

ASSESSING UNDERGRADUATE ENTREPRENEURS' PROPENSITY TO ADOPT BLENDED LEARNING STRATEGIES; A CASE STUDY AT UNIVERSITY OF COLOMBO INSTITUTE FOR AGRO-TECHNOLOGY AND RURAL SCIENCES

Siriwardena B.P.^{1*}, Abeywickrama L.M.², Sandika A.L.², Vidanapathirana N.P.¹

¹Department of Agro-Technology, University of Colombo Institute for Agro Technology and Rural Sciences, Hambantota, Sri Lanka.

²Department of Agricultural Economics and Agribusiness, Faculty of Agriculture, University of Ruhuna, Mapalana, Kamburupitiya, Sri Lanka.

*Corresponding Author: buddhika@uciars.cmb.ac.lk (<https://orcid.org/0000-0002-0781-8580>)

Received: 04.01.2024; Accepted: 13.02.2024

ABSTRACT

The student's likelihood of using an educational technology such as blended learning is heavily influenced by their level of satisfaction with that technology. However, it is not expressed clearly in certain extents. The University of Colombo Institute for Agro Technology and Rural Sciences plays an important role in undergraduate entrepreneurial education through blended learning in Sri Lanka. The purpose of this study is to investigate the relationship of undergraduate entrepreneur's intention to enroll in the blended learning degree programme and their level of satisfaction. The population is made up of agricultural entrepreneurs who want to pursue degrees in the field of agriculture. The entire population included and pretested questionnaire used for gathering primary data on a range of variables on satisfaction and intention of blended learning. The secondary data was also collected accordingly. Analysis was conducted utilizing the statistical software programme SPSS (version 26). Significant positive correlations were found between the likelihood to embrace blended learning in higher education and factors such as overall satisfaction ($p < 0.05$), the form of delivery of blended learning ($p < 0.05$), the decision to follow a blended learning degree ($p < 0.05$), and promotion of blended learning among undergraduates ($p < 0.05$). However, satisfaction with the amount of time spent on the degree programme did not show statistical significance in relation to the intention to use blended learning ($p > 0.05$). Considering that, satisfaction with blended learning is having an impact on intention to use blended learning by undergraduate entrepreneurs

Keywords: *Blended learning, Educational technology, Intention, Satisfaction, Undergraduate entrepreneurs*

INTRODUCTION

Learner satisfaction, an essential component of the successful implementation and adoption of novel teaching approaches like blended learning. Blended learning combines both in-person and online components (Gosh *et al.*, 2022). Applications of blended learning in a variety of fields, including business and management (Truss and Anderson, 2023), information technology (Bachtar *et al.*, 2014), the creative arts (Hlatshwayo, 2023), engineering (Shehawy, 2017), hospitality and tourism (Meeprom and Fakfare, 2023), etc., show how adaptable blended learning is in a variety of contexts and how it can meet the specific learning goals and needs of each domain while utilizing the advantages of both in-person and online instruction. The success of educational innovations such as blended learning is heavily influenced by the level of satisfaction among learners. Students who are happy with a new strategy become more motivated and involved, taking an active role in assignments and maintaining their attention on their education (Sesmiyanti, 2016). Their fulfillment encourages regular application of the strategy, which is essential for its effective execution.

Additionally, it promotes student's resilience in their studies, which lowers dropout rates and is associated with better learning results (Joo *et al.*, 2013 and Suhre *et al.*, 2007). Furthermore, satisfied students frequently welcome new developments in education, which promotes sensitivity to upcoming changes in the field of education (Matulich, 2008). In order to ensure student satisfaction in Sri Lanka, blended learning strategies must not only be in line with the cultural and educational framework in country, but also adapt content and delivery techniques to be respectful of and consistent with local standards. Learners are more likely to accept and use these approaches when they see that their beliefs are being supported. As a result, satisfied learners support for more developments in blended learning (Cheng *et al.*, 2023), promoting its long-term acceptance and advancement, an attitude in the educational system that values inventions and advances (Maiyarni *et al.*, 2022). Therefore, understanding student happiness as well as their intention to use blended learning is crucial for developing new teaching tactics, especially when it comes to encouraging its integration with entrepreneurial education. Recognizing these

components facilitates the successful dissemination and integration of blended learning approaches into entrepreneurship education frameworks in Sri Lanka. This study aims to assess the relationship between the degree of satisfaction of students have with this teaching methodology and their intention to encourage blended learning among Sri Lankan undergraduate entrepreneurs.

Theoretical framework

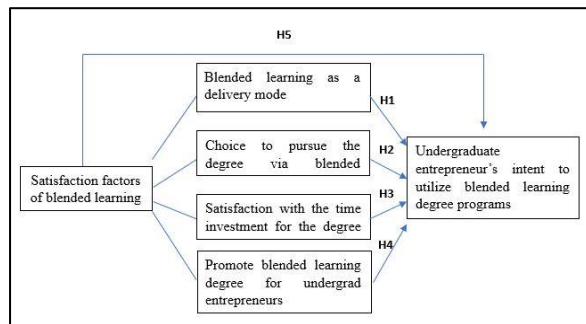


Figure 1: Satisfaction factors influence on blended learning adoption among undergraduate entrepreneurs

Undergraduate entrepreneur intention to use blended learning

The intention to employ blended learning indicates the willingness or readiness to interact with and adopt this method of education (George-Walker and Keffe, 2010). The intention includes their views, reasons, and advantages they see from using blended learning into their academic path. (Radulović *et al.*, 2023 and Samuel, 2023). The undergraduate entrepreneurs (individuals who are pursuing an undergraduate degree while also actively engaged in entrepreneurial activities) gave careful thought to how they intended to employ blended learning. Flexible scheduling and access to learning resources are made possible via blended learning, which can be quite helpful for students who combine their education with projects or business initiatives (Clark and Post, 2021). According to Mittal and Raghuvaram (2021), the abundance of information and resources that can be found online can supplement conventional classroom instruction and support the growth of entrepreneurial knowledge and skills. Additionally, online components often include interactive tools (Krishen *et al.*, 2021), discussions (Schou *et al.*, 2021), or simulations (Zulfiqar *et al.*, 2021), encouraging participation and real-world application, which is advantageous for the development of entrepreneurial skills. Secondly, entrepreneurship frequently calls for flexibility and adaptability (Dabić *et al.*, 2021). Blended learning may fit student's mindsets because of its flexibility and variety of learning approaches (Rahman *et al.*, 2020) and needs in a constantly developing business environment. But more significantly, the power of blended learning might enable business owners to

maximize their time by having access to lectures or course materials from a distance (Li *et al.*, 2020), thus maximizing their productivity (Ma *et al.*, 2022).

Blended learning as a delivery mode

When used as a delivery method, blended learning combines digital resources with physical instruction to provide a dynamic and adaptable learning environment (Dangwal, 2017). Examining the connection between the desire to employ blended learning as a delivery mode and its structure requires comprehending how its advantages and design affect people's choices and preferences (Li *et al.*, 2020). It is important for instructors and educational institutions to recognize this relationship to create and execute blended learning programmes that effectively meet the demands and preferences of learners.

Hypothesis 1 (H1): Blended learning as a delivery mode is positively affect undergraduate entrepreneur's intent to utilize blended learning degree program

Choice to pursue the degree via blended learning

Decision to follow a degree through blended learning is a purposeful judgment that demonstrates a person's intention to adopt a modern teaching model (Ustun and Tracey, 2021). The choice indicates more than presence, Bai (2022) outlined how making a choice indicates a desire to use technology, interact with a variety of learning resources, and take an active role in both in-person and virtual learning. It reflects a person's deliberate attempt to customize their educational journey by making the most of the flexibility and variety of resources that blended learning offers (Osadcha *et al.*, 2021).

Hypothesis 2 (H2): Choice to pursue the degree via blended learning is positively affect undergraduate entrepreneur's intent to utilize blended learning degree program

Satisfaction with the time investment for the degree program

An individual's intention to participate in blended learning is largely influenced by how satisfied they are with the time they have invested in a degree programme. People are more likely to stick with blended learning if they are happy with the time, they spend acquiring a degree through this kind of instruction (Gopinathan *et al.*, 2020). The fulfillment may result from a number of things, including how effective the programme is considered to be (Xie and Li, 2020), the capability to balance studies with other assurances (Konstantinou and Miller, 2021), or the flexibility offered by blended learning in managing time efficiently (Li *et al.*, 2020). In the end, having a

favourable opinion of the time spent on the degree programme helps to encourage a continuing desire to interact with and accept the blended learning model.

Hypothesis 3 (H3): Satisfaction with the time investment for the degree program is positively affect undergraduate entrepreneur's intent to utilize blended learning degree program.

Promote blended learning degree for undergraduate entrepreneurs

The way in which blended learning degree programmes are promoted is a significant factor in determining how people will choose to interact with this particular mode of instruction. Promotion spreads knowledge about the characteristics and advantages of blended learning (Posey and Pintz, 2017). People are made aware of this style due to the benefits, flexibility, and accessibility as well as how well it meets their requirements for education. An excellent promotion highlights how blended learning fits nicely with the intended audience's objectives and desires (Cheng *et al.*, 2020), specifically entrepreneurs. Cheng went on to explain that it demonstrates how this strategy can support their goals by improving their abilities, providing useful knowledge, and working around their hectic schedules. Effective marketing techniques stimulate people's interest and curiosity (Wang, 2010). They display motivating stories of accomplishment (Nortvig *et al.*, 2018), testimonials (Marczok *et al.*, 2015), or demonstrations (Alzer *et al.*, 2023) of how blended learning might encourage people to think about and investigate this strategy by promoting development of skills, creativity, and entrepreneurial thinking. According to the Thorne (2003), by making a strong case for blended learning, promotion influences decisions. Throne went on to say that it shapes people's opinions, encouraging them to think about and plan to employ this approach for their education because it seems like a workable and promising solution.

Hypothesis 4 (H4): Promote blended learning degree for undergraduate entrepreneurs is positively affect undergrad entrepreneur's intent to utilize blended learning degree program.

Satisfaction factors of blended learning

The degree to which students are satisfied in a blended learning setting determines how likely they will continue with and participate in this type of instruction (Kuo *et al.*, 2014). Their dedication is reinforced by positive experiences and a sense of satisfaction with the learning process, which encourages them to stick with blended learning as their favourite teaching approach (Gosh and Anwar, 2022). Moreover, Siriwardena *et al.* (2023) highlighted how undergraduate student's opinions are

positively influenced and encouraged by their interactions with teachers, the resources in the modules, and the objectives of the courses.

Hypothesis 5 (H5): Satisfaction factors of blended learning is positively affecting undergraduate entrepreneur's intent to utilize blended learning degree program

MATERIALS AND METHODS

The University of Colombo Institute for Agro-Technology and Rural Sciences at Weligatta, Hambantota, Sri Lanka, was the location of the study. Every entrepreneur undergraduate who actively pursued a degree program at the institution using a blended learning technique participated in the survey. The entire population (204) was subject to data collecting. This method smoothly combines face-to-face interactions with online learning to produce a complete blended learning system. Data from both primary (from a questionnaire) and secondary sources (such as student registration details) were gathered for this investigation. A pre-tested Google Form survey administered via the Learning Management System was used to collect primary data. More than 80% responded for the Google form. Furthermore, secondary data from already-existing sources were obtained about the blended learning system. The constructed survey was designed to explore many aspects of blended learning satisfaction, covering subjects like blended learning delivery methods, the decision to follow a degree through this approach, satisfaction with the time spent in the degree program, and the promotion of blended learning degrees for undergraduate entrepreneurs. Also, it includes the dimensions to measure undergraduate entrepreneur's intention to use blended learning such as willingness, readiness, and inclination to engage with blended learning. From strongly agreed (+2) to strongly disagreed (-2) on a Likert scale, all the variables that were utilized for testing the hypotheses were evaluated. The statistical application SPSS was used to analyze the collected data (Statistics 26). The analysis included correlation analysis (selected variables on satisfaction and intention on blended learning) and frequency investigation, all of which were customized to the discovered associations between variables.

RESULTS AND DISCUSSION

Socio Economic Background of the Respondents

A population with 50.49% males and 49.51% females was included in the study, indicating gender equality. The age group of 21 to 30 years old comprised the majority of responders, or 61.27% of the total sample.

Table 1: Analysis of Mean, Standard Deviation, and Reliability for Dimensions in Undergraduate Entrepreneurs' Intention to Utilize Blended Learning Degree Programs

Dimension	Corresponding number of items	Cronbach's alpha values	Mean	St. Deviation
Blended learning as a delivery mode	1	0.831	1.86	1.13
Choice to follow the degree via blended learning	1	0.885	2.05	1.18
Satisfaction with the time investment for the degree program	1	0.910	1.39	1.19
Promote blended learning degree for undergrad entrepreneurs	1	0.902	1.91	1.14
Satisfaction factors of blended learning	4	0.803	3.61	1.95
Undergraduate entrepreneur's intent to utilize blended learning degree programs (Dependent variable)	3	0.812	2.08	2.12

Table 2: Correlation Coefficients and Significance Levels: Independent Variables vs. Dependent Variable

Attribute	[1]	[2]	[3]	[4]	[5]	[6]
[1] Blended learning as a delivery mode	1					
[2] Choice to pursue the degree via blended learning	[0.732**] (0.000)	1				
[3] Satisfaction with the time investment for the degree program	[0.321**] (0.000)	[0.399**] (0.000)	1			
[4] Promote blended learning degree for undergrad entrepreneurs	[0.561**] (0.000)	[0.624**] (0.000)	[0.399*] (0.000)	1		
[5] Satisfaction factors of blended learning	[0.822**] (0.000)	[0.869**] (0.000)	[0.672**] (0.000)	[0.811**] (0.000)	1	
[6] Undergrad entrepreneurs' intent to utilize blended learning degree programs (Dependent variable)	[0.367**] (0.000)	[0.364**] (0.000)	[0.108] (0.135)	[0.317**] (0.000)	[0.363**] (0.000)	1

“[]” indicates the correlation value, “()” indicates the significant level

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

*. Correlation is significant at the 0.05 level (2-tailed)

Independent variables – [1] to [5]; Dependent variable – [6]

It is noteworthy that a large percentage of the student entrepreneurs were experts in the area of agricultural consulting when compared with other fields such as training and education in agriculture, food industry and agricultural processing, livestock and crops. Thus, indicating a general trend among the participants in this area of focus.

Validating the instrument for assessing undergraduate entrepreneurs' intention to use blended learning degree programs

Table 1 shows that every dimension used in the research has acceptable Cronbach's alpha values, all of which are over 0.800. Furthermore, these dimensions demonstrate stable levels of reliability that correspond with the mean and standard deviation values. The information taken together indicates that the items measure the target construct consistently and efficiently.

Correlation analysis between variables

To investigate the associations between four different independent variables and one dependent variable, as indicated in table 2, an accurate correlation analysis was conducted. The dependent variable, which measures undergraduate entrepreneur's intention to enroll in blended learning degree programmes, shows a positive connection with all other independent factors, except for satisfaction with the amount of time spent on the programme.

Undergraduate Entrepreneurs' Adoption Intent for Blended Learning

Understanding the undergraduate entrepreneur's intention to employ a blended learning degree programme was the study's goal. A significant number of participants conveyed their contentment with the suggested pedagogical strategy.

According to figure 2, a significant proportion of participants (53.14%) expressed high levels of satisfaction on the willingness of the blended learning model. A majority of the respondents (54.85%) expressed strong satisfaction with the readiness of the blended learning programme. The overall positive readiness indicator among those surveyed suggests that the blended learning programme will be implemented successfully. A significant number of participants expressed their fulfilment with the suggested pedagogical strategy. In particular, 52.17% of the participants expressed great satisfaction with the concept of adopting a blended learning strategy. This clear inclination signal places the blended learning programme in a good position for its successful execution.

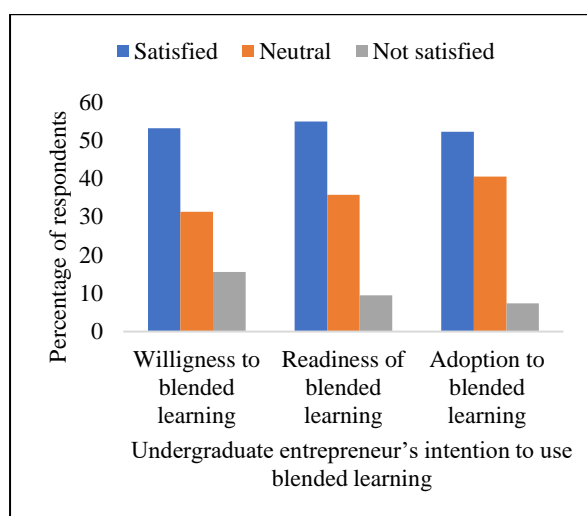


Figure 2: Undergraduate entrepreneur's intention to use blended learning

The Impact of Blended Learning Satisfaction on Intention to Utilize Blended Learning

When gathering all satisfaction dimensions, a statistically significant ($p < 0.05$) positive correlation ($r = 0.363$) is observed regarding the likelihood to use blended learning in their degree programme. Several variables, such as the ease of online material access, the degree of interaction with interactive resources, schedule flexibility, the standard of the instructional materials, or the general user experience in the blended learning environment, could be included in these satisfaction factors. According to the Lin and Wang (2012), learners generally view satisfaction features positively, which tends to support their commitment to staying with this strategy. For example, if students find the internet resources interesting, (Green *et al.*, 2018), the flexibility adapting (Andrade and Alden-Rivers, 2019), and the overall experience performing (Ying and Yang, 2016), they're more likely to anticipate continuing employing blended learning for their learning. People are primarily motivated to select and participate in blended learning on a regular basis by these satisfying

experiences. Thus, undergraduate entrepreneur's intention to use blended learning degree programs is significantly impacted by blended learning satisfaction variables (Hypothesis 5 is accepted).

The Influence of Blended Learning Delivery Mode on the Intention to Support Blended Learning

When looking at blended learning as a delivery method, there is a statistically significant (p value < 0.05) positive association ($r = 0.367$) between it with the intention to enroll in a blended learning degree programme. Baragash and Al-Samarraie (2018) examined the effects of using different learning delivery techniques, including web-based learning, learning management system-based learning, and in-person instruction. The results showed that these strategies had a favourable influence on students' academic achievement and educational perspectives in higher education. There is a positive correlation among the mode of delivery and intention meaning that learners are more likely to want to employ blended learning for their degree programmes when they believe the technique to be effective, available, and beneficial for providing educational information. (George-Walker and Keeffe, 2010). This could be recognized to the flexibility it approaches (Li *et al.*, 2020), the range of resources offered (Snowball, 2014), or the individualized studying experiences (Zhang *et al.*, 2020) contribute to a further positive perception and improved intention to continue employing this educational methodology. Taking all of this into consideration, it can be observed that using blended learning as a delivery method improves undergraduate entrepreneurs' intentions of attending blended learning degree programs (Hypothesis 1 is accepted).

The Choice to Practice the Degree via Blended Learning on Intention to Utilize Blended Learning

The intention to implement blended learning in higher education is significantly (p value < 0.05) positively correlated ($r = 0.364$) with the decision to pursue a degree programme through blended learning. This association emphasizes the importance of this purposeful selection on establishing a tendency towards accepting blended learning as a preferred educational style. This result emphasizes how crucial the decisions people make about their educational directions (Green *et al.*, 2018). Students' intention to continue using blended learning techniques in higher education is favourably aligned when they actively decide to use a blended learning strategy as a satisfaction factor in their degree programme (Kuo *et al.*, 2014). As a result, the decision to obtain the degree through blended learning has a beneficial impact on undergraduate entrepreneur's desire to use the blended learning degree program (Hypothesis 2 is accepted).

The Satisfaction with the Time Investment for the Degree Program on Intention to Utilize Blended Learning

There was not statistically significant (p value > 0.05) correlation found between the amount of time spent on the degree programme and the intention to use blended learning. This implies that their inclination to participate in blended learning may not be immediately impacted by the program's typical length or time commitment. Factors like the accessibility of resources (Almulla, 2022), support structures (Chiu, 2021), technological infrastructure (Ibrahim and Nat, 2019) or personal commitments (Turner and Gianiodis, 2018) may have a greater influence on people's intentions regarding blended learning than the amount of time spent on a degree programme. Therefore, contentment with the time investment for the degree program had no beneficial effect on student entrepreneur's willingness to use blended learning degree program (Hypothesis 3 is rejected).

Impact of Promoting Blended Learning Degrees for Undergraduate Entrepreneurs on Their Intentions to Adopt Blended Learning

Examining how undergraduate entrepreneurs promote blended learning degree programmes showed a strong (p value < 0.05) positive association ($r = 0.317$) with their intention to use such programmes. This implies that such entrepreneurs are more likely to think about and use blended learning as an educational technique when they come across advertising efforts that emphasize the relevance, advantages, and tailored benefits of blended learning. Thus, this association underlines how powerful the personal recommendations (Turner and Gianiodis, 2018) or suggestions for convincing and motivating aspiring college students to choose blended learning (Glazer, 2023), and demonstrating the impact that personal encouragement has on influencing student's educational decisions. Because of these factors, promoting blended learning degrees for undergraduate entrepreneurs has a good impact on their intention to use the blended learning degree program (Hypothesis 4 is accepted).

CONCLUSIONS

Several dimensions such as blended learning as a delivery mode, choice to follow the degree via blended learning, satisfaction with the time investment for the degree program, promote blended learning degree for undergraduate entrepreneurs were assessed to comprehend the undergraduate entrepreneur's intention to use blended learning. All the chosen components showed good internal consistency through reliability analysis, as indicated by Cronbach alpha values ranging from 0.803 to 0.910. The intention to adopt blended learning for higher education was significantly positively correlated with factors including overall happiness,

the blended learning delivery style, the decision to pursue a blended learning degree, and promoting blended learning among undergraduates. However, in terms of the intention to use blended learning, the component pertaining to satisfaction with the amount of time spent in the degree programme did not show statistical significance. Entrepreneur undergraduates are satisfied with the existing blended learning program in different disciplines while they are more concerned on the time consuming the program which could use some improvement. Additionally, satisfaction significantly contributes to the intention to utilize blended learning program at the institute.

ACKNOWLEDGEMENT

The work mentioned here is a component of a research project, the candidate is pursuing for a Degree of the University of Ruhuna.

REFERENCES

- Almulla, M. 2022. Investigating Important Elements That Affect Students' Readiness for and Practical Use of Teaching Methods in Higher Education. *Sustainability*.
<https://doi.org/10.3390/su15010653>.
- Alzer, H., Ismail, N.H. and Alsoleihat, F. 2023. Blended Learning with Video Demonstrations Enhances Dental Students' Achievements in Tooth Carving. *Advances in Medical Education and Practice*, pp.1425-1431.
- Andrade, M., & Alden-Rivers, B. 2019. Developing a framework for sustainable growth of flexible learning opportunities. *Higher Education Pedagogies*, 4, pp. 1 - 16.
<https://doi.org/10.1080/23752696.2018.1564879>.
- Bachtiar, F.A., Rachmadi, A. and Pradana, F. 2014. February. Acceptance in the deployment of blended learning as a learning resource in information technology and computer science program, Brawijaya university. In *2014 Asia-Pacific Conference on Computer Aided System Engineering (APCASE)*, pp. 131-135. IEEE.
<https://doi.org/10.1109/APCASE.2014.6924486>
- Bai, X. 2022. Teaching Design of English Writing Based on UMU. *Mathematical Problems in Engineering*.
<https://doi.org/10.1155/2022/9075380>.
- Baragash, R., & Al-Samarraie, H. 2018. Blended learning: Investigating the influence of engagement in multiple learning delivery modes on students' performance. *Telematics Informatics*, 35, pp. 2082-2098.
<https://doi.org/10.1016/j.tele.2018.07.010>.
- Cheng, S., Hwang, G., & Lai, C. 2020. Effects of the group leadership promotion approach on students' higher order thinking awareness and online interactive behavioral patterns in a blended learning environment. *Interactive Learning*

- Environments*, 28, pp. 246 - 263. <https://doi.org/10.1080/10494820.2019.1636075>.
- Cheng, X., Mo, W. and Duan, Y. 2023. Factors contributing to learning satisfaction with blended learning teaching mode among higher education students in China. *Frontiers in Psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1193675>.
- Chiu, T. 2021. Digital support for student engagement in blended learning based on self-determination theory. *Comput. Hum. Behav.*, 124, pp. 106909. <https://doi.org/10.1016/J.CHB.2021.106909>.
- Clark, C., and Post, G. 2021. Preparation and synchronous participation improve student performance in a blended learning experience. *Australasian Journal of Educational Technology*, pp. 187-199. <https://doi.org/10.14742/AJET.6811>.
- Dabić, M., Stojčić, N., Šimić, M., Potočan, V., Slavković, M., and Nedelko, Z. 2021. Intellectual agility and innovation in micro and small businesses: The mediating role of entrepreneurial leadership. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2020.10.013>.
- Dangwal, K.L. 2017. Blended learning: An innovative approach. *Universal Journal of Educational Research*, 5(1), pp.129-136.
- George-Walker, L., and Keeffe, M. 2010. Self-determined blended learning: a case study of blended learning design. *Higher Education Research & Development*, 29, pp. 1 - 13. <https://doi.org/10.1080/07294360903277380>.
- Glazer, F.S. ed. 2023. Blended learning: Across the disciplines, across the academy. Taylor & Francis. <https://doi.org/10.4324/9781003443285>
- Gopinathan, S., Raman, M., Subbarao, A., and Kaur, A. 2020. The Role of Blended Learning Technologies in Enhancing Student Engagement in Theory Dominant Subjects. *International Journal of Computer Mathematics*, 1, pp. 64-69. <https://doi.org/10.33093/ijcm.2020.1.x1.6>.
- Gosh, G., and Anwar, S. 2022. Blended Learning: Innovative & Effective Student Centered Educational Strategies In The Nursing Profession. *Era's Journal of Medical Research*. <https://doi.org/10.24041/ejmr2022.33>.
- Green, R., Whitburn, L., Zacharias, A., Byrne, G., and Hughes, D. 2018. The relationship between student engagement with online content and achievement in a blended learning anatomy course. *Anatomical Sciences Education*, 11. <https://doi.org/10.1002/ase.1761>.
- Hlatshwayo, B. 2023. Enhancing Creative Arts Teaching and Learning Through a Blended Learning Approach: Teachers' perspectives.
- Ibrahim, M., and Nat, M. 2019. Blended learning motivation model for instructors in higher education institutions. *International Journal of Educational Technology in Higher Education*, 16, pp. 1-21. <https://doi.org/10.1186/s41239-019-0145-2>.
- Joo, Y.J., Lim, K.Y. and Kim, J. 2013. Locus of control, self-efficacy, and task value as predictors of learning outcome in an online university context. *Computers & Education*, 62, pp.149-158.
- Konstantinou, I., and Miller, E. 2021. Self-managed and work-based learning: problematizing the workplace-classroom skills gap. *Journal of Work-Applied Management*. <https://doi.org/10.1108/JWAM-11-2020-0048>.
- Krishen, A., Dwivedi, Y., Bindu, N., and Kumar, K. 2021. A broad overview of interactive digital marketing: A bibliometric network analysis. *Journal of Business Research*. <https://doi.org/10.1016/J.JBUSRES.2021.03.061>.
- Kuo, Y., Belland, B., Schroder, K., and Walker, A. 2014. K-12 teachers' perceptions of and their satisfaction with interaction type in blended learning environments. *Distance Education*, 35, pp. 360 - 381. <https://doi.org/10.1080/01587919.2015.955265>.
- Li, X., Yang, Y., Chu, S., Zainuddin, Z., and Zhang, Y. 2020. Applying blended synchronous teaching and learning for flexible learning in higher education: an action research study at a university in Hong Kong. *Asia Pacific Journal of Education*, 42, pp. 211 - 227. <https://doi.org/10.1080/02188791.2020.1766417>.
- Lin, W., and Wang, C. 2012. Antecedences to continued intentions of adopting e-learning system in blended learning instruction: A contingency framework based on models of information system success and task-technology fit. *Comput. Educ.*, 58, pp. 88-99. <https://doi.org/10.1016/j.compedu.2011.07.008>.
- Ma, G., Yang, R., Minneyfield, A., Gu, X., Gan, Y., Li, L., Liu, S., Jiang, W., Lai, W., and Wu, Y. 2022. A practical analysis of blended training efficacy on organizational outcomes. *Industrial and Commercial Training*. <https://doi.org/10.1108/ict-12-2021-0085>.
- Maiyarni, R., Laksono, E., Ikhsan Sahal Guntur, M. and Soraya. 2022. Innovative Learning: Blended Learning and Its Effectiveness in Education—A Scoping Review. In *Proceedings of the 2022 13th International Conference on E-Education, E-Business, E-Management, and E-Learning* (pp. 232-237).
- Marczok, Y.M., Braukhoff, M.H. and Amann, E. 2015. Impact of Incentive Orientated Blended Learning on Students' Learning Behavior and Outcomes. In *Managing Intellectual Capital and Innovation for Sustainable and Inclusive Society: Managing Intellectual Capital and Innovation: Proceedings of the MakeLearn and THIM Joint International Conference* (pp. 891-899).
- Matulich, Erika & Papp, Raymond & Haytko, Diana. (2008). Continuous Improvement through

- Teaching Innovations: a Requirement for Today's Learners. *Marketing Education Review*, 18, 1-7. DOI: 10.1080/10528008.2008.11489017.
- Meeprom, S. and Fakfare, P. 2023. Blended Learning: Examining Must-Have, Hybrid, and Value-Added Quality Attributes of Hospitality and Tourism Education. *Journal of Hospitality & Tourism Education*, pp.1-15. <https://doi.org/10.1080/10963758.2023.2172419>
- Mittal, P., & Raghuvaran, S. 2021. Entrepreneurship education and employability skills: the mediating role of e-learning courses. *Entrepreneurship Education*, 4, pp. 153 - 167. <https://doi.org/10.1007/s41959-021-00048-6>.
- Nortvig, A., Petersen, A., and Balle, S. 2018. A literature review of the factors influencing e-learning and blended learning in relation to learning outcome, student satisfaction and engagement. *Electronic Journal of e-Learning*, 16, pp. 46-55.
- Osadcha, K., Osadchyi, V., Kruglyk, V., and Spirin, O., 2021. Modeling of the Adaptive System of Individualization and Personalization of Future Specialists' Professional Training in the Conditions of Blended Learning, pp. 43-54. <https://doi.org/10.31812/educdim.4721>.
- Posey, L., and Pintz, C. 2017. Transitioning a Bachelor of Science in nursing program to blended learning: Successes, challenges & outcomes. *Nurse education in practice*, 26, pp. 126-133. <https://doi.org/10.1016/j.nepr.2016.10.006>.
- Radulović, B., Dorocki, M., Ninković, S., Stojanović, M., and Adamov, J. 2023. The Effects Of Blended Learning Approach On Student Motivation For Learning Physics. *Journal of Baltic Science Education*. <https://doi.org/10.33225/jbse/23.22.73>.
- Rahman, N., Arifin, N., Manaf, M., Ahmad, M., Zin, N., and Jamaludin, M. 2020. Students' Perception in Blended Learning among Science and Technology Cluster Students. *Journal of Physics: Conference Series*, 1496. <https://doi.org/10.1088/1742-6596/1496/1/012012>.
- Samuel, S. 2023. A Blended Institutional Learning Approach for the Higher Education Sustainability. *SHS Web of Conferences*. <https://doi.org/10.1051/shsconf/202315609002>.
- Schou, P., Bucher, E., and Waldkirch, M. 2021. Entrepreneurial learning in online communities. *Small Business Economics*, pp. 1 - 22. <https://doi.org/10.1007/s11187-021-00502-8>.
- Sesmiyanti, S. 2016. Student's cognitive engagement in learning process. *Journal Polingua: Scientific Journal of Linguistics, Literature and Language Education*, 5(2), pp.48-51.
- Shehawy, Y. 2017. Effects of using technological innovations on developing tourism education and learning methods: Paradigm shift from learning outcomes perspective. *International Journal of Heritage, Tourism and Hospitality*, 11(3 (Special Issue)), pp.1-26.
- Siriwardena, B.P., Abeywickrama, L.M., Sandika, A.L. and Vidanapathirana, N.P. 2023. Freshmen's perspectives towards blended learning in Higher Education-A case study of the University of Colombo Institute for Agro-Technology and Rural Sciences. *AGRIEAST*, 17(2), pp.31-38. <https://doi.org/10.4038/agri-east.v17i2.125>
- Snowball, J. 2014. Using interactive content and online activities to accommodate diversity in a large first year class. *Higher Education*, 67, pp. 823-838. <https://doi.org/10.1007/S10734-013-9708-7>.
- Suhre, C.J., Jansen, E.P. and Harskamp, E.G. 2007. Impact of degree program satisfaction on the persistence of college students. *Higher Education*, 54, pp.207-226.
- Thorne, K. 2003. Blended learning: how to integrate online & traditional learning. Kogan Page Publishers.
- Truss, A. and Anderson, V. 2023. The navigational challenges of a blended learning approach to teaching in business and management. *The International Journal of Management Education*, 21(1), p.100733. <https://doi.org/10.1016/j.ijme.2022.100733>
- Turner, T., and Gianiodis, P. 2018. Entrepreneurship Unleashed: Understanding Entrepreneurial Education outside of the Business School. *Journal of Small Business Management*, 56, pp. 131 - 149. <https://doi.org/10.1111/jsbm.12365>.
- Ustun, A., and Tracey, M. 2021. An Innovative Way of Designing Blended Learning Through Design-Based Research In Higher Education. *Turkish Online Journal of Distance Education*. <https://doi.org/10.17718/TOJDE.906821>.
- Wang, M. 2010. Online collaboration and offline interaction between students using asynchronous tools in blended learning. *Australasian Journal of Educational Technology*, 26, pp. 830-846. <https://doi.org/10.14742/AJET.1045>.
- Xie, X., and Li, X. 2020. Exploration and Practice of Process Assessment and Evaluation Method Based on Blended Learning: Take programming courses as an example. *2020 2nd International Conference on Advances in Computer Technology, Information Science and Communications (CTISC)*, pp. 85-89. <https://doi.org/10.1109/CTISC49998.2020.00021>.
- Ying, A., and Yang, I. 2016. Academics and Learners' Perceptions on Blended Learning as a Strategic Initiative to Improve Student Learning Experience, 87, pp. 04005. <https://doi.org/10.1051/MATECCONF/20178704005>.
- Zhang, J., Zou, L., Miao, J., Zhang, Y., Hwang, G., & Zhu, Y., 2020. An individualized intervention approach to improving university students'

learning performance and interactive behaviors in a blended learning environment. *Interactive Learning Environments*, 28, pp. 231 - 245. <https://doi.org/10.1080/10494820.2019.1636078>.

Zulfiqar, S., Al-reshidi, H., Moteri, M., Feroz, H., Yahya, N., & Al-rahmi, W., 2021. Understanding and Predicting Students' Entrepreneurial Intention through Business Simulation Games: A Perspective of COVID-19. *Sustainability*. <https://doi.org/10.3390/SU13041838>.