



REMOTE LEARNING IN MILITARY HIGHER EDUCATION DURING COVID-19: CHALLENGES AND STRATEGIES FOR STUDENT OFFICERS IN SRI LANKA

UVS Bandara¹, WS Sudusinghe² and CKW Gamage³

Sri Lanka Air Force¹,

Department of Languages, Faculty of Management, Social Sciences & Humanities, KDU, Sri Lanka²

Faculty of Allied Health Sciences, KDU, Sri Lanka³

ABSTRACT

The COVID-19 pandemic precipitated a global shift in higher education toward remote learning, prompting diverse adaptations to ensure continuity in student education. This transition was particularly impactful in Sri Lanka, where the tri-forces' student officers, crucial for national defense, underwent remote postgraduate studies. This study investigates the challenges, perceptions, and proposed strategies of these officers pursuing the PSC (Master's degree at Defence Services Command and Staff College) during the pandemic. Grounded in Anderson's Theory and Practice of Online Learning, the research employed a descriptive cross-sectional design, surveying 30 male student officers via an online questionnaire. Results indicate a generally positive reception of remote learning, with 61.9% expressing satisfaction, despite encountering technical barriers, limited peer interaction, motivation issues, and content comprehension difficulties. While 52.4% reported moderate engagement levels, 66.7% acknowledged satisfactory lecturer support. The study suggests enhancing infrastructure, fostering interactive learning environments, and improving teacher-student interaction to mitigate challenges and bolster remote learning effectiveness. Notably, 85.7% of respondents advocate for hybrid learning, blending online and traditional methods. However, limitations include a small, male-only sample, limiting generalizability, and neglecting perspectives of officers with lower IT and English proficiency. Recommendations include policy interventions to enhance teacher-student interaction, promote engagement, and optimize remote learning quality, recognizing its pivotal role in future higher education. This study contributes insights into the challenges and prospects of remote learning in a unique military educational context, informing strategies for its effective implementation amidst crises and beyond.

KEYWORDS: Remote learning, Higher education, Tri-forces, COVID-19 pandemic, Student officers

Corresponding Author: WS Sudusinghe, Email: sudusinghews@kdu.ac.lk



<https://orcid.org/0000-0002-5458-8781>



This is an open-access article licensed under a Creative Commons Attribution 4.0 International License (CC BY) allowing distribution and reproduction in any medium crediting the original author and source.

1. INTRODUCTION

The COVID-19 pandemic has been the biggest challenge across the higher education sector all over the world. It has impacted globally by the disruption of normal functioning (He et al., 2020). Therefore, governments implemented policies and regulations to maintain separation between communities, leading many countries to discontinue the traditional face-to-face teaching method (Hoofman and Secord, 2021). Further, the World Health Organization recommended the maintenance of social separation as an effective means of preventing the spread of COVID-19 (He et al., 2020).

The outbreak of the pandemic has led to the transition of remote learning, making it necessary to shift away from the traditional mode of face-to face learning to novel modes of education. This has paved the way for the utilization of wide range of technical sources ranging from lower tech options like the printed material, television, radio, up to highly developed technical sources like online learning platforms, to facilitate the continuation of learning. The process of adopting to remote learning during the pandemic was a momentary approach taken to face the challenging circumstances, and it was different from the well-designed approach of online learning (Wambaria, 2023). This massive transition has impacted multiple facets of education including the education provided for the tri-forces. Therefore, it was obvious that the military education underwent significant changes with its adaptation for remote learning. This has created the need to improve the mechanisms of remote learning with regards to the military education, specially to meet any similar challenges in the future.(Hodgetts et al., 2020). Moreover, it is important to note the vital role played by the tri-forces in enhancing the service provided by the public health systems during the outbreak of the pandemic (Gad et al., 2021).

During the COVID-19 period, the government of Sri Lanka decided to continue education online to ensure the uninterrupted progression of students' academic activities while adhering to health and safety

protocols necessitated by the pandemic (Rameez et al., 2020). Consequently, many students pursuing diplomas and degrees transitioned to online learning (Sudusinghe and Kumara, 2020). Accordingly, the landscape of the higher education sector in Sri Lanka has undergone a massive transformation. This new change has also influenced the higher education of the officers from the tri-forces who require more adaptable and approachable learning environments. The tri-forces of Sri Lanka comprise of the army, navy, and air force. The officers from the tri-forces, who are committed to safeguarding and maintaining the integrity of Sri Lanka, constantly engage in their higher education as a vital component of their career development.

Even though numerous studies had been conducted globally concerning students' perceptions of remote learning, there had been a dearth of studies conducted in Sri Lanka as well as globally in assessing the challenges faced by student officers in the Tri-forces in pursuing their higher studies via remote learning. Moreover, military officers have to maintain a proper balance between their academic prospects and their designated military responsibilities. In this regard, remote learning became a more appropriate and flexible means of pursuing higher education. Assessing the perceptions of tri-forces officers regarding their experience with remote learning was crucial for informing effective strategies, policy-making, and overcoming challenges. Therefore, the current study was conducted to assess the perceptions, challenges, and proposed strategies of student officers from the Tri forces undertaking the PSC (Master's degree at Defence Services Command and Staff College) regarding remote learning during the COVID-19 pandemic.

Theoretical Framework

The current study is based on the Theory and Practice of Online Learning (Anderson, 2008), which has the potential to emphasize the importance of technology, learner autonomy and interaction in enabling effective online education. The theoretical

framework suggested by Anderson offers valued insights into the subtleties in the settings of remote learning and the aspects manipulating student satisfaction and engagement. Most importantly, it brings to light the value of facilitating interaction and catering to the challenges originated by technology to enhance the remote learning experience.

Literature Review

During the COVID-19 pandemic, remote learning has played a vital role in the field of higher education. This has given birth to numerous studies which aim to explore multiple aspects of remote learning including its challenges and opportunities. The Theory and Practice of Online Learning (Anderson, 2008) provides valuable insights to investigate these studies, highlighting the importance of interaction and technology in enabling effective online education. Accordingly, it was identified through the previous research that the encounters interrelated to student interaction and a decreased sense of belonging, which are central to Anderson's theory.

Numerous studies have attempted to explore the perceptions and challenges faced by students in the process of adapting to remote learning, especially with regards to the post-graduate students. Zamora et al., (2023) emphasized on the impact created by disrupted student interactions and decreased sense of belonging due to the transition into the remote learning environment. Martinez et al., (2023) highlighted the stressors associated with COVID-19, which impacted the graduate students. The main concerns were challenges associated with interfering academic responsibilities, leading to food insecurity and depressive symptoms. Parker et al., (2021) investigated on the perceptions of American students with regards to the forced transition to remote learning, exploring aspects like ethical behaviour and commitment during remote learning.

D'Souza et al., (2023) recognized that poor utilization of online tools and internet connections have created noteworthy challenges for nursing students during remote learning. Vintere et al.,

(2021) highlighted that factors such as motivation levels, teachers' e-learning knowledge, and the structured learning environment have the potential to impact on student satisfaction on remote learning. Nguyen et al., (2021) aimed to comprehend the students' understandings and perceptions on remote learning methods to inform future pedagogical decisions. Toquero, (2020) highlighted on the value of innovative approaches and the transition to emergency remote education during the pandemic.

Chaves, (2021) emphasized on the willingness and challenges of tertiary state university management students in remote learning, while providing recommendations on pedagogical and technological involvements to improve the online teaching-learning procedures. AlMunifi & Alfawzan, (2023) attempted to address the students' apprehensions and preferences with regards to remote, in-person, or hybrid learning experiences. Nash, (2021) highlighted on the significance of improving supervision and mentoring during the course of remote learning to decrease the stress and anxiety experienced by the students. In the military context, (Alnaqbi and Yassin, 2021) aimed to assess and investigate the encounters and approaches of inculcating artificial intelligence and e-learning in the UAE military education system, pointing towards the developing nature of educational practices in military settings.

Research Questions:

1. What are the key challenges faced by student officers from the Sri Lankan tri-forces in adapting to remote learning during the COVID-19 pandemic?
2. How do student officers from the Sri Lankan tri-forces perceive the level of interaction and engagement during remote learning, and what factors influence these perceptions?
3. What strategies can be proposed to mitigate the challenges faced by student officers from the Sri Lankan tri-forces in pursuing

their higher studies via remote learning during the COVID-19 pandemic?

2. METHODOLOGY

The current study was conducted as a descriptive cross-sectional study. The study sample comprised student officers from the tri-forces selected to follow the PSC. At the baseline level, 100 student officers were interviewed, and out of them, 30 male student officers who pursued their post-graduate studies via remote learning during the COVID-19 pandemic were included for the study.

Before the data collection, informed consent was obtained from the participants of the study. An online questionnaire developed by the investigators in English was circulated via WhatsApp among the selected student officers for a period of one week. The questionnaire comprised both open-ended and close-ended questions addressing their perceptions of the challenges experienced while engaged in their higher education via remote learning. Additionally, the questionnaire included questions to assess their proposed strategies to mitigate those challenges. The questionnaire was piloted among ten student officers attending the psc course to ensure clarity, relevance, and comprehensibility of the questions. Subsequently, those officers who participated in the pilot test were excluded from the final data collection to prevent any bias or influence on their responses during the main study.

Descriptive statistics were analyzed using SPSS 23.0 as per the study objectives. For the qualitative data, a rigorous thematic analysis was conducted. Themes were identified through a comprehensive process, involving multiple coders to ensure consistency and mitigate bias.

3. RESULTS

Level of satisfaction in remote learning

When assessing students' satisfaction with remote learning, the majority of the study sample (61.9%) reported being satisfied with their experience and

38.1% have reported to be fairly satisfied with learning online.

Respondent three mentioned remote learning as a "highly accessible and convenient means of doing post graduate studies". In addition, respondents eight and eleven have mentioned remote learning to be a "very flexible mode of learning that caters to the needs of the individual". It reveals that remote learning has a strength of being user-friendly due to its high degree of accessibility and flexibility. Some have responded positively about their experience of remote learning.

Main challenges faced during remote learning

As per the findings of the study, there are key challenges identified by the study sample namely, technical barriers, limited interaction with peers, lack of motivation and difficulties in understanding the course content. Nearly 50% of the study sample identified technical difficulties as the dominant challenge. In addition, 20% have revealed limited interaction with peers as a challenge for the success of online education. Similarly, 20% have mentioned lack of motivation as a key challenge that they came across.

Respondents one and six have mentioned that they key problems with regard to the technical barriers were "connectivity issues and the usability of the platforms". Respondent nine has indicated that "limited engagement with peers is a barrier to the overall success of remote learning".

The level of interaction and engagement

When considering class interaction and engagement, 52.4% have shown a moderate level and 33.3% have had a low level of interaction and engagement during e-learning. Moreover, only 14.3% are highly engaged with the lessons during distance learning.

Respondent number seven has revealed that "I feel that many students are reluctant to express their ideas and interact in online classes compared to their

presence in actual classroom”. Similarly, respondent number twelve mentioned that “According to my opinion, the weak students get severely affected by remote learning due to lack of interaction”.

Support Received by the Lecturer During E-Learning

The support and guidance given by the lecturers play a key role in enhancing the students' experience concerning remote learning. It will enable them to potentially tackle the challenges they come across. According to the results, 66.7% of students have received assistance and guidance from their lecturers at a satisfactory level during e-learning, while 5% have received lecturer assistance at a highly satisfactory level. Further, 28.6% of students have remained neutral in terms of their responses.

Respondent number four has mentioned that, “I am very happy about the support given by the lecturers”. However, respondent number fourteen said that, “lecturers find it difficult to give individual attention when it is an online class”. Moreover, respondent number twenty-three mentioned that “lecturers did their best to make the virtual classroom very student friendly”.

Participation in Discussions and Activities in the online classroom

As per the findings of the study, the majority of the students 61.9% have taken part in discussions and activities done in online classrooms. Respondent number ten mentioned that, “I really enjoyed taking part in the online activities done in zoom classes”. Similarly, respondent number seventeen mentioned that “I took part in all the discussions done via virtual classes and I found it interesting”.

Overall Experience with E-Learning

Regarding the overall experience of remote learning, 57.1% responded positively. Moreover, 28.6% have remained neutral and 14.3% have identified it as a negative experience.

Respondent number twenty-two has mentioned: “For me, online education was a whole new experience and I enjoyed it a lot”. In the same way, respondent number thirty indicated that virtual learning was very easy and comfortable for him than attending classes physically. However, respondent number seventeen mentioned that he preferred on site classrooms to virtual classes as it promotes more student interaction.

Future learning preferences

The results show that 85.7% of the respondents prefer continuing hybrid learning, incorporating both online and traditional methods, and 9.1 % have not preferred to continue their studies in both methods.

Respondent number six mentioned: “I prefer hybrid mode as there are some modules which really need onsite lecturing and others can easily be managed virtually”. Moreover, respondent number twenty-five has mentioned that “adapting to the hybrid mode of learning is very cost effective in the modern context”. However, respondent number nine has revealed that, “hybrid mode of learning will not benefit all the students equally and it will have many disadvantages”. Hence, the majority of the population has preferred to continue learning by using both methods.

4. DISCUSSION

The current study aims to assess the perceptions of selected student officers from the tri-forces who have been selected to follow the PSC regarding their perceptions on the challenges of remote learning consistent with the Theory and Practice of Online Learning (Anderson, 2008). The selected officers have pursued their higher education via online mode during the Covid-19 pandemic. As per the study findings, for majority of the participants it was their first-time experience with regard to the remote learning. Despite being their first experience in remote learning, the majority of the study sample have responded positively regarding their satisfaction and effectiveness of online education. A similar study conducted by Sudusinghe and Gamage (2020) to

assess the experience of remote learning among a group of Sri Lankan university students revealed that the majority of the students were neutral in terms of their perceptions regarding the effectiveness of remote learning. Another study conducted in Turkey of the same context also revealed that majority of the students remained neutral regarding the effectiveness of online education (Altunay, 2019).

Furthermore, as indicated by the study findings of Sudusinghe and Gamage (2020), the majority of the students disagreed with the statement that on site education is better than remote learning. The findings of the current study revealed that majority of students have expressed a preference for continuing hybrid learning, incorporating both online and traditional methods. This indicates that they prefer the hybrid learning method due to high degree of flexibility and accessibility.

Moreover, there are key challenges identified by the study sample namely: technical barriers, limited interaction with peers, lack of motivation and difficulties in understanding the course content. The technical barriers were identified as the most prevalent challenge among the key challenges. Therefore, it has been revealed that the above challenges have disrupted the success and the effectiveness of remote learning. Furthermore, in terms of interaction and engagement via distance learning, it has been observed that a satisfactory level has not yet been achieved by a reasonable percentage. Hence, it is clear that there is a need to incorporate more interactive activities into online teaching to make it more effective and fruitful.

Another study has revealed that the utilization of a user-friendly interactive platform has facilitated the participation in discussions and engagement of both students and lecturers. Furthermore, it has been revealed that the provision of recorded lectures, reading materials, and interactive simulations can help mitigate difficulties that have arisen during the learning process (Mahmood, 2021). Moreover, another study conducted in Indonesia has mentioned that ensuring access for both parties, such as lecturers

and students, to reliable technology and technical support has mitigated the difficulties that arise during online learning (Utomo et al., 2021).

The support given by lecturers and their guidance play a key role in enhancing students experience with regard to remote learning. It will enable them to potentially tackle the challenges they come across. According to the results, majority of students have received assistance and guidance from their lecturers at a satisfactory level during e-learning. Further, a study carried out in Thailand among the students following an English course via remote learning has revealed that weak students would be disadvantaged by distance learning and they need self-directing guidance through a tutor (Altunay and Mutlu, 2010). This indicates that the lecturers' assistance plays a key role in the success of remote learning.

Limitations

It will be difficult to generalize the findings of the study to the general population since the study sample comprises of only 30 student officers who have been selected to follow their post graduate studies. Additionally, the study sample comprises only male officers and no perceptions of female officers have been considered. Further, the student officers who have been selected for the course were competent with their IT knowledge and English Language proficiency. Therefore, an assessment of the challenges encountered by the students with poor IT and English language proficiency was not be possible with the current data.

5. CONCLUSION AND RECOMMENDATION

The current study has presented challenges encountered by the student officers in the tri-forces engaged in remote learning during the Covid-19 pandemic. It was also clear that the majority of the participants were satisfied with their experience of remote learning. However, there are key challenges identified by the study sample namely; technical barriers, limited interaction with peers, lack of motivation and difficulties in understanding the

course content. Among these challenges, technical barriers were identified as the most dominant. Hence, it is clear that improving the infrastructure would facilitate successful delivery of remote learning. Further, it was also highlighted that there need to be more activities catering to the student engagement and interactive learning. It would make the learning experience more productive and keep the student motivation at a satisfactory level.

Moreover, it was revealed that the support and guidance given by lecturers play a key role in enhancing the students' experience with remote learning. It will enable them to potentially tackle the challenges encountered by them. According to the results, the majority of students have received assistance and guidance from their lecturers at a satisfactory level during e-learning. Hence, it is recommended to implement policies and strategies to enhance the student-teacher interaction in remote learning. Additionally, it is also recommended to improve the level of engagement of students in discussions and interactive activities during online classes. It would benefit the students by enhancing their level of confidence and motivation.

With the results of the study, it has become evident that the majority of students have expressed a preference for continuing hybrid learning, incorporating both online and traditional methods. Therefore, it is clear that remote learning carries its own set of advantages and disadvantages. As a result, it is recommended to enhance the delivery of remote learning by overcoming its potential disadvantages. It is also clear that remote learning will play a significant role in the higher education sector in the future. Hence, policy makers, the government and higher education institutes need to implement strategic measures to enhance the quality of remote learning in Sri-Lanka.

6. REFERENCES

- AlMunifi, A.A., Alfawzan, M.S., (2023). Back to the New Normal in Engineering Education towards Student-Centered Learning: Remote? In Person? Hybrid? Sustainability 15. <https://doi.org/10.3390/su151813510>
- Alnaqbi, A.M.A., Yassin, A.M., (2021). Current Status, Challenges and Strategies of Artificial Intelligence and E-learning the UAE Military Education System. *Int. J. Sustain. Constr. Eng. Technol.* 12. <https://doi.org/10.30880/ijscet.2021.12.03.034>
- Altunay, D., (2019). EFL Students' Views on Distance English Language Learning in a Public University in Turkey. *Stud. Engl. Lang. Teach.*: 7, p.121. <https://doi.org/10.22158/selt.v7n1p121>
- Altunay, D., Mutlu, M.E., (2010). Distance foreign language learning. The experience of Anadolu University. *Distances Savoirs*: 8, pp.463–473.
- Anderson, T. (Ed.), (2008). The theory and practice of online learning, 2nd ed. ed. AU Press, Edmonton.
- Chaves, M.G.F., (2021). Remote Learning Readiness and Challenges: Perceptions and Experiences among Tertiary State University Management Students. *Recoletos Multidiscip. Res. J.*: 9. <https://doi.org/10.32871/rmrj2109.01.08>
- D'Souza, P.J.J., Assariparambil, A.R., Muthamilselvi, G., Joseph, V.M., George, L.S., (2023). Pandemic Pedagogy: Perception of Nursing students': A cross-sectional study. <https://doi.org/10.12688/f1000research.109789.3>
- Gad, M., Kazibwe, J., Quirk, E.J., Gheorghe, A., Homan, Z.S., Bricknell, M., (2021). Civil–military cooperation in the early response to the COVID-19 pandemic in six European countries. *BMJ Mil. Health*: 167. <https://doi.org/10.1136/bmjmilitary-2020-001721>
- He, F., Deng, Y., Li, W., (2020). Coronavirus disease 2019: What we know? *J. Med. Virol.*: 92, 719–725. <https://doi.org/10.1002/jmv.25766>
- Hodgetts, J.M., Claireaux, H., Naumann, D.N.,

- (2020). Remote training for combat medics during the COVID-19 era: lessons learnt for future crises? *BMJ Mil. Health*:167. <https://doi.org/10.1136/bmjmilitary-2020-001527>
- Hoofman, J., Secord, E., (2021). The Effect of COVID-19 on Education. *Pediatr. Clin. North Am.*: 68, pp.1071–1079. <https://doi.org/10.1016/j.pcl.2021.05.009>
- Mahmood, S., (2021). Instructional Strategies for Online Teaching in COVID-19 Pandemic. *Hum. Behav. Emerg. Technol.*: 3, pp.199–203. <https://doi.org/10.1002/hbe2.218>
- Martinez, S.M., Esaryk, E., Chodur, G., Singh, S., Kalaydjian, S., Bullock, H.E., Britton, T.A., (2023). COVID-19-related stressors exacerbate food insecurity and depressive symptoms among graduate students receiving campus basic needs services: Cross-sectional findings from seven California public universities. *Stress Health*. <https://doi.org/10.1002/smi.3345>
- Nash, C., (2021). Improving Mentorship and Supervision during COVID-19 to Reduce Graduate Student Anxiety and Depression Aided by an Online Commercial Platform Narrative Research Group. *Challenges* 12. <https://doi.org/10.3390/challe12010011>
- Nguyen, T., Netto, C.L.M., Wilkins, J.F., Bröker, P., Vargas, E.E., Sealfon, C.D., Puthipiroj, P., Li, K.S., Bowler, J.E., Hinson, H.R., Pujar, M., Stein, G.M., (2021). Insights Into Students' Experiences and Perceptions of Remote Learning Methods: From the COVID-19 Pandemic to Best Practice for the Future. *Front. Educ.*: 6. <https://doi.org/10.3389/feduc.2021.647986>
- Parker, S.W., Hansen, M.A., Bernadowski, C., (2021). COVID-19 Campus Closures in the United States: American Student Perceptions of Forced Transition to Remote Learning. *Soc. Sci.* 10. <https://doi.org/10.3390/socsci10020062>
- Rameez, A., Fowsar, M.A.M., Lumna, N., (2020). Impact of Covid-19 on Higher Education Sectors in Sri Lanka: A Study based on South Eastern University of Sri Lanka. *J. Educ. Soc. Res.*: 10. <https://doi.org/10.36941/jesr-2020-0132>
- Sudusinghe, W., Walpita Gamage, C., (2020). Students' Perception on Learning English through Distance Education: An Online Survey Conducted in Higher Education Institutes, Sri Lanka at the Time of COVID-19.
- Toquero, C.M.D., (2020). Emergency remote education experiment amid COVID-19 pandemic. *IJERI Int. J. Educ. Res. Innov.* <https://doi.org/10.46661/ijeri.5113>
- Utomo, M.N.Y., Sudayanto, M., Saddhono, K., (2021). Tools and Strategy for Distance Learning to Respond COVID-19 Pandemic in Indonesia.
- Vintere, A., Aruvee, E., Rimkuvienė, D., (2021). Challenges and benefits of remote learning in context of competence development of engineering students during covid-19 pandemic. *20th Int. Sci. Conf. Eng. Rural Dev. Proc.* <https://doi.org/10.22616/erdev.2021.20.tf360>
- Wambaria, M., (2023). Teachers Experiences on Remote Learning During the Covid-19 Period: A Case in Kenya. *Int. J. Innov. Educ. Res.* 11, pp.52–62. <https://doi.org/10.31686/ijer.vol11.iss2.4070>
- Zamora, A.N., August, E., Fossee, E., Anderson, O.S., (2023). Impact of Transitioning to Remote Learning on Student Learning Interactions and Sense of Belonging Among Public Health Graduate Students. *Pedagogy Health Promot.* 9, pp.203–213. <https://doi.org/10.1177/23733799221101539>