

# Effectiveness of Blended Learning Support: Perception of First Year Extended Program Students

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## Abstract:

The era of absolute online learning has made blended learning support crucial for achieving academic success. This support is even more necessary for students who are considered academically disadvantaged and who are experiencing a diverse learning environment. Beyond providing support is the need to the effectiveness of blended learning supports that are being provided. Therefore, this study assesses the perception of students in the first year of the Extended Program of the impact of blended learning support with respect to technical support and instructor-led support (teacher support) on motivation for learning and learning satisfaction. This study which is based on the constructive and social support theory model employed qualitative research method and convenience sampling technique to obtain data using a semi-structured interview from a sample of twenty (20) first year Extended Program students in the Faculty of Management and Commerce to gain insight into students' experiences with blended learning support. The data collected was analysed using thematic analysis. The results showed that most of the first-year students in the Extended Program found blended learning support effective in their learning experience. The respondents acknowledged that technical support has been effective in accessing digital content, supporting learning, thus promoting learning satisfaction, and simplifying communication with instructors. Moreover, instructor-led support in the form of timely feedback, monitoring, and intervention was perceived to promote improvement in their learning outcome. The results of this study provide valuable information on the efficacy of blended learning support and highlight the need for continued efforts to offer and optimise blended learning strategies and support in higher education.

**Keyword:** Blended Learning; Blended Learning Support; Extended Program; Learning Experience

## Introduction

In recent years, higher education has experienced a remarkable transformation, propelled by technological advancements and a growing awareness of the need for personalised and more flexible learning experiences <sup>1</sup>. This change became crucial at the beginning of the COVID-19

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<sup>1</sup> Mamdouh Alenezi, "Digital Learning and Digital Institution in Higher Education," *Education Sciences* 13, no. 1 (2023): 88, <http://dx.doi.org/10.3390/educsci13010088>.

epidemic that made physical contact impossible <sup>2</sup>. One of such transformations is the huge implementation of Blended Learning (BL). Blended learning can be defined as a pedagogical teaching approach that combines traditional face-to-face instruction with online teaching and learning activities or computer-mediated instruction <sup>3</sup>. In addition, blended learning is defined as the thoughtful integration of classroom face-to-face learning experiences with online learning experiences <sup>4</sup>. In order for a course to be regarded as a blended learning course it must have a substantial proportion (30-79%) of the content delivered online along with face-to-face delivery<sup>5</sup>. Blended learning thus, typically uses online discussions and has a reduced number of face-to-face meetings <sup>6</sup>. BL is therefore the strategic combination of online and in-person learning <sup>7</sup>. This might include a wide variety of approaches, this include making online resources and materials available to students outside of class, or using online technology as a forum for and means of interaction and communication outside of a face-to-face classroom, synchronous or asynchronous online instruction <sup>8</sup>. Irrespective of the mode, blended learning has emerged as a powerful solution to meet the evolving needs of contemporary higher education.

The benefits of blended learning in higher education are numerous, including flexibility and personalised learning <sup>9</sup>, increased students' participation <sup>10</sup>, greater access to resources, rapid feedback, and evaluation <sup>11</sup> more effective teaching, and cost effectiveness through decreased costs from the reduction of classroom and travel time <sup>12</sup>. The advantages of blended learning contribute to the improvement of learning outcomes and provide learners with an enhanced educational experience. Blended learning has gained momentum and is widely incorporated by various institutions as an effective mode for delivering education due to its ability to seamlessly integrate

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<sup>2</sup> Abid Haleem et al., "Understanding the Role of Digital Technologies in Education: A Review," *Sustainable Operations and Computers* 3 (2022): 275–285, <http://dx.doi.org/10.1016/j.susoc.2022.05.004>.

<sup>3</sup> Charles R Graham, Stephanie Allen, and Donna Ure, "Benefits and Challenges of Blended Learning Environments," *Encyclopedia of Information Science and Technology, First Edition* (IGI Global, 2005), <http://dx.doi.org/10.4018/978-1-59140-553-5.ch047>.

<sup>4</sup> D.Randy Garrison and Heather Kanuka, "Blended Learning: Uncovering Its Transformative Potential in Higher Education," *The Internet and Higher Education* 7, no. 2 (2004): 95–105, <http://dx.doi.org/10.1016/j.iheduc.2004.02.001>.

<sup>5</sup> I Elaine Allen and Jeff Seaman, *Learning on Demand: Online Education in the United States, 2009*. (ERIC, 2010).

<sup>6</sup> Mustafa Caner, "The Definition of Blended Learning in Higher Education," *Blended Learning Environments for Adults* (IGI Global, 2012), <http://dx.doi.org/10.4018/978-1-4666-0939-6.ch002>.

<sup>7</sup> Charles R Graham and Lisa R Halverson, "Blended Learning Research and Practice," *Handbook of Open, Distance and Digital Education* (Springer Nature Singapore, 2022), [http://dx.doi.org/10.1007/978-981-19-0351-9\\_68-1](http://dx.doi.org/10.1007/978-981-19-0351-9_68-1).

<sup>8</sup> Caner, "The Definition of Blended Learning in Higher Education."

<sup>9</sup> Brian Whalley et al., "Towards Flexible Personalized Learning and the Future Educational System in the Fourth Industrial Revolution in the Wake of Covid-19," *Higher Education Pedagogies* 6, no. 1 (2021): 79–99, <http://dx.doi.org/10.1080/23752696.2021.1883458>.

<sup>10</sup> Jolly Sahni, "Does Blended Learning Enhance Student Engagement? Evidence from Higher Education," *Journal of e-Learning and Higher Education* 2019 (2019): 1–14, <http://dx.doi.org/10.5171/2019.121518>.

<sup>11</sup> Anthony Onesto, "Who Is Gen Z?," in *The New Employee Contract*, 2022.

<sup>12</sup> Graham, Allen, and Ure, "Benefits and Challenges of Blended Learning Environments."

both in-person and virtual learning<sup>13</sup>. In the blended learning dispensation, students' success and positive learning experience is based on several factors including timely feedback, motivation, and self-directed learning<sup>14</sup>, collaboration skills and effective communication<sup>15</sup>, quality of content and instructional design<sup>16</sup>, effective study strategies and awareness of learning style<sup>17</sup>, digital literacy and technological competence<sup>18</sup>, time management and self-regulation, access to resources and learning support<sup>19</sup>. Learning support is the focus of this study.

Support in blended learning refers to the services, guidance, assistance, and resources offered by educational institutions to both students and educators to simplify their engagement and proficiency in BL environment. Blended learning support plays a significant role in ensuring that students and faculty effectively utilise the Learning Management System (LMS) to its full potential and seamlessly navigate the blended learning environment. An integral part of blended learning is student support, and the level of this support can improve or mar students' learning experience in blended learning environment<sup>20</sup>. There are different types of support in a blended learning setting that contribute to creating an effective learning experience; these include tutor support, management or institutional support, emotional support, family and friend support, counselling and well-being support, peer support, technical support, financial support, and instructor-led support, among others<sup>21</sup>.

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<sup>13</sup> Shreya Rustum Virani, Jatinderkumar R Saini, and Sarika Sharma, "Adoption of Massive Open Online Courses (MOOCs) for Blended Learning: The Indian Educators' Perspective," *Interactive Learning Environments* 31, no. 2 (2020): 1060–1076, <http://dx.doi.org/10.1080/10494820.2020.1817760>.

<sup>14</sup> Chantelle Bosch and Jessica Pool, "Establishing a Learning Presence," *Technology-Supported Teaching and Research Methods for Educators* (IGI Global, 2019), <http://dx.doi.org/10.4018/978-1-5225-5915-3.ch003>.

<sup>15</sup> Duong Huu Tong, Bui Phuong Uyen, and Lu Kim Ngan, "The Effectiveness of Blended Learning on Students' Academic Achievement, Self-Study Skills and Learning Attitudes: A Quasi-Experiment Study in Teaching the Conventions for Coordinates in the Plane," *Heliyon* 8, no. 12 (December 26, 2022): e12657–e12657, <https://pubmed.ncbi.nlm.nih.gov/36643330>.

<sup>16</sup> Shariful Islam Shakeel, Md Abdullah Al Mamun, and Md Faruque Ahmed Haolader, "Instructional Design with ADDIE and Rapid Prototyping for Blended Learning: Validation and Its Acceptance in the Context of TVET Bangladesh," *Education and information technologies* 28, no. 6 (2023): 7601–7630, <https://pubmed.ncbi.nlm.nih.gov/36532794>.

<sup>17</sup> Jess Bowyer and Lucy Chambers, "Evaluating Blended Learning: Bringing the Elements Together" (2017); Jie Hu et al., "Differentiating the Learning Styles of College Students in Different Disciplines in a College English Blended Learning Setting," *PloS one* 16, no. 5 (May 20, 2021): e0251545–e0251545, <https://pubmed.ncbi.nlm.nih.gov/34014963>.

<sup>18</sup> Venny Darlis and Dessy Kurnia Sari, "The Effectiveness of Blended Learning: The Impact of Student's Characteristics and Digital Literacy on Student Performance," *Advances in Social Science, Education and Humanities Research* (Atlantis Press, 2021), <http://dx.doi.org/10.2991/assehr.k.210202.097>; Graham, Allen, and Ure, "Benefits and Challenges of Blended Learning Environments."

<sup>19</sup> Samuel Amponsah, Yvette Ussher, and Kwesi Amoak Benjamin, "Availability and Access to Support Services in a Blended Learning Environment," *International Journal of Information and Communication Technology Education* 17, no. 1 (2021): 57–71, <http://dx.doi.org/10.4018/ijicte.2021010104>.

<sup>20</sup> David Kember et al., *Adapting to Online and Blended Learning in Higher Education: Supporting the Retention and Success of the Expanded and Diversified Intake* (Springer, 2023).

<sup>21</sup> Thomas K F Chiu, "Digital Support for Student Engagement in Blended Learning Based on Self-Determination Theory," *Computers in Human Behavior* 124 (2021): 106909,

In the higher education system, blended learning supports are imperative considering the existence of different challenges faced by different categories of students in a blended learning environment. These challenges vary across institutions depending on factors such as personal, and socioeconomic circumstances, learning preferences, technical proficiency, their prior experiences, and academic standing<sup>22</sup>. As regards academic standing, several institutions of higher education across the globe including South Africa have implemented access to the higher education programs to support students' transition to colleges from high<sup>23</sup>. The aim of these access programs is to provide additional academic and social support to students, to ensure a smooth and successful transition into higher education. The early 2000s in South Africa saw the introduction of Extended Programmes with an Integrated Foundation Phase (now commonly known as "Extended Program" (EP) or Extended Curriculum Programs" (ECP) with the aim of enhancing and widening access to learners who are previously disadvantaged and underprepared for higher education, and aiding their academic success<sup>24</sup>. While this study acknowledges diverse supports that have been provided by institutions since the massive adoption of BL pedagogical teaching approach, it is however imperative to appraise the effectiveness of these supports. Appraising the effectiveness of blended learning support across and through different years of study for higher education students is crucial to ensure that the support mechanisms are aligned with student's evolving needs, developmental stages, and changing expectations. One of the several ways to assess the effectiveness of these supports is through feedback surveys where feedback from students is gathered to understand their satisfaction and identify areas for improvement regarding support they receive.

## Methods

The constructive theory and the theory of social support are related to this study.

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<http://dx.doi.org/10.1016/j.chb.2021.106909>; Moses Kumi Asamoah, "Learner Support Services for Postgraduate Students: A Qualitative Approach," *E-Learning and Digital Media* 16, no. 5 (2019): 367–392, <http://dx.doi.org/10.1177/2042753019860613>; Amponsah, Ussher, and Amoak Benjamin, "Availability and Access to Support Services in a Blended Learning Environment"; Kember et al., *Adapting to Online and Blended Learning in Higher Education: Supporting the Retention and Success of the Expanded and Diversified Intake*; Céline Cocquyt et al., "Examining the Role of Learning Support in Blended Learning for Adults' Social Inclusion and Social Capital," *Computers & Education* 142 (2019): 103610, <http://dx.doi.org/10.1016/j.compedu.2019.103610>.

<sup>22</sup> Caroline Leininger-Frézal et al., "Global Change Challenge in the Higher Education Curriculum on the Approach of Blended Learning," *European Journal of Geography* 14, no. 2 (2023): 1–14, <http://dx.doi.org/10.48088/ejg.c.lei.14.2.001.014>.

<sup>23</sup> Louise Webber, "Using Capital, Habitus and Field to Explore Foundation Year Students' Higher Education Experiences," *Journal of Further and Higher Education* 48, no. 1 (2023): 110–124, <http://dx.doi.org/10.1080/0309877x.2023.2277418>.

<sup>24</sup> Webber, "Using Capital, Habitus and Field to Explore Foundation Year Students' Higher Education Experiences."

Constructivist theory suggests that a teacher should establish a learning environment where students can work together for social and personal meaning construction and seek to integrate their own experience with resources provided by the instructor<sup>25</sup>. The constructivism theory aligns with the principles of active student-centered learning, and this makes it very compatible with a blended learning environment. The theory finds strong support in BL environments due to its ability to facilitate social interaction, active learning, flexibility, and the incorporation of real-world situations. Blended learning can enhance students' ability to develop critical thinking skills in a student-centered learning environment, construct their own knowledge, and interact adequately, in a technology-enhanced educational context when effectively implemented<sup>26</sup>.

Social support theory suggests that interactions and social relationships play a crucial role in coping with stress, achieving positive outcomes, and promoting well-being<sup>27</sup>. In this study, social support theory is applied to understand how social interactions influence students' learning outcomes in a blended learning context, where traditional face-to-face instruction is combined with online components.

The research method and design used in this study is qualitative and cross-sectional respectively. Qualitative research method is a method that is adopted to make sense of social situations, or phenomena, feelings, and experiences, as they occur in the real world<sup>28</sup>. The approach allows for an in-depth understanding of these supports in their learning experiences<sup>29</sup>. Also, the study obtained information from sample population at a once-off period, hence cross-sectional research design. Consequently, information was obtained from twenty (20) first-year Extended Program students that were selected through a convenient sampling technique.

Data was gathered through an open-ended questionnaire. The open-ended questionnaire enables respondents to express their thoughts, opinions, and experiences in their own words regarding the effectiveness of blended learning support thus providing a deeper and more comprehensive understanding of their perspectives (Martin et. al., 2012). Data collected through an open-ended questionnaire served as a valuable resource for this study, in that it allowed the

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<sup>25</sup> Asamoah, "Learner Support Services for Postgraduate Students: A Qualitative Approach"; Amponsah, Ussher, and Amoak Benjamin, "Availability and Access to Support Services in a Blended Learning Environment."

<sup>26</sup> Ahmad Al-Huneidi and Jeanne Schreurs, "Constructivism Based Blended Learning in Higher Education," in *Information Systems, E-Learning, and Knowledge Management Research: 4th World Summit on the Knowledge Society, WSKS 2011, Mykonos, Greece, September 21-23, 2011. Revised Selected Papers 4* (Springer, 2013), 581–591.

<sup>27</sup> Xuexue Gao et al., "Characteristics and Development Trend of Learning Motivation in International Blended Learning Environment -- Visual Analysis Based on Web of Science Literature from 2011 to 2021," *The 15th International Conference on Education Technology and Computers* (ACM, 2023), <http://dx.doi.org/10.1145/3629296.3629371>.

<sup>28</sup> California Press et al., "Design for Citizen Science," *Biological Journal of the Linnean Society* (2015).

<sup>29</sup> Bin Yin and Chih-Hung Yuan, "Precision Teaching and Learning Performance in a Blended Learning Environment," *Frontiers in psychology* 12 (February 5, 2021): 631125, <https://pubmed.ncbi.nlm.nih.gov/33613404>.

exploration of the multifaceted aspects of blended learning experiences of study population (first-year Extended Program students). In addition, the data analysis was carried out using a summative content analysis approach. This approach allows researchers to examine data to discover the rate of recurrence of views, themes, and contextual reflection of these views to observe emerging patterns<sup>30</sup>.

Ethical consideration: Ethical clearance was obtained from the University's Research Ethics Committee<sup>31</sup> and a written informed consent form was obtained. These students gave their consent after being informed about the study. Participants were duly informed that their participation in the study was voluntary.

## **Result And Discussion**

It is no longer an argument that blended learning support is essential especially in the light of differences in student's exposure to advanced educational technology and different blended learning challenges amidst massive adoption of blended learning approaches in teaching and learning. However, it is more crucial to evaluate the effectiveness of blend-ed learning supports that are being provided. In this study, two main types of learner support were examined, namely instructor support and institutional (technical) support. Their effectiveness is evaluated in relation to two research questions presented in the study, i) What is the perception of students about the blended learning environment? ii) How do supports impact students' learning experiences, satisfaction, understanding of course material, motivation for learning, and learning satisfaction in a blended learning environment? In answering the question through the responses of respondents, identity of respondents has been taken into consideration; thus, the names attached to each story in the results section are not the authentic names of the study participants.

### ***Instructor-led Support***

Students were asked how they felt about the support provided by instructors in terms of provision of supplementary reading materials and recordings. This question was asked because accessing students' feelings about instructor's support is crucial to creating a positive and effective environment as it serves as an important quality assessment tool providing valuable insights into the effectiveness of teaching. Also, understanding how learners feel about instructors' support helps tailor teaching methods and support to meet individual needs. It can also assist instructors

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<sup>30</sup> David Silverman, *A Very Short, Fairly Interesting and Reasonably Cheap Book about Qualitative Research* (SAGE Publications, Ltd, 2013), <http://dx.doi.org/10.4135/9781526402264>.

<sup>31</sup> UREC, 2022

to refine support strategies they provide. Responses from the students are as follows:

“Grateful because in some courses we ask for them and we are not answered so I am very grateful for the fact I can access the question papers on my blackboard because sometimes it’s not easy to find past question papers.” (Respondent 4), “They are beneficial because they give more clarity and add to the information we’ve received in the lectures and slides. They also help us answer test questions better.” (Respondent 1), “I feel like they help me understand the topics better and it really helps a lot if there’s anything you don’t understand properly it’s easier to check through textbooks and listen to blackboard recordings.” (Respondent 16), “I am very grateful. I find them very helpful because when we do online classes the class is recorded, all you can do is to go back to the blackboard and find the recording and listen to it if you do not understand.” (Respondent 8)

First, in terms of instructor support, this study acknowledges the dynamics and numerous types of instructor support, but in this study the instructor support considered is limited to provision of online supplementary reading materials beyond course notes, consultations for clarity on lesson taught, and instructor’s response and feedback as identified in the literature section which the respondents positively confirmed to be offered by their instructors. The expression of gratitude portrayed by Respondent 8 and the practical example of using recorded classes to review content indicates the perceived value of instructor’s support, especially in the context of online classes where recorded materials have become essential for revision. These results are similar to Frederick<sup>32</sup> who also noted that students in the online cluster expressed favourable opinions and preferences for the various learning materials provided. Student respondents in the study appreciate the flexibility, autonomy and increased responsibility offered by an online course. Equally supporting the finding is the study of Banas<sup>33</sup> where the use of lecture recordings as a supplement to or substitute for live lectures was seen by students as useful.

*Research Question 2: How does support impact students' learning experiences, understanding of course material, and motivation for learning in a blended learning environment?*

The study participants were further asked to share their perception of how instructor support (i.e., online supplementary reading materials, past question papers to practice, provision of recordings of online class sessions, feedback, and electronic copy recommended textbook) they received in their blended learning has impacted their engagement with course materials, motivation

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<sup>32</sup> Kelsey D Frederick et al., “Assessing Student Perceptions of Blended and Online Learning Courses in Pharmacoeconomics, Management, and Leadership,” *American journal of pharmaceutical education* 87, no. 4 (April 2023): ajpe9001–ajpe9001, <https://pubmed.ncbi.nlm.nih.gov/36375849>.

<sup>33</sup> Kasia Banas et al., “Attitude and Peer Norm Predict How Students Use Lecture Recordings,” *Computers & Education* 207 (2023): 104933, <http://dx.doi.org/10.1016/j.compedu.2023.104933>.

to learn, and learning experience in general. The following excerpts illustrate some of their views.

*Engagement with course materials:* “They allow me spread out my studying meaning I will be able to spend more time on complicated topics and come back to those easier topics.” (Respondent 3), “When material is provided before a lesson, I am able to read through the notes before class. This gives me a better understanding of the lesson.” (Respondent 6), “The recordings allow me to go back to a lecture in case I missed something during the lesson. They also allowed me to experience lectures that I was not able to attend.” (Respondent 5)

*Motivation to Learn:* “Feedback on my assignments and performance helps me to fix my previous mistakes and work much better than I did previously.” (Respondent 10), “They motivate me to put more effort into my work and achieve better results.” (Respondent 18), “It helps me recognize my achievements and potential, provides meaningful and challenging goals.” (Respondent 1), “It boosts my self-confidence a lot because I personally love feedback, they make me to do better next time and get better marks.” (Respondent 9)

*Learning Experience:* “Feedback helps me to notice my previous mistakes and do better in future.” (Respondent 2), “The feedback I receive on my assignments shows me where the mistakes that are costing marks are and how to fix those mistakes.” (Respondent 15), “I think feedback helps me to see my strengths and my weaknesses through quality feedback. I also show were to put more effort or focus in order to achieve my goal and see if am progressing in the right direction.” (Respondent 7), “It helps me to close gap between actual and desired performance.” (Respondent 11)

In terms of perceived impact, the responses highlight the positive impact of instructor support in providing supplementary materials on student engagement with learning materials in the context of blended learning. These responses highlight the benefit of spreading out studying which enables more in-depth exploration of complex topics and enhance of students’ acquaintance with notes prior to the start of class. Through the recordings and supplementary materials, students are motivated to understand the material and improve their mastery of new skills. These agree with the observations of Sankar<sup>34</sup>, who point out the many positive effects of Blended Learning (BL) on the students. These include improvements in student engagement, confidence levels, responsiveness, curiosity to learn and overall motivation. This is also consistent with Morris et. al.,<sup>35</sup> who noted that students make significant use of lecture recordings (also known as lecture

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<sup>34</sup> Jayendra P Sankar et al., “EFFECTIVE BLENDED LEARNING IN HIGHER EDUCATION DURING COVID-19,” *Information Technologies and Learning Tools* 88, no. 2 (2022): 214–228, <http://dx.doi.org/10.33407/itlt.v88i2.4438>.

<sup>35</sup> Neil P Morris, Bronwen Swinnerton, and Taryn Coop, “Lecture Recordings to Support Learning: A Contested Space between Students and Teachers,” *Computers & Education* 140 (2019): 103604,



capture), throughout the academic session, and place great value on recordings for notetaking, more in-depth understanding or clarification, and assessment preparation. Indeed, providing well-designed online learning materials and additional instructor resources has been shown to significantly enhance analytical, critical thinking, and problem-solving abilities of students. By providing flexibility and additional resources, proactive instructor support will positively influence student engagement and comprehension. Essentially, from their responses, instructor support is a tool for improvement, especially being able to address and correct errors. The observed psychological effect of strengthening self-confidence, which in turn promotes the desire to continuously improve can also be inferred from their responses.

Furthermore, with respect to perceived impact of instructor's support on motivation to learn, the study respondents' opinions highlight the importance of constructive feedback not only in guiding academic progress, but also in nurturing students' motivation and confidence. This perception is consistent with the studies by Pan and Shao<sup>36</sup>, Esra et. al.,<sup>37</sup>, Turk et. al.,<sup>38</sup>; Lindberg<sup>39</sup>. Moreover, Pan and Shao demonstrated that instructors' online feedback was significantly positively correlated with and significantly influence learning motivation. Likewise, the finding in this study seems to be consistent with study of Esra et. al.,<sup>40</sup> which showed that adequate and satisfying de-tailed feedback was found to be a motivation booster for students that were examined. Satisfying instructor's feedback is imperative for learning motivation at any level of higher education in the blended learning dispensation because it provides constructive guidance and reinforces the connection between effort and academic progress. Thereby encouraging students to stay motivated in their learning journey.

Additionally, the responses relating to the importance of feedback highlight some important implications for the general learning experience in a blended learning environment, where it identified that instructor support plays a central role. First, respondent 2 emphasised the iterative nature of learning by recognizing and addressing mistakes through instructors' feedback, students'

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<http://dx.doi.org/10.1016/j.compedu.2019.103604>.

<sup>36</sup> Xiaoquan Pan and Huijuan Shao, "Teacher Online Feedback and Learning Motivation: Learning Engagement as a Mediator," *Social Behavior and Personality: an international journal* 48, no. 6 (2020): 1–10, <http://dx.doi.org/10.2224/sbp.9118>.

<sup>37</sup> MEŞE Esra and Çiğdem Sevilen, "Factors Influencing EFL Students' Motivation in Online Learning: A Qualitative Case Study," *Journal of Educational Technology and Online Learning* 4, no. 1 (2021): 11–22.

<sup>38</sup> Aras Bozkurt et al., "The Impact of COVID-19 on Education: A Meta-Narrative Review," *TechTrends* 66, no. 5 (2022): 883–896.

<sup>39</sup> Gerhard Fischer, Johan Lundin, and J Ola Lindberg, "Rethinking and Reinventing Learning, Education and Collaboration in the Digital Age—from Creating Technologies to Transforming Cultures," *The International Journal of Information and Learning Technology* 37, no. 5 (2020): 241–252.

<sup>40</sup> Esra and Sevilen, "Factors Influencing EFL Students' Motivation in Online Learning: A Qualitative Case Study."

can continuously refine their understanding and performance, thus, contributing to a dynamic learning process. Feedback is an important part of the teaching and learning process, helping students recognize gaps, self-assess, and respond to the information provided<sup>41</sup>. Additionally, it serves to inform instructors about the effectiveness of their teaching strategies and guide them in adapting these strategies to meet the specific needs of their students. Similarly, the idea of closing the gap between actual and desired performance as indicated in Respondent 11, reflects the adaptive nature of blended learning, where feedback acts as a mechanism for aligning student performance with their aspirations. This collectively ensures a more effective and personalised learning experience. The study of Hooda et. al.,<sup>42</sup> reported that real-time feedback improves student learning outcomes in higher education. Collectively, these responses convey a positive view of instructor support in blended learning environments. Such positive perceptions contribute to a supportive and enriching learning experience for students. Equally, they show that in a blended learning environment, instructor support serves not only as an error detection but also as a strategic tool for improvement, goal achievement, and closing performance gaps, resulting in, which seems to suggest a richer and more personalised learning experience.

### ***Technical Support***

#### ***Technical Challenges and Access to Technical Support***

Prior to exploring technical support students received, the study first considered common technical challenges experienced by the respondents. From their responses, two major technical challenges are encountered these are blackboard login failure and infra-structure related Issues (such as load-shedding and network connection [no connection or weak connection]). One of the respondents expressed that “When I was logging in to my blackboard, I entered an incorrect password, and I was blocked for two days from logging in to blackboard” (Respondent 7). Similar experience is that of respondent 16 who mentioned “I tried to use blackboard and it did not allow me to access my account did not know had to restart my laptop for like six times but nothing while on the other side the class was proceeding and on the other day there was the issue of password.”

In terms of infrastructure related issues, two respondents expressed difficulty due to infrastructure limitation. “It is difficult to attend classes as the WIFI in the residents isn’t good enough, sometimes, it disconnects itself and sometimes it has no internet connection, (Respondent

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<sup>41</sup> Monika Hooda et al., “Artificial Intelligence for Assessment and Feedback to Enhance Student Success in Higher Education,” *Mathematical Problems in Engineering* 2022 (2022): 1–19, <http://dx.doi.org/10.1155/2022/5215722>.

<sup>42</sup> Hooda et al., “Artificial Intelligence for Assessment and Feedback to Enhance Student Success in Higher Education.”

12) “It is an artificial technical issue caused by load shedding that leads to loss of network” (Respondent 9). The impact of technical challenges is broad, as expressed in the quotes; “It dragged down my learning motivation because I was not able to access my blackboard and attend my online classes” (Respondent 4), “It is very demotivating to not be able to attend your online classes properly. It interferes with your understanding of the work covered” (Respondent 13), “It decreased my learning because I can-not study before lectures because I need to wait for the lecturer to upload slides” (Respondent 11), “I no longer have that encouragement to study and improve my learning skills” (Respondent 14), “I was feeling like I was left out by that time and had to cover more work” (Respondent 3), “I couldn’t access blackboard for quite some time and this had a very negative impact on my learning process because I couldn’t get access to study materials” (Respondent 8).

Interviewees were further asked for their opinion on the accessibility of technical support when you encounter technical issues or have inquiries related to the learning platform or tools. The following quotations represent some of their views. “The technical support unit has an email and is always available to ask for anything about a technical problem” (Respondent 9), “The technical support team at the university is always an email away and if you need more immediate assistance the ICT office is easy to reach and there is always someone there to help” (Respondent 2).

It can be inferred from the opinion of the respondents’ that technical challenges interrupt learning individually and sometimes collectively. When these occur, access to online materials is constrained, causing delays, and consuming time, hindering meeting sub-mission deadlines, or leading to inability to attempt assessment within the required time frame. This outcome aligns with the findings of Rasheed et. al.,<sup>43</sup> and Sudewi<sup>44</sup>, where technical issues as a prominent challenge in the context of blended learning was identified. Also, Sudewi reported that participants highlighted connectivity challenges such as access to devices, internet issues as a major barrier in blended learning environments. These internet glitches frustrate learners and divert attention. It was however observed that these technical challenges do not impact learning motivation for some other students as reflected in their responses, “Didn’t impact my learning motivation because I acted to the issues as soon as possible” (Respondent 10), “They only caused minor inconveniences

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<sup>43</sup> Rasheed Abubakar Rasheed, Amirrudin Kamsin, and Nor Aniza Abdullah, “Challenges in the Online Component of Blended Learning: A Systematic Review,” *Computers & Education* 144 (2020): 103701, <http://dx.doi.org/10.1016/j.compedu.2019.103701>.

<sup>44</sup> Putu Wahyu Sudewi, “LEARNING EXPERIENCES USING BLENDED LEARNING ON EFL LEARNERS AT SULAWESI BARAT UNIVERSITY,” *JURNAL BASIS* 7, no. 1 (2020): 121–132, <http://dx.doi.org/10.33884/basisupb.v7i1.1787>.

and did not cause me to lose any motivation when it came to my studies(Respondent 6)”, “The challenges did not im-pact my learning motivation (Respondent 1).” Consequently, the existence of these technical challenges warrants the provision of technical support.

*What is your perception of the responsiveness of the technical support unit regarding your technical needs?*

Understanding the effectiveness of technical support is crucial in any BL environment. The perception of the responsiveness of the technical support unit plays an essential role in determining the overall satisfaction of learning with the services provided. Therefore, the responses below provide an insight into the experiences and satisfaction of students with quickly and effectively the technical support team addresses your specific technical needs.

“The technical support unit are fast and effective in helping with challenges and enquiries” (Respondent 4), “I have not needed them, but from what I have heard from other students they are quick to respond to any problems you might have and are always willing to help” (Respondent 11), “I feel like they alert us and make us aware that they will look into the problem and will report it once they have recovered” (Respondent 7), “It was really great as from now on I know what and where to fix when I face the same problem” (Respondent 9), “Technical support unit is very responsive about technical issues I faced this semester” (Respondent 15).

Chiu (2021) confirmed that students with the digital support had stronger perceived need support and more substantial levels of engagement. But beyond the provision of technical support, there are other sub-technical support that influences learning experiences in education settings. These include accessibility to technical support and responsiveness to technical support. The respondents provide positive feedback on the responsiveness of the technical support unit of the institution’s blended learning environment. Respondent 4 maintained that the technical support unit is effective and fast, thus suggesting that the unit responds swiftly to requests. This effectively minimizes interruptions due to technical challenges and contributes to a smoother learning experience. Likewise, the response that the unit provides updates and alerts students with regards to internet outages and upgrades shows active communication. This keeps students informed, promotes credibility and transparency when dealing with technical glitches. Likewise, respondent 15 mentioned that the unit is very responsive, this buttresses the positive sentiment. This is consistent with Diep et. al., study cohort, and the respondents confirmed the adequacy of support for technical issues and their responsiveness. Furthermore, the study notes that different blended learning modes have been found to have different interaction effects between technical support services and human factors. Responsiveness is a key fac-tor in maintaining the functionality and effectiveness of blended learning environments. These responses indicate that the technical

support unit is positively perceived, characterised by efficiency, proactive communication, and an overall high level of responsiveness. These positive perceptions undoubtedly contribute to a more collaborative and reliable blended learning experience.

*Research Question 2: How has the technical support you received impacted your learning engagement with the course content, participation in activities, and overall learning satisfaction and rate the impact of technical support on enhancing your engagement with the course materials and activities.*

*Responses:* “Technical issues can be very frustrating and time-consuming to resolve alone. Knowing that the technical support is available in our university enables us as learners to quickly resolve our problems, reducing the disruptions of our learning process” (Respondent 11), “The availability of technical support impacts my motivation to learn positively, because whenever I have enquiries about technical problems they respond immediately.” (Respondent 6), “The fact that they are always there and always available has motivated me to study more using my laptop because I know that if I run into an issue they will be there to assist.” (Respondent 19), “It has positive impact as I know whenever I face the same situation I am no longer going to suffer because, they are here which makes my things easier. It gives me assurance that should I face technical issues, they will be resolved.” (Respondent 2), “I might not have been exposed to any technical issues that needed technical support at this stage, but its availability is a great motivation to my learning merely on the citation that there’s a go-to facility when I’m faced with such difficulties. That on its own eases off the worries of what might possibly go wrong.” (Respondent 13)

In terms of perceived impact of technical support, respondents consistently conveyed positive perceptions about the impact of technical assistance on their learning experiences in blended environments. First, there is a common recognition of the potential frustration and time burden associated with solving technical problems on your own. The availability of technical support from the university is considered a valuable resource that allows learners to quickly address problems and minimize disruption to the learning process. This highlights the practical importance of technical support in maintaining the flow of education in a blended environment. A second important factor that positively influences motivation is the immediate responsiveness of technical support. The guarantee that queries regarding technical issues will be answered in a timely manner creates a conducive and supportive atmosphere for learning and promotes an optimistic attitude toward the learning process.

Additionally, the constant availability of technical support serves as a motivator to increase the use of technology in study, as expressed by respondents 19 and 13. This not only reflects the impact on study habits, but also highlights the role of technological support in facilitating more

technology-intensive learning and integrated learning environments. This is in line with the study by (Rotar, 2022) who reported that solid support strategies are important at different stages of students' learning process in blended learning. This allows them to benefit from a blended learning experience, successfully complete their studies and improve their employability.

Also, response 19 highlights the positive effects of ease and well-being, suggesting that the presence of technological support contributes to a smoother and less stressful learning experience. Similarly, respondent 2 emphasises assurance and confidence that technical issues will be resolved, concerns will be alleviated, and a more focused and relaxed learning approach will be possible. Finally, response 20 succinctly characterizes the general sentiment, stating that technical support is "very impactful and of significant impact." This is a concise summary of respondents' agreement on the important role of technical assistance in improving blended learning experiences. These responses provide a qualitative assessment that helps understand the perceived effectiveness of technical support. These responses indicate positive perceptions of the impact of technical support on blended learning experiences. They further emphasize the importance of technical support to the learning success and satisfaction of students in blended learning environments.

## **Conclusion**

This study assessed the effectiveness of blended learning support using the perceptions of first-year extended program students. The study focused on technical support and instructor-led support and their perceived impact on learning experiences and satisfaction, engagement with course material, motivation for learning, and learning satisfaction in a blended learning environment. Consequently, qualitative research methods and summative content analysis approach techniques were adopted. In general, the study findings identify and highlight the perceived positive impact of blended learning support that is expressed through favourable opinions and gratitude, and acknowledgement of efficiency, proactive communication, and an overall high level of responsiveness for both instructor and technical support, respectively. These are all further admitted by the respondents to contribute to a desirable and fulfilling blended learning experience. Considering these results, the study suggests that educational institutions should give priority to students for the blended learning support they require to achieve the desired blended learning out-comes. Instructors should be encouraged to maintain a dynamic interaction with their students and offer adaptability, thoughtfully created materials, and helpful feedback to improve the educational journey of learners in the blended learning system. In addition, technical support departments must also make continuous effort to maintain a positive reputation by ensuring unhindered access and use of the blended learning tool, consistent internet access, and

effective and proactive communication. In extending this study, studies may want to consider exploring or evaluating the effectiveness of blended learning support in different years of study for higher education students.

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