

NURSING STUDENTS CHALLENGES IN STUDYING WHILE WORKING IN THE ERA OF THE COVID-19 PANDEMIC: A QUALITATIVE FOCUS GROUP STUDY

Ellen Ruth Tambunan¹, Evelyn Hemme Tambunan² ^{1,2}Universitas Advent Indonesia Bandung, Indonesia

e-mail: <u>ellenrtambunan@gmail.com</u>¹, <u>evelyntambunan@unai.edu</u>²

Abstract

Corespondence author: Evelyn Hemme Tambunan

Universitas Advent Indonesia

Email: evelyntambunan@ unai.edu Studying while working in the era of the Covid-19 pandemic has become a challenging experiences among nursing students. Various experiences in such positive and negative experiences as well as challenging experiences in online learning were the themes of several qualitative research results. This study aim to investigate the nursing students challenges in studying while working in the era of the Covid-19 pandemic. Two focus-group interviews were conducted with 17 participants (age 40-60 years) who have working experience as a nurse more than 10 years in an extension nursing program at one of private nursing school in Bandung, Indonesia. Trustworthiness was established by Moser and Korstjens criteria. Then, the qualitative inductive content analysis was performed. Four themes were generated namely time challenges, technology challenges, individual challenges and learning challenges. There were ten sub-themes emerged namely studying and working at the same time, dividing time between studying, working and doing household chores, time and location difference, use of computer and zoom, internet network, age and length of time not in college, physical health, credits and many courses, lots of learning tasks and learning strategies. While there is a growing body of research on the online learning challenges in the era of Covid-19 pandemic, a need to continue to study it through thoughtful, welldesigned studies to serve as a guide to scholars and educators in online learning and beyond.

Keywords: challenges, studying while working, Covid-19 era, focus group study

INTRODUCTION

CoronaVirus Disease 19 (Covid-19) is an infectious disease caused by SARS-CoV-2 which has become a global pandemic, including in Indonesia. The government carries out a program of efforts to control the spread of Covid-19, such as the Large-Scale Social Restriction (PSBB). This policy is regulated in Government Regulation No. 9 of 2020 concerning PSBB Guidelines and then Regional Heads make regulations in their respective regions related to the

implementation of PSBB. The education sector is also affected by the introduction of online learning to replace face-to-face learning in the classroom⁽¹⁾ Likewise, policies in the education sector are carried out with the issuance of the circular letter of the Ministry of Education and Culture number 15 of 2020 concerning Guidelines to implement learning from home during a crisis due to the Covid-19 outbreak. Which states that learning from home is the main choice during the pandemic. Thus, all students in Indonesia carry out online learning, including nursing students who are studying while working⁽²⁾.

Previous studies gl obally found the various experiences of students while participating in online learning. Positive and negative experiences as well as challenging experiences are the themes of several qualitative research results $^{(3,4)}$. In addition, numerous stressors, such as economic burden, fatigue, network constraints, a lot of tasks, interactions with lecturers and friends, home atmosphere that makes students lazy to do assignments, etc are described by students during online learning⁽⁵⁾. In fact, various challenges are also faced by Indonesian students. Inadequate facilities such as not having a laptop, inadequate signal in remote areas are student complaints. Unpreparedness to take part in online learning suddenly so that they feel less effective in receiving learning material is also reported by research results $^{(6,7)}$. Another challenge is the cost of online learning. Students said that the expenses were big enough to buy internet quota^(8,9). Positive social experiences are felt by students who are more comfortable in asking questions and giving opinions because they do not feel the pressure from friends that is usually felt during face-to-face learning in $class^{(10,11,12)}$. Positive experiences in the mental aspect are described by motivation and independent learning that are interrelated. High student motivation to learn shows high independence as well $^{(13)}$.

In fact the pandemic conditions provide opportunities for nurses who are working to get further education. Online learning certainly presents its own challenges for nursing students who take continuing education while working. The challenges of crowded lectures and work activities so that students who work must be able to divide their time between lectures, study and rest^(14,15).

Furthermore, research results shows that there is higher stress compared to students who do not work. Limited network and internet access, technical obstacles in learning, and the ineffectiveness of the mentoring system are challenges in the application of online learning in nurse professional education⁽¹⁶⁾.

Despite these findings, there remains a dearth of evidence-based solutions that aim to describe the experiences of nursing students who are working while participating in online learning. Indeed, this is a key target area for universities and online learning services, particularly since more opportunities for online learning in this era of the Covid-19 pandemic, particularly in Indonesia. Therefore, this current study sought to conduct a series of focus groups with an extension program of nursing students. The aim of this research is to highlight the challenges faced by the extension program of nursing students who take online learning while working as a nurse.

METODHS

A qualitative focus group research design was employed in this study. Focus groups are an in-depth group interview method in which participants are chosen as a deliberate, though not necessarily representative, selection of a certain community, and the interviews are focused on a given topic⁽¹⁷⁾. Focus group interviews have a particular group dynamic, therefore the type and amount of data gleaned from group social interactions is frequently deeper and richer than that gleaned from a one-on-one interview⁽¹⁸⁾. In this study, we focused on nursing students who are in an extension program (after completing the Diploma 3 Nursing Program continue to Bachelor Nursing Program), working as a nurse while attending online learning in Covid-19 pandemic era.

Using convenience sampling, the authors asked the members of an academic stage undergraduate extension program who take online learning in the Covid-19 pandemic era in academic year of 2020/2021 and 2021/2022. The participants from the Faculty of Nursing at the private nursing school located in Bandung, Indonesia aged 40-60 years who are still actively working as nurses with a working period of more than 5 years. It's crucial that focus group participants can

converse freely with one another during the interview⁽¹⁹⁾. While using the zoom meeting platform, a total of 17 members in both groups agreed to participate if the focus group interviews. The participants' demographic profiles are shown in the table 1.

Variables	Frequency (n)	Percentage (%)
Gender		
Male	6	35
Female	11	65
Age		
40 - 45 yo	3	18
45 - 50 yo	3	18
50 - 55 уо	9	52
55 - 60 yo	2	12
Work Experience		
<10 years	0	0
10 - 20 years	3	18
20 - 30 years	10	58
>30 years	4	24

Table 1. Participants Characteristics

Two focus group interviews with 8-10 participants in each group were conducted from June to July 2022. As described above, the Faculty of Nursing Science offers the extension program in which online learning has taken place during Covid-19 pandemic era since March 2020. Researcher recommend a group of six to ten people for a group interview⁽¹⁹⁾. Therefore, in this study, we conducted interviews with 8-9 participants in each group to ensure adequate information given by the participants through an online platform. The researchers prepared the following four questions as an interview guide: 1) How do you understand the challenges of students studying online, but while working as a nurse; 2) How is your experience in engaging the learning process using the online system; 3) What challenges do you face in participating in online learning while working as a nurse; 4) How did you overcome these challenges, can you describe them one by one?. All interviews were conducted in Indonesian language, recorded, and transcribed verbatim. Each interview for reasons on

duty. The interview excerpts in this study were translated from the original Indonesian transcripts into English.

The 1975 Declaration of Helsinki served as the guide for this investigation, 2008 revision. The guarantees of anonymity, data confidentiality, the freedom to participate in the study without payment, and the publication of the findings were explained to participants verbally and in writing. All individuals gave their written, informed consent to participate in the study. Anytime they wanted, they could leave. After the interviews, participants were given a voucher of quota as a token of gratitude. A qualitative and inductive data analysis based on content analysis was performed⁽²⁰⁾. The analysis process consisted of three main phases: 1) preparation; 2) organizing; and 3) reporting. In phase 1, the first author examined the data several times, noted the measuring units (textual passages), and then categorized the key themes. Phase 2 involved organizing and categorizing the codes and creating sub themes and themes. Preliminary analysis results were shared with the second author, and the organized data were modified until consent was obtained. As a result, four main themes composed of multiple sub themes were generated. When there were no more emerging ideas, the data became saturated. After consensus was reached by all authors, sub themes and themes were established. All analyses were done manually, in Indonesia, and translated into English at the time of writing.

The following strategies were used to increase the trustworthiness and credibility of the data analysis. The researchers performed a continuous analysis and described the results of the analysis process in detail. In the group zooming period in which the participants gathered, a summary of the results of the study was shared, and the member check was carried out. After listening to the authors explain the results, participants discussed the results in groups for about 15 minutes and provided feedback to the authors. Participants generally agreed with the results and spoke more about what they felt about their challenges in working while engaging in online learning during Covid-19 pandemic era. The methods and results followed the Consolidated Criteria for Reporting Qualitative Research

guidelines-a 32-item comprehensive checklist used in reporting data from interview and focus groups^(21,22).

RESULTS AND DISCUSSION

Focus group interviews were conducted with 17 nursing students in an extension program at a private nursing school at Bandung, Indonesia to explore their challenges on working while engaging online learning during Covid-19 pandemic era. As a result of qualitative inductive content analysis, 25 codes were extracted and four themes were generated: "time challenges," "technology challenges," "individual challenges," and "learning challenges." The structure of the themes is shown in table 2. Hereinafter, each theme is described in order.

Table 2 Themes structure

Themes	Subthemes	
Time challenges	Studying and working at the same time	
	Dividing time between studying, working and	
	doing household chores	
	Time and location difference	
Technology challenges	Use of computer and zoom	
	Internet Network	
Individual challenges	Age and length of time not in college	
	Physical health	
Learning challenges	Credits and many courses	
	Lots of learning tasks	
	Learning strategies	

Theme 1. Time challenges

Participants expressed three aspects of time challenges. One of the "time challenges" themes was that they might have been studying and working at the same time. They talked about how their conditions as full-time workers so that sometimes in the work schedule they have to follow online learning:

"It's a bit difficult because when we study we are working, so it's no longer off or it's really like a face to face class."

"...I find it challenging to divide the time. Because, we work directly with

patients.... sometimes when we are in class, suddenly there is an emergency."

"Because we only listen through headphones while working, concentration is slightly diminished."

The other expressed about dividing time between studying, working and doing household chores. Male and female participants as parents continue to carry out their respective roles in the household while the role of students must also be fulfilled:

"In between working, looking after kids, sleeping, and attending to homework. The exam must really be like being chased by time. And it's incredibly difficult. It's not that easy..."

"However, because this time is so essential to us, we need to learn how to share while working."

"I myself have two jobs. So half to death I divide the time. In the morning I work, then at night I work to add more classes..hhmm."

Similarly, another time challenge that became a topic of discussion was time and location difference. Some participants who are outside the continent of Asia have problems in participating in time-related learning:

"Despite most of the lessons being at night. What's difficult is that the class is in Indonesia at 8 in the morning, it's 6 in the morning, here at 5, at 7 in the morning."

"Different times so that it makes me a bit overwhelmed because at night I have to get up, then outside work, the next morning work."

Theme 2. Technology challenges

Participants said that technology is one of the challenges in online learning, as described in the theme of "Time challenges," there has been make it necessary to use. The use of computers and zoom has been a challenge experienced by students:

"Not many nurses are familiar with Microsoft PowerPoint, PowerPoint presentations, or how to create effective presentations."

"Yes, for the first time we used computers. Indonesian people...more upgraded than us. Maybe we use a computer here like most. So you have to learn to use a computer before zooming in, share to do your homework"

"Therefore, if it's a computer issue, it was a serious issue. In my opinion, since I also finished my D3 in 2002, I have never used a computer except only at work "

"Indeed, we use computers here, but they are already configured on each one."

The need to use technology is crucial in the era of online learning. Another technology challenge expressed by the participants is internet network needs

which to carry out learning activities such as zooming, video conferencing, etc. Some participants experienced internet problems when participating in online learning:

"So we use zoom meetings...sometimes this zoom depends on the internet signal. Sometimes there is a problem with no signal so we can't engage online learning properly."

"We were expelled from the zoom meeting because there was no signal and then we lost it."

"A tough challenge when we ah..take the TOEFL test. Sometimes the sound is very small, sometimes it's not even clear."

Theme 3. Individual challenges

Age affects the learning process, especially in online learning. Participants have left the previous education level, namely Diploma 3 in nursing several years ago. Therefore, participants felt the "age and length of time not in college" were challenges in participating in online learning in this extension program to obtain a bachelor's degree:

"We haven't attended school for a very long time, possibly about 20 years since we completed the D3 nursing degree. Now we have to enroll in college once more. It's too hard to think."

"Since I also completed my D3 in 2002, I don't think I've ever used a computer for anything other than work.. then when you start taking online learning... it's too heavy...heee."

"We've lost some of our former intelligence and vigilance. So actually taking school is much better when you are young."

"We are old, sometimes we use technology, and occasionally we are also slow.. But because it's time to use technology, we have to learn too.."

Another challenge is health conditions as states in the sub-theme "Physical health." Participants felt that the heavy burden experienced was using sleep time to participate in online learning or completing learning tasks. Participants feel worried about their health, especially in this Covid-19 era.

"There is one challenge that I am most afraid of, actually the problem of covid, because we are also fighting. But thank God I didn't get sick, I'm still healthy until now."

"Many have contracted Covid and many are sick. But I have to maintain a strong enough stamina to face work and study. So from all this the burden is a lot, not only time, but health."

"Because I work in a different city, so it takes like 45 min to 1 hour. I have to go to class, come home at 9 pm, class again from 1 to 5 am. sometimes feel... afraid too if I get sick."

Theme 4. Learning challenges

Participants feel a lot of credit burden or the number of courses taken in one semester is too many. The challenges in learning become sub-themes related to the number of credits and the types of courses that students must complete in the extension program and stated as follow:

"The number of courses we take. I was shocked, it turned out to be far more than what we thought. Yes, so the number is a hundred how much is that...to complete the program."

"We have a lot of credits; during one semester, I took 14-16 of them."

"...especially while taking numerous courses—roughly 14 credits—while completing a thesis..."

Participants felt that the tasks to meet the requirements of each course were too many. This provides a challenging experience in participating the online learning as called "Lots of learning tasks" sub-theme and expressed by the participants as follow:

"....concerning the assignments given... hmmm.. because it's online, perhaps there are too many..."

"Then we also have a lot of homework. In the past, who was it..mom, there I had a lot of homework. Sometimes it's all right to have a lot of a homework, but with a lot of home it becomes unfocused."

"The amount of homework that each professor assigns is excessive. For example, there is one lecturer teaching 2 types of lecture words, each course has many assignments. Not to mention the other lecturer's classes... haa."

Some participants feel that the learning system experienced by students recently is different from what they have experienced in their country of residence, America. Participants explained that independent learning is a system that is applied in the learning process as expressed as follow:

"This might be the difference between studying abroad and studying here at this university, we all zoom, in America and here we don't zoom too much. So the faculty just gives students tasks, so we do everything independently."

"The system here is important for face-to-face meetings, absent... if studying in America, only important tasks are given by the lecturer, submitted at any time during the semester. So to meet zoom is not as often as here. So one of the obstacles for our presence to zoom is also an obstacle."

"The learning system that I have followed in America, we are considered as students who are responsible for themselves. Work on assignments then submit, work on submitting assignments. So once in a while we meet. That's one of the problems too."

This study aims to explore the nursing students' challenges in working while studying in the era of the Covid-19 pandemic. As a result of the qualitative inductive content analysis, four themes were generated. The first theme "time challenges" emerged from the three sub-themes "studying while working at the same time," "dividing time between studying, working and doing household," and " time and location difference." They expressed how they as parents have to carry out household roles while also meeting the demands of learning. Furthermore, in conditions of different continents, some students have to use the nighttime sleep to take part in online learning. The results of this study are very contrary to the results of many studies that have been carried out. The theme of time management was largely acknowledged by participants as the dominating viewpoint, and they all concurred that online sessions had helped them save time and increased their performance. Indeed this is because these studies used participants who were not working^(24,25,26).

Many participants talked about technology challenges. This theme emerged from sub-themes "Use of computer and zoom," and "Internet network." They found that computer use and zoom are new. Even though using a computer at work, but in learning is a challenge. More specifically, it's very real baby boomers generation and generation X are very different in mastery of technology compared to generation Y or Millennials. Previous studies validated that these older generations tend to have higher anxiety associated with technology use. They take longer to adopt new technologies and use less variety of technologies^(27,28). In fact, several studies were consistent with this study regarding to internet networks. The stability of the internet network and the ease of accessing the internet sometimes become obstacles in participating in online learning. Students complain that they are late in submitting assignments because of the problematic internet network. In

addition, the socio-economic, race, social class, gender, age, geographical area were also found as factors challenges in online learning^(29,30,31).

In addition, an individual challenges theme emerged from the sub-themes of "Age and length of time not in college," and "Physical health." Some research results show that age affects learning independence in the Covid-19 pandemic era. In the context of this study, the age of the participants and has long left the learning process, which was at the stage of diploma 3 nursing education. This condition affects student learning independence. At the age of the respondents in this study, this condition has a high impact on their self-regulated learning. However, in some previous study results, self-regulated learning was low or moderate, which is in fact at the age of 20-25 years^(31,32,33). On the other hand, the students encounter difficulties in remote learning to the point that they are sacrificing their physical health.

In this study, the students are working while engage in online learning, though other research on students who are not while working. Students in Malaysia have brought up a similar concern about the burden of attending 6 to 8 hours of online classes. Students spend almost the entire day for online classes and answering activities, thus giving them less time or no time to engage in physical activities^(32,33).

Finally, participants in this study experienced learning challenges. This theme emerged from sub-themes "Heavy workloads," and "Learning strategies." These two sub-themes are very consistent with previous studies^(11,12,32,5). During the Covid-19 epidemic, a lot of scholars have proposed ideas for improving the efficacy of online learning. Eight suggestions are made about how universities should increase access to online learning and equity. Included in them are the following: (1) develop accessible materials; (2) select suitable digital tools; (3) record lectures and caption videos and audio content; (4) adopt inclusive culturally responsive teaching; (5) adopt a flexible approach to student participation; (6) ensure financial support and equipment; (7) recognize students' needs; and (8) address systemic racism^(34,35,36).

CONCLUSION

The following four themes were generated for participants' challenges on studying while working in the era of Covid-19 pandemic as resulted by focus group study namely time challenges, technology challenges, individual challenges and learning challenges. In addition to these themes raised, ten sub-themes emerged namely studying and working at the same time, dividing time between studying, working and doing household chores, time and location difference, use of computer and zoom, internet network, age and length of time not in college, physical health, credits and many courses, lots of learning tasks, and learning strategies. These challenges were delineated from the point view of nursing students at one of the nursing schools in Indonesia. In addition, the nursing students' challenges on the online learning while working has an impact on their learning engagement, satisfaction, and performance. While there is a growing body of research on the online learning challenges in the era of Covid-19 pandemic, a need to continue to study it through thoughtful, well-designed studies to serve as a guide to scholars and educators in online learning and beyond.

ACKNOWLEDGMENT

We would like to thank all of the students who participated in our survey. Special thanks to the 17 students who also participated in the focus group discussion that followed. Your insights have given the overall survey results more clarity and relevance, and your thoughts have offered us suggestions for future research.

ETHICAL CLEARANCE

This research was approved by the Ethics Review Committee of Fakultas Ilmu Keperawatan UNAI no. 227/KEPK-FIK.UNAI/EC/IV/22.

REFERENCES

- 1. Purwanto, A., Pramono, R., Asbari, M., Hyun, C. C., Wijayanti, L. M., & Putri, R. S. Studi Eksploratif Dampak Pandemi COVID-19 Terhadap Proses Pembelajaran. EduPsyCouns Journal. 2020; 2(1):1-12.
- 2. Kemdikbud. (2020). Surat Edaran Nomor 2 Tahun 2020 Tentang Pencegahan

dan Penanganan Corona Virus Disease (COVID-19) di Kementrian Pendidikan dan Kebudayaan. Diakses di https://pusdiklat.kemdikbud.go.id/surat-edaran-nomor-2-tahun-2o2o-tentang-pencegahan-dan-penanganan-coro-va-y-rus-d-sease-covid-19-di-kementerian-pendidikan-dan-kebudayaan/.

- 3. Ferri, F., Grifoni, P., GUzzo, T. Online learning and emergency remote teaching: Opportunities and challenges in emergency situations. Scoieties. 2020;10(86):1-18. doi:10.3390/soc10040086.
- 4. Ullah, A., Ashraf, M., Ashraf, S., Ahmed, S. Challenges of online learning during the Covid-19 pandemic encountered by students in Pakistan. Journal of Pedagogical Sociology and Psychology. 202;3(1):36-44. doi:10.33902/JPSP.2021167264.
- 5. Dhawan, S. Online learning: A Panacea in the time of Covid-19 crisis. Journal of Educational Technology Systems. 2020;49(1):5-22. doi: 10.1177/0047239520934018.
- 6. Astini, N.K.S. Tantangan dan peluang pemanfaatan teknologi informasi dalam pembelajaran online masa Covid-19. Cetta: Jurnal Ilmu Pendidikan. 2020;3(2):241-255. doi:10.37329/cetta.v3i2.452.
- 7. Harianto, T., Sumunar, D.S.E.W. Tantangan dan peluang pembelajaran dalam jaringan: Studi kasus implementasi ELOK (E-Learning: Open For Knowledge Sharing) pada mahasiswa profesi Ners. 2018;5(1):24-28.
- 8. Naserly, M.K. Implementasi zoom, Google Classroom, dan Whatsapp Group dalam mendukung pembelajaran daring (online) pada mata kuliah Bahasa Inggris Lanjut. Jurnal AKSARA PUBLIC. 2020;4(2):155-165
- 9. Yulia, P., Defina, M. Hubungan antara motivasi berprestasi dan gaya belajar mahasiswa pekerja di Fakultas Keguruan dan Ilmu Pendidikan Universitas Riau Kepulauan Batam. Jurnal Phytagoras. 2015;4(1): 47-55
- Firman, & Rahman, S. R. Pembelajaran Online di Tengah Pandemi Covid-19 Firman1, Sari Rahayu Rahman1. Indonesian Journal of Educational Science (IJES). 2020;2(2): 81–89.
- 11. Gultom, RFN, Tambunan, E.H. Pengalaman mahasiswa program studi pendidikan ners dalam pembelajaran daring di masa pandemi Covid-19. Nursing Update. 2021;12(1):111-21
- 12. Situmorang, R,P., Tambunan, E.H. Pengalaman mahasiswa program studi profesi ners dalam pembelajaran daring di masa pandemi Covid-19. Jurnal Media Keperawatan Poltekes Kemenkes Makassar. 2021;12(1):80-86.
- 13. Fitriani, W., Haryanto., Atmojo, S.E. Motivasi berprestasi dan kemandirian belajar mahasiswa saat pembelajaran daring. Jurnal Pendidikan: Teori, Penelitian dan Pengembangan. 2020;5(6): 828-834.
- 14. Abante, A.S., Cruz, R.P., Guevarra, D.J., Lanada, M.I.B., Macale, M.J.S., Roque, M.W., Salonga, F.R., Santos, L.C., Cabrera, W.C. A comparative analysis on the challenges of online learning modality and modular learning modality: A basis for training program. International Journal of Multidisciplinary Research and Analysis. 2021;4(4):463-476. doi:10.47191/ijmra/v4-i4-17.
- 15. Perangin-angin, M.A., Oktaviani, N.P.W., Sihombing, R.M., Sitanggang, Y.F., Haro, M., Tahulending, P.S., Siregar, D., Trsinadewi, N.W., Tambunan,

E.H. (2021). Etika Keperawatan. Bandung: Yayasan Kita Menulis

- 16. Hamadi, Wiyono, J., Rahayu, W. Perbedaan tingkat stres pada mahasiswa yang bekerja dan tidak bekerja di Universitas Tribuwana Tunggadewi Malang Fakultas Ekonomi Jurusan Manajemen Angkatan 2013. Nursing News. 2018;3(1):369-378
- 17. Polit, D.F., Beck, C.T. Essentials of Nursing Research. Appraising evidence for nursing practice. (9th edition). Philadelphia. Wolters Kluwer. 2018.
- 18. Creswell, J.W.Researchdesign.Quantitative, qualitative and mixed methods. (4the dition). USA: Sage. 2014.
- 19. Hennink, M.M., Kaiser, B.N., Weber, M.B. What influences saturation?
- 20. Estimatingsamplesizeinfocusgroupresearch. QualitativeHealthResearch. 2019;29(10):1483-1496.
- Moser, A., Korstjens, I. Series: Practical guidance to qualitative research. Part 3: Sampling, data collection and anlaysis. Eur JGen Pract. 2018, 24(1):9-18.
- 22. Khalil, R., Mansour, A.E., Fadda, W.A., Almisnid, K., Aldamegh, M., Al-Nafeesah, A., Alkhalifah, A., Al-Wutayd, O.The sudden transition to synchronized online learning during the Covid-19 pandemic in Saudi Arabia: a qualitative study exploring medical students' perspectives. BMC Medical Education. 2020;20(285):1-10. doi: 10.1186/s12909-020-02208-z
- 23. Rajab, M.H., Gazal, A.M., Alkattan, K. Challenges to online medical education during the Covid-19 pandemic. Cureus. 2020;12(7):e8966. doi:10.7759/cureus.8966
- 24. Hermida, A.P.A. College students' use and acceptance of emergency online learning due to Covid-19. International Journal of Educational Research Open. 2020.1,100011. doi: 10.1016/j.ijedro.2020.100011
- 25. Van Volkom, M., Stapley, J.C., Amaturo, V. Revisiting the digital divide: generational differences in technology use in everyday life. NAJP. 2014;16(3):557-574.
- 26. Kathryn, X., Madden, M. Older adults and internet use. Pew Research Center - Internet & Tech.2012.
- Mpungose, C.B. Emergent transition from face-to-face to online learning in a South African University in the context of the Coronavirus pandemic. Humanities and Social Sciences Communications. 2020;7(113):1-9. doi: 10.1057/s41599-020-00603-x
- 28. Van Deurson, A.J., Van Dijk, J.A. The first-level digital divide shifts from inequalities in physical access to inequalities in material access. New Media Soc. 2019;21(2):354-357. doi: 10.1177/1461444818797082
- 29. Rodrigues, H., Almeida, F., Figueierdo, V., Lopes, S.L. Tracking e-learning through published papers: a systematic review. Computer Educ. 2019;136:87-98
- Martin, F., Stamper, B., Flowers, C. Examining student perception of readiness for online learning: Importance and confidence. 2020;24(2):38-58. doi:10.24059/olj.v24i2.2053
- 31. Sikteubun, C.I., Tambunan, E.H. Kemandirian belajar mahasiswa keperawatan dalam pembelajaran daring di era pandemi Covid-19. Nursing

Update: Jurnal Ilmiah Ilmu Keperawatan. 2022;13(1):38-44. doi:10.36089/nu.v13i1.641

- Churiyah, M., Filianti, S., Sakdiyyah, D.A. Indonesia education readiness conducting distance learning in Covid-19 pandemic situation. 2020;7(6):491-507.doi:10.18415/ijmmu.v7i6.1833
- 33. Sundarasen, S., Chinna, K., Kamaluding, K., Nurunnabi, M., Baloch, G.M., Khoshaim, H.B., Hossain, S.F.A., Sukayt, A. Psychological impact of Covid-19 and lockdown among university student in Malaysia: Implications and policy recommendations. International Journal of Environmental Research and Public Health. 2020;17(17), 6106. doi:10.1016/j.ajp.2020.102256
- Rotas, E.E., Cahapay, M.B. Difficulties in remote learning: Voices of Philippine University students in the wake of Covid-19 crisis. Asian Journal of Distance Education. 2020;15(2):147-158. doi:10.5281/zenodo.4299835
- Naffi, N., Davidson, A., Patino, A., Beatty, B., Gbetoglo, E., Dupendol, N. Online learning during Covid-19: 8 ways universities can improve equity and access. The conversation.2020. http://theconversation.con/on;ine-learningduring-covid-19-8-ways-universities-can-improve-equity-and-access-145286
- Sudarmanto, E., Purba, R.A., Nur, N.K., Hasibuan, E.R.A., Recard, M., Samsir, Simbolon, I., Chaerul, M., Tambunan, E.H., Saragih, H., Purba, B., Purba, S. Pengembangan Budaya Akademik. Yayasan Kita Menulis. 2021.