Evaluating Four Factors of Students' Engagement in Task-based Learning under Blended English Learning Environment Using PLS-SEM Approach

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ABSTRACT

The discussion in this article centres on the implementation of blended learning and the learning duties that are delegated to students within a blended learning environment. Learners will be entrusted with blended learning duties in the midst of pandemics. However, the efficacy of task utilisation may fail to fulfil its intended objective. Therefore, the research presented in this article assessed the perceived level of student engagement in integrated learning tasks based on the following criteria: task timeliness, task richness, task accuracy, and task adaptability. The investigation was carried out at four universities located in Shandong Province, China. An English course was conducted in the spring of 2022 employing a task-based teaching approach and a combination of traditional and online instructional design. The instructors allocated learning tasks for each class, both in-person and online. Specifically, the students were given these tasks prior to, during, and subsequent to each class. The duties completed by the students were assessed and the instructors provided feedback. At the conclusion of the academic term, students were requested to provide feedback through the administration of a questionnaire. The study's findings underscored the students' favourable disposition towards assignments within integrated learning courses. The research emphasised the importance of meticulously crafted assignments that possess the qualities of promptness, depth, precision, and flexibility. Moreover, the efficacy of integrated learning is enhanced by practical assessment methods that gauge students' attributes and provide timely feedback on task completion. Additionally, learner autonomy and student engagement are enhanced by the task-based blended learning course.

Keywords: Blended learning, PLS-SEM, task-based learning, timeliness of task, richness of task, accuracy of task, adaptability of task

INTRODUCTION

In a blended learning environment, students have the chance to engage in a class given by a teacher in a traditional classroom setting, while simultaneously completing the online portion of the course independently via an online platform (Sriwichai, 2020). The blended learning technique encompasses two primary delivery modes: traditional face-to-face classroom instruction and online-based learning experience. Blended learning is the blending of online learning materials and activities with traditional classroom instruction (Sriwichai, 2020).

Once the notion of a blended learning environment for English learning is grasped, it is crucial to evaluate if the assigned tasks for English learning have effectively achieved their intended objectives. The input and perspectives of the learners are crucial. Therefore, this paper investigates how students estimate their level of engagement in the activities created for blended learning based on the timeliness, richness, accuracy, and adaptability of the tasks.

LITERATURE REVIEW

To successfully enable students' participation in a mixed learning environment, it is critical to understand the factors that lead to students' success in such a setting (Kahu, 2013; Kahu & Nelson, 2018). These realms of comprehension would surely include knowledge of activities assigned inside the blended learning environment to facilitate learning. Thus, it is vital to measure students' participation in technology-mediated learning, such as blended learning (Henrie et al., 2015). The importance of tasks can influence views of learning engagement should not be overlooked.

Timeliness of tasks is defined as the timely organisation of learning assignments provided in the blended learning environment. It is vital as it affects the pleasant learning experience through the timely learning contents provided to the learners (Wang & Wang, 2018). Once the students are convinced that the learning content offered is timely and can enhance their learning, they will be keen to involve themselves in all the tasks assigned to them.

The abundance of learning tasks is the key aspect that represents a vast range of responsibilities provided in the blended learning setting (Prasetya et al, 2020). To foster active participation in blended learning, it is essential to realise the significance of offering difficult and diverse activities to the learners. This is because kids may feel bored when they are assigned tasks that are dull, repetitive, and lack challenge.

Furthermore, the precision of actions is typically related to the appropriateness of language skills developed for specific courses (Brudermann et al, 2021). Tasks that require high accuracy have a positive impact on language acquisition and promote student autonomy for self-improvement. Prioritising the development of linguistic ability is really important when assigning tasks with a high level of precision (Yang & Kuo, 2021). Tasks that increase comprehension of learning materials are easily engaging and involving students without any problems. However, assignments that are considered unnecessary or inconsequential to the learning contents often encounter difficulties and challenges in terms of learning engagement.

The objective of task adaptability is to address the varying needs that arise during the learning process. Learning analytics is required to personalise assignments to the adaptability of learners with varied levels of capability and competency (Tempelaar, 2020). Morze et al (2021) propose that the adaptation of a task should begin with identifying students' learning needs in order to determine the desired learning outcomes. In addition, various learning tasks will be offered. These

assignments are designed to satisfy the unique learning objectives. The in-class learning assignments are carried out to meet the learning requirements. The learning tasks should be monitored to verify that they successfully achieve the purpose of boosting learning performance and achievement. Hence, establishing effective communication between the teacher and learners is crucial, as it enables the instructor to be responsive and adaptable to the students' learning requirements.

Totally, there are four research objectives in this study:

RO1: To investigate the effect of timeliness of task (TT) on students' perceived engagement (SPE) in EFL task-based activities in blended learning environment

RO2: To investigate the effect of richness of task (RT) on students' perceived engagement (SPE) in EFL task-based activities in blended learning environment

RO3: To investigate the effect of accuracy of task (AT) on students' perceived engagement (SPE) in EFL task-based activities in blended learning environment.

RO4: To investigate the effect of adaptability of task (ADT) on students' perceived engagement in EFL task-based activities in blended learning environment.

Overall, this study encompasses four research hypotheses. These hypotheses are:

H1: The timeliness of task (TT) will have a significant positive effect on students' perceived engagement (SPE) in EFL task-based activities in blended learning environment.

H2: The richness of task (RT) will have a significant positive effect on students' perceived engagement (SPE) in EFL task-based activities in blended learning environment.

H3: The accuracy of task (AT) will have a significant positive effect on students' perceived engagement (SPE) in EFL task-based activities in blended learning environment.

H4: The adaptability of task (ADT) will have a significant positive effect on students' perceived engagement (SPE) in EFL task-based activities in blended learning environment.

METHODOLOGY

The study was carried out in four universities located in Shandong Province, China. A course in English was conducted in Spring 2022, employing a blend of conventional and online instructional design, along with a task-based teaching approach. These students used similar English textbooks and participated in the same online courses. Each class required students to complete learning assignments both online and offline. These tasks were assigned before, during, and after class. Teachers will evaluate the students' completion of the activities and offer timely feedback. At the conclusion of the semester, a survey was conducted to gather input from students. Totally there were 280 students from these four universities in Shandong Province who participated in this study. Finally, our study acquired 255 qualifying questions. This study used PSL-SEM to process data.

In the field of EFL education, the application of Partial Least Squares Structural Equation Modelling (PLS-SEM) with software such as Smart PLS gives academics a valuable tool for analysing complicated interactions between variables. Smart PLS, built exclusively for PLS-SEM analysis, has distinct features and capabilities that suit to the specific demands of EFL education research. With Smart PLS, researchers can explore the relationships between variables such as students' perceived engagement, accuracy of learning tasks, and adaptability of learning tasks, etc. By leveraging the capabilities of Smart PLS in EFL education research, scholars can make

informed decisions, derive meaningful insights, and contribute to the improvement of teaching strategies and learning outcomes in EFL education.

Table 1 shows the survey items used to assess the model components in this study. The questionnaire has a total of seventeen items. These items were changed based on Lan and Sie's questionnaire (2010).

Table 2 displays the Cronbach's Alpha value when each item is removed. All values exceed 0.7, suggesting a greater and more robust level of dependability indices. All dimensions had dependability indices over 0.7 but falling short of 0.95. Although there are two values that slightly above 0.95, overall, they are considered acceptable. Therefore, there were no problems related to multicollinearity and auto collinearity. This instrument is appropriate for doing PLS-SEM analysis in the subsequent stages of this investigation.

Table 1

Items in the instrument of this study

Item number	Item	Reference
Dv	Students' perceived engagement	
1	I'm actively engaged in completing tasks.	
2	I'd like to take part in task-based learning activities.	
3	I think that actively completing these tasks facilitates my study.	
4	I think that these task-based activities are important.	
Iv 1	**Timeliness of task**	
5	When instructor posts a class announcement the tasks I should do, I can receive the message immediately.	
6	When peer replies a discussion topic on the tasks, I can receive the replied message automatically.	
7	I can regularly acquire the reports of learning status from the learning system on the tasks that I am doing.	
8	Overall, I think that the tasks I am doing are timely.	
Iv 2	**Richness of task**	Lan & Sie (2010)
9	I think that the tasks I am doing are rich in contents	
10	The tasks consist of text and various media types to describe a learning activity that I should do.	
11	Overall, I find that the tasks involve various media types (e.g., text, image, sound, or animation).	
Iv 3	**Accuracy of task**	
12	I think that the tasks are clear.	
13	I can easily understand the tasks I should do.	
14	Overall, I think that the tasks are explicit and easy to understand to support my learning.	
Iv 4	**Adaptability of task**	
15	I think that the tasks are presented in different viewing modes to reveal the difference of specific subject.	
16	I think that the feedbacks of the tasks are demonstrated in different results based on same subject.	
17	Overall, I think that the tasks given are adapted to my learning abilities.	

Table 2

Reliability indices of the dimensions

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted

SPEM	15.5078	14.161	.951	.905	.924
TTM	15.6549	14.942	.867	.776	.939
RTM	15.6124	14.998	.802	.703	.951
ATM	15.6595	15.286	.853	.763	.941
ADTM	15.6124	15.065	.852	.905	.941

FINDINGS

Table 3 below presents demographic data of the subjects, which were calculated using SPSS 23. The participants were from four universities in Shandong, China. The universities included both comprehensive and professional institutions, with participants specialising in the disciplines of art and science.

Table 3

Demographic information of the study

Gender	Frequency	Percentage
Female	128	50.2
Male	127	49.8
School type		
Comprehensive	125	49
Professional	130	51
Discipline		
Arts	124	48.6
Science	131	51.4
Number of classmates		
≤60	126	49.4
>60	129	50.6

The measurement model of this study is illustrated in Table 4. The current study used Smart-PLS version 3 to calculate the outer loadings of items and their underlying constructs. The findings revealed that each item had an indication loading greater than 0.707 and a significant value less than 0.050. The factor loadings of all the items to their associated constructs, as presented in table 4, are above 0.7 and statistically significant (p-value < 0.05), indicating outstanding results. Therefore, the measurement model exhibits indicator reliability.

Table 4

The model with outer loadings and related P- values

Indicators	TT	RT	AT	ADT	SPE	P Values
TT1	0.940					0.000
TT2	0.935					0.000
TT3	0.921					0.000
TT4	0.926					0.000
RT1		0.946				0.000
RT2		0.949				0.000
RT3		0.946				0.000
AT1			0.945			0.000
AT2			0.947			0.000
AT3			0.936			0.000
ADT1				0.930		0.000
ADT2				0.940		0.000
ADT3				0.947		0.000

SPE1	0.921	0.000
SPE2	0.937	0.000
SPE3	0.935	0.000
SPE4	0.934	0.000

Additionally, develop internal coherence. Reliability is the degree to which the indicators of a specific construct reliably and consistently measure that construct (Herzog & Tonchia, 2014). To put it simply, establishing internal consistency indicates that the elements are measuring the same concept. Cronbach's alpha is a statistical measure that assesses the internal consistency or reliability of a set of scales or test questions. In this study, it was estimated with Smart-PLS version 3. Simply said, "reliability" in this sense refers to the consistency with which a measurement represents a certain concept. Cronbach's alpha is a metric used to estimate the degree of consistency in such measures (Urbach & Ahlemann, 2010). A higher value of α implies that the items have a greater degree of shared covariance and are likely measuring the same underlying concept. According to Gefen et al. (2011), a Cronbach's α value of at least 0.6 is suggested for determining internal consistency in exploratory research and at least 0.7 for confirmatory research, especially for confirmatory factor analysis (CFA). Furthermore, in the context of CFA (Confirmatory Factor Analysis) and SEM (Structural Equation Modelling), internal consistency can be assessed using composite reliability (CR), which should exceed a threshold of 0.7, as suggested by Urbach and Ahlemann (2010). The values of Cronbach's alpha (α) and composite reliabilities (CRs) are presented in Table 5. Table 5 demonstrates that all values of Cronbach's α and CRs above 0.7, indicating that the measurement model has internal consistency dependability.

Table 5

The results of internal consistency reliability and convergent validity analysis

Construct	Cronbach's alpha	Composite reliability (CR)	Average variance extracted (AVE)
SPE	0.949	0.963	0.866
TT	0.948	0.963	0.896
RT	0.942	0.963	0.889
AT	0.938	0.960	0.881
ADT	0.933	0.957	0.868

The outcomes of both the Model with Outer Loadings and Related P-Values, as well as the Internal Consistency Reliability and Convergent Validity Analysis, have conclusively demonstrated that the instrument generated in this study is unquestionably valid. Hence, the measurement model adheres to the standard, making this instrument suitable for evaluating the Structural Model.

The next table, Table 6, presents the evaluation of the structural model in this study. Table 6 indicates that the route coefficients connecting all constructs are statistically significant (p-value < 0.01). The results show that each of the independent variables (task timeliness, task richness, task accuracy, and task adaptability) has a significant and positive impact on the dependent variable (students' perceived engagement).
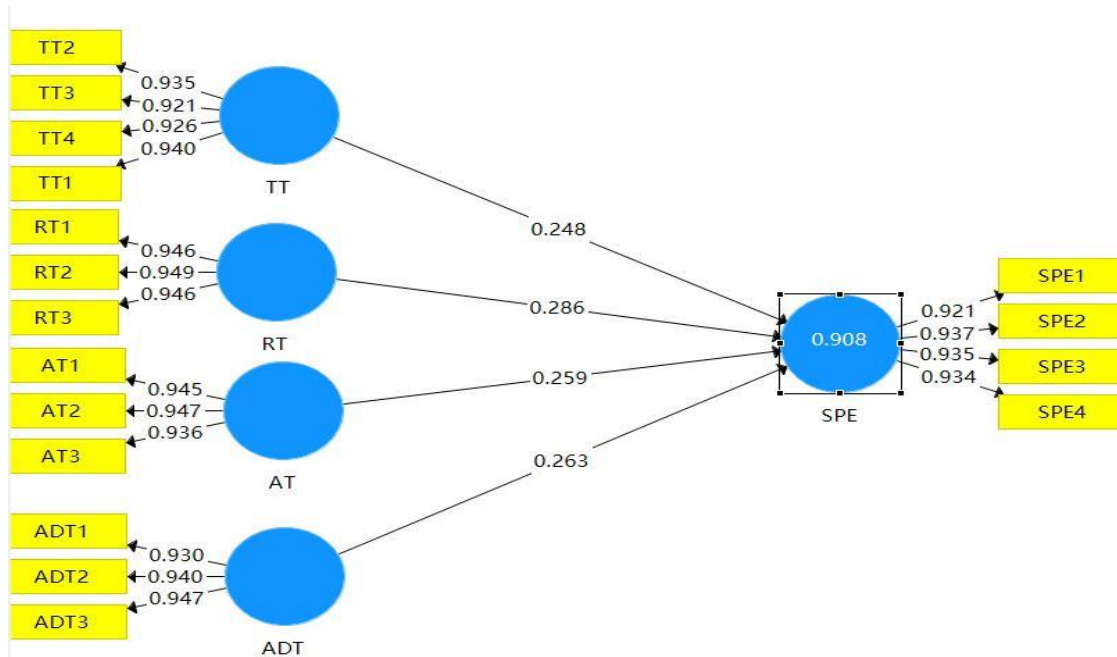
Table 6

The results of internal consistency reliability and convergent validity analysis

	Path Coefficients	P Values	Explained Variance (R2)
TT-SPE	0.248	0.000	
RT-SPE	0.286	0.000	
AT-SPE	0.259	0.000	0.908
ADT-SPE	0.263	0.000	

In addition, Figure 1 below and Table 6 above display the explained variance of all the constructs. The coefficient of determination (R-squared) is equal to 0.908, indicating that 90.8% of the variance in the dependent variable construct can be accounted for by its predictors. This suggests that all the independent variables, including timeliness of task, richness of task, accuracy of task, and adaptability of task, have a significant impact on the dependent variable in this study, namely students' perceived engagement. The Path Coefficients for the relationships between TT and SPE, RT and SPE, AT and SPE, and ADT and SPE are 0.248, 0.286, 0.259, and 0.263 respectively.

Figure 1

The graphic representation of the model with path coefficients, P- values, and explained variance

Given the validation of the evaluation findings of the Structural Model and the significant value of r square, as depicted in Figure 1 and Table 6 above, it is now possible to proceed with the hypotheses testing for this study. The primary findings on the hypotheses testing of this study are presented in Table 7 below.

Table 7

Hypotheses testing

	Relationships	T value	Decision	95% CILL	95% CIUL
H1	TT to SPE	5.118	Accepted	0.156	0.347
H2	RT to SPE	7.468	Accepted	0.215	0.364
H3	AT to SPE	6.268	Accepted	0.180	0.341
H4	ADT to SPE	6.554	Accepted	0.187	0.343

The t-value for hypothesis 1 is 5.118. The substantial value lies within the lower limit (LL) and upper limit (UL) of the 95% confidence interval (CI). Therefore, hypothesis 1 is confirmed. The t value for hypothesis 2 is 7.468. The substantial value lies within the lower limit (LL) and upper limit (UL) of the 95% confidence interval (CI). Therefore, hypothesis 2 is confirmed. The t value for hypothesis 3 is 6.268. The substantial value lies within the lower limit (LL) and upper limit (UL) of the 95% confidence interval (CI). Therefore, hypothesis 3 is confirmed. The t value for hypothesis 4 is 6.554. The substantial value lies within the lower limit (LL) and upper limit (UL) of the 95% confidence interval (CI). Therefore, hypothesis 4 is confirmed. The study's findings emphasized the favorable associations between students and tasks in blended learning courses. The investigation confirmed four hypotheses:

H1: The timeliness of task (TT) has a significant positive effect on students' perceived engagement (SPE) in EFL task-based activities in blended learning environment.

H2: The richness of task (RT) has a significant positive effect on students' perceived engagement (SPE) in EFL task-based activities in blended learning environment.

H3: The accuracy of task (AT) has a significant positive effect on students' perceived engagement (SPE) in EFL task-based activities in blended learning environment.

H4: The adaptability of task (ADT) has a significant positive effect on students' perceived engagement (SPE) in EFL task-based activities in blended learning environment.

The four research objectives of this study were met: timeliness of task, richness of task, correctness of task, and flexibility of task all had a substantial beneficial influence on students' reported involvement in EFL blended learning. The findings will give vital insights and suggestions for instructors and researchers to continue improving the quality of EFL blended learning.

DISCUSSION

The study emphasized the need for intricately crafted assignments that possess the qualities of being timely, comprehensive, precise, and flexible. Simultaneously, offering prompt feedback on work completion and using practical evaluation methods to evaluate students' qualities improve the efficacy of blended learning. The blended learning course also enhances student engagement and promotes learner autonomy.

This study aims to enhance understanding of the dependent variable, students' perceived engagement (SPE), in a blended learning environment. It investigates the impact of four independent variables: timeliness of task (TT), richness of task (RT), accuracy of task (AT), and adaptability of task (ADT). The findings emphasise the critical role of instructors' employment arrangements in boosting student engagement in blended learning contexts.

Completing activities promptly after acquiring new knowledge and skills would enable students to deepen their understanding and apply their abilities. Rop et al. (2018) state that timely assignments should not include superfluous information or learning resources that do not give

assistance. Teachers should offer comprehensive guidance to pupils in order to assist them in successfully accomplishing their assignments. Otherwise, the students would lack active engagement in the duties set by the professors.

Assignments that are rich in both variety and depth have the ability to pique students' interest and inspire them to complete the tasks. Researchers also observed that respondents would engage in tasks that were rich in substance. According to Prasetya et al. (2020), the tasks should include the following contents, which are structured as follows: 1. Foundational learning activities, 2. Review tasks, 3. Enrichment exercises, 4. Remedial assignments, and 5. Interactive educational tasks. When assigning and presenting projects to students, their difficulty should be consistent with the course's objectives and content. Unlimited riches and meaningless pursuits are fruitless and would not meet the educational objectives of the course. By providing a diverse range of projects, students with different needs will benefit from being able to choose assignments that align with their individual requirements.

To encourage active engagement in activities provided in a mixed learning environment, the tasks must be accurate. Tasks that require high accuracy have a good influence on language acquisition because they promote excellent performance and allow learners to take control of their own advancement (Wang, 2021). Thus, the tasks assigned in a mixed learning environment should effectively improve course knowledge, improve assessment performance, and develop language abilities, rather than being assigned solely for the sake of passing time.

In addition, the importance of task adaptability in promoting positive engagement has been demonstrated in this study. According to Pardo (2018), feedback is an important concept in helping students. Instructors must develop strategies for providing feedback on students' studies and learning. The blended learning platform should also incorporate elements to ensure that the flow of feedback is effectively managed and executed.

Evaluation of students' task completion was conducted both online and offline in this study. Each activity completed by the students was subject to formative assessment, which ultimately contributed to the performance evaluation for the entire semester. Prompt evaluation and feedback from instructors on students' work performance would enhance the learning of new knowledge by the pupils. Simultaneously, the instructors' affirmative response would instill a sense of the teacher's care in the pupils, so serving as a catalyst for their continued academic pursuits. Engaging in learning tasks with attributes such as timeliness, richness, accuracy, and adaptability can help students acquire a comprehensive command of the target language in a progressive and systematic manner.. This, in turn, helps establish a sense of learning rhythm and enhances the effectiveness of blended learning, while also promoting students' autonomy in the learning process.

To ensure students' perceived engagement (SPE) in a blended learning environment, it is important to carefully consider four factors: the timeliness of tasks (TT), the richness of tasks (RT), the accuracy of tasks (AT), and the adaptability of tasks (ADT). The options for addressing these issues in a blended learning environment are presented in Table 8.

Table 8

Attending Engagement of Learning Tasks in Blended Learning Environment

Adapting of tasks in blended learning environment.	Option	Factor taken care of	Setting: blended learning environment
1	Explain the timeline for task completion	Timeliness of task	Face to face

2	Using breakout rooms for group discussion with tasks in richness of learning contents. The good students may assist the poor students. Good students may engage in enriching learning tasks. Poor students may engage in revision learning tasks.	Richness of task	Online distant learning environment
3	Students may assign in completing tasks in collaborative manner, such as using Google Docs, and etc. These are to ensure that the students are engaged in doing tasks that assist them in achieving of certain learning outcomes	Accuracy of task	Online distant learning environment
4	Students back to work on individual task. Individual feedbacks on learning tasks are given.	Adaptability of task.	Face to face

This study has many limitations that need to be addressed. To address these constraints, numerous proposals for future study are proposed. Initially, data was collected exclusively in four universities in Shandong Province, China, which could potentially limit the generalizability of the findings. To enhance the generalizability of the findings in future studies, it is recommended to utilize bigger samples and employ the stratified sampling method.

Furthermore, this study only considered a limited number of four criteria. Additional aspects can be added to improve future study to gain a more thorough knowledge and construct an improved model for assessing the success of active involvement in a blended learning environment.

Besides, the present study solely examined the impact of four specifically chosen independent variables on the dependent variable. Future research should consider the moderators and mediators that may influence the relationships under investigation. This will lead to a more comprehensive knowledge of the impact of these moderators and mediators on the interactions being studied.

At the same time, this study utilized the conventional approach of Partial Least Squares Structural Equation Modelling (PLS-SEM) throughout the evaluation phase. In future research, it is recommended to utilize more sophisticated methods in PLS-SEM analysis. This involves including methods to examine common method variance at the concept level and using multi-group analysis (MGA) to study the influence of moderating variables on the links.

CONCLUSION

In conclusion, this study has verified that students' perceived engagement (SPE) in a blended learning environment can be influenced by four distinct variables: timeliness of task (TT), richness of task (RT), accuracy of task (AT), and adaptability of task (ADT). As a result, instructors must ensure that the activities assigned to students correspond with these four critical characteristics to encourage active engagement in the learning tasks, which leads to good learning outcomes.

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REFERENCES

Brudermann, C., Muriel Grosbois, Cédric Sarré. (2021). Accuracy Development in L2 Writing: Exploring the Potential of Computer-assisted Unfocused Indirect Corrective Feedback in An Online EFL Course. *ReCALL 33*(3): 248-264. https://doi.org/10.1017/S095834402100015X

Gefen, D., Rigdon, E. E., & Straub, D. W. (2011). An Update and Extension to SEM Guidelines for Administrative and Social Science Research. *MIS Quarterly, 35*(2), iii-xiv. https://doi.org/10.2307/23044042

Henrie, C. R., Halverson, L. R., & Graham, C. R. (2015). Measuring Student Engagement in Technology-mediated Learning: A Review. *Computers & Education, 90*, 36–53. https://doi.org/10.1016/j.compedu.2015.09.005

Herzog, N. V., & Tonchia, S. (2014). An Instrument for Measuring the Degree of Lean Implementation in Manufacturing. *Mechanical Engineering, 60*(12), 797-803. https://doi.org/10.5545/sv-jme.2014.1873

Kahu, E. R. (2013). Framing Student Engagement in Higher Education. *Studies in Higher Education, 38*(5): 758–773. https://doi.org/10.1080/03075079.2011.598505

Kahu, E. R., & Nelson, K. (2018). Student Engagement in the Educational Interface: Understanding the Mechanisms of Student Success. *Higher Education Research & Development, 37*(1): 58–71. https://doi.org/10.1080/07294360.2017.1344197

Lan, Y.-F., & Sie, Y.-S. (2010). Using RSS to Support Mobile Learning Based on Media Richness Theory. *Computers and Education, 55*, 723–732. https://doi.org/10.1016/j.compedu.2010.03.005

Morze, N., et al. (2021). Implementation of Adaptive Learning at Higher Education Institutions by Means of Moodle LMS. *Journal of Physics Conference Series, 1840* (1), 012062. https://doi.org/10.1088/1742-6596/1840/1/012062

Pardo, A. 2018. A Feedback Model for Data-Rich Learning Experiences. *Assessment & Evaluation in Higher Education, 43*(3), 428–438. https://doi.org/10.1080/02602938.2017.1356905

Prasetya, D.D., et al., (2020). Designing Rich Interactive Content for Blended Learning: A Case Study from Indonesia. *The Electronic Journal of e-Learning, 18*(4), 276-287. https://doi.org/10.34190/EJEL.20.18.4.001

Rop, G., van Wermeskerken, M., de Nooijer, J.A., et al. (2018). Task experience as A Boundary Condition for the Negative Effects of Irrelevant Information on Learning. *Educational Psychology Review, 30*(1), 229-253. https://doi.org/10.1007/s10648-016-9388-9

Sriwichai, C. (2020). Students' Readiness and Problems in Learning English through Blended Learning Environment. *Asian Journal of Education and Training, 6*(1), 23-34. https://doi.org/10.20448/journal.522.2020.61.23.34

Urbach, N., & Ahlemann, F. (2010) Structural Equation Modeling in Information Systems Research Using Partial Least Squares. *Journal of Information Technology Theory and application, 11*(2), 5-40.

Wang, C.Y. (2021) Employing Blended Learning to Enhance Learners' English Conversation: A Preliminary Study of Teaching with Hitutor. *Education and Information Technologies 26*(2), 2407-2425. https://doi.org/10.1007/s10639-020-10363-5

Wang, L.J. & Wang, S.S. (2018). Task Experiential Teaching Method and Its Application in Ship Structure and Equipment Course. 3rd International Conference on Education, E-learning and Management Technology (EEMT 2018), *Advances in Social Science, Education and Humanities Research,* 220. https://doi.org/10.2991/iceemt-18.2018.41

Yang, Y.F. & Nai-Cheng Kuo. (2021). Blended Learning to Foster EFL College Students' Global Literacy. *Computer Assisted Language Learning*, *36*(1–2), 81–102. https://doi.org/10.1080/09588221.2021.1900874