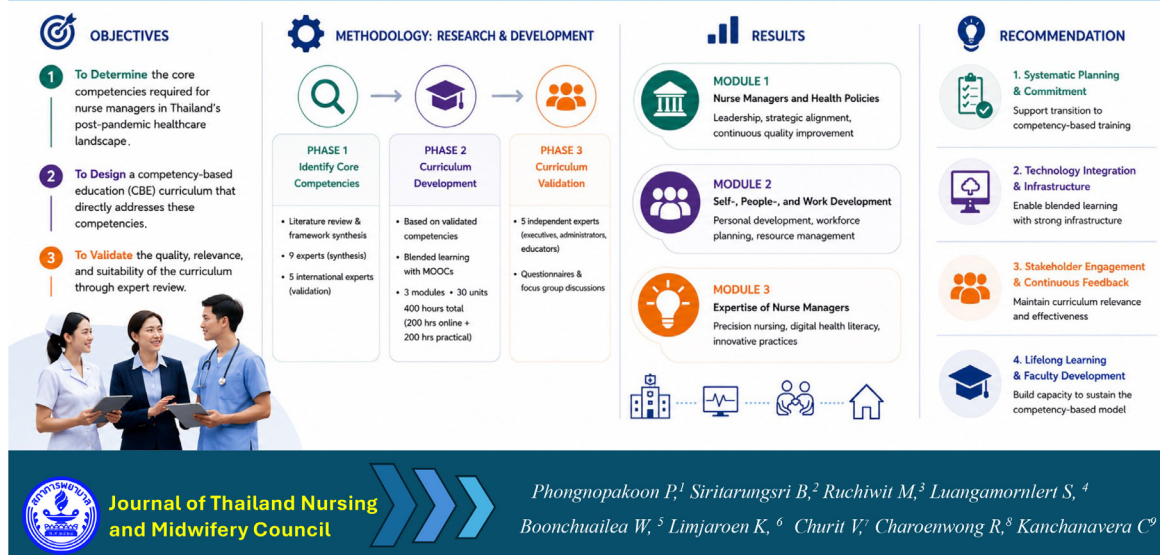


Development of a Competency-Based Short Course Training for Nurse Managers in the New Normal Era

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Extended Abstract

Introduction In Thailand, the Nursing and Midwifery Council currently offers only general nursing administration programs. While these programs provide a broad foundation in administrative theory, they place limited emphasis on the specific competencies required of contemporary nurse administrators and fail to fully address the complexities of the “new normal” era. The COVID-19 pandemic, coupled with rapid technological change, demographic shifts, and evolving healthcare demands, has highlighted critical gaps in leadership readiness, digital literacy, and crisis management. Nurse managers, who play a pivotal role in ensuring quality of care, staff resilience, and organizational adaptability, require specialized training that goes beyond traditional administrative frameworks. This study responds to that urgent need by developing a competency-based short-course curriculum tailored to nurse managers, aligned with both national priorities and international standards.

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Objectives The primary objectives of this research were threefold: (1) to determine the core competencies required for nurse managers in Thailand's post-pandemic healthcare landscape; (2) to design a competency-based education (CBE) curriculum that directly addresses these competencies; and (3) to validate the quality, relevance, and suitability of the curriculum through expert review. By achieving these aims, the study sought to bridge the gap between existing general administration programs and the specialized skills needed for effective leadership in the new normal era.

Design This study employed a research and development (R&D).

Methodology This study included three phases. Phase 1: Identification of core competencies: A comprehensive literature review was conducted, drawing on frameworks from the American organization for nurse executives (AONE), the American organization for nursing leadership (AONL), and recent scoping reviews. Nine experienced nursing administration experts from both public and private sectors synthesized findings and collaboratively defined essential competencies. To ensure impartiality, five internationally recognized external experts validated the draft competencies. The content validity index (CVI) was calculated, yielding a robust score of .96, confirming strong agreement and content validity. Phase 2: curriculum development: The validated competencies informed the design of a competency-based curriculum. The development process followed the Nursing and Midwifery Council's criteria for specialized training, incorporated blended learning through massive open online courses (MOOCs), and applied the Professional Standards Framework for higher education. The curriculum was structured into three modules, each comprising 10 units, totaling 400 hours of instruction, 200 hours of online theoretical learning and 200 hours of practical administrative training. Phase 3: curriculum validation: Five independent experts, including nursing executives, administrators, and educators, evaluated the curriculum's quality and relevance. Their feedback was gathered through questionnaires and focus group discussions, ensuring consensus on the curriculum's suitability. The CVI for the curriculum was 1.00, indicating unanimous agreement on its validity and appropriateness.

Results The finalized curriculum comprises three modules, each designed to cultivate specific competencies essential for nurse managers: Module 1: Nurse Managers and Health Policies focuses on leadership, strategic alignment, and continuous quality improvement. Learners engage in policy analysis, strategic planning, and organizational alignment exercises. Module 2: Self-, People-, and Work Development emphasizes personal development, workforce planning, and resource management. Practical tasks include case studies on leadership, retention planning, and budget management. Module 3: Expertise of Nurse Managers concentrates on precision nursing, digital health literacy, and innovative practices. Learners apply health informatics tools and explore innovative models of care delivery. The blended learning approach reinforces theoretical knowledge through practical application, preparing nurse managers to navigate complex healthcare environments.

Recommendation This study highlights the urgent need for specialized competency-based training for nurse managers in Thailand. By systematically identifying core competencies, developing a tailored curriculum, and validating its quality, the research provides a practical, evidence-based solution to strengthen nursing leadership in the new normal. The proposed curriculum not only addresses current gaps but also equips nurse managers with the skills, knowledge, and resilience required to lead effectively in dynamic healthcare environments. Addressing training gaps and aligning outcomes prepares nurse managers to meet evolving healthcare challenges. Successful implementation of this curriculum requires: (1) systematic planning and sustained commitment from administrators to support the transition to competency-based training, (2) technology integration and infrastructure support to facilitate blended learning delivery, (3) stakeholder engagement and continuous feedback to maintain curriculum relevance and effectiveness, and (4) promotion of lifelong learning and faculty development to sustain the competency-based model. Future research should focus on longitudinal evaluation of the curriculum's impact on leadership performance, clinical readiness, and organizational outcomes. Additionally, ongoing reassessment of competencies is necessary to adapt to emerging healthcare trends, digital innovations, and evolving international standards.

Keywords competency-based education/ professional competency/ nurse managers/ leadership/ blended learning

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การพัฒนาหลักสูตรฝึกอบรมระยะสั้นอำนวยการ พยาบาลในยุควิถีใหม่

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บทคัดย่อขยาย

บทนำ ในประเทศไทย สถานการณ์การพยาบาลให้มีการจัดการเรียนการสอนเฉพาะหลักสูตรการบริหาร การพยาบาลทั่วไป แม้ว่าหลักสูตรดังกล่าวจะวางรากฐานที่ครอบคลุมด้านทฤษฎีการบริหาร ยังมีข้อจำกัด ด้านสมรรถนะเฉพาะที่จำเป็นสำหรับผู้บริหารการพยาบาลในบริบทปัจจุบัน อีกทั้งยังไม่สามารถตอบสนอง ต่อความซับซ้อนของยุควิถีใหม่ได้อย่างสมบูรณ์ การแพร่ระบาดของโรคโควิด-19 ประกอบกับการเปลี่ยนแปลง ทางเทคโนโลยีที่รวดเร็ว การเปลี่ยนแปลงทางโครงสร้างประชากร และความต้องการด้านสุขภาพที่ปรับเปลี่ยน อย่างต่อเนื่อง ได้สะท้อนให้เห็นช่องว่างสำคัญในด้านความพร้อมด้านภาวะผู้นำ ความรอบรู้ทางดิจิทัล และ การจัดการภาวะวิกฤต ผู้จัดการทางการพยาบาลซึ่งมีบทบาทสำคัญในการสร้างความมั่นใจต่อคุณภาพการดูแล ความเข้มแข็งของบุคลากร และความสามารถในการปรับตัวขององค์กร จึงจำเป็นต้องได้รับการฝึกอบรมเฉพาะทาง ที่ก้าวข้ามกรอบการบริหารแบบดั้งเดิม การศึกษาครั้งนี้จึงมุ่งตอบสนองต่อความจำเป็นเร่งด่วนดังกล่าว โดยการพัฒนาหลักสูตรระยะสั้นที่เน้นสมรรถนะเฉพาะสำหรับผู้จัดการการพยาบาล ซึ่งสอดคล้องกับทั้ง มาตรฐานระดับชาติและมาตรฐานสากล

วัตถุประสงค์ การศึกษาครั้งนี้มี 3 วัตถุประสงค์หลัก ได้แก่ (1) เพื่อระบุสมรรถนะหลักที่จำเป็นสำหรับผู้จัดการพยาบาลในบริบทระบบสุขภาพของประเทศไทยภายหลังการแพร่ระบาดของโรคโควิด-19; (2) เพื่อ ออกแบบหลักสูตรการเรียนการสอนที่เน้นสมรรถนะ (competency-based education, CBE) ซึ่งตอบสนองต่อ สมรรถนะดังกล่าวโดยตรง และ (3) เพื่อประเมินคุณภาพ ความเหมาะสม และความสอดคล้องของหลักสูตร ผ่านการทบทวนโดยผู้ทรงคุณวุฒิ ทั้งนี้มีเป้าหมายเพื่อเชื่อมช่องว่างระหว่างหลักสูตรการบริหารทั่วไปที่มีอยู่กับ ทักษะเฉพาะที่จำเป็นสำหรับภาวะผู้นำที่มีประสิทธิภาพในยุควิถีใหม่

การออกแบบการวิจัย การศึกษาครั้งนี้เป็นการวิจัยและพัฒนา (research and development, R&D)

การดำเนินการวิจัย การศึกษาครั้งนี้ประกอบด้วยสามระยะ ระยะที่ 1 การระบุสมรรถนะหลัก โดย การทบทวนวรรณกรรมอย่างครอบคลุม อ้างอิงกรอบแนวคิดจาก American Organization for Nurse Executives (AONE), American Organization for Nursing Leadership (AONL) และการทบทวนวรรณกรรมเชิงขอบเขต

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⁹ เจ้าหน้าที่งานบริหารงานทั่วไป สถานการณ์พยาบาล

จากนั้นผู้ทรงคุณวุฒิด้านการบริหารการพยาบาลที่มีประสบการณ์จำนวน 9 ท่านจากทั้งภาครัฐและเอกชน ได้สังเคราะห์ผลการศึกษาและร่วมกันกำหนดสมรรถนะที่จำเป็น และเพื่อให้เกิดความเป็นกลาง ผู้เชี่ยวชาญภายนอกที่ได้รับการยอมรับในระดับนานาชาติจำนวน 5 ท่านตรวจสอบและยืนยันสมรรถนะฉบับร่าง โดยมีการคำนวณดัชนีความตรงเชิงเนื้อหาซึ่งได้ค่าที่สูงถึง .96 แสดงถึงความเห็นพ้องและความตรงเชิงเนื้อหาที่ดี ระยะเวลาที่ 2 การพัฒนาหลักสูตร สมรรถนะที่ผ่านการตรวจสอบ นำมาใช้เป็นข้อมูลในการออกแบบหลักสูตรที่เน้นสมรรถนะ กระบวนการพัฒนาหลักสูตรดำเนินตามเกณฑ์ของสภาการพยาบาลสำหรับการฝึกอบรมเฉพาะทาง โดยบูรณาการการเรียนรู้แบบผสมผสาน (massive open online courses, MOOCs) และใช้กรอบมาตรฐานวิชาชีพสำหรับการศึกษาระดับอุดมศึกษา หลักสูตรมีโครงสร้างแบ่งเป็น 3 โมดูล แต่ละโมดูลประกอบด้วย 10 หน่วย รวมทั้งสิ้น 400 ชั่วโมงการเรียนรู้ ซึ่งประกอบด้วย 200 ชั่วโมง และการฝึกอบรมเชิงปฏิบัติการด้านการบริหารอีก 200 ชั่วโมง ระยะเวลาที่ 3 การตรวจสอบหลักสูตร โดยผู้เชี่ยวชาญอิสระจำนวน 5 ท่าน ประกอบด้วยผู้บริหารการพยาบาล ผู้จัดการ และนักการศึกษา ได้ทำการประเมินคุณภาพและความเหมาะสมของหลักสูตร โดยรวบรวมข้อเสนอแนะผ่านแบบสอบถามและการสนทนากลุ่ม เพื่อสร้างความเห็นพ้องร่วมกันเกี่ยวกับความเหมาะสมของหลักสูตร ได้ค่าดัชนีความตรงเชิงเนื้อหาเท่ากับ 1.00 ซึ่งสะท้อนถึงความเห็นพ้องอย่างเป็นเอกฉันท์ต่อความตรงและความเหมาะสมของหลักสูตร

ผลการวิจัย หลักสูตรฉบับสมบูรณ์ประกอบด้วย 3 โมดูล โดยแต่ละโมดูลได้รับการออกแบบเพื่อพัฒนาสมรรถนะเฉพาะที่จำเป็นสำหรับผู้จัดการการพยาบาล ได้แก่ โมดูลที่ 1 ผู้จัดการการพยาบาลและนโยบายสุขภาพ มุ่งเน้นภาวะผู้นำ การจูงใจบุคลากร และการปรับปรุงคุณภาพอย่างต่อเนื่อง ผู้เรียนจะได้ฝึกวิเคราะห์นโยบาย การวางแผนเชิงกลยุทธ์ และการจัดวางองค์กร โมดูลที่ 2 การพัฒนาตน บุคลากร และงาน เน้นการพัฒนาตนเอง การวางแผนกำลังคน และการบริหารทรัพยากร โดยมีการฝึกปฏิบัติผ่านกรณีศึกษาเกี่ยวกับภาวะผู้นำ การวางแผน การคงอยู่ของบุคลากร และการบริหารงบประมาณ โมดูลที่ 3 ความเชี่ยวชาญของผู้จัดการพยาบาล มุ่งเน้นการพยาบาลเชิงความแม่นยำ ความรอบรู้ด้านสุขภาพดิจิทัล และการปฏิบัติที่สร้างสรรค์ ผู้เรียนจะได้ประยุกต์ใช้เครื่องมือสารสนเทศสุขภาพและสำรวจรูปแบบการให้บริการที่เป็นนวัตกรรม แนวทางการเรียนรู้แบบผสมผสาน ช่วยเสริมสร้างความรู้เชิงทฤษฎีผ่านการประยุกต์ใช้จริง เพื่อเตรียมผู้จัดการพยาบาลให้สามารถรับมือกับสภาพแวดล้อมด้านสุขภาพที่ซับซ้อน

ข้อเสนอแนะ การศึกษาครั้งนี้ชี้ถึงความจำเป็นเร่งด่วนในการจัดการฝึกอบรมเฉพาะทางที่เน้นสมรรถนะสำหรับผู้จัดการพยาบาลในประเทศไทย โดยการระบุดสมรรถนะหลักอย่างเป็นระบบ การพัฒนาหลักสูตรที่ปรับให้เหมาะสม และการตรวจสอบคุณภาพของหลักสูตร งานวิจัยนี้ได้เสนอแนวทางเชิงปฏิบัติที่มีหลักฐานเชิงประจักษ์เพื่อเสริมสร้างภาวะผู้นำทางการพยาบาลในยุควิถีใหม่ ไม่เพียงแต่ตอบสนองโดยเชื่อมต่อช่องว่างที่มีอยู่ แต่ยังช่วยเสริมสร้างทักษะ ความรู้ และความแข็งแกร่งที่จำเป็นสำหรับผู้จัดการพยาบาลในการนำองค์กรอย่างมีประสิทธิภาพในสภาพแวดล้อมด้านสุขภาพที่มีพลวัต การปิดช่องว่างด้านการฝึกอบรมและการจัดแนวผลลัพธ์ช่วยเตรียมผู้จัดการพยาบาลให้พร้อมรับมือกับความท้าทายด้านสุขภาพที่เปลี่ยนแปลงไป การดำเนินการหลักสูตรนี้ให้ประสบความสำเร็จจำเป็นต้องอาศัย (1) การวางแผนอย่างเป็นระบบและความมุ่งมั่นอย่างต่อเนื่องจากผู้บริหารเพื่อสนับสนุนการเปลี่ยนผ่านสู่การฝึกอบรมที่เน้นสมรรถนะ (2) การบูรณาการเทคโนโลยีและการสนับสนุนโครงสร้างพื้นฐานเพื่อเอื้อให้เกิดการเรียนรู้แบบผสมผสาน (3) การมีส่วนร่วมของผู้มีส่วนได้ส่วนเสียและการให้ข้อเสนอแนะอย่างต่อเนื่องเพื่อรักษาความเหมาะสมและประสิทธิผลของหลักสูตร และ (4) การส่งเสริมการเรียนรู้ตลอดชีวิตและการพัฒนาคณาจารย์เพื่อคงไว้ซึ่งรูปแบบการเรียนการสอนที่เน้นสมรรถนะ งานวิจัยในอนาคตควรมุ่งเน้นการประเมินผลในระยะยาวต่อผลลัพธ์ด้านภาวะผู้นำ ความพร้อมทางคลินิก และผลลัพธ์ขององค์กร นอกจากนี้ยังจำเป็นต้องมีการประเมินสมรรถนะอย่างต่อเนื่องเพื่อปรับให้สอดคล้องกับแนวโน้มด้านสุขภาพ เทคโนโลยีดิจิทัล และมาตรฐานสากลที่เปลี่ยนแปลงไป

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คำสำคัญ การศึกษาอิงสมรรถนะ สมรรถนะทางวิชาชีพ ผู้จัดการพยาบาล รูปแบบการเรียนรู้แบบผสมผสาน วันที่ได้รับ 29 ธ.ค. 68 วันที่แก้ไขบทความเสร็จ 9 ก.ค. 69 วันที่รับตีพิมพ์ 9 ก.ค. 69

Background and Significance

Thailand's healthcare system, already strained, experienced unprecedented challenges driven by evolving trends, including the integration of digital health, a rapidly aging population, and increasingly complex post-pandemic care demands. The COVID-19 pandemic acutely exposed vulnerabilities in emergency readiness, digital infrastructure, and agile leadership. Consequently, nurse administrators must now take on a more dynamic role to maintain quality of care, support staff resilience, and promote system adaptability. The Nursing and Midwifery Council's 2022–2026 plan strongly urges nursing leaders to innovate and transform their practices to meet these new healthcare complexities.¹⁻²

Economic, social, and technological shifts have drastically increased expectations for nursing leadership.³ Nurses are vital to healthcare operations, as their active involvement in management and clinical roles improves organizational performance.⁴ Nurse managers are key to effective healthcare delivery.

In this current healthcare landscape, specific competencies are emerging as critical priorities, necessitating a fundamental revision of existing nursing leadership education. To navigate the “new normal” demands effectively, contemporary nurse managers must master emerging priorities, including digital health technology and literacy, strategic alignment, comprehensive precision nursing care, and continuous quality improvement.⁵

For the over 20,000 nurse managers currently operating in the public and private sectors, this creates a concrete gap in essential skills, particularly in crisis management, strategic planning, and technological fluency. However, a systematic analysis of the existing educational offerings reveals concrete gaps in the current curriculum that leave nursing leaders unprepared for these evolving demands.²⁻³

Currently, the Thailand Nursing and Midwifery Council offers predominantly general nursing administration programs. These traditional programs exhibit specific deficiencies: they rely heavily on general administrative theory rather than measurable, competency-based learning outcomes.⁶⁻¹⁰ Furthermore, they significantly lack modern content, innovative teaching methods, and technology integration. These specific limitations in the current educational framework strongly justify the proposed study and the urgent need for a new training program. The demonstrated deficiencies emphasize that traditional programs are no longer sufficient to equip leaders for modern, data-driven healthcare environments.

By systematically addressing these concrete gaps, this study proposes a competency-based education (CBE) that aligns with national needs and international standards drawn from the American Organization for Nursing Leadership (AONL) and the American Organization for Nurse Executives (AONE).^{7,11} Implementing a blended learning approach will explicitly cultivate the essential knowledge and skills missing from current programs, thereby empowering nursing leaders to strengthen healthcare organizations and improve the quality of care for diverse populations in a rapidly changing world.¹²⁻¹⁵

Objectives

1. To analyze key competencies of nurse managers
2. To create a competency-based education for these roles
3. To verify the curriculum's quality and relevance

Conceptual Framework

This study employed a synthesized conceptual framework built around nine core competencies for

nurse managers. Although AONE and AONL offer established five-domain executive leadership models, this study adopted a tailored framework better suited to its aims.³

The framework was chosen because it links global executive standards to the practical needs of middle nurse managers in post-pandemic Thailand. By combining AONE and AONL models with six competency areas from recent scoping reviews, it addresses priorities such as digital health literacy, continuous quality improvement, and strategic alignment. These nine competencies provide the study's foundation and guiding structure.¹⁶⁻¹⁷

To translate these competencies into practice, the study uses CBE as its pedagogical framework. Unlike time-based instruction, CBE aligns learning outcomes with the nine competencies and assesses nurse managers through measurable skills and clinical readiness.¹⁸⁻¹⁹

The process of developing a CBE includes determining the necessary competencies, grouping them into themes, creating related courses, and establishing continuous evaluation.²⁰ International nursing education standards recommend that practical experience comprises at least 50% of training, highlighting the importance of balancing theoretical and practical elements.²¹⁻²² This framework aligns with Thailand's 2022 Higher Education Qualification Standards, which emphasize learning outcomes.

Finally, the framework adopts a Blended Learning approach as the delivery mechanism to bridge the gap between academic and clinical knowledge.²³ The COVID-19 pandemic prompted greater use of blended learning (BL), which incorporates both online and in-person approaches, links theoretical concepts with practical application, and reduces the limitations of solely traditional or online methods.²⁴ According to a systematic review, BL is associated with improvements in academic performance, skill acquisition, engagement, self-regulation, well-being, and learner satisfaction

By combining theoretical online modules with practical administrative training, the blended learning structure ensures that the nine core competencies are functionally integrated into practice. Together, the nine core competencies provide the content of the study, while the CBE and blended learning models provide the process, creating a cohesive structure from competency identification to curriculum development and validation.

Methodology

This study employed a research and development (R&D) framework adapted from Febriana.²⁵ Phase 1 identified essential nurse manager competencies, Phase 2 developed a competency-based nursing administration curriculum, and Phase 3 validated the curriculum's quality and suitability before implementation. The period from June 2023 to December 2023 was dedicated exclusively to Phase 1, the preliminary literature review, preceding data collection. This allocation was intended to address ethical considerations, ensure study feasibility, and establish a rigorous methodological foundation for subsequent stages of the research.

Phase 1 Preliminary study aimed to describe the core competencies of nurse managers.

Participants and procedures

This phase included a thorough literature review and collaborative brainstorming sessions by a research team of nine experienced nursing administration experts from both public and private sectors, selected by the Nursing and Midwifery Council.

The core competencies for nurse managers were developed using concepts from the AONE, AONL, and the scoping review conducted by González G. et al.^{3,7,11} This phase included a thorough literature review and collaborative brainstorming sessions by a research team of nine experienced nursing administration experts from both public

and private sectors. To ensure objectivity and avoid any potential conflict of interest, the draft competencies were subsequently reviewed by a separate panel of five independent external experts. The expert selection criteria required these individuals to have extensive experience in local and global nursing contexts and to be recognized at the national and international levels. It was explicitly ensured that these evaluating experts were entirely independent and had no direct affiliation with the research team that developed the initial content, thereby strengthening the validity and impartiality of the validation process. These independent experts evaluated the content validity of the draft curriculum using the content validity index (CVI).

Ethical Consideration

The study was approved by the Research Ethics Committee and the Nursing and Midwifery Council on January 5th, 2024 (CRO number TNMC-IRB 03/2023.0918). Curriculum development data were collected after ethics approval. Draft competencies underwent content validity assessment in Phase 1. In Phases 2 and 3, all eligible participants consented, were informed of their right

to withdraw at any time and were assured of confidentiality and anonymity.

Data Analysis

The researchers undertook a critical evaluation of the core and sub-competencies presented in frameworks. Subsequently, they collaboratively synthesized and clearly defined each nurse manager's competency through structured brainstorming sessions. The competencies were prioritized based on the Thai context and global standards. This comprehensive approach resulted in the identification of nine core competencies and twenty-six sub-competencies.

The CVI measures expert agreement on statements using a 4-point scale from inconsistent to very consistent. CVI is calculated as the proportion of items rated 3–4 by experts; a score of 0.80 or higher is considered acceptable. This study reports a CVI of 0.96 for nurse manager competency, reflecting robust content validity. The competencies were subsequently validated by five experts, who offered constructive feedback and recommendations while maintaining agreement on the nine-core competency framework established by the research team. Table 1 presents the core competencies.

Table 1 The nine core competencies for nurse managers, developed based on the frameworks of González G. et al., AONL, AONE

AONE (2015)	AONL (2021)	González García et al. (2021)	Nine core competencies for nurse managers
1. Leadership	1. Leadership.	1. leadership and	1. Managerial leadership
2. Knowledge of the healthcare environment	2. Knowledge of the Healthcare	teamwork	2. Strategic Alignment
3. Communication and relationship– building	3. Environment	2. Management	3. Continuous Quality Improvement
4. Professionalism	4. Communication and Relationship Building	3. Nursing expertise	4. Comprehensive Precision Nursing Care
5. Business skills	5. Professionalism	4. Knowledge of the health system	5. Innovated Nursing Practice
	6. Business Skills and Principles	5. Communication and technology	6. Workforce Planning Management
		6. Personal attributes.	7. Resource Management
			8. Digital health technology and literacy
			9. Self-development

Phase 2 Development based on the solution from Phase 1

Participants and procedures

The research team developed a competency-based curriculum for nurse managers using three key concepts: 1) following the Nursing and Midwifery Council's 2014 criteria for specialized nursing training and curriculum management, 2) implementing Blended Learning that combines in-person and online education through massive open online course (MOOC), and 3) applying the Professional Standards Framework for higher education teaching and learning support. A CBE ensures that learners gain specific competencies, knowledge, skills, and attitudes for professional practice. The development process starts by identifying key competencies, grouping them into broad themes, and designing courses around these areas.²⁰

The CBE for nurse managers outlines core competencies, learning outcomes, course content, instructional and evaluation strategies, and

modular educational approaches designed to build the knowledge and skills of administrative nurses. To ensure the curriculum meets the requirements of modern nursing leadership, feedback was systematically collected from stakeholders, including nursing professionals and educators. This methodical process ensures alignment with educational standards while effectively addressing the unique needs of nurse leaders within the dynamic healthcare environment.

Data Analysis

Five individuals assessed content validity: two nursing executives from the private sector, two nurses from the public sector, and one educational administrator. The CVI for nurse managers' curricula is 1.00. The curriculum for nurse managers comprises three modules with 10 units, totaling 200 hours for online theoretical instruction and 200 hours for practical administrative training. Table 2 presents a detailed synthesis of the development of the CBE for nurse managers.

Table 2 The curriculum structure of nurse managers

Developing Competency-based Education			Curriculum Structure for Nurse Managers	Evaluation strategies
Content	Pedagogy	Technology		
9 competencies	According to	Blended	Module 1: Nurse	Module 1
1. Managerial leadership	either the	learning: 200	Managers and Health Policies	• Healthcare system and policy report.
2. Strategic Alignment	International	hours of theory	1.1 Leadership for Nurse Managers	• Report on healthcare, ethics, and law.
3. Continuous Quality Improvement	Professional Standard Framework	through MOOCs and 200 hours of practical	1.2 Health Policies and Strategic Alignment within Organizations	• Group project and presentation.
4. Comprehensive Precision Nursing Care	(Advance Higher Education, 2023) or the Thailand	administrative training.	1.3 Continuous Quality Improvement	• Participation in policy planning and implementation.
5. Innovated Nursing Practice	Professional Standard		1.4 Operational Nursing Administration for Nurse Managers	
6. Workforce Planning Management	Framework (Ministry of Higher Education, Science,		Module 2: Self-Development, People Development, and Work Development	Module 2
7. Resource Management	Research and Innovation, 2025)		2.1 Personal Development	• Group presentation
8. Digital health technology and literacy			2.2 Workforce Planning	• Case study on strategic leadership
9. Self-development			2.3 Resource Management	• Assessment of effective leadership skills

Table 2 The curriculum structure of nurse managers (Cont.)

Developing Competency-based Education			Curriculum Structure for Nurse Managers	Evaluation strategies
Content	Pedagogy	Technology		
			Module 3: Expertise of Nurse Managers	Module 3
			3.1 Precision Nursing and Expertise	• Report on a strategic plan for nursing services.
			3.2 Digital Technology and Health Literacy	• Group presentation of strategic management.
			3.3 Innovative Nursing Practices	• Competency assessment

Phase 3 Validation: Quality and Appropriateness Participants and Procedures

This phase validates the curriculum's quality and suitability. A five-member expert panel, selected through purposive sampling from nursing administration and education professionals across the public and private sectors with national and international experience, evaluates the curriculum to inform effective implementation planning.

The procedures involved each expert initially responding to a preliminary questionnaire. This was followed by a focus group discussion on each key question, during which the experts reached consensus to validate the quality and suitability of the developed curriculum. Due to the time constraints of this research study, the developed curriculum could not be implemented in practice. Nevertheless, the curriculum has been designed with a modern, appropriate approach, making it well-prepared for effective and efficient implementation in the New Normal era.

Data Analysis

The draft curriculum's structure and content were assessed for quality and suitability as a central resource for nursing education. Five experts, including an educational administrator, two nursing directors, and two nurse managers, evaluated it. Their feedback guided final recommendations for the CBE for nurse managers in Phase 2. The CVI was 1.00, indicating strong content validity.

In Phases 2 and 3, curriculum validity, quality, and suitability were assessed by five independent experts selected through purposive sampling: one educational administrator, two private-sector nursing executives, and two public-sector nurse managers. Because these experts were not involved in the curriculum's design, the evaluation reduced potential bias and strengthened credibility.

Results

The findings of this study are systematically organized according to the three phases of the research and development framework.

Phase 1: Identification of core competencies

Through a literature review and synthesis by nursing administration experts, the study identified nine core competencies essential for contemporary nurse managers: 1) managerial leadership, 2) strategic alignment, 3) continuous quality improvement, 4) comprehensive precision nursing care, 5) innovated nursing practice, 6) workforce planning management, 7) resource management, 8) digital health technology and literacy, and 9) self-development. Expert validation produced a high CVI of .96, indicating strong agreement and solid content validity.

Phase 2: Training program development

Based on the validated competencies, a CBE was developed. The training program consists of three

modules with 10 learning units. The program requires a total of 400 hours, evenly divided into 200 hours of online theoretical instruction via MOOCs and 200 hours of practical administrative training. Expert review of the curriculum's structure, content, and learning outcomes yielded a CVI of 1.00.

The three developed modules are:

- **Module 1:** nurse managers and health policies (covering leadership, strategic alignment, and continuous quality improvement)
- **Module 2:** self-development, people development, and work development (covering personal development, workforce planning, and resource management)
- **Module 3:** expertise of nurse managers (covering precision nursing, digital technology, and innovative practices)

Phase 3: Training program validation In the final phase, a focus group of five independent experts (including an educational administrator, nursing directors, and nurse managers) reached a unanimous consensus. They validated that the curriculum is of high quality, structurally sound, and highly suitable for preparing nurse leaders for modern administrative roles.

Discussion

This study identified nine core competencies for nurse managers in Thailand through a literature review and needs assessment. The expert-validated curriculum, consisting of three modules and ten units, aligns with international standards (ANCC, AONE) and prepares nurse managers for evolving healthcare demands.^{1,7}

The developmental phase produced a competency based curriculum aligned with Thailand's Higher Education Qualification Standards, and González-García et al. supported the AONE model for selecting and training middle nurse managers, while Boahin emphasized task-focused, corrective

feedback to promote self-regulation and achievement in line with international standards and Thailand's PSF pedagogy.^{3,26,27}

Module highlights, suitability, and implementation

The curriculum includes three modules designed to comprehensively develop nurse leadership.

Module 1: Nurse managers and health policies

- **Strengths:** builds systems thinking and helps managers align unit goals with hospital strategy and national policy.
- **Suitability:** well-suited for preparing clinical nurses for strategic leadership roles.
- **Implementation:** combines online policy and leadership content with workplace projects such as gap analysis and strategic planning.

Module 2: self, people, and work development

- **Strengths:** focuses on workforce planning, resource management, and staff resilience.
- **Suitability:** highly relevant to middle managers handling staffing, conflict, and team morale.
- **Implementation:** combines MOOC-based human resource content with practical tasks such as retention planning and budget management.

Module 3: Expertise of nurse managers

- **Strengths:** emphasizes digital health, health literacy, and innovative nursing practice.
- **Suitability:** prepares leaders for technology-driven and data-informed healthcare.
- **Implementation:** applies health informatics and digital tools through integration into clinical workflows and precision care models.

Comparison with the previous curriculum:

Previous programs in Thailand focused on general nursing administration theory, with limited technology content and few innovative teaching methods. The proposed CBE addresses these gaps through measurable assessment across nine

modern competencies and a blended learning model (MOOC plus practical training), improving access for more than 20,000 working nurse managers.

Relevance to the new normal era The new normal exposed major weaknesses in global healthcare systems, especially in emergency readiness, agile leadership, and digital infrastructure. The proposed curriculum is designed to address the realities of the new normal era. By embedding “Digital health technology and literacy” and “Innovated Nursing Practice” as core competencies, it prepares leaders to manage telehealth transitions and data-driven care. Its focus on “Workforce Planning Management” and “Resource Management” also equips leaders with crisis management and adaptive leadership skills to deploy staff effectively during sudden surges in care demand and support organizational resilience in the “new normal.”

Limitation

This study emphasized the use of independent external experts. To reduce any remaining risk of team-affiliated bias or subjectivity during validation, the researchers applied structured quantitative procedures. Specifically, they calculated the CVI using a blind 4-point rating ranging from inconsistent to very consistent. A threshold of .80 or higher was required to indicate consensus and strong content validity.⁶

Recommendation

In summary, this research highlights the need for a CBE that meets current nursing leadership demands. Addressing training gaps and aligning outcomes will better prepare nurse managers for evolving healthcare challenges. Successful implementation requires thoughtful planning, ongoing commitment, and a balance between quality assurance and stakeholder involvement to apply this approach effectively.

Implementation of guidelines for academic administrators

Administrators implementing this CBE for nurse managers should focus on four key strategies:

1) Systematic planning and ongoing commitment: Successful adoption requires clear planning and sustained administrative support for the shift to outcome-based training.

2) Technology integration and support: Because the curriculum uses blended learning with MOOCs and practice, administrators must provide strong technology infrastructure and support.

3) Stakeholder engagement and feedback: Administrators should regularly gather and use feedback from nurses, educators, and industry partners to keep the curriculum relevant and effective.

4) A culture of continuous learning: Administrators should promote lifelong learning and ensure faculty are trained and supported to sustain the direct-assessment CBE model.

Recommendations for future research

Based on the findings and limitations of the current study, future research should focus on the following areas:

1) Implementation and longitudinal evaluation: Because time constraints prevented implementation, future research should apply the three modules with nurse managers and evaluate outcomes such as leadership performance, clinical readiness, and workplace care delivery.

2) Adaptation to evolving healthcare needs: Future studies should regularly reassess the nine core competencies and update the curriculum to keep pace with post-COVID healthcare changes, digital health advances, and evolving national and international standards.

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Conflict of interest: The authors report no conflicts of interest.

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