Increasing Student Creativity Through Medical Surgical Nursing Clinical Learning with Digital Literacy in Nurse Profession Education)

Section H- Original Research

Increasing Student Creativity Through Medical Surgical Nursing Clinical Learning with Digital Literacy in Nurse Profession Education

[1]Ismonah, [2]Oktia Woro Kasmini Handayani*, [3]Wahyono, [4]Tri Suminar

Abstract

This study aims to determine the effectiveness of medical surgical nursing clinical learning with digital literacy in increasing the creativity of students in the nurse profession program.

In this research, a quasi-experimental design with a quantitative approach was employed. The study involved two distinct groups, with the intervention group exposed to medical surgical clinical learning with digital literacy, while the control group received conventional learning. The intervention period lasted eight weeks. The data was collected through tests and questionnaires that aimed to elicit information on students' experiences, perceptions, and suggestions for enhancing the learning experience. To analyze the collected data, descriptive and inferential statistical techniques were employed. The investigation's findings suggest that implementing Medical Surgical Nursing Clinical Learning with Digital Literacy resulted in a discrepancy in the mean creativity scores between the intervention and control groups. Therefore, the use of Medical Surgical Clinic Learning with Digital Literacy may enhance nursing students' creativity within their professional education.

Key words: Creativity, Medical-Surgical, Nursing, Digital Literacy

[1] Public Health Study Program, Faculty of Medicine and Health Science, Jambi University, Indonesia
[1]Doctoral Student, Education Management Department, Universitas Negeri Semarang, 50229, Indonesia
[2] Department of Public Health, Faculty of Sport Science, Universitas Negeri Semarang, 50229, Indonesia
[3]Education Management Department, Universitas Negeri Semarang, 50229, Indonesia
[4]Department of Outer School Education, Faculty of Science Education, Universitas Negeri Semarang, 50229, Indonesia

Email: oktia2016@mail.unnes.ac.id

Introduction:

Clinical learning is an important aspect of nursing education that allows students to develop the knowledge and skills necessary to provide safe and effective patient care.[1] Traditional clinical learning approaches may not adequately prepare nursing students for the dynamic and complex healthcare environment.[2] Therefore, an innovative clinical learning management model is needed that incorporates a scientific approach in nursing professional education.

Medical surgical nursing is an important component of nurse professional education because it prepares nurses to provide care to patients with acute and chronic medical-surgical conditions. These patients often have complex care needs that require specialized nursing knowledge and skills [3]. Common conditions, that Medical surgical nursing prepares nurses to care for patients with common medical-surgical conditions such as cardiovascular disease, respiratory disorders, and gastrointestinal disorders. These conditions are prevalent and require specialized nursing care [4]. Critical care:

2543

Eur. Chem. Bull. 2023, 12(7), 2543-2549

Increasing Student Creativity Through Medical Surgical Nursing Clinical Learning with Digital Literacy in Nurse Profession Education)

Section H- Original Research

Medical surgical nursing prepares nurses to provide care in critical care settings such as intensive care units and emergency departments. These settings require advanced nursing skills and knowledge.[5]

Complex patients: Medical surgical nursing prepares nurses to care for patients with complex care needs. These patients often have multiple medical conditions and require coordinated care from multiple healthcare providers [6]. Specialized skills: Medical surgical nursing requires specialized nursing skills such as medication administration, wound care, and patient monitoring. These skills are essential for providing safe and effective nursing care [7]. Career opportunities: Medical surgical nursing is a growing field with many career opportunities. Nurses who specialize in medical surgical nursing can work in a variety of settings such as hospitals, clinics, and long-term care facilities.[8]

The study of Clinical Medical Surgical Nursing typically includes coursework in anatomy and physiology, pathophysiology, pharmacology, nursing assessment, and the nursing management of medical-surgical patients.[2] Students may also learn about common medical-surgical conditions such as cardiovascular disease, respiratory disorders, and gastrointestinal disorders.[9]

In addition to coursework, Clinical Medical Surgical Nursing students typically engage in clinical rotations in hospitals or other healthcare facilities [10]. These clinical rotations allow students to gain practical experience in caring for medical-surgical patients under the supervision of a registered nurse or other healthcare professional.

Creativity is an essential component of academic and professional success. It allows individuals to think outside the box, solve problems in innovative ways, and create new and original ideas[11]. In recent years, there has been a growing interest in fostering creativity among students in universities, as it has become increasingly clear that the ability to think creatively is a critical skill for success in today's knowledge-based economy.

There are several strategies, methods, and media that can be used to increase student creativity, and it is important to choose those that are appropriate to the subject matter being taught. Medical-surgical learning through digital literacy in universities is typically carried out using a combination of various digital tools and technologies. These may include online learning platforms, virtual simulations, interactive videos, educational apps, social media, and other digital resources.

Online learning platforms, such as Blackboard or Canvas, are commonly used to deliver course content, assignments, and assessments.[12][13] These platforms allow students to access course materials and communicate with their instructors and peers anytime, anywhere. They also provide opportunities for collaborative learning and engagement in discussions and forums.

Virtual simulations and interactive videos are also increasingly used to enhance medical-surgical learning.[14] These tools enable students to practice clinical skills and procedures in a safe and controlled environment, without the risk of harm to patients. They can also help students to visualize complex concepts and processes, improving their understanding and retention of the material.

Educational apps are another valuable digital resource for medical-surgical learning.[15] These apps can provide interactive quizzes, flashcards, and other tools to help students reinforce their knowledge and test their understanding of the material. Social media platforms, such as Twitter and LinkedIn, can also be used to facilitate communication and collaboration among students and faculty members.[16] These platforms provide opportunities for networking and sharing of ideas and resources, as well as for professional development and career exploration.

The formulation of the research problem is: How effective is the medical surgical nursing clinical learning model with digital literacy in increasing the creativity of nursing professional students? The objectives of this study are: (1) To examine the effectiveness of medical-surgical nursing clinical learning with digital literacy in increasing the creativity of nursing professional students. (2) Identifying the factors that influence the success of medical surgical nursing clinical learning with digital literacy. (3) Evaluating nursing students' perceptions of the use of medical surgical nursing clinical learning with digital literacy in the nursing profession.

2544

Eur. Chem. Bull. 2023, 12(7), 2543-2549

Methods

This study will use a quasi-experimental design. The participants will be undergraduate nursing students from an X university. This research will be conducted in two phases: (1) In this stage, students' basic knowledge and skills will be assessed using standardized tools. The intervention group will receive medical surgical nursing clinical management learning using a case study model with digital literacy. The control group will receive traditional clinical learning management.[17] The duration of the intervention was eight weeks. Both groups will be evaluated using the same standard tools at the end of the intervention. In this second stage, students' perceptions of the use of the case study model of medical surgical nursing clinical learning management with a scientific approach will be assessed using a survey. The survey will be given to the intervention and control groups. The survey will include questions about students' experiences, perceptions, and suggestions for improvement.[18] The collected data will be analyzed using descriptive and inferential statistics.[19] The pre and post-test scores of the intervention and control groups will be compared using an independent sample t-test.[20] Students' perceptions of the use of medical surgical nursing clinical learning with digital literacy will be analyzed using descriptive statistics.

Result and Discussion

Increasing Creativity Through Learning Medical Surgical Nursing Clinics with Digital Literacy

The study focuses on increasing student creativity through the application of the Learning Medical Surgical Nursing Clinic with Digital Literacy, using product performance data as the research data. Table 12 provides an overview of the results of the students' creativity product performance in both the intervention and control groups.

Table 1
Description of Second Group Creativity Data

Creativity Statistics	Intervention Group	Control Group
Mean	86.88	76.25
Standard deviation	6.05	3.27
Maximum	93.75	81.25
Minimum	75	68.75

Table 1 presents the average creativity product performance results of the intervention and control groups. The students in the intervention group had an average score of 86.88, a standard deviation of 6.05, with the highest and lowest scores being 93.75 and 75 respectively. On the other hand, the students in the control group had an average score of 76.25, a standard deviation of 3.27, with the highest and lowest scores being 81.25 and 68.75 respectively. The research results also included observational data on student creativity in the intervention class, which can be depicted graphically for each indicator.
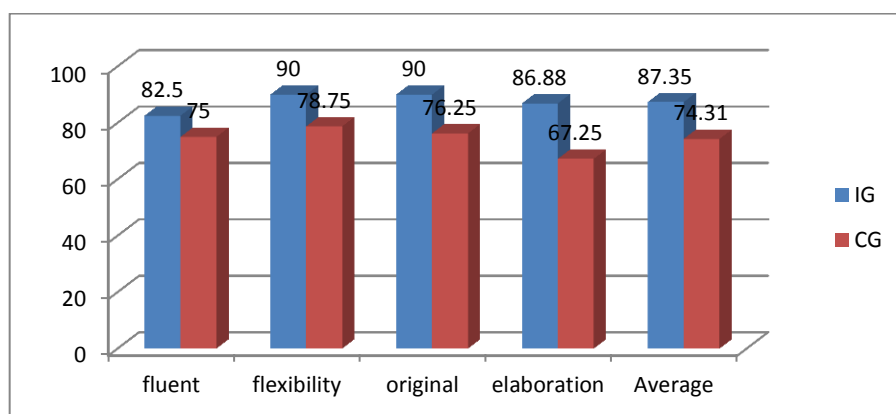

Figure 1. Observation Results of Intervention and Control Group Creativity

2545

Eur. Chem. Bull. 2023, 12(7), 2543-2549

Based on Figure 1 above, it shows that student creativity after implementing the Learning Medical Surgical Nursing Clinic with Digital Literacy in the intervention group, the fluency indicator was 82.5%, the flexibility indicator was 90%, the originality indicator was 90%, and the elaboration indicator was 86.88. Creativity in the control group on the fluency indicator is 75; flexibility indicator 76.25; on the original indicator is 76.25; and the elaboration indicator was 67.25.

In summary, the intervention group exhibited good creativity with an average score of 86.88, while the control group demonstrated sufficient creativity with an average score of 76.25. Graph 1 indicates that students in the intervention class showed high levels of creativity across all indicators, especially in flexibility and originality, whereas students in the control group exhibited high creativity only in the flexibility indicator. The figure below presents the results of the comparison of creativity between the intervention and control groups.
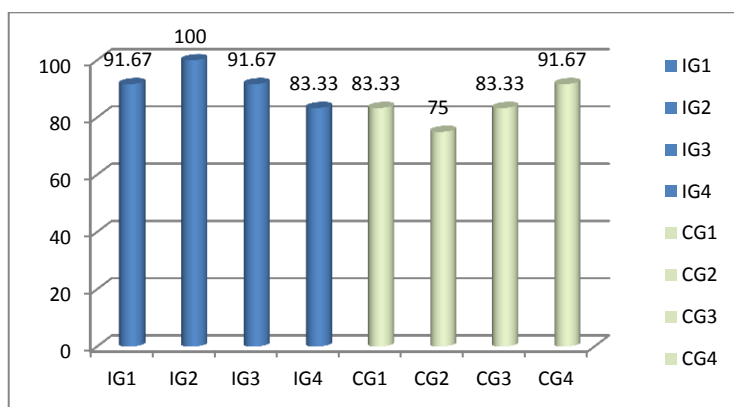

Figure 2. Comparison of Creativity Per Group of Both Classes

Figure 2 shows a comparison graph of the assessment of student creativity from each group of the two groups which shows that group 1 of the intervention group scored 91.67, group 2 received 100; group 3 got a score of 91.67, and group 4 got a score of 83.33. While the assessment of creativity in the control group obtained a value of 83.33 for group 1, a value of 75 for group 2, a value of 83.33 for group 3, and a value of 91.67 for group 4. So, it can be explained that the highest creativity assessment is in group 2 intervention group (IG2), while in the control group the highest rating was in group 4 (CG4). Based on the results of the assessment of each group from the two groups, it can be concluded that the creativity of the intervention group is higher than the creativity of the control group.

The results of this study are in accordance with research X that digital medical-surgical clinical learning increases student creativity [21], that majority of medical students believe that e-learning can be adopted in Indonesia and that their capacity to use electronic devices is good [22], Using virtual reality simulations show nursing students what it is like to be in a real-world clinical setting and what problems and risks they may encounter there [23]

Learning management in medical surgical nursing can have positive implications for student creativity in the nursing profession. Some of the aspects are:

Problem-solving skills: Surgical medical nursing requires nurses to have strong problem-solving skills[24]. As students learn to manage complex medical-surgical cases, they develop critical thinking and problem-solving skills[25]. This helps them to approach patient care in a creative and innovative way.[26] Students who learn management in surgical medical nursing are exposed to a wide range of medical-surgical conditions and treatment options. This exposure can inspire them to develop new and innovative solutions to improve patient care.[27]

2546

Interdisciplinary collaboration: Learning management in surgical medical nursing involves working closely with other healthcare professionals[28], such as surgeons, anesthesiologists, and physical therapists. This collaboration can foster creativity by encouraging students to consider a variety of perspectives and approaches to patient care.[29]

Patient-centered care: Effective surgical medical nursing requires nurses to provide patient-centered care that is tailored to each patient's individual needs[30]. As students learn to provide patient-centered care, they may develop creative solutions to improve the patient experience.[31]

Professional development: Learning management in surgical medical nursing is a continual process that requires nurses to stay up-to-date with the latest medical-surgical practices and technologies[32]. This ongoing professional development can inspire nurses to be creative in their approach to patient care.[33]

Conclusion

Based on the result and discussion can conclude that: there is a variation in the average creativity score between the intervention and control groups after applying Learning Medical Surgical Nursing Clinic with Digital Literacy. The intervention group's average score of 86.88 is categorized as good, while the control group's average score of 76.25 is classified as sufficient.

The expected result is to gain a better understanding of the effectiveness of medical-surgical nursing clinical learning with digital literacy in increasing the creativity of students in the nursing profession. Overall, learning management in surgical medical nursing can provide nursing students with the skills, knowledge, and exposure needed to promote creativity in the nursing profession. This creativity can lead to improved patient outcomes and a more fulfilling career in healthcare

References

[1] E. İlaslan, D. Adıbelli, G. Teskereci, and Ş. Üzen Cura, "Development of nursing students' critical thinking and clinical decision-making skills," *Teach. Learn. Nurs.*, vol. 18, no. 1, pp. 152–159, 2023, doi: 10.1016/j.teln.2022.07.004.

[2] E. Guanabara, K. Ltda, E. Guanabara, and K. Ltda, *No 主観的健康感を中心とした在宅高齢者における 健康関連指標に関する共分散構造分析Title*.

[3] M. Karam *et al.*, "Nursing care coordination for patients with complex needs in primary healthcare: A scoping review," *Int. J. Integr. Care*, vol. 21, no. 1, pp. 1–21, 2021, doi: 10.5334/ijic.5518.

[4] H. Sharma, *Fundamentals of Medical-Surgical Nursing*. 2018. doi: 10.5005/jp/books/14252_2.

[5] T. Ali-Abadi, H. Babamohamadi, and M. Nobahar, "Critical thinking skills in intensive care and medical-surgical nurses and their explaining factors," *Nurse Educ. Pract.*, vol. 45, no. April 2019, p. 102783, 2020, doi: 10.1016/j.nepr.2020.102783.

[6] S. B. Hassmiller and M. K. Wakefield, *The Future of Nursing 2020–2030: Charting a path to achieve health equity*, vol. 70, no. 6. 2022. doi: 10.1016/j.outlook.2022.05.013.

[7] S. L. Lewis, S. R. Dirksen, and L. Bucher, *Study Guide for Medical-Surgical Nursing: Assessment and Management of Clinical Problems*, 9th ed. Elsevier Inc., 2014. [Online]. Available: https://books.google.com/books?id=4VcMBAAAQBAJ&pgis=1

[8] U. Nair, *Textbook of Medical and Surgical Nursing*. 2009. doi: 10.5005/jp/books/10916.

[9] M. Harding, J. S. Snynder, and B. A. Preusser, *Winningham's Critical Thinking Cases in Nursing: Medical-Surgical, Pediatric, Maternity, and Psychiatric, 5 edition*. 2013.

[10] K. Butterworth, R. Rajupadhya, R. Gongal, T. Manca, S. Ross, and D. Nichols, "A clinical

2547

Increasing Student Creativity Through Medical Surgical Nursing
Clinical Learning with Digital Literacy in Nurse Profession Education)

Section H- Original Research

nursing rotation transforms medical students' interprofessional attitudes," *PLoS One*, vol. 13, no. 5, pp. 1–11, 2018, doi: 10.1371/journal.pone.0197161.

[11]　W. A. S. Gafour, Ola W. A., Gafour, "Creative Thinking skills – A Review article," *J. Educ. e-Learning*, vol. 4, no. May, pp. 44–58, 2020.

[12]　P. Bradford, M. Porciello, N. Balkon, and D. Backus, "The Blackboard Learning System: The Be All and End All in Educational Instruction?," *J. Educ. Technol. Syst.*, vol. 35, no. 3, pp. 301–314, 2007, doi: 10.2190/x137-x73l-5261-5656.

[13]　V. M. Bradley, "Learning Management System (LMS) Use with Online Instruction," *Int. J. Technol. Educ.*, vol. 4, no. 1, p. 68, 2020, doi: 10.46328/ijte.36.

[14]　S. Tabatabai, "Simulations and virtual learning supporting clinical education during the COVID 19 pandemic [response to letter]," *Adv. Med. Educ. Pract.*, vol. 11, no. September, pp. 669–671, 2020, doi: 10.2147/AMEP.S280840.

[15]　K. Singh *et al.*, "Smartphones and Educational Apps Use among Medical Students of a Smart University Campus," *Front. Commun.*, vol. 6, no. October, 2021, doi: 10.3389/fcomm.2021.649102.

[16]　W. D. Chawinga, "Taking social media to a university classroom: teaching and learning using Twitter and blogs," *Int. J. Educ. Technol. High. Educ.*, vol. 14, no. 1, 2017, doi: 10.1186/s41239-017-0041-6.

[17]　J. Malekzadeh, Z. Amouzeshi, and S. R. Mazlom, "A quasi-experimental study of the effect of teaching Orem's self-care model on nursing students' clinical performance and patient satisfaction," *Nurs. Open*, vol. 5, no. 3, pp. 370–375, 2018, doi: 10.1002/nop2.151.

[18]　T. Nguyen *et al.*, "Insights Into Students' Experiences and Perceptions of Remote Learning Methods: From the COVID-19 Pandemic to Best Practice for the Future," *Front. Educ.*, vol. 6, no. April, pp. 1–9, 2021, doi: 10.3389/feduc.2021.647986.

[19]　V. Yellapu, "Full Text Introduction," *Descr. Stat.*, vol. 4, no. 1, pp. 60–63, 2018, doi: 10.4103/IJAM.IJAM.

[20]　W. Gamani, L. Sitoayu, R. Nuzrina, L. P. Dewanti, and A. Novianti, "Do bagASI Change the Exclusive Breastfeeding Knowledge and Attitudes?," *Indones. J. Public Heal. Nutr.*, vol. 1, no. 2, pp. 1–9, 2021, doi: 10.7454/ijphn.v1i2.4804.

[21]　J. A. O'Hare, D. O'Doherty, S. Hyde, and D. McGrath, "Exploring Creativity in Medical Students: Themes and Media in a Compulsory Humanities Student Selected Component," *Creat. Educ.*, vol. 10, no. 02, pp. 407–422, 2019, doi: 10.4236/ce.2019.102029.

[22]　M. B. Ulla and J. M. R. Asio, "Impact on Medical Education and the Medical Student ' s Attitude , Practice , Mental Health , After One Year of the Covid-19 Pandemic in Indonesia," no. July, 2022, doi: 10.3389/feduc.2022.843998.

[23]　O. Access, "We are IntechOpen , the world ' s leading publisher of Open Access books Built by scientists , for scientists TOP 1 %".

[24]　A. Y. Kim and I. O. Sim, "Communication skills, problem-solving ability, understanding of patients' conditions, and nurse's perception of professionalism among clinical nurses: A structural equation model analysis," *Int. J. Environ. Res. Public Health*, vol. 17, no. 13, pp. 1–14, 2020, doi: 10.3390/ijerph17134896.

[25]　P. H. Harasym, T. Tsai, and P. Hemmati, "C URRENT T RENDS IN D EVELOPING M EDICAL S TUDENTS ' C RITICAL T HINKING A BILITIES," vol. 24, no. 7, pp. 341–355, 2008, doi: 10.1016/S1607-551X(08)70131-1.

[26]　R. C. Özdemir and M. T. Işık, "Nursing students' innovation and creativity approaches: A descriptive study," *Heal. Sci. Q.*, vol. 2, no. 3, pp. 117–126, 2022, doi: 10.26900/hsq.2.3.01.

Increasing Student Creativity Through Medical Surgical Nursing
Clinical Learning with Digital Literacy in Nurse Profession Education)

Section H- Original Research

[27] U. M. D. E. C. D. E. Los, *No 主観的健康感を中心とした在宅高齢者における 健康関連指標に関する共分散構造分析Title*.

[28] A. Babiker *et al.*, "Health care professional development: Working as a team to improve patient care.," *Sudan. J. Paediatr.*, vol. 14, no. 2, pp. 9–16, 2014, [Online]. Available: http://www.ncbi.nlm.nih.gov/pubmed/27493399%0A http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=PMC4949805

[29] M. R. D. R. Raymundo, "Fostering creativity through online creative collaborative group projects," *Asian Assoc. Open Univ. J.*, vol. 15, no. 1, pp. 97–113, 2020, doi: 10.1108/AAOUJ-10-2019-0048.

[30] A. L. Byrne, A. Baldwin, and C. Harvey, "Whose centre is it anyway? Defining person-centred care in nursing: An integrative review," *PLoS One*, vol. 15, no. 3, pp. 1–21, 2020, doi: 10.1371/journal.pone.0229923.

[31] B. R. Golden *et al.*, "Improving the patient experience through design.," *Healthc. Q.*, vol. 14, no. 3, pp. 32–41, 2011, doi: 10.12927/hcq.2011.22488.

[32] M. Chaghari, M. Saffari, A. Ebadi, and A. Ameryoun, "Empowering education J Adv Med Educ Prof," *Adv Med Educ Prof*, vol. 5, no. 1, pp. 26–32, 2017, [Online]. Available: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5238493/pdf/JAMP-5-26.pdf

[33] M. Mlambo, C. Silén, and C. McGrath, "Lifelong learning and nurses' continuing professional development, a metasynthesis of the literature," *BMC Nurs.*, vol. 20, no. 1, pp. 1–13, 2021, doi: 10.1186/s12912-021-00579-2.

2549

Eur. Chem. Bull. 2023, 12(7), 2543-2549