



# Motivation to participate in a virtual exchange among nursing students with and without prior online course experience: A comparative study

Nurul Hikmatul Qowi\*   
Diah Eko Martini  
Dias Tiara Putri Utomo

Nursing Department, Faculty of  
Health Sciences, Universitas  
Muhammadiyah Lamongan,  
Lamongan, Indonesia

## \*Correspondence:

Nurul Hikmatul Qowi  
Nursing Department, Faculty of  
Health Sciences, Universitas  
Muhammadiyah Lamongan,  
Lamongan, Indonesia, Plalangan  
Highway KM 02 Plosowahyu,  
Lamongan Regency, East Java,  
Indonesia, Postal Code 62218  
Email: [nurul\\_hikmatul\\_qowi@umla.ac.id](mailto:nurul_hikmatul_qowi@umla.ac.id)

## ABSTRACT

**Background:** Virtual exchange programs offer several benefits, including enhancing students' knowledge, promoting technological literacy, and fostering cross-cultural exchange between countries. However, student participation in virtual exchanges remains relatively low.

**Objective:** This study aimed to compare the motivation to participate in virtual exchange programs between nursing students with and without prior experience in online courses.

**Methods:** A comparative study design with purposive sampling was used. Nursing students who had previously participated in online courses ( $n = 53$ ) and those who had not ( $n = 47$ ) completed a 29-item motivation questionnaire. Data were analyzed using the Mann–Whitney U test to assess differences in motivation between the two groups.

**Results:** Students with prior online course experience demonstrated higher motivation to participate in virtual exchanges (84.8%) compared to those without such experience (70.4%). The Mann–Whitney U test revealed a significant difference in motivation between the two groups ( $p = 0.003$ ).

**Conclusion:** Online course participation appears to be a motivating factor for nursing students to engage in virtual exchange programs. Encouraging involvement in online learning may serve as an effective strategy to prepare nursing students for future participation in international collaborations and the global healthcare market.

**Keywords:** distance education; motivation; nursing; students

## INTRODUCTION

Education lies at the heart of the 2030 Agenda for Sustainable Development and is central to achieving all Sustainable Development Goals (SDGs) (United Nations Development Programme, 2015). Specifically, SDG 4 emphasizes inclusive and equitable quality education and the promotion of lifelong learning opportunities. Achieving this goal requires strengthening educational systems at all levels through sufficient resource allocation and strategic partnerships at local, regional, national, and international levels. Universities play a critical role in this process by preparing students to thrive in multicultural societies through comprehensive internationalization strategies. These

Volume 3(3), 120-126

© The Author(s) 2024

<http://dx.doi.org/10.55048/jpns131>

e-ISSN 2827-8100

p-ISSN 2827-8496

Received : January 23, 2024

Revised : May 25, 2024

Accepted : May 25, 2024

Published : September 7, 2024



This is an **Open Access** article distributed under the terms of the [Creative Commons Attribution-NonCommercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/).

## Nursing and Healthcare Practices

- *Student participation in the previous online course activities will motivate nursing students to take part in the virtual exchange*
- *The motivation of nursing students to join the virtual exchange depends on the university and the facilities obtained during the exchange program*
- *Nursing students who have a high interest in studying abroad will be motivated to take part in a virtual exchange*

strategies must integrate global perspectives into teaching, research, and community engagement (American Council on Education, 2019; Gani et al., 2021; Hudzik, 2011). In parallel, educational institutions must also provide flexible lifelong learning opportunities by promoting informal learning supported by information technology (UNDP, 2015). The integration of information and communication technology (ICT) into education has immense potential to accelerate human progress and expand access to knowledge and innovation, thereby advancing SDG 4 (UNESCO, 2022).

The COVID-19 pandemic has accelerated the internationalization and digitalization of higher education institutions (Al-Sharafi et al., 2022). One form of informal learning that supports internationalization is the virtual exchange, also known as Collaborative Online International Learning (COIL), which has become increasingly relevant during the pandemic (Bowen et al., 2021; Stärke & Mällinen, 2021). COIL allows students from different cultural backgrounds to connect, collaborate, and engage in cross-cultural learning using technology. This approach helps enhance personal and professional development while also increasing students' cultural competence (Anna & Srirahayu, 2020; Brown et al., 2016; Marshall, 2017). Despite the growing participation of students in online courses, nursing student involvement in virtual exchange activities remains notably low.

Globally, nursing student participation in international exchange programs is limited. For example, a study found that 21% of UK

students and 30% of Spanish students were not interested in studying abroad (Goodman et al., 2008). Specifically, in nursing education, participation in online courses was only 1.3% in 2018, increasing to 16.6% in 2020, and reaching 44.8% in 2021 during the pandemic. In Indonesia, the government launched the Indonesian International Students Mobility Awards (IISMA) in 2021, as part of the Merdeka Belajar Kampus Merdeka (MBKM) initiative. This program encourages student participation in international academic and self-development activities, including virtual credit transfers. Despite this policy, no nursing students have participated in either the IISMA program or international credit transfer activities.

Various factors influence students' decisions to participate in virtual exchange programs. These include normative beliefs, personal motivation, cultural sensitivity, perceived relevance, workability, language barriers, financial concerns, technical issues, support adequacy, time constraints, and course design (Kelleher et al., 2016). In addition, social support and positive self-concept have been found to significantly influence motivation for virtual learning (Agustina & Kurniawan, 2020). Participation in international programs can broaden nursing students' global perspectives, enhance their knowledge, and build professional capacity (Turale et al., 2020). Moreover, international experience helps students develop resilience and coping strategies for future challenges (Tuncer Unver et al., 2021). Students who have previously participated in exchange or online learning activities are often more confident and more likely to participate in similar opportunities in the future (Brown et al., 2016). Therefore, this study aims to compare the motivation to participate in virtual exchange programs among nursing students with and without prior online course experience.

## METHODS

### Design

This study used a descriptive design with a comparative approach to describe and compare aspects of a specific phenomenon.

### Sample and Setting

The study population consisted of 638 undergraduate nursing students from the 1st to 4th year. Of these, 255 students had previously participated in an online course, while 388 had

not. A total of 154 students joined the WhatsApp group link provided by the researchers. Over a 10-day period, 111 students completed the questionnaire, but only 100 responses were completed in full and included in the final analysis. The inclusion criteria were active nursing students during the 2021/2022 academic year who voluntarily agreed to participate. Incomplete questionnaires were excluded from the analysis.

### Variable

The main variable measured was student motivation to participate in a virtual exchange program. This was assessed in two groups: students who had participated in online courses and those who had not.

### Instruments

Participation in online courses was assessed using a single closed-ended question: "Have you ever taken an online course conducted by the nursing study program before?". Motivation was measured using a questionnaire adapted from Yekti (2016). The instrument was validated and tested for reliability among 20 students. All 29 items were declared valid with an  $r$ -table value of 0.4683 and were found to be reliable. The motivation questionnaire included both internal and external factors. Internal factors consisted of interest (4 items), talent (4 items), and motive (6 items). External factors included environment (5 items), family (4 items), infrastructure (2 items), and accompanying lecturers (4 items). Each item was scored on a 4-point Likert scale: strongly agree (4), agree (3), disagree (2), and strongly disagree (1). No items were negatively worded. Motivation levels were categorized as: good if the mean score was greater than 3.3, sufficient if between 2.53 and 3.31, and poor if less than 2.53.

### Data Collection

The research was conducted at a university in Indonesia from November 2021 to April 2022. After obtaining permission from the university, the researchers explained the study's purpose and procedures via WhatsApp student groups for 1st to 4th-year students. A join-link to the research group was provided for those willing to participate. Students received instructions on completing the online questionnaire, which included demographic and study-related data, with an estimated completion time of 10 minutes. A link to the questionnaire was shared,

and students were given a 10-day deadline for submission. Fifty-nine students who had taken online courses and 53 students who had not responded. After checking for completeness, 54 students from the first group and 46 from the second group submitted complete responses and were included in the analysis.

### Data Analysis

Data were analyzed using univariate and bivariate statistical methods. Descriptive statistics were used to summarize demographic characteristics and motivation scores. The Mann–Whitney U test was employed to compare motivation between students who had and had not taken online courses. A significance level of  $p < 0.05$  was used.

### Ethical Consideration

Participants received an explanation of the study and procedures involved. Those who agreed to participate provided informed consent. Confidentiality and anonymity of all participants were ensured throughout the research process. Ethical approval was granted by the Health Research Ethics Committee of Universitas Muhammadiyah Lamongan (No. 125/EC/KEPK/S2/12/2021) on December 2, 2021.

## RESULTS

The findings revealed that the majority of respondents were female (79.0%) and most were 19 years old (37.0%). Second-year students accounted for the highest proportion of completed questionnaires (56.0%) (Table 1). Among the respondents, 54% had previously participated in an online course, while 46% had not. Regarding motivation, the internal factor most influencing students' participation in international virtual exchange was interest, with a mean score of 3.21. For external motivation, infrastructure was the most influential indicator, with a mean score of 3.15 (Table 2). Both groups—students who had participated in online courses and those who had not—showed a moderate level of motivation to engage in international virtual exchanges, at 84.8% and 70.4%, respectively. However, a higher percentage of students in the online course group demonstrated good motivation compared to those who had never participated in such courses. The Mann–Whitney U test indicated a statistically significant difference in motivation between the two groups ( $p = 0.003$ ), with the

**Table 1.** Respondent demographics data (n=100)

Characteristics	Category	n	%
Gender	Male	21	21.0
	Female	79	79.0
Age	17	1	1.0
	18	8	8.0
	19	37	37.0
	20	25	25.0
	21	14	14.0
	22	7	7.0
Student level	1st	18	18.0
	2nd	56	56.0
	3rd	10	10.0
	4th	16	16.0
Participation in previous online courses	Yes	56	56.0
	No	46	46.0

**Table 2.** Students' motivation to attending a virtual exchange (n=100)

Scale	Sub Scale	Number of Item	M±SD
Intrinsic motivation	Interests	4	3.21±0.50
	Talents	4	3.06±0.54
	Motives	6	3.11±0.52
Extrinsic Motivation	Environment	5	2.79±0.48
	Families	4	2.85±0.58
	Infrastructures	2	3.15±0.56
	Accompanying lectures	4	3.05±0.49

Note: M: mean; SD: Standard Deviation

motivation of students who had participated in online courses being significantly higher than those who had not (Table 3).

## DISCUSSION

This study found that extrinsic motivation, particularly infrastructure and institutional support, was the most influential factor driving students' participation in virtual exchange programs. The home university played a key role by providing enabling facilities such as easy access to the programs, extensive promotion, and credit conversion of up to 20 credits per semester. These resources, including access to libraries, laboratories, and study spaces, influenced students' decisions to engage in international learning activities.

As noted by Lesjak et al. (2015), students are more likely to join exchange programs when they are motivated by the opportunity to access high-quality academic support. In line with Serin (2018), extrinsic motivation is effective in shaping desired behaviors and improving academic performance. Therefore, university-level support has proven crucial in encouraging nursing students to participate in virtual exchange programs.

In addition to external factors, intrinsic motivation such as students' interests and talents significantly impacted their willingness to participate in international virtual exchanges. Students expressed curiosity about gaining up-to-date nursing knowledge that was unavailable at their home university. Moreover,



**Table 3.** The to compare motivation in attending virtual exchanges among students with and without online courses

Participation in online courses	Student's motivation to attending virtual exchange							
	Poor		Fair		Good		Total	
	n	%	n	%	n	%	n	%
Had never attended online courses	3	6.5	39	84.8	4	8.7	46	100
Had ever attended online courses	0	0.0	38	70.4	16	29.6	54	100
Total	3	3.0	77	77.0	20	20.0	100	100

*Mann-Whitney test,  $p = 0.003$*

virtual exchanges were viewed as opportunities to improve English proficiency and develop key academic skills such as critical thinking, self-regulation, and independent learning. These findings align with [Lerch \(2021\)](#), who emphasized the value of international education in enhancing awareness, sensitivity, and professional skills. The potential to broaden academic and cultural horizons served as a major internal motivator for participation.

Furthermore, the role of qualified lecturers and engaging learning methods also influenced student motivation. Students perceived virtual exchange programs as opportunities to escape monotonous classroom routines and experience different teaching environments. The use of collaborative learning methods—commonly seen in online courses—was reported to enhance students' nursing knowledge, clinical competence, class engagement, and self-confidence ([Zhang & Cui, 2018](#)). Previous online learning experiences also helped alleviate boredom and fostered a preference for dynamic and interactive learning environments, encouraging students to seek further involvement in virtual exchanges with international peers and lecturers.

Family support emerged as another significant factor affecting student motivation. Emotional and financial support from family members, particularly parents, played a vital role in encouraging academic participation. During home-based learning in the COVID-19 pandemic, students received increased parental attention and supervision, which contributed to their academic focus and motivation to meet expectations. This is consistent with studies showing that parental involvement positively influences academic achievement ([Hall, 2020](#); [Lara & Saracostti, 2019](#); [Wong Siew Yieng et al., 2020](#)). Therefore, family support functioned

as both a psychological and practical motivator for nursing students to pursue virtual exchange opportunities.

Finally, the findings showed that students who had previously participated in online courses had significantly higher motivation to engage in virtual exchange programs compared to those who had not. Familiarity with online learning environments increased their comfort, sense of achievement, and confidence to explore new academic challenges ([Souto-Otero et al., 2013](#)). In contrast, students without prior online course experience often cited language barriers—especially difficulties with English—as a major demotivating factor ([Owen et al., 2013](#)). While language limitations may reduce interest in virtual exchanges, the programs remain appealing due to their real-world applications, intercultural exposure, and the opportunity to gain global insights ([Daly et al., 2019](#)). Therefore, universities should continue to expand global partnerships and promote accessible virtual exchange opportunities to better prepare nursing students for the global healthcare environment.

## CONCLUSIONS

Students' interest in virtual exchange activities was identified as the strongest internal motivational factor, while infrastructure emerged as the most influential external factor. The study found that students who had previously participated in online courses showed significantly higher motivation to engage in virtual exchange programs compared to those who had not. This highlights the importance of institutional support—academic, structural, and financial—in stimulating student participation. However, the study has limitations, particularly in generalizability due to a small sample size

and the use of a modified instrument originally designed for extracurricular motivation, which may not fully capture motivation related to online learning. To address these gaps, universities can offer regular international guest lectures to expose students to global academic environments and provide language support through coaching or bilingual instruction. Future research is recommended to examine student readiness and motivation for international exchanges with larger samples and context-specific measurement tools.

### Declaration of Interest

There is no conflict of interest stated in this research.

### Acknowledgment

The author of this study would like to thank the students who agreed to be respondents in this study.

### Funding

This research was supported and funded by the Ministry of Education, Culture, Research, and Technology through the Merdeka Belajar Kampus Merdeka Policy Research and Community Service Program, based on research results and implemented by Private University (PTS) prototypes in the 2021 fiscal year.

### Data Availability

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

## REFERENCES

- Agustina, M. T., & Kurniawan, D. A. (2020). Motivasi belajar mahasiswa di masa pandemi Covid-19. *Jurnal Psikologi Perseptual*, 5(2), 120. <https://doi.org/10.24176/perseptual.v5i2.5168>
- Al-Sharafi, M. A., Al-Emran, M., Iranmanesh, M., Al-Qaysi, N., Iahad, N. A., & Arpaci, I. (2022). Understanding the impact of knowledge management factors on the sustainable use of AI-based chatbots for educational purposes using a hybrid SEM-ANN approach. *Interactive Learning Environments*, 1–20.
- American Council on Education. (2019). Comprehensive Internationalization. <https://www.acenet.edu/ResearchInsights/Pages/Internationalization/Comprehensive-Internationalization.aspx>
- Anna, N. E. V., & Srirahayu, D. P. (2020). Evaluation of virtual reference and information services at University Libraries in Indonesia. *Library Philosophy and Practice*, 1–11.
- Bowen, K., Barry, M., Jowell, A., Maddah, D., & Alami, N. H. (2021). Virtual exchange in global health: An innovative educational approach to foster socially responsible overseas collaboration. *International Journal of Educational Technology in Higher Education*, 18(1). <https://doi.org/10.1186/s41239-021-00266-x>
- Brown, M., Boateng, E. A., & Evans, C. (2016). Should I stay or should I go? A systematic review of factors that influence healthcare students' decisions around study abroad programmes. *Nurse Education Today*, 39, 63–71. <https://doi.org/10.1016/j.nedt.2015.12.024>
- Daly, D., Rasmussen, A. V., & Dalsgaard, A. (2019). Learning about midwifery in another country from a distance: Evaluation of a virtual classroom learning session. *Nurse Education Today*, 75(December 2017), 47–52. <https://doi.org/10.1016/j.nedt.2019.01.007>
- Gani, M. A., Nurhan, A. D., Maulana, S., Siswodihardjo, S., Shinta, D. W., & Khotib, J. (2021). Structure-based virtual screening of bioactive compounds from Indonesian medical plants against severe acute respiratory syndrome coronavirus-2. *Journal of Advanced Pharmaceutical Technology & Research*, 12(2), 120.
- Goodman, B., Jones, R., & Macias, M. S. (2008). An exploratory survey of Spanish and English nursing students' views on studying or working abroad. *Nurse Education Today*, 28(3), 378–384. <https://doi.org/https://doi.org/10.1016/j.nedt.2007.06.013>
- Hall, C. M. (2020). The Impact of Family Engagement on Student Achievement. *Networks: An Online Journal for Teacher Research*, 22(2). <https://doi.org/10.4148/2470-6353.1327>
- Hudzik, J. . (2011). Comprehensive Internationalization: From Concept to Action. *NAFSA, The Association of International Educators*.
- Kelleher, S., FitzGerald, S., & Hegarty, J. (2016). Factors that influence nursing and midwifery students' intentions to

- study abroad: A qualitative study using the theory of planned behaviour. *Nurse Education Today*, 44, 157–164. <https://doi.org/10.1016/j.nedt.2016.05.019>
- Lara, L., & Saracostti, M. (2019). Effect of parental involvement on children's academic achievement in Chile. *Frontiers in Psychology*, 10(JUN), 1–5. <https://doi.org/10.3389/fpsyg.2019.01464>
- Lerch, M. (2021). Leaving home to become the foreigner: Perspectives on nursing study abroad. *Nurse Education Today*, 106(June 2019), 2019–2021. <https://doi.org/10.1016/j.nedt.2021.105061>
- Lesjak, M., Juvan, E., Ineson, E. M., Yap, M. H. T., & Axelsson, E. P. (2015). Erasmus student motivation: Why and where to go? *Higher Education*, 70(5), 845–865. <https://doi.org/10.1007/s10734-015-9871-0>
- Marshall, J. E. (2017). Experiences of student midwives learning and working abroad in Europe: The value of an Erasmus undergraduate midwifery education programme. *Midwifery*, 44(March 2016), 7–13. <https://doi.org/10.1016/j.midw.2016.10.013>
- Owen, C., Breheny, P., & Ingram, R. et al. (2013). Factors associated with pharmacy student interest in international study. *American Journal of Pharmaceutical Education*, 77(3).
- Serin, H. (2018). The Use of Extrinsic and Intrinsic Motivations to Enhance Student Achievement in Educational Settings. *International Journal of Social Sciences & Educational Studies*, 5(1). <https://doi.org/10.23918/ijsses.v5i1p191>
- Souto-Otero, M., Huisman, J., Beerkens, M., de Wit, H., & Vujić, S. (2013). Barriers to international student mobility: Evidence from the ERASMUS program. *Educational Researcher*, 42(2), 70–77.
- Stärke, P., & Mällinen, S. (2021). Virtual exchange : Three factors for successful implementation. <https://doi.org/https://urn.fi/URN:NBN:fi-fe202104089751>
- Tohidi, H., & Jabbari, M. M. (2012). The effects of motivation in education. *Procedia - Social and Behavioral Sciences*, 31(2011), 820–824. <https://doi.org/10.1016/j.sbspro.2011.12.148>
- Tuncer Unver, G., Celebi Cakiroglu, O., Gungor Satilmis, I., & Harmanci Seren, A. K. (2021). The experiences of nurses who studied abroad with the erasmus program during undergraduate education: A qualitative study. *Nurse Education in Practice*, 51(February), 102993. <https://doi.org/10.1016/j.nepr.2021.102993>
- Turale, S., Kunaviktikul, W., & Mesukko, J. (2020). Giving undergraduate nursing students international experiences: Issues and strategies. *Nursing and Health Sciences*, 22(3), 830–836. <https://doi.org/10.1111/nhs.12722>
- UNDP. (2015). Education 2030. *Incheon Declaration Framework for Action*. In the Implementation of Sustainable Development Goal 4.
- UNESCO. (2022). Where do we stand on education for sustainable development and global citizenship education.
- Wong Siew Yieng, L., Katenga, J. E., & Kijai, J. (2020). The effect of parental support on academic performance among students at Asia-Pacific International University. *Abstract Proceedings International Scholars Conference*, 7(1), 1432–1453. <https://doi.org/10.35974/isc.v7i1.895>
- Yekti, L. H. S. (2016). Motivasi siswa dalam mengikuti kegiatan ekstrakurikuler bola voli di SMK Negeri 1 Kendal. Universitas Negeri Yogyakarta.
- Zhang, J., & Cui, Q. (2018). Collaborative learning in higher nursing education: A systematic review. *Journal of Professional Nursing*, 34(5), 378–388. <https://doi.org/10.1016/j.profnurs.2018.07.007>