

Online Learning: Is There a Relationship between Learning Performance with Flexibility and Study-Life Balance?

Mazlan Che Soh¹, Nur Zafifa Kamarunzaman², Zurina Md Nen³, Nur Ain Yaacob⁴, Noor Hanim Rahmat⁵

^{1,2,3,4}Fakulti Sains Pentadbiran & Pengajian Polisi, Universiti Teknologi MARA Cawangan Negeri Sembilan, Kampus Seremban, ⁵Akademi Pengajian Bahasa, Universiti Teknologi MARA Cawangan Johor, Kampus Pasir Gudang

Email: mazlan3161@uitm.edu.my, nurzafifa@uitm.edu.my, zurina707@uitm.edu.my, nurainyaacob@uitm.edu.my, noorh763@uitm.edu.my
Corresponding Author Email: mazlan3161@uitm.edu.my

To Link this Article: <http://dx.doi.org/10.6007/IJARBSS/v14-i1/17193>

DOI:10.6007/IJARBSS/v14-i1/17193

Published Date: 24 January 2024

Abstract

The study examines the effects of online learning and the relationship between learning performance with flexibility and study-life balance. The research objectives ask: first, how do learners perceive their flexibility during learning; second, how do learners perceive their study-life balance during online learning; third, how do learners perceive their learning performance during online learning; and fourth, is there a relationship between learning performance with flexibility and study-life balance? This study applied a quantitative method with a distribution of questionnaires to the respondents. The survey consists of five sections. Section A has items on demographic profiles. Section B has nine items on flexibility. Section C has 10 items on study-life balance. Section D has 10 items on learning performance, and Section E has nine items on support strategies. A purposive sample of 207 students from Universiti Teknologi MARA (UiTM) participated in this study. The findings reveal a highly significant relationship between online learning and learning performance, flexibility, and study-life balance. The study's implication is crucial to educators and students as it can help mitigate any issues and challenges they face in online learning relating to these three attributes.

Keywords: Online Learning, Learning Performance, Study-Life Balance, Flexibility

Introduction

Background of Study

Students' learning performance has always been a central discussion in education. Measuring learning performance is crucial to ensure an effective learning process to achieve learning outcomes. This entails a degree of student achievement or success in acquiring and applying

knowledge, skills, and competencies. As such, research on initiatives and factors to improve learning performance has been extensive. A significant discussion on improving learning performance encompasses the role of technology in education.

Technology-enhancing tools and platforms were developed in the 1980s to enhance students' learning performance. With the advancement of technology, the twenty-first century has brought about a massive change in the world of education. Online learning has become a significant option for teaching and learning platforms worldwide. Online learning can be defined as "the use of the internet in some way to enhance the interaction between teacher and student. Online delivery covers both asynchronous forms of interaction such as assessment tools and the provision of web-based course materials and synchronous interaction through email, newsgroups, and conferencing tools, such as chat groups. It includes both classroom-based instruction and as well as distance education modes. Other terms synonymous with online learning are 'web-based education' and 'e-learning' (Curtain, 2002).

Ideally, online learning improves teaching effectiveness and enhances creativity in the teaching and learning process. These effects encourage engaging learning activities, creating significant positive and supportive learning environments, and improving learning performance (Harasim, 2000; Halabi et al., 2014; Chun & Heo, 2018). Online learning also offers a more flexible learning process (Daniel, 2016; Naidu, 2019; Almahasees et al., 2021). The most addressed dimensions of flexibility in online learning are learner-related factors such as time, place, learning resources, interaction, and pace of learning (Li & Wong, 2018; Soffer, Kahan & Nachmias, 2019). Students can complete their work anywhere and anytime at their convenience, removing the need for a location or time restriction. This flexibility ensures and maintains a study-life balance. Hendriks (2020) defines study-life balance as the division between a student's time and focus between their studies and other activities, such as leisure and extracurricular activities, and how a student's study and personal life (positively or negatively) affect or interfere with each other.

From the first offering of a fully online learning course in 1981 Harasim (2000), it was clear that this new education model had much potential to impact education at all levels. Online learning has transformed education from instructor-centered (traditional classroom) to student-centered, where students are more responsible for learning (Koch, 2014; Peterson, 2008). Chun & Heo (2018) pointed out that flipped learning is effective for self-efficacy and academic performance. Halabi et al (2014) provide empirical evidence to support that students who spend more time online significantly improve their course marks. Xhomara and Karabina (2021) found that the variance of online learning is different, revealing how different levels influence academic performance. Approximately 49.7% of the variance in academic performance can be accounted for by online learning differences. It is confirmed that the variance of online learning is different, revealing how different levels of online learning influence students' satisfaction. The study also found that approximately 78% of the variance in students' satisfaction can be accounted for by online learning differences.

Following the global outbreak of Coronavirus Disease 2019 (Covid-19), students were forced to shift from face-to-face to online learning, affecting about 1.2 billion school and university students worldwide (WEF, 2020). Consequently, the growth of online learning increased tremendously. According to the Coursera Impact Report (2021), more than 20 million students registered for online courses in 2016, which has increased by around 7 million annually. However, the post-pandemic shift to stay at home has tripled the number of new registrations, reaching 71 million in 2020 and 92 million in 2021. Therefore, online learning has become an

integral part of the educational landscape. The COVID-19 pandemic in 2020 closed all schools and universities worldwide, forcing about 1.2 billion students out of the classroom. Consequently, education has changed dramatically with the distinctive rise of online learning, whereby teaching is undertaken remotely and on digital platforms (WEF, 2020).

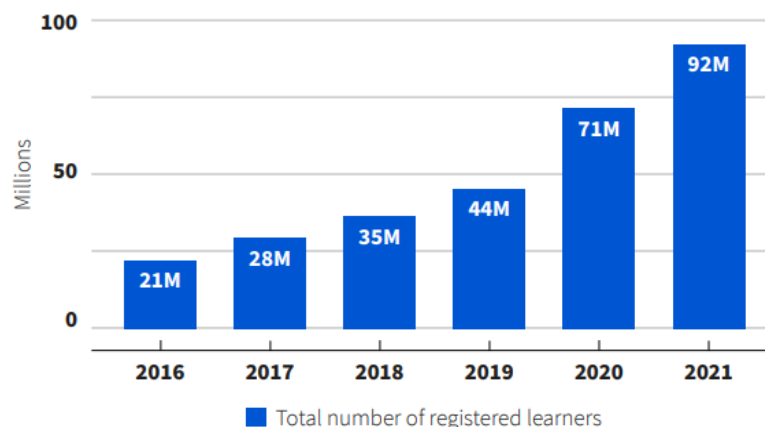


Figure 1: Statistics of Learners Accessing Online Learning 2016–2021

Source: Sinha Arunav, 2021

Malaysia is no exception. The Malaysian government issued a Movement Control Order (MCO) in March 2020 to contain the spread of the disease (Prime Minister's Office, 2020). The order calls for the closure of public and private buildings, including schools and universities. All students were forced to shift to online learning. Interestingly, even though online learning was cited on many positive accounts, students also faced many difficulties during the pandemic, especially when access to information and communication technology infrastructure and facilities was limited. It is worth investigating how students perceive their flexibility, study-life balance, and learning performance with online learning during the Covid-19 outbreak.

Learning performance can be defined in different ways. Some define it by students' test scores (Ferguson and DeFelice, 2010; Ekwunife-Orakwue and Teng, 2014; Law and Geng, 2019) while others view it as satisfaction with learning (Ekwunife-Orakwue and Teng, 2014; Yuan et al., 2020). Yang et al (2016) look at it from the perspective of the performance logged in the online learning system. The Association for Educational Communications and Technology (2004) states that learning performance is a learner's ability to apply newly acquired knowledge or skills. This definition does not solely involve learning basic knowledge and skills but applying them.

Meanwhile, flexibility is regarded as a key concept in individualizing the learning and teaching process, covering all activities of learners from entry to classes to the end of the learning process beyond the flexibility of place and time (Bergamin et al., 2012).

Kumain et al (2021) conducted a study to analyze university students' perceptions of the challenges and hurdles they faced during the Covid-19 pandemic when they utilized IT platform applications for online learning activities. The study utilized mixed methods research emphasizing qualitative research, supported by literature content analysis techniques. The data set for this study was collected from 16 May to 5 June 2020. The study collected data from 486 students from different universities in Malaysia and conducted a descriptive analysis, and analyzed the results with NVivo12. Students disclosed various obstacles they

encountered when utilizing IT platform applications for online learning. These obstacles are summarized as follows: (1) Work and information overload received from instructors through online learning platforms; (2) Technical challenges related to students' lack of affordability for having online learning support facilities; and (3) Personal health challenges related to stress and anxiety problems. Overall, online learning has affected the study-life balance among students in Malaysia.

In another study, Wong and Khambari (2021) explore the lived experiences of students from one public university in Malaysia in online learning from home. The study utilizes a qualitative method and analyzes students' personal experiences regarding the advantages and challenges of online learning during the MCO. Data were collected through students' blogs, documenting their expressions of their online learning experience for 12 weeks. Data were classified according to two main studied areas: advantages and challenges. Three themes emerged for advantages (flexible learning time, student-driven learning, and positive learning opportunities), while four themes emerged for challenges (poor internet connection, poor self-control, unconducive learning environment, and feelings of helplessness and burden). The study supports that online learning is the best alternative during the ongoing crisis despite the challenges.

Problem Statement

Over the last decade, the pedagogical use of technology has emerged progressively within the education world. The Covid-19 outbreak has forced all education institutions to adopt online learning, making it the main pedagogical mode for at least two years (Ahmad et al., 2022). During the outbreak, online learning was the best way to maintain learning among students. Some studies have reported that it provides time and cost savings and flexible time and location to attend classes (Ahmad et al., 2022; Šestanović & Siddiqui, 2021). The flexibility provides time to adjust and deals with uncertainty for students and teachers (Abuhmaid et al., 2022).

However, it does not lessen the stress students face during traditional pedagogy. Bauwens et al.'s (2020) research findings recorded inconclusive results on how working online contributes to work-life balance. A study on adult learners identified high stress levels when balancing life during the Covid-19 pandemic (Šestanović & Siddiqui, 2021). This was especially true when managing study-related responsibilities and life commitments all in one place, which was at home. They also reported job insecurity, which escalated their stress. In another study, Chansaengsee (2017) asserts that university students must be independent and responsible for their studies and lives, often leaving them anxious. Many failed to master time management skills. Ahmad et al.'s (2022) findings confer that university students did not experience a cutback of stress that increased their productivity. How do university students in Malaysia consider online learning? This study investigates university students' perceptions of online learning.

Objective of the Study and Research Questions

This study explores learners' perceptions of online learning. Specifically, this study answers the following questions

- How do learners perceive their flexibility during online learning?
- How do learners perceive their study-life balance during online learning?
- How do learners perceive their learning performance during online learning?

- Is there a relationship between learning performance with flexibility and study-life balance?

Literature Review

Drawbacks of Online Learning

Thamrin et al (2022) conducted a study among undergraduate students from three faculties at Universitas Bung Hatta, namely the Faculty of Humanities (FIB), Faculty of Economic and Business (FEB), and Faculty of Technology Industry (FTI). One research objective was to find the advantages and disadvantages of online learning. Disadvantages included technical problems, such as internet access, which limit and interrupt online learning. Online learning also affects learners' understanding of the subjects, reduces interactions with friends and the teacher, and may be harmed by learners' poor learning conditions at home, lack of self-discipline, or social isolation.

Benefits of Online Learning

The recent COVID-19 pandemic and the rapid development of technology have prompted a shift from traditional classroom teaching to online education. Online learning is rapidly growing, especially in niche areas of education. Almahasees et al (2021) indicate that online learning is perceived favorably by students for its flexibility, practicality, self-learning, cost-effectiveness, and opportunity to learn new things. Lecturers have also discovered that utilizing technology promotes engagement and collaboration among learners and can handle enormous numbers of students worldwide. Hence, at an institutional level, teaching using technology is a cost-effective method (Botham & Mason, 2007).

In another study by Hussein et al (2020) on students' attitudes toward online learning during COVID-19, students think that time- and cost-effectiveness, safety during the pandemic, and convenience are the advantages of online learning. Students can learn independently and study whenever and wherever they want. Learners have more learning opportunities as all the materials can be accessed from a computer or mobile device. Additionally, online courses are conducive to students who favor self-regulated learning (You & Kang, 2014). These courses employ a large amount of interactive content from the internet, accommodating various types and styles of learning methodologies. There is a growing number of online materials available online, such as online journals and related websites, which provide rich resources for online learners. These advantages enhance students' efficacy of knowledge and qualifications via easy access to a huge amount of information.

Additionally, online learning enables remote groups to collaborate online, work on common projects, and develop a feeling of community despite being hundreds of miles apart (An & Kim, 2006). Discussion forums can form relations between learners and consequently eliminate the barriers hindering students who are afraid of talking to other learners. Students will be motivated to interact with others and exchange and respect different points of view.

Past Studies on Benefits of Online Learning

There have been many past studies on the benefits of online learning. Rawashdeh et al (2021) identified the advantages and disadvantages of online learning in university education in the United Arab Emirates. A close-ended structured questionnaire was constructed to collect data from 100 students enrolled in Ajman University in the second semester of the academic year of 2018–2019. The findings revealed that 81% of students stated that online learning interestingly provides scientific material and increases the possibility of contact between

students and between students and teachers. Next, Almahasees et al. (2021) investigated the effectiveness, challenges, and advantages of online education in Jordan. The respondents were 50 faculty members and 280 randomly selected students. The instrument was an online Google Forms survey sent to the faculty and students through emails, Facebook Messenger, WhatsApp, and LinkedIn. The findings revealed that online learning brings more flexibility, cost-effectiveness, and convenience and enhances self-learning among students. The study also recommends blended learning to provide a rigorous learning environment.

Conceptual Framework

This study assumes that there are factors influencing learning from home with either negative or positive impacts. These impacts are rooted in the learners' intrinsic and extrinsic motivations. According to Rahmat et al (2022), intrinsic motivation is positively impacted when learners feel competent and autonomous. When learners engage in activities for internal rather than external reasons, there will be positive effects on their intrinsic motivation. The conceptual framework is presented in Figure 2. This study is rooted in Abdullah et al.'s (2020) study, which presented three factors influencing studying from home: flexibility, study-life balance, and learning performance. This study investigates the relationship between learning performance and flexibility. This study also explores the relationship between learning performance and study-life balance.

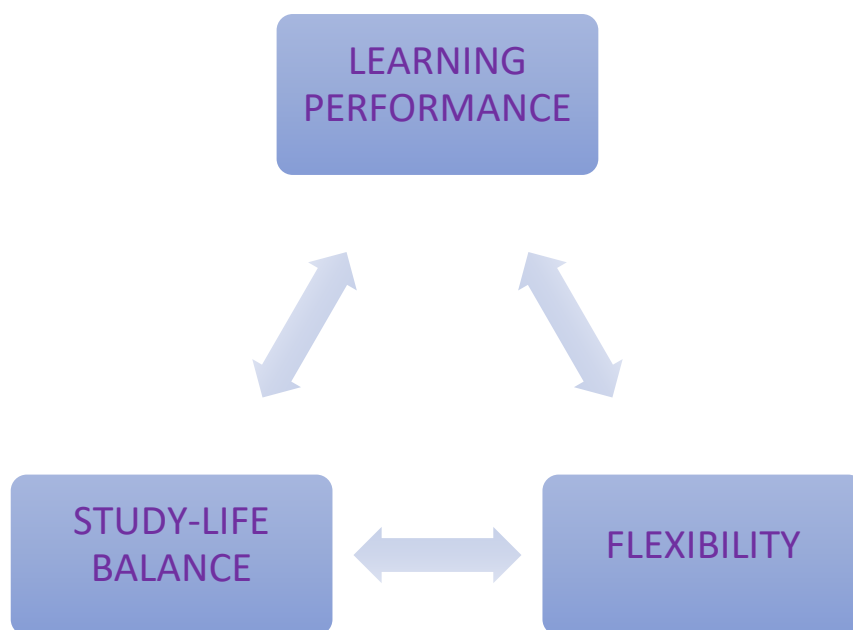


Figure 2- Conceptual Framework of the Study- Is there a relationship between learning performance with flexibility and study-life balance?

Methodology

This quantitative study explores motivation factors for learning among undergraduates. A purposive sample of 207 participants responded to the survey. The instrument employed is a 5 Likert-scale survey rooted in Abdullah et al (2020) to reveal the variables in Table 1 below. The survey has four sections. Section A has items on demographic profile. Section B has nine items on flexibility. Section C has 10 items on study-life balance. Section D has 10 items on learning performance and section E has nine items on support strategies.

Table 1

Distribution of Items in the Survey

SECTION	FACTORS	NO OF ITEMS
B	Flexibility	9
C	Study-Life Balance	10
D	Learning Performance	10
		29

Table 2

Reliability of Survey

Reliability Statistics	
Cronbach's Alpha	N of Items
.960	29

Table 2 displays the survey’s reliability. The analysis reveals a Cronbach’s alpha of .960, revealing the instrument’s high reliability. Further analysis through SPSS presents findings to answer the research questions.

Findings

Findings for Demographic Profile

Q1.Gender

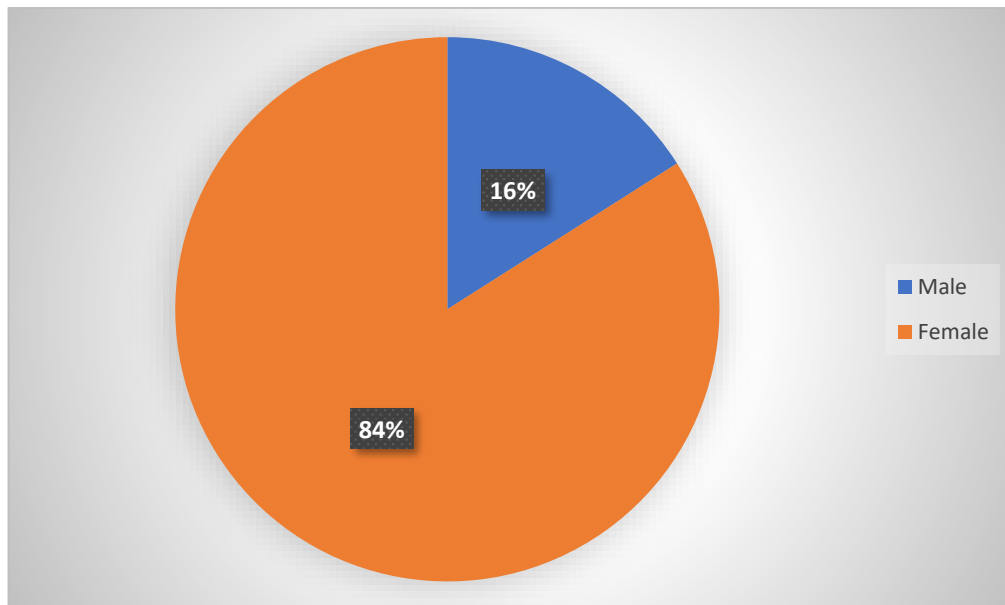


Figure 3- Percentage of Gender

Figure 3 displays the respondents’ genders. There were 33 males (16%) and 174 females (84%).

Q2 Year of Study

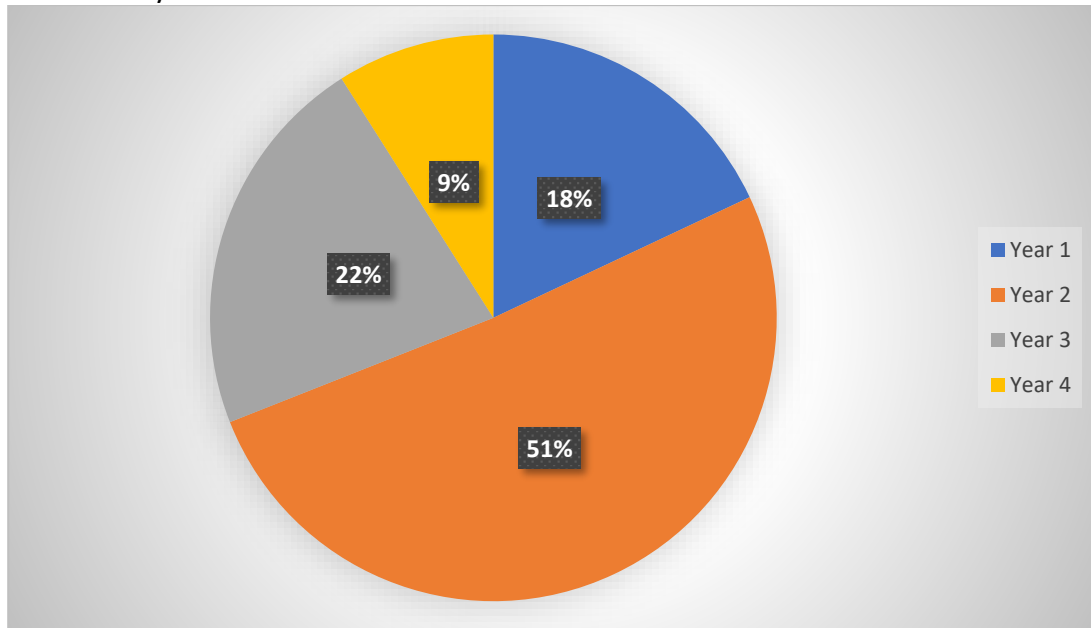


Figure 4- Percentage for Year of Study

Figure 4 displays the respondents' year of study. Most respondents were from Year 2 (51%), followed by respondents from Year 3 (22%), Year 1 (18%), and Year 4 (9%).

Q3. Cluster

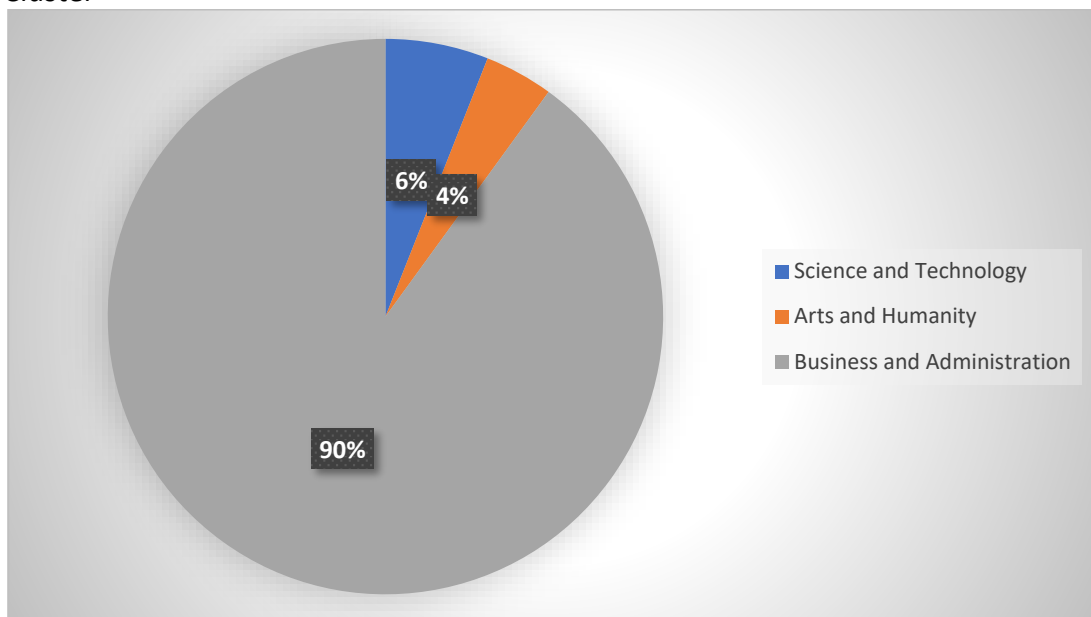


Figure 5- Percentage for Cluster

Figure 5 reveals that most respondents were from Business and Administration with 188 respondents (90%), followed by Science and Technology with 10 respondents (6%), and Arts and Humanity with nine respondents (4%).

Findings for Flexibility

This section presents data to answer research question 1: How do learners perceive their flexibility during online learning? Overall, the findings recorded four items with high mean

scores and five with average scores. Most respondents expressed the convenience of being at home while working (mean=4.3), the cost spent on travelling to the university (mean=4.3), and the effortlessness in being present in an online class (mean=4.3). Meanwhile, respondents adjusted their lifestyle to fit the new norm, such as by travelling less (mean=3.6), being healthier (mean=3.8), increasing work productivity (mean=3.5), and having less stress (mean=3.4).

Flexibility (F)

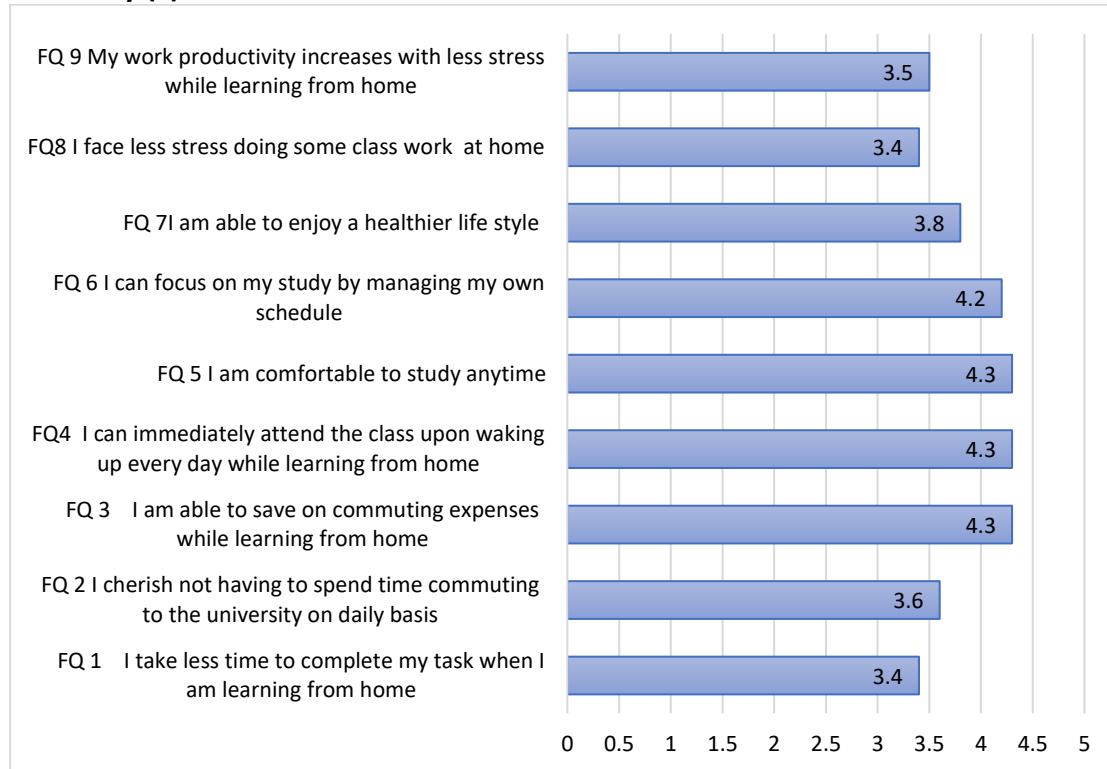


Figure 6- Mean for Flexibility

Findings for Study-Life Balance

This section presents data to answer research question 2: How do learners perceive their study-life balance during online learning?

Study-Life Balance

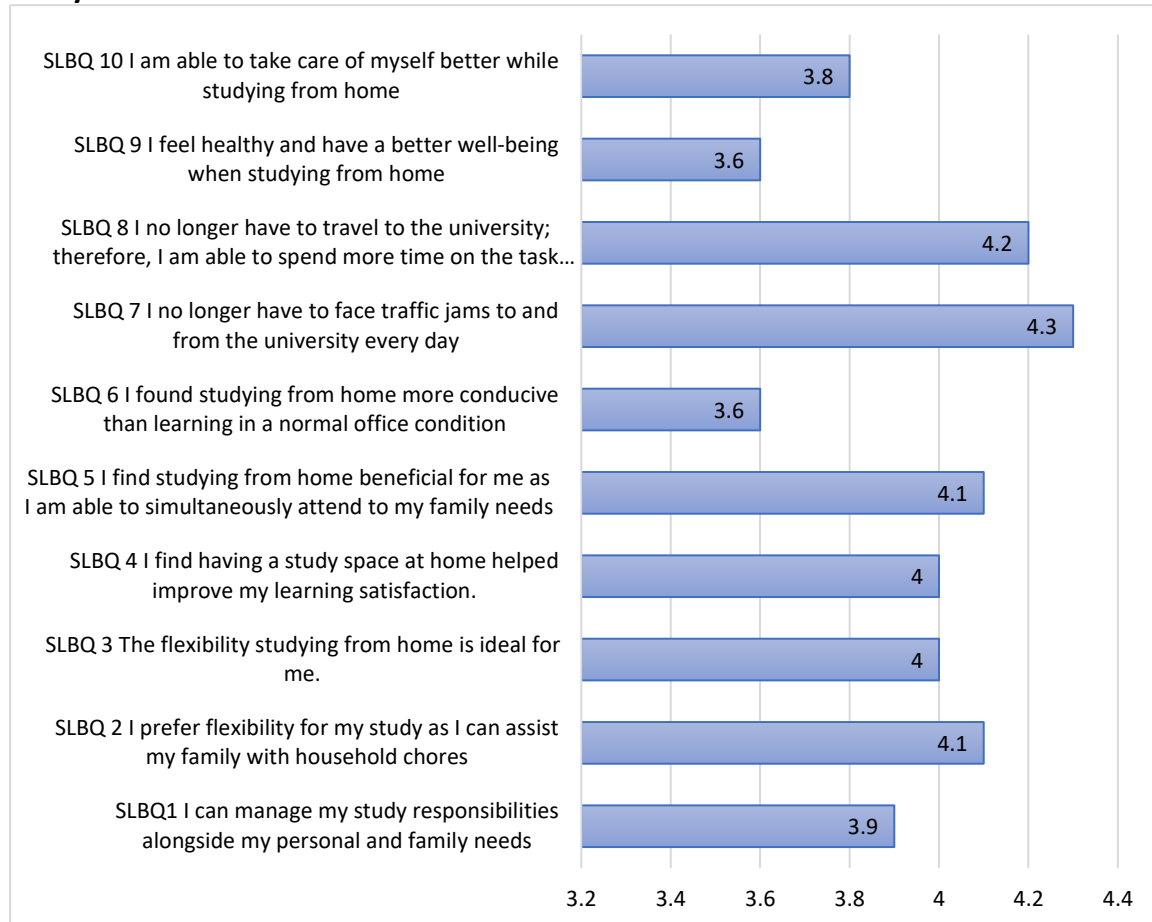


Figure 7- Mean for Study-Life Balance

Overall, the findings recorded six items with high mean scores and four with average scores. Most respondents expressed concerns about not facing traffic jams to and from the university daily (mean=4.3), followed by no longer having to travel to the university. They expressed that they could spend more time on tasks (mean=4.2). Next, most respondents preferred the flexibility of online learning as they could help their family with household chores (mean=4.1) and attend to their family's needs (mean=4.1). The flexibility of studying from home was ideal (mean=4.0) and improved their learning satisfaction (mean=4.0). Respondents found a study-life balance as studying from home was more conducive than normal office conditions (mean=3.6). Respondents also expressed feeling healthy and having better well-being when studying from home (mean=3.6). They could better care for themselves while studying from home (mean=3.8). They could manage their study responsibilities alongside their personal and family needs (mean=3.9).

Findings for Learning Performance

This section presents data to answer research question 3: How do learners perceive their learning performance during online learning?

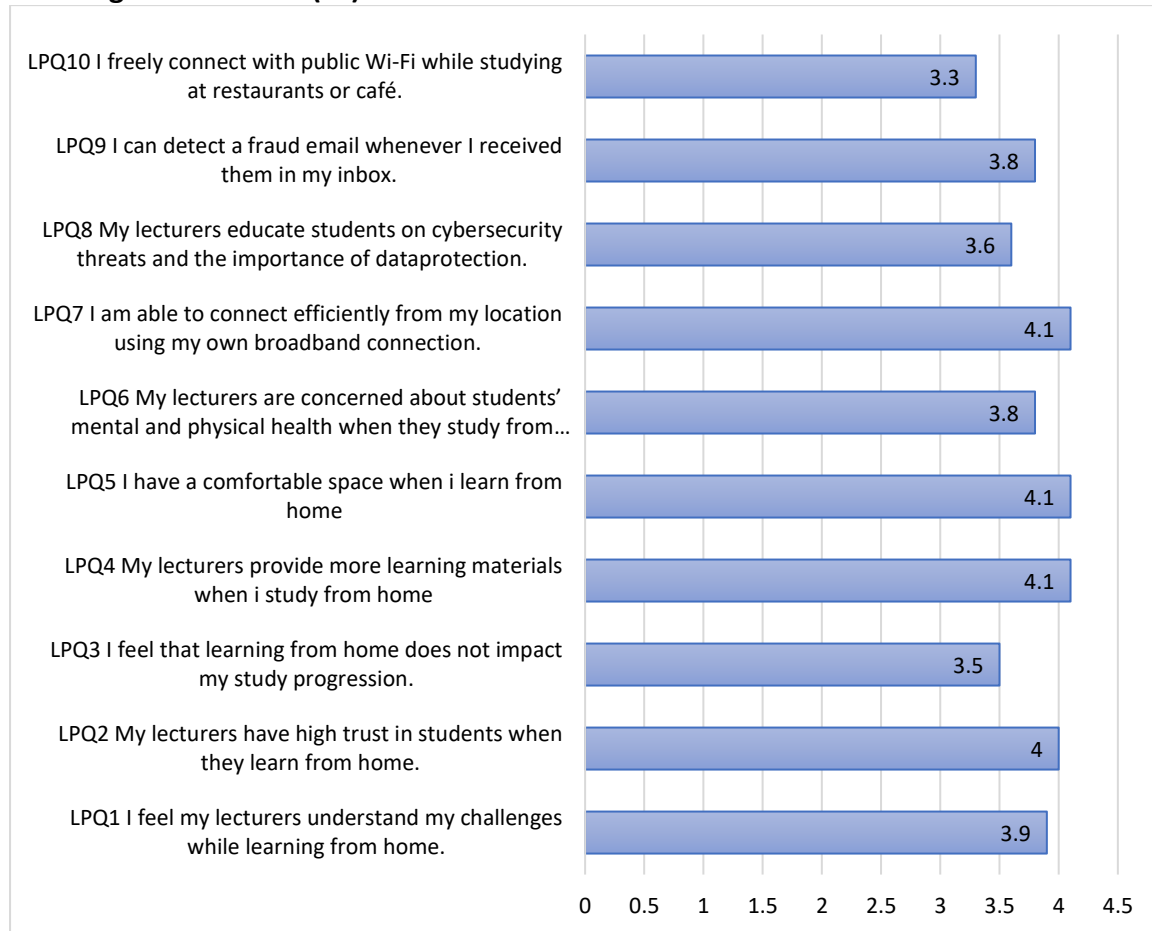
Learning Performance (LP)

Figure 8-Mean for Learning Performance

The above table displays the mean score for learning performance during online learning. Most learners agree that they have a comfortable space at home, can connect efficiently during online classes, and receive more learning materials from lecturers when they study from home. These three items have the highest mean at 4.1. Meanwhile, the lowest mean for learning performance is 3.3, where learners freely connect to public Wi-Fi while studying at restaurants or cafes.

Findings for Relationship between Learning Performance with Flexibility and Study-Life Balance

This section presents data to answer research question 4: Is there a relationship between learning performance with flexibility and study-life balance? Data is analyzed using SPSS for correlations to determine a significant association in the mean scores between learning performance with flexibility and study-life balance. The results are presented separately in Tables 3 and 4 below.

Table 3

*Correlation between Learning Performance and Flexibility***Correlations**

		TOTALLEARNINGPERFORMANCE	TOTALFLEXIBILITY
TOTALLEARNINGPERFORMANCE	Pearson Correlation	1	.762**
	Sig. (2-tailed)		.000
	N	207	207
TOTALFLEXIBILITY	Pearson Correlation	.762**	1
	Sig. (2-tailed)	.000	
	N	207	207

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

Table 3 reveals an association between learning performance and flexibility. Correlation analysis reveals a highly significant association between learning performance and flexibility ($r=.762^{**}$, $p=.000$). According to Jackson (2015), a coefficient is significant at the .05 level, and a positive correlation is measured on a 0.1 to 1.0 scale. A weak positive correlation would be between 0.1 to 0.3, a moderate positive correlation from 0.3 to 0.5, and a strong positive correlation from 0.5 to 1.0. Thus, there is a strong positive relationship between learning performance and flexibility.

Table 4

*Correlation between Learning performance and Study-Life Balance***Correlations**

		TOTALLEARNINGPERFORMANCE	TOTALSTUDYLIFEBALANCE
TOTALLEARNINGPERFORMANCE	Pearson Correlation	1	.723**
	Sig. (2-tailed)		.000
	N	207	207
TOTALSTUDYLIFEBALANCE	Pearson Correlation	.723**	1
	Sig. (2-tailed)	.000	
	N	207	207

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

Table 4 reveals an association between learning performance and study-life balance. Correlation analysis reveals a highly significant association between learning performance and study-life balance ($r=.723^{**}$, $p=.000$). There is a strong positive relationship between learning performance and study-life balance.

Conclusion*Summary of Findings and Discussions*

This research examines the effects of online learning and the relationship between learning performance with flexibility and study-life balance. Learning performance is an attribute where students acquire knowledge and skills from the learning activity and process.

Meanwhile, flexibility refers to the settings provided through online learning. A unique characteristic of online learning is the flexibility provided in the learning process. Online learning delivers knowledge beyond time and place. Next, study-life balance is the state of balancing between a student's time and focus between their study and other activities, such as leisure activities and extracurricular activities, and how their study and personal life (positively or negatively) affect or interfere with each other.

The above results illuminate the effects of online learning and their relationship between learning performance with flexibility and study-life balance. The findings on online learning and learning performance found that most learners agree that they have a comfortable space at home, can connect efficiently during online classes, and receive more learning materials from lecturers when they study from home. These findings are supported by (Wei and Chou, 2020; Yang et al., 2016).

This study also found that most respondents expressed the convenience of being at home while working during online learning. This proves that online learning provides flexibility. This is supported by Naidu (2019); Daniel (2016). The study also outlined the significance of study-life balance. The findings are supported by Sestanovic and Siddiqui (2021) and Tan, Wong and Lim (2020). This article also found a significant association in the mean scores between learning performance with flexibility and study-life balance. The same was discovered within the relationship between learning performance and flexibility and study-life balance.

Pedagogical Implications and Suggestions for Future Research

Based on these results, educators and instructional designers must foster a conducive environment while engaging students in an online learning setting. This medium offers flexibility that can improve learners' learning performance and study-life balance. Future research can conduct an in-depth study employing a qualitative method to investigate the challenges and opportunities in providing online learning between Science and Non-Science students.

References

- Abdullah, N. A. A., Rahmat, N. H., Zawawi, F. Z., Khamsah, M. A. N., and Anuarsham, A. H. (2020) Coping with Post COVID-19: Can Work from Home be a New Norm? *European Journal of Social Science Studies*, Vol 5(6), pp 61-81. Retrieved from <https://oapub.org/soc/index.php/EJSSS/article/view/933>.
- Abuhmaid, A., Kaur, I., & Joordens, S. (2022). The Convertible Learning System: A Certainty for Uncertain Times. *Journal of Education*, 00220574221088500. DOI: 10.1177/00220574221088500.
- Ahmad, N., Rashid, N. R. A., Abdullah, N. A. T., Yean, C. P., Sharif, S., & Rahmat, N. H. (2022). Exploring learners' motivations for studying from home. *International Journal of Academic Research in Business and Social Sciences*, 12(1), 2210-2243. DOI: 10.6007/IJARBS/v12-i1/12151.
- Al-Kumaim, N. H., Mohammed, F., Gazem, N. A., Fazea, Y., Alhazmi, A. K., & Dakkak, O. (2021). Exploring the Impact of Transformation to Fully Online Learning During COVID-19 on Malaysian University Students' Academic Life and Performance. *International Journal of Interactive Mobile Technologies*, 15(5).
- Almahasees, Z., Mohsen, K., and Amin, M. O. (2021). Faculty and Students' Perceptions of Online Learning During COVID-19. *Frontiers in Education*, 6:638470. doi: 10.3389/feduc.2021.638470.

- An, H., & Kim, S. (2006). The benefits and limitations of online group work in a teacher education program. In C. Crawford, D.A. Willis, R. Carlsen, I. Gibson, K. McFerrin, Jerry Price, et al. (Eds.), *Proceedings of Society for Information Technology and Teacher Education International Conference 2006* (pp. 2465-2472), Orlando, FL. Chesapeake, VA: Association for the Advancement of Computing in Education.
- Bauwens, R., Muylaert, J., Clarysse, E., Audenaert, M., & Decramer, A. (2020). Teachers' acceptance and use of digital learning environments after hours: Implications for work-life balance and the role of integration preference. *Computers in Human Behavior, 112*, 106479. <https://doi.org/10.1016/j.chb.2020.106479> .
- Bergamin, P. B., Ziska, S., Werlen, E., & Siegenthaler, E. (2012). The relationship between flexible and self-regulated learning in open and distance universities. *The International Review of Research in Open and Distributed Learning, 13*(2), 101-123. <https://doi.org/10.19173/irrodl.v13i2.1124>.
- Botham, R., & Mason, C. (2007). *Good Practice in Enterprise Development in UK Higher Education*. Birmingham: National Council for Graduate Entrepreneurship.
- Chansaengsee, S. (2017). Time management for work-life and study-life balance. *Veridian E-Journal, Silpakorn University (Humanities, Social Sciences and arts), 10*(5), 20-34.
- Chun, B. A., & Heo, H. J. (2018). The Effect of Flipped Learning on Academic Performance as an Innovative Method for Overcoming Ebbinghaus' Forgetting Curve. *ICIET 2018, January 6-8, 2018, Osaka, Japan* © 2018 ACM. ISBN 978-1-4503-5359-5/18/01. DOI: <https://doi.org/10.1145/3178158.3178206>.
- Curtain, R. (2002). Online delivery in the vocational education and training sector. Retrieved from <http://www.flexiblelearning.net.au>.
- Daniel, J. (2016). Making sense of flexibility as a defining element of online learning. Athabasca University.
- Ekwunife-Orakwue, K. C. V., and Teng, T. L. (2014). The impact of transactional distance dialogic interactions on student learning outcomes in online and blended environments. *Comput. Educ. 78*, 414–427. doi: 10.1016/j.compedu.2014.06.011.
- Ferguson, J. M., and DeFelice, A. E. (2010). Length of online course and student satisfaction, perceived learning, and academic performance. *Int. Rev. Res. Open Distance Learn. 11*, 73–84. doi: 10.19173/irrodl.v11i2.772.
- Halabi, A. K., Essop, A., & Carmichael, T., Steyn, B. (2014). Preliminary Evidence of a Relationship between the Use of Online Learning and Academic Performance in a South African First-Year University Accounting Course. *Africa Education Review, 11*(2), 164-182.
- Harasim, L. (2000). Shift happens: online education as a new paradigm in learning. *The Internet and Higher Education, 3*(1–2), 41 – 61. doi:[http://dx.doi.org/10.1016/S1096-7516\(00\)00032-4](http://dx.doi.org/10.1016/S1096-7516(00)00032-4).
- Hendriks, J. A. (2020). *Exploring study-life balance of students and their perceptions of an engagement app* (Bachelor's thesis, University of Twente).
- Hussein, E., Daoud, S., Alrabaiah, H., & Badawi, R. (2020). Exploring undergraduate students' attitudes towards emergency online learning during COVID-19: A case from the UAE. *Children and youth services review, 119*, 105699. <https://doi.org/10.1016/j.chilyouth.2020.105699>.
- Jackson, S. L. (2015). *Research methods and Statistics-A Critical Thinking Approach* (5th Edition) Boston, USA: Cengage Learning.

- Koch, L. F. (2014). The nursing educator's role in e-learning: a literature review. *Nurse Education Today*, 34(11), 1382 – 1387. doi:<http://dx.doi.org/10.1016/j.nedt.2014.04.002>.
- Law, K. M. Y., and Geng, S. (2018). How innovativeness and handedness affect learning performance of engineering students? *Int. J. Technol. Des. Educ.* 29, 897–914.
- Li, K. C., & Wong B. Y. Y. (2018). Revisiting the definitions and implementation of flexible learning. In K. Li, K. Yuen & B. Wong (Eds.), *Innovations in Open and Flexible Education* (pp. 3-13). Singapore: Springer.
- Naidu, S. (2019). The changing narratives of open, flexible and online learning. *Distance Education*, 40(2), 149-152.
- Peterson, D. S. (2008). A meta-analytic study of adult self-directed learning and online nursing education: A review of research from 1995 to 2007. retrieved from <http://search.proquest.com.proxy.lib.sfu.ca/docview/194001867?accountid=13800>.
- Prime Minister Office of Malaysia. (2020). *Restriction of Movement Order*. Retrieved from <https://www.pmo.gov.my/2020/03/movement-control-order/>.
- Rahmat, N. H., Rahman, S. A. S. A., Yunus, D. R. M., Sa'adan, N., Jasman, N. H., & Rahman, S.S. S. A. (2022). Exploring Work from Home Amidst Post-Covid. *International Journal of Academic Research in Business and Social Sciences*, 12(1), 1107–1120. <http://dx.doi.org/10.6007/IJARBS/v12-i1/12026>.
- Šestanović, A., & Siddiqui, M. (2021). Study-Life Balance And Mature Students In Higher Education During The Covid-19 Pandemic: The Case Of Oxford Business College, United Kingdom. *European Journal of Education Studies*, 8(11). DOI: 10.46827/ejes.v8i11.3975
- Arunav, S. (2021) Coursera Impact Report. Retrieved from <https://about.coursera.org/press/wp-content/uploads/2021/11/2021-Coursera-Impact-Report.pdf>. Accessed 10 June 2023
- Soffer, T., Kahan, T., & Nachmias, R. (2019). Patterns of students' utilization of flexibility in online academic courses and their relation to course achievement. *The International Review of Research in Open and Distributed Learning*, 20(3). <https://doi.org/10.19173/irrodl.v20i4.3949>.
- Tan, E. S. J., Wong, S. C., & Lim, C. S. (2020). Quantitative Approach on Undergraduates' Student-Life Balance: Intervention for Academic Stress. *Asian Social Science*, 16(11), 1-66.
- Thamrin, T., Hasan, D. C., Rina, N., Gani, M. H., & Miranda, A. M. (2022). Advantages and disadvantages of online Learning during the COVID-19 pandemic: The perceptions of students at Bung Hatta University. *KnE Social Sciences*, 329-338.
- Wei, H. C., & Chou, C. (2020). Online learning performance and satisfaction: do perceptions and readiness matter?. *Distance Education*, 41(1), 48-69.
- Wong, S. L., & Khambari, M. N. M. (2021). Students' Online Learning Experience during the COVID-19 pandemic: A Case Study at Universiti Putra Malaysia. In 29th International Conference on Computers in Education (ICCE), Electr Network, Nov (pp. 22-26).
- World Economic Forum. (2020). The COVID-19 Pandemic has changed the education forever. Accessed 11th April 2023 from <https://www.weforum.org/agenda/2020/04/coronavirus-education-global-covid19-online-digital-learning/>.
- Xhomara, N., Karabina, M., & Hasani, N. (2021). The Perceptions of Students and Principals on the Improvement of Students' Achievements by the Managerial and Transformational Leadership Styles. *Pedagogika*, 144(4), 119-136.

- Yang, J. C., Quadir, B., Chen, N. S., and Miao, Q. (2016). Effects of online presence on learning performance in a blog-based online course. *Internet High. Educ*, 30, 11–20. doi: 10.1016/j.iheduc.2016.04.002.
- You, J. W., & Kang M. (2014). The role of academic emotions in the relationship between perceived academic control and self-regulated learning in online learning. *Computers & Education*, 77, 125–133. <https://doi.org/10.1016/j.compedu.2014.04.018>.
- Yuan, C. H., Wang, D. J., Mao, C. Y., and Wu, F. X. (2020). An empirical comparison of graduate entrepreneurs and graduate employees based on graduate entrepreneurship education and career development. *Sustainability*, 12:10563. doi: 10.3390/su122410563.