Changing Educational Strategies in Nursing Colleges from the COVID-19 Pandemic: Experiences from Thailand and Japan

Original article

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Abstract

This article examines the impact of the COVID-19 pandemic on nursing education in Thailand and Japan, focusing on the adaptations in teaching methods and educational strategies implemented during the crisis. The study compares case studies from Srimahasarakam Nursing College in Thailand and Okayama Saiseikai Nursing College in Japan, highlighting significant shifts in educational management. Both institutions transitioned to online teaching for theoretical courses and emphasized infection control in laboratory-based training. Despite challenges, the innovative strategies employed contributed to a 100% national exam pass rate in Japan, demonstrating the effectiveness of these adaptations. The study explores similarities and differences in teaching methods, including blended learning, simulation-based training, and policy support. Findings indicate that the pandemic quickened educational transformation, integrating technology and adaptive learning techniques into nursing curricula. Understanding these adaptations provides valuable insights for future educational strategies in healthcare crisis management.

Keyword; Changing nursing education, Pandemic's educational impact, Adaptive teaching methods

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Introduction

The outbreak of the Coronavirus Disease 2019 (COVID-19) had an impact on global education systems, requiring rapid adaptation to ensure continuity of learning while maintaining student safety. The World Health Organization (WHO) implemented preventive measures such as mask-wearing, hand hygiene, and social distancing, which significantly influenced educational settings. During this period of uncertainty, nursing education faced the dual challenge of maintaining academic standards while ensuring the competency of future healthcare professionals. This study compares the educational strategies employed by nursing institutions in Thailand and Japan during the pandemic. The decision to focus on these two countries stems from their distinct healthcare and educational systems, as well as their differing policy responses to COVID-19. While both nations swiftly integrated online teaching and adapted clinical training methodologies, variations in technological infrastructure, and institutional approaches influenced the effectiveness of these strategies. By analyzing these adaptations, this study aims to provide valuable insights into nursing education in crisis situations.

1. Summary of the COVID-19 Pandemic Situation in Thailand

The World Health Organization (WHO) officially declared the emergence of Coronavirus Disease 2019 (COVID-19) as a Public Health Emergency of International Concern (PHEIC) on January 30, 2020. This rapidly evolved into a global pandemic, registering 125,260 confirmed cases and 4,613 fatalities across 118 countries by March 11, 2020. As of January 31, 2023, the worldwide impact of the COVID-19 pandemic escalated significantly, resulting in over 620 million confirmed cases and an unfortunate toll of more than 6.5 million deaths.

Thailand encountered several waves of the COVID-19 pandemic stemming from the novel Coronavirus (SARS-CoV-2). The initial outbreak emerged in March 2020 and was traced back to entertainment venues and boxing stadiums. In response, the Thai government implemented the Royal Decree on Public Administration in Emergency Situations, enforced since March 26, 2020, aimed at efficiently curbing the virus's transmission. Subsequent waves occurred in December 2020, March 2021, and August 2021, each presenting varying impacts across different sectors. Throughout each phase, the Ministry of Public Health in Thailand and all associated entities diligently worked to control and prevent widespread transmission, resulting in varying degrees of containment and improvement in the spread. Thailand formally transitioned from a pandemic to an endemic phase on October 1, 2022, officially reclassifying COVID-19 as a notifiable infectious disease, as per the Department of Disease Control, Thailand (DDC, Thailand, 2022).

2.Pre-pandemic COVID-1 9 teaching and learning model

In education management before the epidemic, the nursing institute provides educational management that is in line with the 21st century, emphasizing on the announcement of the Ministry of Education, Thailand to have higher education management standards. The teaching and learning model are divided into 5 categories: 1) Teaching and learning that develops Cognitive domain helps learners gain knowledge and understanding of various contents. 2) Teaching and learning that develops the mind (affective domain) helps develop learners' feelings, attitudes, values, morals and ethics. 3) Teaching and development of special skills (psycho-motor domain) helps develop learners' abilities in performing various actions or expressions. 4) Teaching that emphasizes the development of process skills (process skill) is a skill related to various methods, which may be Intellectual processes such as various thinking processes, analytical thinking, and creative thinking and critical thinking, etc. Or it may be a social process, such as a collaborative process, etc. 5) Integration instruction model, this model develops various aspects of learner learning simultaneously by integrating both content and methods. (Saraketrin, A., Rongmuang, D., Chantra, R., (2019). This is a format that is gaining immense popularity. This is an education management in the 21st century, emphasizing on the learner-centered. Students must learn by doing, practice and seek additional knowledge

by themselves apart from textbooks. Instructors have the role of facilitating, introducing, pointing out ways to seek knowledge, making teaching less, focusing on teaching in a way that helps learners learn. Furthermore, an additional, there is also a study focused on fostering creative thinking, critical analysis, and problem-solving skills. This educational approach, which emphasizes the learners, is crucial in the 2 1 st century. Students need to learn by doing, practice, and seek additional knowledge independently. In this context, instructors assume a pivotal role as facilitators, providing guidance, directing avenues for seeking knowledge, and offering tools to support learning and skill development tailored to the learners. This approach is guided by the 8 C learning principles, which are skills in various areas, including 1) critical thinking and problem solving 2) creativity and innovation 3) cross-cultural understanding 4) collaboration, teamwork and leadership 5) communications information, and media literacy 6) computing and ICT literacy 7) career and learning skills and 8) morality, benevolence, discipline (compassion) (Panich, V. (2017).

In conducting teaching and learning in normal conditions, teaching is taught in the classroom at the location of the school or sometimes we call it face-to-face teaching. Teachers and learners meet face to face in class and have classroom activities by a variety of teaching methods, including lectures, participatory learning or do learning activities, such as problem-based learning (PBL), research-based learning (RBL), community-based learning (Community Based Learning), etc.

Clinical learning or practice is learning in real situations where the instructor teaches close to the student. The number of students per group is small. Teachers can provide a mix of learning activities that can help develop nursing skills and assess individual learners. Learning activities used include small group discussions, mind mapping. utilization of case studies as foundational frameworks, nursing consultation, reflective thinking, and multimedia utilization. These methods collectively enhance nine critical skills, including analytical thinking, rational reasoning, synthesis, creative thinking, problem-solving, technology utilization, interpersonal relationships, language proficiency, and public mental aptitude.

In western countries, teaching in this era uses a curriculum in nursing education that centered on humanism (referring to person-centered care and the humanistic narrative of a person seeking healthcare), evidence-based education and practice, reflective analysis and evaluation, and leadership and professionalism in practice. (Bouchaud, M., Brown, D., & Swan, B. A., 2017)

The field of nursing education abroad in this era of advances in information technology. Many nurse educators embrace the classroom learning methods of the 20th century. Hoping they will successfully translate for a new century of learners. This phenomenon will not happen unless educators recognize we are teaching students who embrace different learning methods. Students today have information presented to them almost instantly from multiple sources. Through just a few clicks of the mouse, they can access almost any piece of information on the World Wide Web. So, how do we teach students to harness this information, so it makes sense in their nursing education. Nurse educators struggle with questions such as, how can I get students to see the whole picture? This is the challenge every nurse educator must address if they desire to be successful. Helping students to put the pieces of the learning puzzle together will help with student success. Classrooms and clinical areas should contain different learning styles where students can see how multiple aspects of patient care overlaps from many sources. Bringing all the pieces of education together helps students embrace the knowledge that will make them successful in practice. (Rosati, L. J., & Szoka, A.. 2019)

4. Changes in Nursing Education Management Due to the COVID-19 Pandemic

When COVID-19 spread, the Thai government implemented measures such as closing venues where large gatherings occurred, including entertainment establishments, educational institutions, and public tourist attractions. As a result, students were unable to attend in-person classes until the situation gradually improved, allowing colleges to reopen under the authorization of the Disease Control Committee. In response to new waves of the

pandemic, colleges had to suspend in-person classes and adapt their teaching methods based on the severity of each outbreak. During this period, COVID-19 had not yet become endemic, and uncertainty about the pandemic's duration required continuous adjustments in education. These adjustments prioritized maintaining educational quality, enforcing safety measures, and minimizing virus transmission. The modifications in teaching and learning during this time included the following:

4.1 Nursing Education in Thailand: The Case of Srimahasarakam Nursing College

Srimahasarakam Nursing College, located in Mahasarakham Province in northeastern Thailand, has provided nursing education for over 40 years. It is one of 30 nursing colleges under the Faculty of Nursing at Praboromarajchanok Institute, which operates under the Ministry of Public Health. This institution specializes in health science education and adapted its teaching methods in several ways:

1) Online Teaching

Online teaching became a primary method for delivering theoretical courses, enabling students to access educational content remotely without requiring physical attendance. Students could participate in lessons from various locations using personal computers, laptops, or other devices with larger screens for better visibility. Virtual classrooms were conducted via platforms such as Zoom, Google Meet, and Microsoft Teams. While smartphones were also used, smaller screens sometimes required additional resources for optimal engagement. A stable internet connection was essential to ensure clear audio and visual communication. Instructors used various digital media, including text documents, power point presentations, audio recordings, and videos, to facilitate learning. Compared to traditional classrooms, online learning required higher student engagement and occasional one-on-one interactions, as monitoring all students simultaneously was more challenging.

2) Laboratory learning with infection prevention measures

Laboratory-based learning continued but with strict infection prevention and control measures. Practical skill sessions were conducted in small groups to maintain physical distancing. Stringent hygiene protocols included continuous mask-wearing, regular handwashing, and adherence to physical distancing guidelines. This approach was particularly crucial for subjects requiring hands-on practice, such as basic nursing and childbirth training. Students practiced on mannequins in realistic lab settings, supplemented by video demonstrations and e-learning resources. Small-group sessions allowed for instructor feedback and evaluation. As all nursing students resided in campus dormitories, the college implemented daily health screenings, restricted visits to high-risk areas, and followed strict disease control measures. As a result, there were no reported infections within the college during the first and second waves of the pandemic.

3) Blended Learning

Blended learning, which combines online and face-to-face instruction, was introduced as vaccination rates increased and pandemic conditions improved. This method was mainly used for theoretical courses requiring conceptual understanding and collaborative work. Large-group online lectures were supplemented by small-group in-person discussions. The proportion of online versus in-person learning varied depending on the local COVID-19 situation. In cases of severe outbreaks, regional Disease Control Committees recommended a full transition to remote learning.

4) Simulation-Based Learning

Simulation-based learning became an essential method for nursing education, particularly during the pandemic. This approach allowed students to observe and practice clinical scenarios in a controlled setting, reducing the risk of exposure to real patients. High-fidelity virtual reality simulations enabled learners to develop nursing skills, including handling critical and high-risk patient cases, without compromising patient safety. Repeated practice improved clinical decision-making, critical thinking, communication, and teamwork. The realistic simulations boosted students' confidence when transitioning to real clinical settings.

4.2 Nursing Education in Japan: The Case of Okayama Saiseikai Nursing College

Japan is divided into eight regions and 47 prefectures, with Okayama prefecture located in the Chugoku region on western Honshu Island. Okayama Saiseikai Nursing College has offered a bachelor of science in nursing program for over 50 years. The COVID-19 outbreak in Japan began in 2020, and as of February 2023, the country had experienced eight waves of infections. One remarkable achievement of Okayama Saiseikai Nursing College is its consistent 100% pass rate in the national nursing examination for 12 consecutive years, even during the COVID-19 crisis (2020–2022). The college implemented remote learning for the first time during the emergency declaration in 2020 and continued adapting its teaching strategies with each new wave of infections.

Remote Teaching Methods

When the pandemic intensified in 2020, the college initially held face-to-face classes for new students. However, as the fourth wave emerged, the Okayama prefecture declared a state of emergency, prompting the college to shift to remote learning. Skype was used as the primary platform, with support from the information management division at Okayama Saiseikai general hospital.

To overcome the challenges of remote learning, instructors provided instructional videos demonstrating procedures on mannequins, using tablet cameras to zoom in on key details. Remote teaching also allowed students to replay recorded lessons for better understanding. Learning materials and printed resources were made available online, and students were given more questions and interactive opportunities compared to traditional in-person classes. The college maintained regular in-person check-ins every one or two weeks to support student engagement. While some students found remote learning less stressful and appreciated the flexibility, others struggled with concentration at home. The use of video technology improved the observation of nursing techniques, enhancing the learning experience despite the absence of physical medical equipment.

4.3 Similarities and differences in a component of teaching between Thailand and Japan

part	Similarities	differences	
		Srimahasarakam Nursing College, Thailand	**Okayama Saiseikai Nursing College, Japan**
teaching method	1. Using online teaching methods through an online meeting program 2. simulation to replace hours of practice in real situations	1. Use teaching through programs such as Zoom Meeting, Google Meeting, Cisco Webex. 2. have a mixed style and study in the laboratory by strictly following to prevention and infection control and social distancing	1.Use teaching through online meeting program skype 2. using the DVD posted on the website in advance. Easy to teach, emphasizing that "This is the point!" and answer questions from students at any time, can immediately respond to the request by saying, "Please show me again."
Teacher	1. Develop the potential of online teaching through various methods. 2. There is more motivatio	1. Asking individual learners periodically while teaching 2. Focused on small-group practical training	1.had to prepare a greater number of questions for students compared to face-to-face classes to ensure

part	Similarities	differences	
		Srimahasarakam Nursing College, Thailand	Okayama Saiseikai Nursing College, Japan
	n for learners than normal teaching. 3.Provide or make new teaching materials that can be used to assemble online, such as video, movies	within controlled environments.	engagement and comprehension in an online setting, 2. increased the frequency of verbal interactions with students during online sessions to create a more interactive learning environment
Learner	1. Reduce the risk of infection. 2. Studying at home, arrange a seat and watch the screen through devices that are convenient for the students, such as Notebook, Tablet, Smart phone.	1. Most students use a private room such as a bedroom, giving them privacy. It doesn't take much time to prepare dressing before class. 2. Some students' home environment is not	1. Concentrate less on studying at home than in class. 2. Reduce commuting time and can take that time to study instead of commuting.
	3. Attending classes face-to-face is more stressful.	conducive to online learning, such as other noise disturbances. insufficient internet signal so the sound is not clearly. commuting time	
Policy or college action	1. Support, facilitating information systems or internet network signals, equipment, tools that help create quality teaching and learning. 2. Establish appropriate teaching styles under prevention and	Help reduce costs by reducing the cost of credits so that students can use the money to compensate for paying for the internet that each person has to use to study at home.	- The number of days students are required to attend classes on campus has been reduced to save time and travel costs. However, tuition fees remain unchanged.

part	Similarities	differences	
		Srimahasarakam Nursing College, Thailand	**Okayama Saiseikai Nursing College, Japan**
	infection control.		

Other Similarities and Differences in Nursing Education.

In examining the nursing education systems of Thailand and Japan, several key similarities and differences come to the forefront. Both countries have witnessed a notable shift towards online teaching in response to the COVID-19 pandemic. In both contexts, theoretical courses have migrated to virtual platforms, allowing students to access educational content remotely, enhancing flexibility and accessibility. Nevertheless, there are distinctions worth noting. In Thailand, nursing students predominantly reside in dormitories within college grounds, allowing for comprehensive health screenings and stringent disease control measures, contributing to a low incidence of on-campus infections during the initial waves of the pandemic. In contrast, the situation in Japan may vary, given the diverse nature of educational institutions and accommodation arrangements.

Moreover, while laboratory-based learning with a focus on infection prevention and control is a shared priority in both countries, variations arise in the application of this approach. In Thailand, small groups of students engage in practical sessions where hygiene measures, including mask-wearing, handwashing, and physical distancing, are vigilantly enforced. The hands-on practice is essential for honing skills necessary for patient care. In Japan, the approach may vary between institutions, with some emphasizing stringent health protocols, while others may adopt alternative instructional strategies.

Blended learning, incorporating both online and face-to-face components, is another commonality. This approach becomes more prominent as vaccination rates rise and pandemic conditions evolve. However, the precise composition of blended learning often depends on local pandemic circumstances, with variations in how theoretical concepts are delivered and collaborative work is conducted within small groups.

Lastly, both Thailand and Japan have recognized the potential of simulation model learning management. This approach involves students engaging in simulated scenarios to apply theoretical concepts in practical contexts. The high-fidelity virtual simulations used in both countries offer learners the opportunity to practice essential nursing skills without jeopardizing patient safety. These simulations foster proficiency, reduce errors, and enhance the clinical decision-making abilities of students. Notably, the practice of employing simulation scenarios in nursing education is an effective strategy adopted by both countries, offering a means to cultivate clinical competence in a controlled, risk-free environment.

In sum, while nursing education in Thailand and Japan shares some common responses to the challenges posed by the pandemic, contextual variations and institutional practices result in unique approaches to online learning, laboratory-based instruction, blended learning, and the use of simulation models. These adaptations underscore the flexibility and adaptability of nursing education systems to address unforeseen challenges."

5. Discussion

The teaching methods employed in nursing education in Thailand and Japan, including online teaching, laboratory learning, blended learning, and simulation model learning management, offer a multifaceted approach that enhances both theoretical understanding and practical proficiency among nursing students. Online teaching has been recognized for its flexibility and accessibility, enabling students to engage with educational content remotely. Numerous academic studies have lauded the benefits of online learning, particularly in nursing education. Robinson, M., & Breen, H. (2020). Gazza, E. A. (2017). Research by Carrillo and Flores, 2020, Tathahira, T. (2020) underscores the effectiveness of online education in enhancing critical thinking skills among nursing students. A study by Landrum, B. (2020) highlights the positive impact of online education on students' self-regulation and time

management skills. Additionally, a study by Landrum (2020) highlights the positive impact of online education on students' self-regulation and time management skills. In contrast, while online education offers flexibility and accessibility, it also presents challenges that can negatively impact nursing students' learning experiences. Research has shown that online learning can lead to feelings of isolation and reduced opportunities for peer interaction, which are crucial for collaborative learning in nursing education (Hodges et al., 2020). A study by Mukhtar et al. (2020) found that students often face difficulties in maintaining motivation and engagement due to the lack of face-to-face interaction with instructors and peers. Moreover, technical issues such as unstable internet connections and limited access to digital resources can hinder students' ability to fully participate in online learning (Adnan & Anwar, 2020). These challenges highlight the need for a well-structured support system, including regular instructor feedback, peer collaboration strategies, and technical assistance, to ensure that online learning remains effective and inclusive for all students.

Blended learning, which combines online and face-to-face instruction, has also been increasingly adopted as pandemic conditions ease. A study by Gawlik-Kobylinska, Domalewska, and Maciejewski (2021) suggests that blended learning offers a balanced approach, catering to diverse learning preferences. Similarly, a study by Law, Geng, and Li (2019) highlights the advantages of blended learning in promoting social presence and learner engagement. Interactive elements like discussion forums, live video sessions, and group activities help students feel connected and engaged. Technology readiness enhances participation, and with well-structured digital resources and support, students interact more effectively with peers and instructors, leading to a richer learning experience and improved academic outcomes. Lastly, simulation-based learning management leverages high-fidelity virtual simulations, reducing the risk of patient harm while promoting essential clinical skills. Research by Brown (2015) highlights the significant role of simulation in nursing education, emphasizing its effectiveness in enhancing student competence, critical thinking, problem-solving, and decision-making skills. A study by Toqan et al. (2023) underscores the effectiveness of high-fidelity simulation in improving students' professional self-confidence. Additionally, research by Fuglsang, Bloch, and Selberg (2022) supports the role of simulation in strengthening clinical judgment and patient assessment skills. Furthermore, a study by Raurell Torredà et al. (2015) highlights the importance of simulation in improving nursing students' patient assessment abilities. A study by Wai et al. (2021) emphasizes the value of simulation-based learning in fostering increase the positive attitudes on teamwork, trust, and communication skills among nursing students. In conclusion, these teaching methods represent a strategic blend of evidence-based practices and contemporary approaches that contribute to the comprehensive development of nursing students in Thailand and Japan.

6. Conclusion

The transformation in nursing education management is centered on empowering learners with vital nursing knowledge and skills for safe and efficient patient care. This evolution stems from adapting to global shifts, technological advancements, and the profound impact of the COVID-19 pandemic. Meeting these challenges, nursing education embraces technology and communication tools, meeting the demands of our modern world. It remains dedicated to laboratory and practical training, ensuring learners acquire crucial nursing skills, especially in infection prevention. This fusion of traditional and innovative methods not only addresses global health crises but also fortifies nursing graduates in Thailand and Japan. As education evolves, this adaptive approach becomes fundamental in delivering top-notch nursing education in our ever-changing world.

7. Recommendations and Implementation

Based on the comparison of nursing education management in Thailand and Japan during the COVID-19 pandemic, several key recommendations and best practices can be applied to enhance nursing education in similar contexts:

7.1 Strengthening Online and Blended Learning

Nursing institutions should invest in reliable digital platforms, ensuring stable internet connections and access to high-quality learning materials. Providing students with necessary technological support, such as subsidized internet services, can help minimize digital inequalities. In addition, interactive teaching methods, such as real-time case discussions, virtual group work, and simulation-based e-learning, should be incorporated to maintain student motivation and participation. Regular instructor feedback and structured peer interactions can help mitigate feelings of isolation.

7.2 Enhancing Laboratory and Simulation-Based Training

The use of high-fidelity simulation should be expanded to provide students with hands-on experience in a controlled environment. Virtual simulations and augmented reality tools can enhance training in clinical skills, decision-making, and emergency response scenarios.

7.3 Supporting Student Well-Being and Academic Success

Providing mental health and academic support: The transition to remote and blended learning can be stressful for students. Institutions should implement regular check-ins, virtual counseling services, and peer mentorship programs to support students' emotional well-being and academic success. Additionally, promoting flexibility in learning through personalized learning plans and self-paced modules can help accommodate diverse learning needs and prevent burnout, particularly in high-intensity programs like nursing education.

7.4 Practical implementation,

To implement these recommendations effectively, institutions should:

1) Conduct regular assessments of students' technological and academic needs.

2) Train instructors in digital pedagogy and simulation-based teaching methodologies.

3) Establish support networks, including faculty mentorship and peer study groups.

4) Collaborate with healthcare organizations to integrate real-world clinical experiences into nursing education.

5) Continuously evaluate and refine educational strategies to align with evolving healthcare demands and technological advancements.

By integrating these recommendations, nursing education programs can enhance the quality of training, improve student outcomes, and ensure preparedness for future healthcare challenges

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