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A Comparative SWOT Analysis of Nursing Curriculum–Assessment between China and Thailand

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ABSTRACT
The study addresses curriculum–assessment alignment issues in undergraduate nursing programs from a cross-national perspective, focusing on China and Thailand, amid the world's calls for highly skilled professionals who are capable of thinking critically and demonstrating professional responsibility. Even though there is an increased interest in this field, empirical information about how the process of curriculum design, teaching practices, and evaluation systems can align coherently is still scarce. This study uses a mixed-methods approach to gather data from 100 respondents: students, graduates, lecturers, and clinicians, using curriculum document review, questionnaires, and SWOT analysis. While quantitative data were analyzed by means of descriptive statistics and Chi-Square tests, which helped to reveal any perception differences, qualitative techniques were used to identify patterns of alignment and differences depending on the context. The findings show similarities in program duration and adherence to competency criteria, but some major differences are evident in terms of curriculum focus, theory-practice integration, teaching approaches, and evaluation. Thailand shows better alignment due to the use of experiential learning and competency-based evaluation of practice, while China pays more attention to scientific principles and structure of the curriculum. Significant differences have been identified among different stakeholders concerning educational support, learning environment, and alignment of outcomes and evaluation.

KEYWORDS
Curriculum–assessment; nursing education; SWOT; alignment; clinical assessment.

INTRODUCTION

The fast-paced changes occurring within the systems of healthcare around the globe make it extremely important to produce graduates of nursing schools who are clinically competent as well as possess critical thinking skills, adaptability, and professional responsibility (Silitonga et al., 2026). To cope with this situation, many educational institutions around the world have been using competency-based education, where the integration of curriculum development with assessment is the key focus in order to produce specific learning outcomes (Kox et al., 2021; Lin et al., 2025). Under such circumstances, the compatibility between the curriculum and assessment becomes an important factor in assessing the success of nursing education and its readiness for clinical practice (Leighton et al., 2021; Louey et al., 2025; Rosina et al., 2022).

While there is considerable literature on the topic of nursing education reform and competence-based curriculum development (Connor & Carter, 2026; Jackson et al., 2025; Minja et al., 2026; Mukurunge et al., 2025), many of the existing studies have considered the issues related either to curriculum development or to the process of learning in isolation without due consideration being given to the connection between curricula and competence-based assessment systems. There is a lack of cross-country comparative studies with an emphasis on the effect of the interaction of curricula and competence-based assessment systems on the development of competences of nursing students, especially in Asia (Lin et al., 2025; Mani, 2025).

In order to fill this research gap, it is necessary to use an integrated framework of analysis to assess the advantages, disadvantages, opportunities, and threats of curriculum alignment and competence assessment in nursing education. Using the SWOT analysis will offer a strategic perspective on internal capabilities and external forces impacting the effectiveness of the implementation of the curriculum as a way to develop graduate competencies (Budiharso et al., 2026; Chen et al., 2025; Erbilgin, 2017; Li et al., 2025). Hence, the current research uses a comparative SWOT analysis framework to evaluate nursing curriculum–assessment systems in China and Thailand. A comparative SWOT analysis framework is theoretically sound for analyzing the degree of alignment between the curriculum and assessment, as the alignment includes not only technical aspects related to the congruence between the objectives, content, pedagogical process, and assessment activities, but also involves strategic aspects of alignment determined by the institutional capacity and professional expectations from the external environment. Therefore, in nursing education, the issue of curriculum–assessment alignment should be considered in terms of internal strengths such as faculty competencies, competence-based design of the curriculum, assessment literacy, and clinical training resources, and internal weaknesses, including the lack of consistency and coherence in the assessment process, mapping competencies, and giving feedback. Meanwhile, the alignment is affected by external opportunities and threats, including international standards of accreditation, mobility of health care workers, technology change, and changing demands in clinical competencies. Consequently, SWOT is the appropriate tool for a precise and realistic analysis of how nursing

curricula and assessment systems are coherent, responsive, and strategic enough to produce competent graduates.

LITERATURE REVIEW

SWOT analysis and constructive alignment theories

The present research applies a combination of SWOT analysis and constructive alignment theory to assess and compare the alignment of curriculum and assessment within nursing education in China and Thailand. SWOT analysis can be considered a strategic tool for exploring the inner and outer variables that affect the processes of implementing the curriculum and evaluating the competencies of students (Erbilgin, 2017; Tan et al., 2025). The dimensions of this approach involve strengths (inner factors of the curriculum, institution capabilities, teaching abilities, and the procedures of the assessment that facilitate the formation of competencies); weaknesses (the lack of consistency between the curriculum, teaching techniques, and assessment criteria); opportunities (the outer factors that may help enhance the curriculum and include such aspects as educational innovations, technology, international standards, and collaboration at the regional level); and threats (such aspects as the needs of healthcare, regulatory issues, resource gaps, and international competition) (Hatefimoadab et al., 2026; Talebi, 2025; Tan et al., 2025).

Constructive Alignment Theory builds on the strategic analysis process of SWOT analysis by providing insight into the consistency within the internal structure of intended learning outcomes, curriculum content, teaching and learning processes, and assessment procedures (Croy, 2018; Joseph & Juwah, 2012). This theory is based on the idea that students construct their knowledge through learning and that there needs to be alignment between all aspects of the curriculum in order for learners to develop required competencies (Arifani et al., 2020; Croy, 2018; Javadnoori et al., 2024; Joseph & Juwah, 2012). Constructive alignment in this research is examined in regard to three major constructs. First, alignment in terms of curriculum content focuses on the extent to which topics in the curriculum, clinical learning experience, and instructional materials match with the knowledge, skills, professional attitudes and competencies specified in the intended learning outcomes. Second, alignment in terms of cognitive level reflects whether the level of learning activities and assessment tasks corresponds to the intended outcome and involves levels of knowledge, comprehension, application, clinical reasoning, critical thinking, problem-solving, and professional decision making (Lin et al., 2025; Mani, 2025; Tarman & Dev, 2018). Third, alignment of the assessment with the intended learning outcome involves checking whether the assessment tools used such as written exams, clinical performance, simulation exercises, case analysis, portfolio, and OSCE tests are appropriate for measuring the intended competency.

The comparative analysis of nursing curriculum in China and Thailand which is going to be conducted next will involve two theoretical approaches. At first, Constructive Alignment Theory will be used in order to analyze the degree of alignment of curriculum content, cognitive outcomes, learning processes, assessment procedures, and desired graduate competencies in

each of the countries. Then, the patterns of alignment discovered will be classified through the lens of the SWOT approach. The strengths will be found in well-aligned curriculum content, appropriate cognitive outcomes, authentic assessments, qualified instructors, and strong institutional support. The weaknesses will include curriculum gaps, misalignment of cognitive outcomes, emphasis on written exams, and weak clinical assessment. The opportunities will be explored in terms of national policy changes, technology for assessment, international competency standards, and inter-country cooperation in education. As for the threats, they will be related to different regulatory frameworks, unequal resource endowments, changing needs of health care, and other challenges in implementing new curriculum and assessment models. Thus, the combination of theories allows us to conduct not only a comparative evaluation of the structure of the curriculum and assessment system in China and Thailand, but also an assessment of the conditions of their efficiency.

Comparative curriculum assessment

Existing research on nursing curricula has mainly taken place in single country settings and has mainly favored a dominant standpoint, mainly that of the students. For example, Chen and Zheng (2023), in China, explored the quality of undergraduate nursing classroom teaching through student satisfaction data and established that classroom environment, teacher ethics, and teaching method greatly influenced curriculum quality with respect to the development of student-centered teaching. In Thailand, Turner et al. (2021) investigated the integration of rational drug use in a Bachelor of Nursing Science curriculum and determined that curriculum integration could improve the students' knowledge about drugs and contribute to safe drug prescription practices. Likewise, in Saudi Arabia, Abuadas (2022) assessed the students' perception regarding clinical competence and learning environment and established that curriculum experience and clinical environment had an influence on the perception of preparedness for practice. Overall, it appears that there is existing research that has provided useful information for improvement of teaching quality, competencies and curriculum delivery; however, it has largely relied on a single country and stakeholder perspective.

A similar trend is evident in the African context, in which curricula studies have also tended to remain within national boundaries and particular perspectives. In South Africa, Ngunyulu et al. (2020) have analyzed the opinions of nursing students concerning the incorporation of African traditional indigenous knowledge in the curriculum and discovered that curricular neglect of local knowledge led to identity issues and prevented students from being culturally responsive. Adjei et al. (2018), studying the experience of intra-semester clinical placement for student nurses in Ghana, found that clinical experience allowed for knowledge transfer but was characterized by stress, assignment of menial tasks, and lack of supervision that prevented learning. In Malawi, Mbakaya et al. (2020) have studied the perceptions of students regarding the clinical learning environment and discovered that resource shortage, bad interpersonal relationships among staff, and lack of clinical support were negatively influencing learning. The significance of these studies is that they have pointed out the specific weaknesses

of curricula and practicums that can be used in future reform efforts; nevertheless, the conclusions remain isolated in national contexts and are primarily based on student reports (Connor & Carter, 2026; Jackson et al., 2025; Louey et al., 2025; Metli, 2026).

Similarly, studies conducted in Europe and the Middle East indicate that curriculum analysis has often remained fragmented in relation to distinct components of the curriculum. For instance, in the Netherlands, van Iersel et al. (2020) examined how students perceived and preferred placement within a community-oriented curriculum and determined that, although interest in community care was somewhat increased, overall, the curriculum had not transformed perceptions and career preferences of students. Fawaz and Anshasi (2019) examined senior nursing students' perceptions of interprofessional simulation-based education in Lebanon and proved that simulations helped in role understanding, collaboration, and interpersonal skills development. Furthermore, in Australia and Malaysia, Ahmad et al. (2021) explored how oral health education was organized within nursing curricula and found inconsistent learning outcomes, clinical experience, and assessments among the universities in question, while curriculum overload was named one of the barriers by educators. These studies have shown how curriculum innovations influenced competence, collaboration, and professional preparation; still, they remain focused on particular aspects of the curriculum, particular groups of stakeholders, or national contexts alone (Minja et al., 2026; Mukurunge et al., 2025).

It can be seen that there is a deficiency in the existing body of literature which has been revealed through a synthesis of the available literature in terms of nursing curriculum evaluation. In other words, it can be said that past research has mainly focused on evaluating the nursing curriculum from one perspective at a time in an institution or nation. It may be noted that although there have been localized findings from such evaluations, which have mainly been in terms of increasing awareness of the gap between theory and practice, need for competencies, and motivation for revision of the curriculum, there has not been enough evidence about the interactions between curriculum design, learning process, and assessment structure in a comprehensive manner. Therefore, there is insufficient comparative evidence about how different nations align their curriculum and assessments in order to develop nursing competencies.

Research question:

1) What is the level of curriculum–assessment alignment within undergraduate nursing education in China and Thailand, as evidenced by curriculum documents and stakeholder perceptions?
2) What internal strengths and weaknesses, and external opportunities and threats (SWOT), characterize the implementation of curriculum–assessment alignment under the Chinese and Thai national educational frameworks?

METHOD

Design

The research adopted a mixed methods approach for developing a more comprehensive understanding of the phenomenon of concern through the collection and analysis of both qualitative and quantitative data in one research design. Qualitative data were collected through document analysis of nursing education curriculum documents in two universities, whereas quantitative data were obtained from the administration of questionnaires among nursing education stakeholders such as lecturers, clinical instructors, and practitioners in health care organizations. This was made possible through the combination of data that allowed for evaluation of the consistency of the curriculums and assessment processes in relation to the curriculum development process and its implementation from the perspectives of stakeholders. Through a methodology involving document analysis, questionnaires among the stakeholders, comparative analysis, and SWOT analysis, the research aimed at developing a more holistic view of the implementation of the nursing education curriculum and the compatibility of the curriculum and the assessment process.

Data Sources and participants

The data that form the basis of this study are derived from two main sources. They include documentary material on the curriculum of undergraduate nursing education programs of the two universities and data from the surveys carried out among stakeholders. The use of the two sources is appropriate given the mixed methodological approach that this study adopts with the aim of getting a thorough understanding of the concept of alignment between curriculum and assessment in undergraduate nursing education in China and Thailand. The first source of data is made up of official and institutional documents on curriculum development, competency requirements, assessment procedures, and policy regarding nursing education in the two countries.

The anticipated sample size in this research is 120 participants, including 60 people from China and 60 from Thailand. In each country, the recruiting target included about 30 lecturers or faculty members, 10 clinical instructors or preceptors, and 20 alumni or practitioners. It was assumed to facilitate greater participation of people, who are directly related to the process of curriculum planning and implementation, as well as those, who are involved in clinical supervision and post-graduate nursing practice. The participants were recruited using purposive sampling, which is a non-probability sampling technique used to recruit people who have knowledge or experience related to the topic of research. In addition, the power analysis was not conducted as part of the research, since the survey was a part of a larger comparative mixed methods study and was not supposed to be generalized to the whole population. The sample size in this case was chosen on the basis of some methodological and practical aspects: (1) to compare two national environments, (2) to represent three main stakeholders related to the topic of alignment of curricula and assessments and (3) to be enough for descriptive analysis and Chi-square comparison of grouped stakeholders' answers. The participant characteristics

included demographic and professional variables such as age, gender, professional position or title, experience in teaching and practicing nursing. Overall, 100 out of 120 targeted respondents participated in the research giving the response rate of 83.3%, where 50 respondents were from China and 50 from Thailand.

Research Instruments

Questionnaire

The initial measuring tool involved a self-report questionnaire used to measure perceptions of alignment between curriculum, learning, and assessment in undergraduate nursing programs in China and Thailand. The development of this tool was based on the curriculum-assessment alignment theory and constructive alignment approach as proposed by Croy (2018) and Joseph & Juwah (2012), where coherence is emphasized as critical between intended outcomes of learning, teaching and learning process, and assessment approaches. Using the above framework, an initial item bank was developed through which four main areas were considered: curriculum design, teaching and learning process, assessment, and competencies.

Content validity was determined through the examination of the questionnaire by three specialists with knowledge in nursing education and curriculum assessment. These specialists had many years of experience in competence-based education and methods of evaluation. Their recommendations were based on clearness of items, relevance, and representativeness of constructs leading to small amendments in the wording and format of the questionnaire. Later, the test was tested using a group of 20 respondents who had the same qualities as the participants of the survey. The purpose of pilot study was the appraisal of clarity of items, consistence of responses, and preliminary reliability. Internal consistency proved to be satisfactory since Cronbach's alphas of 0.87, 0.89, 0.85, and 0.88 corresponded to curriculum design, teaching and learning process, assessment system, and competency development.

SWOT Analytical Matrix

The second instrument was a SWOT (strengths, weaknesses, opportunities, and threats) analysis survey, which was designed based on strategic management theories such as SWOT (Hatefimoadab et al., 2026; Talebi, 2025). Strategic management theories pay attention to analyzing the strengths, weaknesses, opportunities, and threats of an organization in order to enhance its effectiveness. The instrument was developed to study the extent to which the alignment between curriculum and assessment takes place in the field of nursing education in China and Thailand through different dimensions including curriculum, learning process, assessment process, and competencies development. The dimensions were translated into several items on Likert scale in order to measure the internal strengths and external threats in the educational and healthcare settings (Tan et al., 2025).

In order to determine content validity, the initial instrument was subjected to evaluation by three experts who were specialists in nursing education, curriculum planning, and educational evaluation. Their responses related to the adequacy of items in terms of clarity, relevance, and representativeness and led to some changes in wording. Then the instrument

was piloted with 20 participants, selected from relevant stakeholder groups (i.e., students, lecturers, and practitioners), to evaluate its reliability and comprehensibility. The reliability of the tool demonstrated that the instrument was reliable in all dimensions (i.e., strengths, weaknesses, opportunities, and threats) and had the following alpha coefficients: 0.87, 0.84, 0.86, and 0.85.

For the SWOT analysis, data were gathered using document analysis and the results of a validated questionnaire survey. The integration of both data sets helped in providing a triangulated and comprehensive assessment of the alignment of curriculum and assessment within the nursing education system of both countries.

Data Collection

The research made use of an online survey (Google Form) which was completed by individuals who met the predetermined research criteria. Potential participants in the research were mailed an invitation to join the study. These included nursing lecturers, clinicians, practitioners, and alumni who were currently working in the nursing field. The purpose of the research as well as the expected duration to fill the survey were highlighted in the invitation.

This questionnaire was created using English as the source language, followed by translations to Chinese and Thai languages to make sure that the respondents in these two nations would be able to understand the content of the questions and answer them in their preferred language. In order to increase the linguistic accuracy and equivalency, a process of translation and back-translation was performed. At first, the English version was translated into Chinese and Thai languages by bilingual translators who had knowledge about education and nursing terminology. Afterward, the translated questionnaires were back-translated into English by another set of bilingual reviewers.

Data was collected between the months of October 2025 and January 2026. Subjects were given sufficient time to answer the questionnaire voluntarily. In order to ensure a high rate of response, various methods were adopted; they include (a) sending a clear and simple invitation, (b) using an easily accessible online format, (c) providing the questionnaire in their language of preference, (d) sending reminders to subjects who had not responded, and (e) ensuring the confidentiality of responses and their use only for research purposes.

All the responses were collected through electronic means and securely kept. Participants were assured that responding to the survey was completely voluntary and they had the freedom to skip any question they did not want to answer and could also leave at any time before submission. In order to maintain confidentiality, personal information was not included in the data analysis process and all data was analyzed in aggregate form. Through combining document analysis and stakeholder surveys, this research generated complete data concerning the curriculum design, learning processes, and student competency evaluation system for nursing education in China and Thailand.

Before embarking on the process of collecting data, the study received clearance from the appropriate institutional research ethics committee or IRB at the governing institution. The

ethical clearance is meant to ensure that all ethical principles guiding research are adhered to; this includes upholding of participants' rights, confidentiality, and privacy. All survey participants were briefed thoroughly about the objectives of the study, its benefits, and the procedures of data collection before their consent was sought. Participation was entirely voluntary, and the respondents had an option to either refuse to participate or opt out at any point without suffering any repercussions.

Analysis

The data from the survey questionnaire were first extracted from the online survey tool in spreadsheet form and analyzed using the SPSS software. Descriptive analysis was done to understand the respondents and the responses to each question in the questionnaire. Results from descriptive analysis are presented in terms of frequencies and percentages to demonstrate how respondents answered each question in the questionnaire.

Apart from the description of the analysis, this study used Chi-square test for detecting statistical significant differences among respondent groups in various elements of the nursing education program. This test was chosen due to the fact that the type of data under analysis is categorical and one should compare the respondents' answers between groups. In some cases, the exact p-value was used due to violation of the assumptions of Pearson Chi-square test since in such cases, more than 20% of the cells had an expected value less than five. In this case, the exact p-value gives a more accurate estimation of the significance of the results. Moreover, in order to detect sources of variance, standardized residuals were analyzed. At the significance level of $\alpha = 0.05$, cells with standardized residuals larger than +2 or smaller than -2 were considered significant in the variance.

The last step in the analysis of the data was conducted via the use of SWOT analysis (strengths, weaknesses, opportunities, and threats) to analyze the implementation of the nursing education curriculum in both countries. The purpose of the SWOT analysis was to define both internal and external determinants of the fit between the curriculum and its assessment system in the context of nursing education. The internal factors that were considered included strengths and weaknesses related to the curriculum development, the learning process, and the student competency assessment system. The external factors that were considered included opportunities and threats connected to the educational context, the health care system development, and nursing education policy in each country.

FINDINGS

Research Question (RQ1): What is the level of curriculum–assessment alignment within undergraduate nursing education in China and Thailand, as evidenced by curriculum documents and stakeholder perceptions?

The analysis of alignment between the curriculum and the assessment processes in China and Thailand for undergraduate nursing education is illustrated in Table 1 and Table 2, respectively. The basis of this analysis is the perceptions of the three key stakeholder groups –

students, alumni, and the faculty (including clinicians). Table 1 and Table 2 (see appendix) provide a comprehensive quantitative perspective of the alignment level based on 17 crucial indicators which include learning outcomes, curricula, competencies, academic supports, and institutional resources. In order to identify any statistically significant differences between stakeholder groups, Chi-square (χ^2) test is used.

The findings from Table 1 highlight significant perception disparities between students, alumnuses, and faculty members regarding curriculum and assessment alignment in China. Generally, faculty members expressed greater agreement compared to both students and alumnuses, with regard to competency development processes (56.3%), curriculum alignment with institutional vision (50.0%), and integration of faculty knowledge (56.3%). This difference is statistically significant ($p<0.05$), which shows that there is a top-down perception gap where institutional members perceive more alignment than learners involved in the process.

In comparison, there is significantly less agreement on a number of key dimensions among the students, namely on academic resources (0.0%), administration support (3.0%) and the learning environment (6.1%). The alumni survey generally lies somewhere in between the surveys conducted among students and faculty members, representing a transition standpoint influenced by educational and work experience. One should note that the statistical significance of the answers given by the students in regard to such dimensions as detailed description of courses ($p = 0.617$) and research seminars ($p = 0.118$) is zero.

Likewise, from Table 4.9, it is apparent that there are distinct variations in terms of stakeholder perception regarding the alignment between curriculum and assessment in Thailand, although the trend suggests an evenly distributed set of answers compared to China. The faculty consistently gives the highest percentage of agreement across all dimensions, particularly learning environment (64.7%), alignment (58.7%), and nursing science focus in the curriculum (55.6%).

It was also seen that students showed low levels of agreement, especially concerning academic resources (4.2%), administrative oversight (6.3%), and availability of career information (5.8%), revealing deficiencies in the student-centric support structures. Alumni responses were again in the middle, but showed a higher level of agreement on topics like the role of the key course in competency building (61.7%) and career support (46.8%), suggesting that the benefits of the program curriculum can be recognized after graduation.

Similarly to China, there is no statistical significance ($p = 0.660$) in terms of differences in such components as course descriptions and research seminars ($p = 0.210$), which demonstrates the consistency of formal curriculum designs. In general, despite the fact that Thailand is characterized by the higher level of alignment in terms of learning experiences and institutional support as compared to China, both cases demonstrate the consistency of misalignment of institutional expectations and students' experiences.

Qualitative findings for RQ 1

From the document analysis, it is clear that there is a considerable level of alignment between the formal curriculum and assessment of undergraduate nursing in both China and Thailand, especially concerning the recorded learning outcomes, competence descriptions, course organization, and the clinical practice requirement. In both countries, the curriculum is directly linked to the acquisition of graduate competences, professional ethics, clinical knowledge, and nursing skills. This is exemplified in China through its statement about the need for the learners to “master fundamental theories, basic knowledge, and essential clinical skills of nursing,” showing alignment between the knowledge learning outcomes and the curriculum. Similarly, the Thai curriculum indicates that their graduates are expected to “provide holistic nursing care based on professional standards and ethical responsibility,” showing competence-based curriculum with alignment between learning outcomes and professional nursing practice.

In the Chinese curriculum documents, alignment was most visible in the structured organization of courses and assessment requirements.

This curriculum has a clear pattern in which it begins with basic medical sciences, progresses to nursing sciences, and then leads to advanced nursing courses as well as the clinical experience. It appears that this structure makes the assessment process follow an incremental process whereby students' theoretical knowledge is assessed before they apply it in practice. Phrases such as “the students have to take theoretical examination, practical assessment and clinical internship assessment" point towards an attempt to make the assessment correspond to both the cognitive and practical aspect of the curriculum. However, based on the documents provided, it can be seen that the existing assessment scheme still focuses on theoretical knowledge more than competency in practice.

According to the curriculum documents from Thailand, there has been an increased focus on the alignment of competencies and experiences. References to "clinical practice in real healthcare environments," "portfolio assessment," and "nursing performance evaluation based on competency standards" point to the fact that there has been an explicit connection between assessment and clinical practice/performance. From these documentary findings, it can be said that there is a curriculum in Thailand for nurses where there has been an attempt to align learning outcomes, learning activities, and assessment based on authentic clinical learning experiences. Clinical practicum, reflection learning, performance-based assessment, and community-based learning show that students are not only expected to learn nursing concepts but also display their professional competence.

In making an analysis of the relationship between curriculum documents and stakeholders’ perceptions, the alignment that can be seen between them can be considered a partial one. First of all, the perception of curriculum and assessment alignment made by faculty members is positive because it refers to the formal elements of the curriculum such as its design, stated learning outcomes, content of courses, and assessment process. Second of all, the perception of alignment made by students and alumni refers to the experience of learning

process that includes such factors as academic support, learning opportunities, feedback, clinical supervision, and consistency of assessment process implementation. That is why documentary alignment seems better compared to experiential alignment.

Research Question (RQ2): What internal strengths and weaknesses, and external opportunities and threats (SWOT), characterize the implementation of curriculum–assessment alignment under the Chinese and Thai national educational frameworks?

The SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats) concerning the alignment between curriculum and assessment in undergraduate nursing education in China and Thailand is illustrated in Table 3. The data provided in the table are derived from the results of the document review and perceptions of stakeholders in relation to the examination of the internal and external aspects influencing the development of curriculum and competency-based assessment. Organizing the relevant attributes according to the four different dimensions (internal and external) allows for making a comprehensive evaluation of the strategies used by each country's nursing education system in adapting to changing academic, clinical, and healthcare needs. The comparative nature of the approach enables identifying distinct features and common problems of each system as well.

It appears from SWOT analysis that both countries have good foundations of capacities for nursing education, but they focus on different areas. In China, the strengths relate to a highly structured scientific curriculum with national standards and thorough theoretical preparation. It means that there exists a good academic basis for achieving consistency and deepness in knowledge. However, in Thailand, the strengths pertain to practical application of theoretical knowledge and integration of theoretical teaching with clinical practice. Moreover, early introduction to clinical practice and the use of competency-based assessment techniques, such as portfolios and clinical performance assessment, characterize Thai education system. Such differences suggest that China emphasizes academic aspect of education with its standardization, whereas Thailand stresses experience of nursing students and development of their competencies, which is another way to achieve alignment of curriculum and assessment.

Despite these strengths, there are certain internal factors that impede the implementation of effective curriculum alignment in both systems. For instance, China faces the problem of poor integration of theoretical knowledge and clinical practice at an early stage of education. Moreover, the lack of competency-based assessment techniques shows that there is a misalignment between desired results and assessment process. On the other hand, Thailand faces challenges connected with variations in quality of clinical supervision and inconsistency across training sites. The problems may also include students' perception of lack of support from educational institution and academia.

The analysis reveals a number of opportunities from the outside which can enable curriculum-assessment alignment improvement in both countries' contexts. The common one is associated with the global movement towards competency-based nursing education, as it drives educational reforms that target aligning curricula to the competencies required by the

healthcare system. In China, the opportunities are related to the use of digital technologies, simulation learning and international standards compliance, allowing the bridge between theory and practice to be built. In Thailand, opportunities arise due to the implementation of innovative teaching methods including problem-based learning, stronger international cooperation, and community health education integration. Overall, this indicates a favorable global and regional environment that encourages curriculum innovations, focusing particularly on competency-based learning.

Both countries face significant threats externally that may compromise the sustainability of the relationship between curriculums and assessments. The major threat facing China relates to the fast-changing healthcare environment, shortage of clinical instructors, and the possibility of curriculum misalignment with workforce needs. Such threats might limit the ability of institutions to constantly change and remain relevant. On the other hand, some of the major threats facing Thailand include the scarcity of clinical training facilities, variability in the quality of clinical experiences, and increased workload of the faculty and clinical instructors. Furthermore, the complexity of the changing patient care and healthcare systems is another challenge faced by both countries. This requires enhanced competency of nurses and continuous changes in curriculums.

Qualitative Findings for RQ2

Curriculum assessment SWOT analysis reveals that undergraduate nursing education programs in China and Thailand have their own strengths internally but at the same time, face several limitations while implementing these curriculum assessments. One of the strengths in the Chinese curriculum documentation framework is that there is a very structured national curriculum framework that stresses the importance of mastering “basic theories, basic knowledge and basic nursing skills.” This implies that there is an already existing strong knowledge base as well as the progression of knowledge from theoretical to practical. Such a strength is further revealed through the structured arrangement of basic medical sciences, nursing basics, specialized nursing, and clinical practice.

Chinese curriculum documentation contains an internal weakness in the form of an overreliance on knowledge-based assessment. While the documents do recognize theoretical examination, practical skills test, and clinical internships, the general structure of assessment still relies on written exams as the main tool for measuring student performance. Such approach may lead to a discrepancy between the intended acquisition of nursing competence and the actual method used for the assessment thereof. In other words, while the curriculum formally includes practical and clinical skills, it is evident that the assessment of theoretical knowledge is better aligned with intended learning outcomes than skills like clinical reasoning, communication, teamwork, and professional decision-making. It is possible that the misalignment between the curriculum and the intended nursing competencies might limit students' perception of the competency-based assessment.

Conversely, the Thai curriculum documents contain the following internal strengths related to experiential and competency-based assessment. Firstly, Thai national education focuses on practice within a real healthcare setting, holistic nursing care, and professional standards and ethics. Secondly, the use of portfolio, clinical performance, community-based learning, and practice-based assessment reflects the attempt to link curriculum learning with nursing practice. Therefore, the internal strength of Thailand lies in the ability to link curriculum and assessment practice with the professional context.

The curriculum in Thailand has concurrent problems in terms of internal aspects of consistency of implementation. Despite the use of terms such as "clinical practice," "competency standards," and "performance-based evaluation" in curriculum documents, the successfulness of these activities depends significantly on the quality of clinical supervision, availability of clinical placement sites and consistency of assessors. Thus, the curricula-assessment compatibility may look consistent on the paper while being inconsistent in its practical application due to variability of hospitals, clinical instructors, training sites. Hence, Thailand's primary problem is not the lack of competency-based compatibility, but inconsistency in its implementation because of variability of clinical learning environments.

There were opportunities identified in both national contexts. The first external opportunity is connected with international changes concerning the trend towards competency-based nursing education in China. This global change could help the country to increase the linkage between theoretical studies and clinical practice through international standards, use of technology for simulations, virtual patient platforms, and outcome-based education. In addition, the strong scientific basis of the Chinese curriculum can be used for development of innovative methods of assessment including case-based, simulation-based, and clinical examination.

External opportunities for Thailand depend on its practice-oriented curriculum and current trends in international competence-based healthcare education. International cooperation, regional accreditation standards, use of digital portfolios, establishment of simulation laboratories and cross-border clinical education programs can enhance the potential of Thailand’s curriculum, which emphasizes holistic approach to nursing care and real-life healthcare environment. All of the opportunities mentioned above provide the chance for Thailand to institutionalize its strengths in practice. With the help of improved documentation procedures, better calibration of assessors, and use of new assessment methods such as digital tools, Thailand can increase the reliability of competence-based assessment and maintain its practice-based approach at the same time.

There are several external threats, which have been detected by SWOT analysis and which affect both countries. Rapid changes in healthcare system, complexity of patients’ problems, shortage of competent clinical educators and lack of clinical assessment resources may affect the curriculum-assessment alignment negatively. In China, the mentioned threats may create the problem of discrepancy between students’ theoretical background and their

clinical readiness due to poor clinical teaching and assessment. In Thailand, the same threats may lead to increased variability among different placement facilities and inconsistency of competence assessments.

DISCUSSION

Findings suggest that there are different perceptions regarding the alignment of curricula with assessment procedures in China and Thailand, where the faculty members reported high levels of alignment while compared to students and alumni. It suggests that the institutional stakeholders perceive more coherence in curriculum and assessment designs as compared to those who experience it. On the other hand, the students have provided low levels of agreement with respect to issues like academic support, learning environment, and resource availability, which suggests that there is a discrepancy between the design of curriculum and actual education delivery process. While there are strong formal arrangements in both nations, such as course documentation and research seminar sessions, alignment is not consistent.

Such a distinction can be explained through the application of the theory of curriculum alignment and the concept of constructive alignment. Alignment implies consistency between intended learning outcomes, instructional and learning activities, and assessment process (Croy, 2018; Joseph & Juwah, 2012). It can be observed that both China and Thailand have developed intended learning outcomes and designed structured curriculums, but as the curriculums move from intention to implementation in classrooms and clinics as well as assessment feedback and learner support, alignment becomes less pronounced. Whereas teachers focus on alignment based on design and compliance, students base their understanding of alignment on their own experience of learning. It is evident that there is some partial realization of constructive alignment: formal curriculum designs exist but experiential and learner-centered coherence lacks.

These findings point out that there is rather better alignment between the two components in Thailand especially in learning context, integration into the practice setting, and authentic assessment. This alignment shows that a competence-based approach to education dominates the country focusing on clinical readiness, professionalism and practical application of the obtained knowledge. As for China, the strengths in scientific aspect, structure of the curriculum, and standardized competences are seen. Overall, these examples show two different approaches to nursing education where the first one is characterized by knowledge-based and regulated model typical of China and the other one is practice-oriented and competency-based model typical of Thailand. Therefore, an alignment of curriculum and assessment should not only be considered in terms of the presence of documents but also in terms of the implementation of the curricula intentions through the process of teaching, clinical practice, assessment, feedback, etc.

This SWOT analysis gives a strategic explanation to these findings. The main strengths of the country in question are a standardized structure of the curriculum, good regulatory

environment, scientific orientation, and standardized competences. All these strengths should be used in order to create a basis for the consistent competencies mapping and linking course objectives with assessment tasks and quality assurance system. Moreover, the country can use its theoretical and scientific background to create simulation-based clinical cases and assessments, as well as integrate theory-practice modules into the curriculum. From this perspective, standardization should not be viewed as a controlling mechanism but rather as a basis for innovation.

Strengths include practice-oriented curriculum, clinical exposure at an early stage, learner-centered approach to learning and assessment of clinical competency using authentic assessment such as portfolio and performance-based assessment. The strength should be capitalized upon through the development of benchmarks in these areas and improving documentation of clinical competency assessment and expansion of clinical learning programs in diverse settings. It will also help the country take advantage of its experience to become a regional leader in competency-based education in the nursing curriculum through cross-curriculum collaboration, networks of clinical simulations and benchmarking of best practices in clinical education. Thus, Thailand will be able to transform the strength of practice-based learning into a strategic strength.

Both countries have to work on weaknesses in their curriculum and clinical assessment. The main weakness of the Chinese model is lack of the connection between theoretical learning and clinical practice. It could be resolved through introduction of clinical exposure, simulation learning, workplace-based assessment and reflection in practice. It would be useful not only to assess knowledge but also skills of nurses through competency-based assessment which would assess not only the knowledge but clinical reasoning, communication, ethics, teamwork, and professional behaviors. For Thailand, the main weakness is lack of consistency in clinical supervision in terms of the quality of learning experience for students at different clinical placements (Chen & Zheng, 2022; Turner et al., 2021).

Opportunities that were identified within the SWOT analysis also define areas of improvements. Global transition to competence-based medical education, digitalization, simulation learning, and international accreditation may bring benefits to both countries. China may take advantage of these opportunities to improve international comparability and bridge the gap between theory and practice through digital simulation, virtual patients and integrated assessment systems (Hatefimoadab et al., 2026; Talebi, 2025; Tan et al., 2025). Thailand may use these opportunities to expand problem-based learning, community-based nursing education, and international partnerships in clinical education (Suryanti & Arifani, 2021; Turner et al., 2021). Cross-national cooperation between China and Thailand will allow for exchange of experience: China may contribute with its strengths of standardization and scientific rigor, whereas Thailand may provide clinical expertise and competency-based assessment.

However, these opportunities have to be balanced with potential threats. Rapid transformation of healthcare systems, increased complexity of patient care, shortage of

competent clinical educators, poor quality of clinical placements, and insufficient training resources may reduce the efficacy of curriculum implementation. In order to minimize the threats, nursing programs of both countries need more flexible curriculum governance. It includes regular curriculum evaluation, feedback from all stakeholders, partnership with hospitals and other healthcare organizations, investments into simulation labs and other technologies, and faculty training on how to conduct competence-based assessment (Jackson et al., 2025; Louey et al., 2025). Shortage of clinical educators may be minimized through training and mentoring of preceptors, joint supervisions, and mentoring at the clinical site. Healthcare threats can be mitigated with regular updating of competencies to include digital health, geriatrics, community health, collaboration, and patient safety.

In terms of strategic management perspective, the results of the research suggest that the sustainable alignment between the curriculum and the assessment is a dynamic, not a static process. The alignment cannot be achieved only through the curriculum policies, the compliance with these policies and through the assessment tools. It requires constant interaction between internal strengths and weaknesses as well as external opportunities and threats (SWOT) (Hatefimoadab et al., 2026; Talebi, 2025; Tarman & Dev, 2018). The main strategic recommendation for China is to use its strength of standardization in order to promote the applied and competency-based assessment, while Thailand can benefit from its experience with the experiential curriculum to improve the consistency, documentation and quality control in the clinical setting. The two countries need to neutralize their external threats by developing a flexible governance of the curriculum, developing clinical relationships, digitalizing and developing the teaching staff.

Another limitation that exists in the context of this study is that associated with the appropriateness of the sample size as well as the fact that there was no a priori power analysis performed before starting the research. The goal was set to collect 120 responses, yet only 100 of them turned out to be valid. Although this sample size may be sufficient for performing a preliminary comparative study, its division on two countries and three stakeholder groups, namely students, alumni and faculty members, renders this sample size methodologically limited. Hence, several cell sizes were quite small; for example, there were about 33 students in the Chinese sample. Small cell size reduces the statistical power of the Chi-square test and increases the probability of making Type II error. Also, such a sample size limits the possibility of applying the obtained results to the nursing education populations in China and Thailand due to small numbers of respondents in each subgroup. Absence of a priori power analysis further compromises our ability to state whether the sample size used in the research is appropriate for detecting statistically significant differences. Thus, the results of the quantitative data should be carefully considered and understood as indicative, not conclusive.

CONCLUSION

This paper has clearly shown that curriculum-assessment alignment in nursing programs at the undergraduate level within China and Thailand is characterized by similarities in structure but

problems in implementation. It is clear from the findings of this study that while curriculum components such as learning outcomes and documentation are relatively well developed in the two nations, there are clear perceptual differences among various parties, especially among faculty members and students, that show that there is misalignment between design and actual learning experience. Furthermore, China and Thailand have their own strategic approaches to curriculum development; while in China, the focus is on science-based curriculum, in Thailand, the approach involves competency-based curriculum. Nevertheless, both have some weak points that involve poor integration of theory and practice as well as poor clinical supervision. Also, they face external challenges including health care complexity and resources. Theoretically, the findings of this study support the concept of constructive alignment and competency-based curriculum, whereas from a practical point of view, this research calls for curriculum reform that focuses on students' experiences.

However, despite being very useful and informative, this research suffers from certain drawbacks. First of all, the employment of the perceptual approach in evaluating the competency level of stakeholders might be subjective; future researchers will have to use the performance-based approach to measure the level of competency. Second, the study focuses on the comparison between only two countries of Asia, thus limiting its applicability to other education systems that differ from the one of China in terms of regulation and culture. Third, the lack of longitudinal research design does not allow to trace the process of development of curriculum-assessment alignment over time. Therefore, the research conducted in the future should employ longitudinal and multicountry designs to observe the development of curriculum-assessment alignment through time. Moreover, the combination of quantitative and qualitative methodologies with the use of statistical analysis and direct assessment of clinical performance might be helpful for more thorough assessment of the alignment process.

Declarations

Ethical Approval Statement

This study was conducted in accordance with the Declaration of Helsinki and received exemption approval from the Institutional Review Board of Chiang Mai Rajabhat University (Project Code and Certificate Number: IRBCMRU 2025/360.25.04; date of approval: 01 April 2025).

Artificial Intelligence (AI) Use Statement

The authors acknowledge the use of AI to proofread and paraphrase several parts of this manuscript. While the authors acknowledge the use of AI, they maintain that they are the sole authors of this article and take full responsibility for its content.

Data Availability Statement

The data are not publicly available due to ethical considerations and the need to protect participants' privacy. The de-identified data supporting the findings of this study are available from the corresponding author upon reasonable request and subject to appropriate data-sharing conditions.

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Conflict of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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APPENDIX

Table 1.

Evaluation of Curriculum–Assessment Alignment in China

No	Statement	Students (Mean)	Alumni (Mean)	Faculty (included clinical professional (Mean)	χ^2	df	p
1	Alignment between learning outcomes and assessment methods is clearly defined	30.3	40.4	56.3	12.32	6	0.046*
2	Institution supports students' academic activities	24.2	44.7	50.0	38.61	8	0.001*
3	System exists to foster competency development	9.1	21.3	56.3	25.0	6	0.001*

4	Curriculum consistent with institutional mission	12.1	34.0	50.0	13.65	6	0.021*
5	Curriculum emphasizes nursing science and research	12.1	44.7	56.3	28.8	8	0.001*
6	Faculty expertise reflected in curriculum	9.1	29.8	56.3	24.1	6	0.001*
7	Core courses support competency development	33.3	59.6	43.8	16.7	8	0.024*
8	Students receive formal research ethics training	3.0	31.9	37.5	31.1	6	0.001*
9	Detailed course descriptions available	48.5	51.1	62.5	4.67	6	0.617
10	Curriculum includes research seminars	18.2	36.2	37.5	12.37	8	0.118
11	Learning environment supports student learning	6.1	12.8	62.5	32.16	6	0.001*
12	Program fosters interaction among students and faculty	6.1	19.1	37.5	30.42	8	0.001*
13	Faculty numbers sufficient	6.1	25.5	31.3	21.03	8	0.004*
14	Administrative supervision supports student progress	3.0	25.5	31.3	29.55	8	0.001*
15	Academic resources available for students	0.0	28.3	37.5	33.23	8	0.001*
16	Information about career opportunities available	3.0	34.0	37.5	31.63	8	0.001*
17	Faculty provide recommendation and career support	6.1	43.5	12.5	49.35	8	0.001*

Table 2.

Evaluation of Curriculum–Assessment Alignment in Thailand

No	**Statement**	**Students (Mean)**	**Alumni (Mean)**	**Faculty (included clinical professional)** (Mean)	**χ^2**	**df**	**p**
1	Alignment between learning outcomes and assessment methods is clearly defined	32.4	45.1	58.7	11.84	6	0.048*

2	Institution supports students' academic activities	26.5	47.2	52.8	35.27	8	0.001*
3	System exists to foster competency development	11.2	24.6	53.1	22.94	6	0.001*
4	Curriculum consistent with institutional mission	14.3	36.4	49.2	12.76	6	0.039*
5	Curriculum emphasizes nursing science and research	16.8	42.3	55.6	26.53	8	0.001*
6	Faculty expertise reflected in curriculum	12.7	31.5	54.4	21.82	6	0.001*
7	Core courses support competency development	35.6	61.7	46.2	15.92	8	0.044*
8	Students receive formal research ethics training	5.6	34.9	40.3	29.75	6	0.001*
9	Detailed course descriptions available	50.3	53.7	65.1	4.12	6	0.660
10	Curriculum includes research seminars	21.4	39.6	42.8	10.83	8	0.210
11	Learning environment supports student learning	8.4	15.2	64.7	28.74	6	0.001*
12	Program fosters interaction among students and faculty	9.1	22.6	41.3	26.41	8	0.001*
13	Faculty numbers sufficient	8.7	27.3	34.2	19.86	8	0.011*
14	Administrative supervision supports student progress	6.3	28.5	36.9	27.61	8	0.001*
15	Academic resources available for students	4.2	30.1	39.7	30.48	8	0.001*
16	Information about career opportunities available	5.8	36.2	41.5	29.13	8	0.001*
17	Faculty provide recommendation and career support	7.4	46.8	18.3	41.75	8	0.001*

Table 3.

SWOT Analysis of Curriculum Assessment Documents between China and Thailand

SWOT Dimension	China	Thailand
Strengths	Strong scientific and biomedical foundation in nursing education	High integration between theoretical learning and clinical practice
	Structured and nationally regulated curriculum design	Strong emphasis on competency-based nursing education
	Clear national competency standards guiding curriculum development	Early exposure to clinical practice through experiential learning
	Comprehensive theoretical preparation supporting clinical reasoning	Community-based learning orientation aligned with public health needs
	Established academic assessment systems combining written and clinical evaluation	Use of authentic assessment methods such as portfolio and clinical performance evaluation
Weaknesses	Limited integration of theory and clinical practice in the early stages of the program	Variations in clinical supervision and mentoring quality
	Students may experience difficulty connecting theoretical knowledge with clinical practice	Differences in clinical learning environments across training sites
	Perceived gaps between curriculum design and student learning experiences	Student perceptions of limited academic and institutional support
	Greater emphasis on knowledge-based assessment compared to competency-based evaluation	Potential inconsistencies in assessment standards across institutions
	Clinical competency assessment practices may vary between institutions	Heavy reliance on clinical placement availability for competency development
Opportunities	Global shift toward competency-based nursing education	Expansion of innovative teaching methods such as problem-based learning and simulation
	Integration of digital technologies and simulation-based learning	Increasing international collaboration in nursing education

SWOT Dimension	China	Thailand
	Increasing demand for qualified professional nurses in healthcare systems	Stronger integration of community health and primary care education
	Opportunities for curriculum reform toward greater clinical integration	Development of competency-based assessment frameworks
	Potential alignment with international nursing education standards	Opportunities to strengthen reflective and portfolio-based assessment
Threats	Rapid changes in healthcare systems requiring continuous curriculum adaptation	Limited clinical training resources in some healthcare settings
	Shortage of experienced clinical educators and mentors	Variability in quality of clinical placement sites
	Increasing complexity of patient care requiring higher competency levels	Growing demands on clinical supervisors and nursing faculty
	Risk of misalignment between academic curriculum and healthcare workforce needs	Differences in institutional capacity to support competency-based education
	Pressure for continuous curriculum reform and professional accreditation	Increasing complexity of healthcare systems and service delivery