and Aoujil Said

Doctoral studies center in Applied Linguistics & Language Teaching, Faculty of Letters and Human Sciences, Moulay Ismail University, Meknes, Morocco.

World Journal of Advanced Research and Reviews, 2023, 19(03), 1064–1074

Publication history: Received on 31 July 2023; revised on 19 September 2023; accepted on 21 September 2023

Article DOI: <https://doi.org/10.30574/wjarr.2023.19.3.1916>

Abstract

Within this increasingly globalized world, technology integration in education has become a critical component of teaching and learning to prepare learners to face 21st-century challenges. Learning Management System (LMS) is a software application for administering, documenting, tracking, reporting, and delivering e-learning courses or training. LMS platforms offer a diverse learning environment that is highly interactive, dynamic, and nonlinear, making them appropriate for teaching writing, which is a crucial twenty-first-century skill. Using LMS in teaching writing skills can provide students with more opportunities to practice and develop their writing skills outside the classroom, thereby promoting learners' autonomy. Additionally, using LMS to teach writing skills can help address the challenges teachers face in the classroom, such as limited time and resources. LMS allows students to engage in writing activities at their own pace and in their own time, and teachers can monitor and assess their progress online. To this end, the study aims to explore the factors influencing the integration of Learning Management Systems (LMS) in teaching writing skills from the perspective of student acceptance and usage at the University of Moulay Ismail, Meknes. The study uses the Unified Theory of Acceptance and Use of Technology (UTAUT) as the theoretical framework to guide the research questions and hypotheses. The UTAUT model is widely used in technology acceptance research, and it identifies several factors that influence individuals' intention to use and actual usage of technology, including performance expectancy, effort expectancy, social influence, and facilitating conditions. The result revealed that EE, PE, SI, and FC significantly impact student behavioral intention to accept and use LMS for writing improvement.

Keywords: E-learning; Writing skill; Learning Management Systems; The UTAUT Model; Learners' Autonomy.

1. Introduction

In light of the globalized era, education is undergoing a paradigm shift from the traditional methods that rely on rote learning and memorization to more learner-centered approaches aiming to equip the new millennials with 21st-century skills. The latter is defined as the necessary content knowledge, skills, expertise, and literacies to succeed in work and life (Ledward & Hirata (2011). Furthermore, Ledward & Hirata pointed out that 21st-century skills entail communication, collaboration, critical thinking, digital literacy, and fluency in foreign languages, mainly English. These soft skills, being fundamental, allow people to thrive in the new economy as they assist people in working collaboratively, using their critical thinking skills to solve problems, create new knowledge, and communicate effectively. The latter materializes through a solid mastery of the four language skills, mainly writing, which is crucial in accomplishing one's goals. People who cannot write effectively are disqualified from many social roles (Tribble, 1996). Therefore, as we enter the 21st century, educators and institutions seek innovative ways to incorporate new technology to improve writing instructions, mainly at the tertiary level. Learning Management System (LMS) platforms have become popular in recent years. Many studies have been conducted on these virtual platforms and their potential to improve writing skills.

* Corresponding author: Oumekloul Tariq

1.1. The statement of the problem

Despite their proficiency in English, Moroccan EFL learners may need help expressing their thoughts in writing as it involves cognitive and affective investments. Writing is an essential language skill that necessitates the attention and efforts of all stakeholders, including educators, supervisors, designers, and learners. Given the fact that learners nowadays are digital natives Prensky (2001), it is high time that the ELT community harnesses innovative technology into the educational system and explores all the horizons that these cutting-edge technologies have to offer to enhance students' writing skills, mainly at the tertiary level. Accordingly, it is highly recommended to cast some light on this issue by finding practical approaches and techniques to help twenty-first-century learners become good writers, all in a virtual world that has become an integral part of their lives.

1.2. Significance of the study

Integration of LMS is influenced by various factors that require thorough study and understanding. Thus, this research explores the main factors that impact students' acceptance and use of LMS in teaching writing skills in higher education. By studying these factors, educators and institutions can gain valuable insights into optimizing the integration of LMS, leading to more effective and engaging approaches to enhancing students' writing abilities.

Several theoretical models have been proposed to investigate the factors influencing behavioral intention to accept and use technology. These models include the Diffusion of Innovation model (DOI) (Rogers, 1962); the Concerns-based Adoption Model (CBAM) (Hall, 1974); the Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975); the Theory of Planned Behaviour (TPB) (Ajzen, 1991), the Technology Acceptance Model (TAM) (Davis, 1989). However, according to Venkatesh et al. (2003), the models above accounted only for thirty to sixty percent of users' behavioral intention to use technology. Therefore, he unified eight models and then put forward the Unified Theory of Acceptance and Use of Technology model (UTAUT), which accounted for seventy percent of the variation in users' intentions to accept and use technology. Table 1 below showcases the UTAUT constructs and the components they share with the other models.

Table 1 UTAUT constructs and similar constructs drawn from other models

Construct	Perception description	constructs drawn from other models
Performance expectancy	The extent to which a user believes a system use will help achieve a gain in task performance	Perceived usefulness (TAM/TAM2 & C-TAM/ TPB)
Effort expectancy	The extent to which the user believes the system will be easy to use	-Ease of use (DOI). -Perceived ease of use (TAM/TAM2)
Social influence	The extent to which the user believes that important others believe they should use the system	-Subjective norms (TRA, TAM2, TPB/DTPB and C-TAM-TPB) - Image (DOI)
Facilitating conditions	The extent to which the user believes an organizational and technical infrastructure exists to support system use.	Perceived behavioral control (TPB/DTPB, C-TAM-TPB); -Facilitating conditions (MPCU); - Compatibility (DOI).

The model constitutes four independent variables and one dependent variable, as seen in Figure 1 below. The model aimed to predict the behavioral intention to use technology (BI) by highlighting four significant factors: performance expectancy (PE), effort expectancy (EE), facilitating conditions (FC), and social influence (SI), in addition to four moderators including age, gender, experience, and voluntariness (Venkatesh et al., 2016, p. 329). In the current study, the moderator variables are not accounted for. To attain the research objectives, the following research questions are generated:

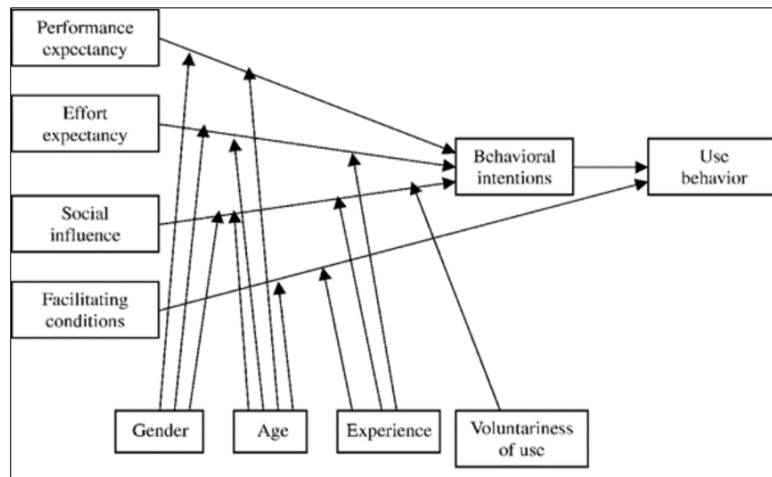


Figure 1 The UTAUT research model (Venkatesh et al., 2003).

- To what extent do students believe using the LMS will enhance their writing skills?
- To what extent do students perceive using LMS to enhance their writing as easy?
- To what extent do technical support and students' important people influence using LMS to enhance writing?
- To what extent does technical support influence students to use LMS to enhance their writing?

Therefore, based on the research questions and the theoretical model guiding the current study, the following hypotheses were generated:

Performance Expectancy (PE) positively influences students' intentions to accept and use LMS to enhance their writing skills.

The Effort Expectancy (EE) construct is significant during the first period, becoming non-significant over extended and sustained usage (Venkatesh et al., 2003). It is predicted that effort expectancy will be particularly significant in the early stages of developing a behavioral intention. Additionally, it is expected that increased ease of use will also have a positive impact on the intention to use it. However, it is worth noting that experienced users may be less affected by the ease of LMS usage. Therefore, the following hypothesis is put forward:

EE positively influences students' intentions to accept and use LMS to enhance their writing skills.

Social influence (SI), as posited by various models, suggests that individuals' behavior can be influenced by their perceptions of how others will view them after using technology (Venkatesh et al., 2003). Such influence can significantly impact one's intention to utilize technology. In learning, superior officers, faculty, and peers can all shape students' overall behavioral intention to use technology. SI is significant only in mandatory settings. Thus, the following hypothesis is put forward:

SI positively influences students' intentions to accept and use LMS to enhance their writing skills.

The influence of facilitating conditions (FC) is significant on an individual's intentions to use technology when believing that technology support is erratic. However, facilitating conditions directly influence use behavior where the support is consistent.

FC positively influences students' intentions to accept and use LMS to enhance their writing skills.

2. Review of the literature

2.1. Learning Management Systems

A learning management system (LMS) can be defined as a software program that contains numerous integrated teaching/ learning applications, both synchronous and asynchronous. LMS is also known as course management systems, virtual learning environments, integrated application software, and e-learning courseware (Gibbons, 2005).

The most popular LMSs in the educational field are Blackboard, Google Classroom, Learning Space, WebCT, and Moodle. These LMSs allow learners to lead conversations via IRC, e-mail, and bulletin boards and for teachers to assign homework, post class notes, and administer online tests. Thanks to LMS, instructors can control the flow of information and keep track of the performance of their learners. Hence, teachers can monitor their student's progress and ensure the tasks are done. Similarly, Taylor and Gitsaki (2003) stipulate that LMS can promote motivation, autonomy, and active learning. Therefore, LMS platforms provide appropriate space for learners to develop their writing skills.

More than that, LMS offers a range of customizable tools such as forums, wikis, assignments, quizzes, and polls. These activities can be combined into sequences and groups, creating learning paths that help instructors guide participants. Building on previous activities' outcomes makes each subsequent activity more meaningful and effective.

LMS platforms are based on the principles of constructivist theory. This theory suggests that when learners encounter a problem beyond their cognitive abilities, they use their prior knowledge and new information to construct new knowledge. According to Jonassen (1999), technology is a tool that can help learners construct knowledge for themselves. Therefore, learners learn from more than just technology; they learn with technology. According to him, Collaborative Learning Environments (CLEs) incorporate all the components of the constructivist approach to engage learners in meaningful practices. Using technology as a supportive tool, teachers create an environment fostering active, constructive, collaborative, authentic, and meaningful learning processes.

2.2. Features of learning management systems

LMS platforms possess pedagogical tools that make them effective instructional platforms appropriate for writing enhancement; these comprise content creation, communication, assessment, and administration Dabbagh & Bannan-Ritland (2005).

2.3. Content creation

The LMS enables instructors to generate course materials using text or HTML. They can also upload presentations, documents, pictures, audio, and video into the LMS. Additionally, hyperlinks can be added to direct learners to external websites or documents. Drop boxes and assignments are also available for learners to submit their work to their teacher for grading and feedback.

2.4. Communication

With LMS, educators can easily facilitate both student-teacher and student-student interactions. The platform offers synchronous (real-time) and asynchronous (non-real-time) communication tools. Asynchronous tools include sending emails, posting on blogs and discussion boards, and sharing files. Meanwhile, LMS's synchronous tools provide text chat, whiteboards, and a shared web browser.

2.5. Assessment

Instructors can access various assessment tools to evaluate, test, and monitor students' progress. These tools typically include a test manager for creating exams and a generator for developing diverse question types such as multiple-choice, true/false, and matching. Exams can feature randomized questions displayed individually or all at once. Teachers can set exam time limits and provide feedback based on student types for correct and incorrect answers. Similarly, tests can be graded, ungraded, or delivered as anonymous surveys with aggregated results. An electronic grade book for managing students' assignments and displaying students' grades is a feature of virtually every LMS and is students' most highly valued LMS feature (Kvavnik & Caruso, 2005).

2.6. Teachers' administrative tool

Administrative tools enable instructors to customize their course look, make tools, content, and resources available or unavailable to users, manage files, and move or copy content. In addition, administrative tools for LMS system administrators allow them to manage the creation of user accounts and courses, enrollment of instructors and students into courses, deactivating and activating accounts and courses, and tracking activity in the system.

Thanks to the application discussed earlier in this section, LMS combines all the pedagogical values within the same package. In addition, it allows the representation of different types of information, such as texts, documents, pictures, and videos, through multi-linear strands linked via hypermedia. Thus, it is easier for instructors and learners to do their work from a familiar interface than to do different tasks on different platforms.

2.7. Writing

Mastering writing skills is crucial for students in today's globalized world, where competence is critical to achieving one's goals. Writing can be viewed from various perspectives, such as a process or a product. According to Johnson and Johnson (1999), writing as a product refers to the final output of the writing activity (p. 342). Process writing is the act of turning ideas into written words rather than just the end product. Writing is a social activity that involves communication between the writer and the reader in a particular context. Writing aims to convey a clear and cohesive message to the audience using a standardized format.

In Moroccan EFL classes, the primary approach to teaching writing is process writing. Jerome Bruner, a prominent cognitive psychologist, is commonly associated with this approach (L. Clark, 2003). According to Bruner, learning is a process influenced by the student's cognitive abilities and relation to the studied academic discipline. Besides, Kroll (2001) maintained that process writing involves a cyclical process where students draft, receive feedback from peers or the teacher, and revise their work before writing the final draft. The process includes several mental processes like brainstorming, planning, mind mapping, writing the first draft, and peer editing. However, these stages are not necessarily linear and can be done recursively. (Harmer, 2001 p.326; Larouz, 2012 p.47).

2.8. Using LMS platforms to enhance writing skills

Many studies have studied the link between using LMS platforms and enhancing learners' performance, mainly writing skills (Yamin & Ishak, 2017; Al-rahmi et al., 2015; Sahin, 2014). One experimental study (Diantari et al., 2017) was conducted about integrating Edmodo, an LMS platform, to enhance writing skills. The study found that using Edmodo as an instructional tool to teach writing positively impacts students' writing performance. Another study was carried out by (Wihastyanang et al., 2014). The study aimed to discover whether LMS improves students' writing, particularly argumentative writing. It was concluded that teaching writing using LMS had a better outcome than conventional classroom teaching.

3. Methodology

The current study explores the factors affecting Moroccan university students to accept and use LMS platforms to enhance their writing skills in tertiary education. This study uses a quantitative method to attain the research objective. It collects data through a questionnaire based on the UTAUT model, the theoretical framework that guides and orients this research. To distribute the questionnaire, convenience sampling was chosen as it allows researchers to survey conveniently available participants (Heath, 2018, p.172). The targeted populations are students in the Department of English from Moulay Ismail University, Meknes. The participants reached 193, of which 76 were females and 117 were males, belonging to different levels.

3.1. Reliability and validity of the model constructs

To test the reliability of the questionnaire, Cronbach's Coefficient Alpha was utilized. Hinton et al. (2004) put forward four degrees of reliability scale as follows: 0.90 and above (excellent); 0.7 to 0.9 (high); high moderate (0.50 to 0.70); and 0.50 and below (low). After running data in SPSS, the reliability analysis results indicated that all the questionnaire constructs had a high reliability of more than 0.9. Cronbach's α value result ranged between 0.904 for behavioral intention and 0.958 for performance expectancy, except the facilitating conditions construct with a Cronbach's α value of 0.867, as shown in Table 2 below. Thus, the internal consistency of each construct can be confirmed. Furthermore, the overall value of the questionnaire reached a high Cronbach's α of .893.

Table 2 Reliability analysis scale of the students' questionnaire

Constructs	No0. of Items	Cronbach's Alpha (α)	Total items	Overall Reliability
Performance Expectancy (PE)	4	0.958	17	0.893
Effort expectancy (EE)	3	0.945		
Social influence (SI)	3	0.959		
Facilitating conditions (FC)	4	0.876		
Behavioral intent (BI)	3	0.904		

Construct validity was checked by running correlation and factor analyses for each construct to eliminate any weak items and check the unidimensionality of each construct in the model, thus confirming its convergent and discriminant validity. Before running factor analysis, certain conditions must be met. Firstly, the correlation coefficients should exceed 0.3 (Cooke, 2005). Secondly, the item-total correlation should be greater than 0.3 (Pallant, 2005). Finally, examining the Kaiser-Meyer-Olkin (KMO) output is essential to determining sampling adequacy; it can indicate whether the sample size is large enough to extract factors reliably (Field, 2009). A KMO correlation is typically deemed satisfactory if it exceeds 0.5 (De Vaus, 2002; Field, 2005). It should be noted that the recommended factor loadings for scale items should be above 0.4 and that low-loading items below that range should be suppressed (Field, 2005; Hair et al., 2006). Thus, Tables 3 to 7 below showcase the adequacy of KMO values of each construct and their high significant levels (.000). Besides, all the factor loadings are adequate as they exceed the recommended value of 0.4. Furthermore, univariate normality was checked by calculating skewness and kurtosis, as shown in Table 8 below. The accepted range of skewness and kurtosis should be between -2.58 and +2.58 (Hair et al., 2006, p.82), which lays the foundation for inferential statistics to test the model's hypotheses.

Table 3 KMO, item-total correlation, and factor loading of performance expectancy scale items

Constructs & Items	KMO	Bartlett's Test	Sig	Item total correlation	Factor loading
Performance expectancy	0.834	434.758	0.000	0.0720	
I find LMS useful for developing my writing skills.					0.933
Through using LMS, I will be able to improve my writing skills.					0.866
By using LMS, my grades in writing will increase.					0.889
I can quickly improve my writing skills using LMS					0.868

Table 4 KMO, item-total correlation, and factor loading of effort expectancy scale items

Constructs & Items	KMO	Bartlett's Test	Sig	Item total correlation	Factor loading
Effort expectancy	0.682	209.069	0.000	0.0571	
1. It is easy for me to become skillful at using LMS to learn					0.888
2. I find LMS easy to use.					0.914
3. Learning to operate LMS is easy for me.					0.807

Table 5 KMO, item-total correlation, and factor loading of social influence scale items

Constructs & Items	KMO	Bartlett's Test	Sig	Item total correlation	Factor loading
Social influence	0.714	350.328	0.000	0.0766	
10. People who are important to me (e.g., Friends, family members etc) think I should use LMS in learning.					0.907

20. My professors have been supportive of the use of LMS in learning0.					0.955
30. The Ministry of Higher Education is supportive of the use of LMS0.					0.912

Table 6 KMO, item-total correlation, and factor loading of facilitating condition scale items

Constructs & Items	KMO	Bartlett's Test	Sig	Item total correlation	Factor loading
Facilitating conditions	0.708	401.861	0.000	0.631	
1. I have easy access to the internet to use LMS					0.865
2. I have the necessary electronic gadgets (e.g., laptop. Smart phone...etc.) to use LMS.					0.891
3. I am skillful at using LMS.					0.817
4. I do not need assistance to deal with LMS functions.					0.829

Table 7 KMO, item-total correlation, and factor loading of behavioral intention scale items

Constructs & Items	KMO	Bartlett's Test	Sig	Item total correlation	Factor loading
Behavioral intention	0.623	224.541	0.000	0.601	
10. I intend to use LMS to improve my writing skills0.					0.692
20. I predict to use LMS to improve my writing skills and performance in the future0.					0.880
30. I plan to use LMS to improve my writing and performance0.					0.709

Table 8 Normality distribution of each construct

Constructs & Items	Sekweness	Kurtosis
Performance expectancy		
PE1	-0.694	-1.539
PE2	0.051	-0.755
PE3	0.007	-0.720
PE4	0.678	1.671
Effort expectancy		
EE 1	0.422	0.129
EE2	0.170	-0.062
EE3	0.897	0.991
Social influence		

SI1	0.303	0.267
SI20.	0.040	-0.518
SI3	0.148	-0.719
Facilitating conditions		
FC1	1.056	0.680
FC2	0.890	0.407
FC3	1.046	0.524
FC4	0.621	0.024
Behavioral intention		
BI1	0.877	-0.216
BI2	0.407	-1.858
BI3	0.480	-0.882

4. Results and discussions

The current research study sought to explore and gain deeper insights into the main factors influencing students' acceptance and use of LMS to enhance writing skills in higher education using the UTAUT model. According to Venkatesh et al. (2003), this model involves four variables: Effort Expectancy, Performance Expectancy, Social Influence, and Facilitating Conditions influencing Behavioral Intention. Having checked the unidimensionality and normality of the data, the next step is to test the hypotheses by running a Multiple Regression test in SPSS. The most critical value in interpreting the regression analysis coefficient output in Table 9 is the significance level (Sig). It should be noted that the current study's P-value is 0.05. To reject the null hypothesis, Sig. should be below 0.05; otherwise, the null hypothesis is not rejected. Besides, the unstandardized beta coefficients for the model (β) show the relationship between the outcome variable and the predictor variables; they show whether the relationship is positive or negative.

Table 9 Regression Analysis Coefficients

Models	Unstandardized Coefficients		Standardized Coefficients	t-value	Sig.
	β	Std. Error	Beta		
Constant	0.210	0.511		0.410	0.682
PE	0.388	0.042	0.465	9.304	0.000
EE	0.197	0.054	0.169	3.656	0.000
SI	0.246	0.045	0.258	5.399	0.000
FC	0.152	0.039	0.207	3.865	0.000

a. Dependent variable: BI

4.1. Hypothesis 1: Performance expectancy positively affects students' intentions to use LMS to enhance writing skills.

The results showed that Performance Expectancy positively affects students' intentions to use LMS ($\beta = .388$, $p > .001$). Therefore, H1 is confirmed. This means that when students expect an LMS platform to increase their writing performance, they increase their intentions to use it.

4.2. Hypothesis 2: Effort expectancy positively affects students' intentions to use LMS in writing.

Effort Expectancy positively affects students' intentions to use LMS in writing ($\beta = 197$, $p > .001$). For every 1-unit increase in Effort Expectancy, the Behavioral intention will increase by .197, meaning that when students think an LMS

platform is user-friendly and easy to use, their intentions to accept and use it increase significantly. Therefore, H2 is supported.

4.3. Hypothesis 3: Social Influence positively affects students' intention to use LMS to enhance writing.

Social influence positively affects students' intentions to use LMS ($\beta = .246, p > .001$). Therefore, H3 is supported. This means that when students' instructors, classmates, or someone from their social contacts suggests that they use LMS platforms to develop their writing skills, they increase their intentions to use them.

4.4. Hypothesis 4: Facilitating conditions positively affect users' intention to use LMS platforms in writing.

Table 4 reveals that Facilitating Conditions positively affect users' intention to use LMS platforms to enhance their writing skills ($\beta = .152, p > .001$). Thus, H4 is confirmed. That is to say, when learners receive more facilitating conditions to use LMS platforms to enhance their writing skills, their user intention increases.

5. Implications and Conclusion

The current study explores students' behavioral intentions toward using LMS to enhance writing skills at Moulay Ismail University in Morocco. The study used the UTAUT model as a basic theoretical model validated in the Moroccan context. The model was closely examined to identify its effect on the acceptance and use of LMS platforms. The conclusive results revealed that effort expectancy (EE), performance expectancy (PE), social influence (SI), and facilitating conditions (FC) contribute significantly to students' acceptance and use of LMS platforms to enhance their writing skills.

This research has significant implications for education stakeholders. Based on the findings, it is highly recommended that educational institutions emphasize the performance-enhancing aspects of their LMS platforms when introducing them to students. By clearly communicating the benefits of using LMS to improve their writing skills, educational institutions can boost students' motivation to engage with the platform actively. Similarly, it is essential for educational institutions in higher education to emphasize that LMS platforms are user-friendly and do not require any special skills from learners. In addition, the statistical analysis revealed a strong correlation between social influence and adopting LMS platforms on the part of the students. That is when students are recommended or encouraged by their instructors, peers, or social network contacts to use LMS platforms for improving their writing abilities, it has a significant impact on their eagerness to use these systems. Thus, educators are recommended to entice their learners to use LMS platforms to improve their writing skills.

Understanding the predicting variables for the acceptance and use of technology is an overarching issue in technology integration. The more we know about the leading factors in the acceptance and use of technology, the more we guarantee the effective integration of technology. Moreover, raising all the stakeholders' awareness of the determinant factors affecting LMS integration will likely yield a better and more effective integration. Thus, conducting awareness campaigns to tackle this topic in depth is paramount.

The current study did not consider the moderator variables of the UTAUT model, such as gender, age, voluntariness of use, and experience, which could impact the social influence construct (Venkatesh et al., 2003). Furthermore, moderators affect the strength or weakness of relationships between independent and dependent constructs (Serenko et al., 2006). Therefore, it is recommended that future research account for all moderator variables in the UTAUT model.

Compliance with ethical standards

Acknowledgment

The author is grateful to all contributors who assisted in completing this article.

Disclosure of conflict of interest

The author declares no conflicts of interest and takes full responsibility for the paper's content and writing.

Statement of informed consent

All individual participants included in the study provided informed consent.

References

- [1] Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50 (2), 179–211.
- [2] Coakes, S. J. (2005). *SPSS*. Singapore: John Wiley and Sons Australis. Ltd.
- [3] Dabbagh, N., & Bannan-Ritland, B. (2005). *Online learning: Concepts, strategies, and applications*. Upper Saddle River, NJ: Pearson Prentice Hall.
- [4] Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology, *MIS Quarterly*, 13(3),319–340.
- [5] D. Diantari, I N. P. Hadisaputra, I P. N. W. Myartawan (2017). The Effect of The Integration of Edmodo on the Writing Competency of The Tenth Grade Students of SML Negeri1Tampaskiring.URL:<https://ejournal.undiksha.ac.id/index.php/JPBI/article/view/15066> Retrieved May 25th , 2023.
- [6] De Vaus, D. (2002). *Surveys in Social Research*. 5th Edition, Routledge, London.
- [7] Field, A. (2009). *Discovering Statistics using SPSS*. Sage: London.
- [8] Field, A. (2005) Reliability analysis. In: Field, A., Ed., *Discovering Statistics Using spss*. 2nd Edition, Sage, London, Chapter 15.
- [9] Fishbein, M., and Ajzen, I. (1975). "Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research," Addison-Wesley, Reading, MA.
- [10] F. M. Yamin and W. H. W. Ishak. (2017). Do the blended learning and student-centered learning methods increase student performance? ISS Conf. Proc.
- [11] Johnson, D.W. and R.T. Johnson, (1999). Making cooperative learning work. *Theory into Practice*, 38 (2), 67–73. Available at: <https://doi.org/10.1080/00405849909543834>.
- [12] Jonassen, D. (1999). *Learning with Technology: A Constructivist Perspective*. Toronto: Prentice-Hall.
- [13] Hair, J., Black, W., Babin, B., Anderson, R. and Tatham, R. (2006) *Multivariate Data Analysis*. 6th Edition, Pearson Prentice Hall, Upper Saddle River.
- [14] Harmer, J. (2007). *The Practice of English Language Teaching*. Harlow: Pearson Education Limited.
- [15] Heath, W. (2018). *Psychology Research Methods: Connecting research to students' lives*. Retrieved from <http://books.google.com>
- [16] Hinton, P.R., McMurray, I., & Brownlow, C. (2004). *SPSS explained* (1st ed.). Routledge. <https://doi.org/10.4324/9780203642597K>.
- [17] Kroll, B. (2001). Considerations for teaching ESL/ EFL writing and going just beyond. In M. Celce-Murcia (Ed.), *Teaching English as a second or foreign language*. 219–232. Boston: Heinle, Cengage Learning.
- [18] Kvavnik, R., & Caruso, J. (2005). *ECAR study of student and technology 2005: Convenience, connection, control, and learning*. Boulder, CO: EDUCAUSE Center for Applied Research.
- [19] Larouz.Mohammed (2012). *Reading and Writing Ability in Descriptive & Argumentative Discourse: Moroccan University Students as a Case Study*. Lambert Academic Publishing, p.43.
- [20] Ledward, B. C., & Hirata, D. (2011). *An Overview of 21st Century Skills. Summary of 21st Century Skills for Students and Teachers*, by Pacific Policy Research Center, Honolulu: Kamehameha Schools-Research & Evaluation.
- [21] Marc Prensky (2001). *Digital Natives, Digital Immigrants*. MCB University Press, 9 (5).
- [22] Pallant, J. (2005). *SPSS survival manual: A step-by-step guide to data analysis using SPSS* (2nd ed.). Crows Nest, NSW: Allen & Unwin.
- [23] Rogers, E.M. (1995). *Diffusion of Innovation*. Free Press, New York, NY
- [24] Sahin, K A. (2014). Blended instruction for EFL learners: Engagement, learning and course satisfaction. *Jalt Call J.* , 10 (3), 175-188.

- [26] Schwartz, L., Clark, S., Cossarin, M., & Rudolph, J. (2004). Educational Wikis: features and selection criteria. *The International Review of Research in Open and Distributed Learning*, 5(1). <https://doi.org/10.19173/irrodl.v5i1.163>
- [27] K. Serenko, O. Turel and S. Yol, “Modelrating Roles of User Demographics in the American Customer Satisfaction Model within the Context of Mobile Services,” *Journal of Information Technology Management*, Vol. 17, No. 4, 2006, pp. 20-32.
- [28] Tribble, C. (1996). *Writing*. Oxford: Oxford University Press.
- [29] Taylor, R. & Gitsaki, C. (2003). Teaching well and loving it. In Fotos, S. & Browne, C. (Eds.), *New perspectives on CALL for second language classrooms* (pp. 131–147). Mahwah, NJ: Lawrence Erlbaum Associates.
- [30] Venkatesh, V., Morris, M., Davis, G., and Davis, F. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*, 27 (3), 425-478
- [31] Wihastyanang W.D. , Daning H. & Anjarwati R. (2014). Active learning using a learning management system to improve students’ competence in argumentative writing.
- [32] W. M. Al-rahmi, M. S. Othman, and L. M. Yusuf (2015). The effectiveness of e-learning in Malaysian higher education: A case study Universiti Teknologi Malaysia. *Med. J. Soc. Sci.*, 6 (5), 625-625.