Cambodian Journal of Educational Research
2026, Vol. 6, No. 2, Online First
https://doi.org/10.62037/cjer.2026.06.02.02

CAMBODIAN EDUCATION FORUM
A forum for education

Review Article **Open Access**

A comparative curriculum analysis of Cambodian architecture programs against the UNESCO–UIA Charter for Architectural Education

Pisith Hun [1,*], and Chanrachna Nou [2]

[1] Department of Architecture, Paragon International University, Phnom Penh, Cambodia
[2] Quality Assurance Office, Cambodia University of Technology and Science, Phnom Penh, Cambodia

Received: February 17, 2026 *Revised: September 29, 2026* *Accepted: October 31, 2026*

Abstract

This study analyzes and compares Cambodian architecture programs using a framework adapted from the United Nations Educational, Scientific and Cultural Organization and the International Union of Architects (UNESCO–UIA), together with relevant literature on architectural Knowledge Domains. The analysis draws on publicly available curriculum information collected from Cambodian university websites between 6 and 10 April 2026. Courses were classified into six UNESCO–UIA Knowledge Domains: Cultural and Artistic Studies, Social Studies, Environmental Studies, Technical Studies, Design Studies, and Professional Studies. Among the 20 programs identified across 20 universities, 12 provided sufficient curriculum information for detailed analysis. Across these programs, Design Studio consistently constituted the largest curricular component, ranging from 21.7% to 33.9%. However, considerable variation existed in the distribution of supporting Knowledge Domains, particularly Technical Studies (13–35%) and Design Studies (6.5–17.5%). Professional Studies generally received a smaller curricular allocation across most programs. As the first study to benchmark Cambodian undergraduate architecture curricula against the UNESCO–UIA Charter for Architectural Education using publicly available curriculum data, this study provides an initial reference point for understanding architectural education in Cambodia and highlights the need for greater emphasis on Professional Studies, improved curriculum transparency, and future accreditation efforts.

Keywords: Cambodian architectural education; UNESCO–UIA Charter for Architectural Education; curriculum analysis; architecture accreditation; Cambodia

* Pisith Hun ✉ hunpisith@gmail.com 🖃 Department of Architecture, Paragon International University, No. 8, St. 315, Boeng Kak 1, Tuol Kork, Phnom Penh, Cambodia

© 2026 The Author(s)
This is an Open Access article distributed under the terms of Creative Commons Attribution-NonCommercial-ShareAlike (CC BY-NC-SA) license.

Introduction

Architectural education is a multidisciplinary field that has evolved from craftsmanship-based training into formal academic programs (Şahin, 2024). Contemporary architectural practice extends beyond creative design, requiring the integration of cultural understanding, technical expertise, sustainability principles, and professional practice (Burton & Salama, 2023; Butt et al., 2025; Deamer, 2020; Samudro et al., 2025). As a result, to support this balance and promote unified architecture curricula, international accreditation frameworks have been established.

The development of architectural education in Cambodia has followed a similar trajectory, moving from craftsmanship training to the first degree programs at the Royal University of Fine Arts (Baumgärtel, 2012; Raintree, 2024). In the last decade, rapid urbanization has intensified the country's demand for housing, buildings, and infrastructure development (General Department of Housing, 2016). These developments have elevated the role of architects, requiring a broader range of knowledge and competencies.

In response, numerous higher education institutions in Cambodia have started to provide architecture degree programs. Despite their rapid expansion, there has been no systematic comparison of the curricula of these programs or an assessment of their alignment with internationally recognized competency frameworks. To address this gap, this study examines the alignment of current architectural education in Cambodia with the United Nations Educational, Scientific and Cultural Organization and the International Union of Architects (UNESCO-UIA) Charter for Architectural Education. Specifically, it explores two questions:

1. How are undergraduate architecture programs geographically distributed across Cambodian universities?
2. How are architecture courses structured and distributed across the Knowledge Domains adopted by the UNESCO–UIA Charter for Architectural Education?

This study provides the first systematic benchmark of Cambodian undergraduate architecture curricula against the UNESCO–UIA Charter using publicly available curriculum data, thereby establishing a foundation for future

curriculum evaluation, accreditation, and architectural education research in Cambodia.

Architectural education and curriculum frameworks

The Design Studio has long been regarded as the heart of architectural education. However, the education for future architects is no longer limited to the teaching of design skills. Recent studies have argued that architecture programs should also equip students with technical knowledge, cultural understanding, environmental awareness, and professional competencies to respond to the changing demands of practice (Butt et al., 2025; Deamer, 2020; Şahin, 2024; Samudro et al., 2025). This expectation has raised ongoing discussions about how architecture curricula should balance studio teaching with theoretical and interdisciplinary learning (Deamer, 2020).

In response to this challenge, a number of countries have developed accreditation systems and curriculum guidelines. Although these frameworks aim to improve the quality of education, they serve different purposes (Attia, 2019; Masri & Arnaouty, 2015). Some are closely linked to professional registration (NAAB, 2020), while others provide broader guidance for curriculum development (ASEAN, 2007).

The National Architectural Accrediting Board (NAAB) in the United States is one example of a national accreditation system for architectural education. It evaluates architecture programs and determines whether graduates satisfy educational requirements for professional licensure (NAAB, 2020). In the United Kingdom, the Royal Institute of British Architects (RIBA) performs a similar role by validating programs against established standards for design competence and professional practice (RIBA, 2021). South Korea and Australia have also established national accreditation systems through the Korea Architectural Accrediting Board (KAAB) and the Architects Accreditation Council of Australia (AACA), respectively. Although these systems operate independently, they all seek to align architectural education with internationally recognized professional expectations (AACA, 2021; KAAB, 2024).

Regional initiatives have also emerged. Within the Association of Southeast Asian Nations (ASEAN), the Mutual Recognition Arrangement (MRA) on Architectural Services was introduced to support the mobility of architects

across member states (ASEAN, 2007). The agreement specifies a minimum of five years of accredited architectural education but allows flexibility in recognizing equivalent qualifications (ASEAN, 2007). At the same time, it does not substitute for national accreditation or licensing procedures. Each country continues to regulate its own educational system and professional requirements.

For this reason, architecture programs in Southeast Asia are still diverse. Variations can be seen in the curriculum structures, educational practices, accreditation procedures, and professional registration systems, which pose difficulties in regional comparison (Jitrojanaruk et al., 2021). Therefore, a framework developed for one country may not be directly applicable to another.

United Nations Educational, Scientific and Cultural Organization and the International Union of Architects Charter for Architectural Education (UNESCO-UIA)

Among the many frameworks used in architectural education, the UNESCO–UIA Charter has become one of the most widely recognized international references. Rather than functioning as a national accreditation system, it provides broad guidance for architectural programs across different countries and educational settings. The Charter encourages a balance between theory and practice and aligns architectural education with wider global priorities, including the United Nations Sustainable Development Goals (UNESCO-UIA, 2023).

The influence of the Charter can also be seen in several national accreditation systems. In Australia and South Korea, for example, the AACA and KAAB have adopted competency frameworks that reflect many of the principles promoted by UNESCO–UIA (AACA, 2021; KAAB, 2024). At the same time, the Charter is not directly linked to professional registration or licensing. This allows it to be applied in countries with different educational structures and accreditation arrangements (Masri & Arnaouty, 2015; Salama, 2016; UNESCO-UIA, 2023).

The Charter is not without limitations. Like the ASEAN Mutual Recognition Arrangement, it identifies broad competencies rather than detailed curriculum models or teaching methods (Masri & Arnaouty, 2015; Nikezić, 2022; UNESCO-UIA, 2023). Individual institutions are therefore expected to interpret and

implement these principles in their own contexts. For the purposes of this study, however, that flexibility is an advantage rather than a weakness.

The UNESCO-UIA Charter offers a definition of architectural education based on three interrelated competencies: Knowledge, Design, and Skills (see Figure 1). In this study, these competencies are understood as a simple conceptual hierarchy, distinguishing between disciplinary knowledge, design application, and professional skills. Knowledge acts as the disciplinary foundation, Design represents its application and synthesis, and Skills reflect the professional capacities expected of architecture graduates. This understanding forms the conceptual basis for the curriculum analysis presented in the sections that follow.

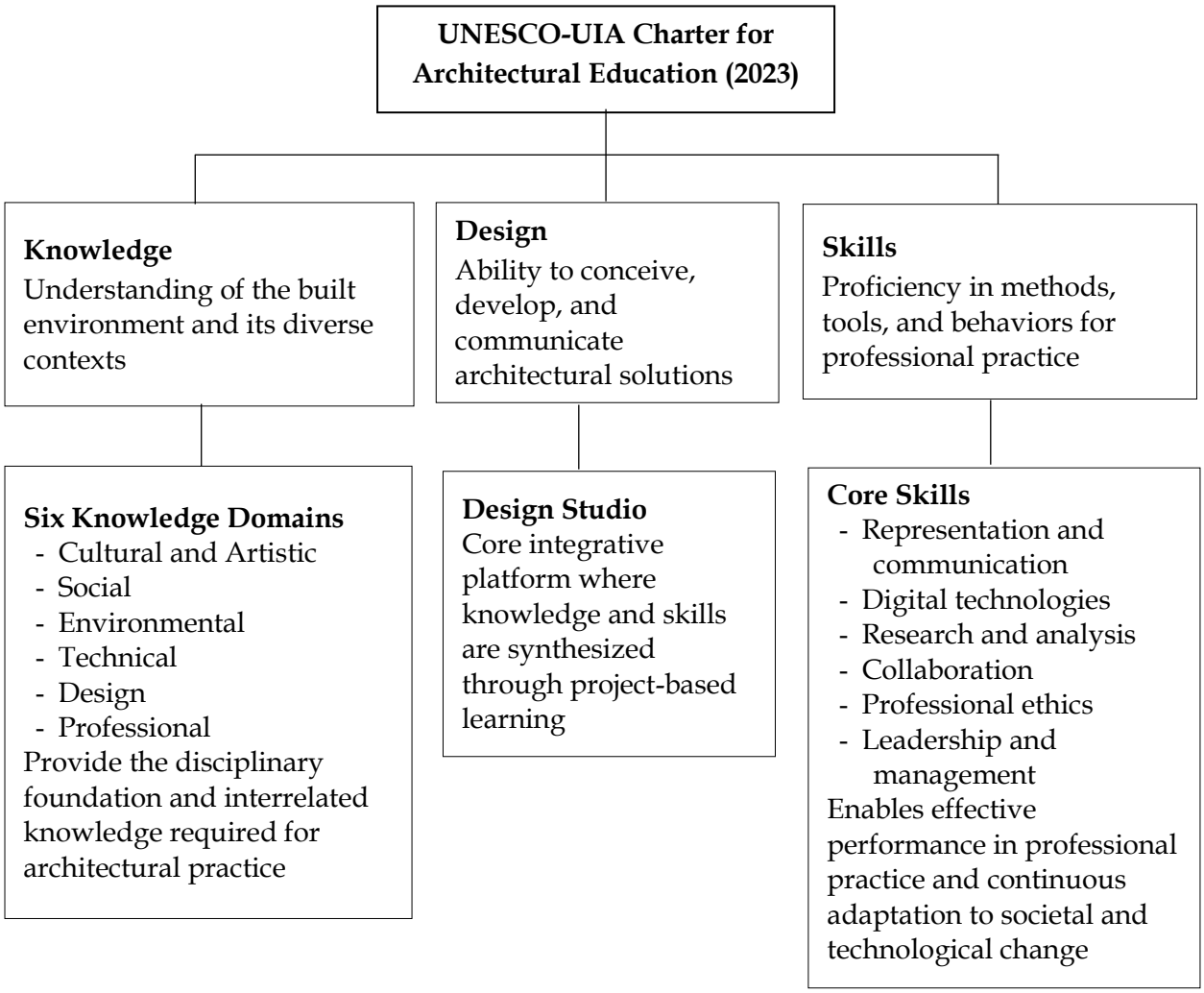


Figure 1. Conceptual framework of architectural education competencies and Knowledge Domains
Source: Adapted from UNESCO–UIA (2023)

Knowledge Competency

The UNESCO–UIA Charter identifies six Knowledge Domains in architectural education: Cultural and Artistic Studies, Social Studies, Environmental Studies, Technical Studies, Design Studies, and Professional Studies (UNESCO-UIA, 2023). Together, these domains contribute to a broader range of knowledge necessary for design decision-making and the design process.

Each Knowledge Domain addresses a different aspect of architectural education. Cultural and Artistic Studies, Social Studies, and Environmental Studies, commonly identified as fundamental or general knowledge, widen the scope of knowledge in architectural history, culture, society, and the environment, which are crucial in rethinking the built environment (UNESCO-UIA, 2023). An understanding of site context, local culture, and the environment, for example, ensures that design responds not only to aesthetics but also to local heritage and demography (Muszynska-Lanowy, 2021; UNESCO-UIA, 2023). These courses also directly contribute to the United Nations Sustainable Development Goals (SDGs), which are a priority for contemporary architectural education (Burton & Salama, 2023; Butt et al., 2025).

Moreover, in architecture programs, technical knowledge such as Design Studies, Technical Studies, and Professional Studies needs to be balanced with fundamental knowledge to prepare graduates for contemporary practice (Al-Sayed et al., 2010; Fahmy, 2025; UNESCO-UIA, 2023). Design Studies classically support the design process through architectural theory, drawing, critical design thinking, and representation methods (Ceylan et al., 2024; UNESCO-UIA, 2023). Technical Studies develop knowledge of building systems, structures, construction technologies, disaster management, and digital tools such as computer-aided design (CAD) and Building Information Modelling (BIM), which have become integral to contemporary practice (Muszynska-Lanowy, 2021; UNESCO-UIA, 2023). Lastly, Professional Studies link design with practice, offering students opportunities to do internships and gain a better understanding of design ethics, project planning and management, and fieldwork (Salama, 2016; UNESCO-UIA, 2023).

Theoretical and technical knowledge, although they have different purposes, complement one another throughout undergraduate education. Previous studies have emphasized that contemporary architecture programs should

integrate and balance cultural, social, environmental, technical, design, and professional knowledge throughout their curricula (Al-Sayed et al., 2010; Burton & Salama, 2023; Ceylan et al., 2024; Muszynska-Lanowy, 2021; Salama, 2016). For this reason, these six UNESCO-UIA Knowledge Domains provide the benchmark for curriculum comparison in this study.

Design Competency

The Design Competency is directly practiced in the Architectural Design Studio class. The Studio or Workshop serves as the synthesis environment where knowledge and skills are integrated and applied. According to UNESCO-UIA (2023), the principal objective of design education is to "integrate knowledge and apply skills in the creation of a design solution" (p. 16). Ceylan et al. (2024) and Lawson (2006) argued that, as a core component of architectural education, the design studio supports the exploration of three-dimensional thinking and the formulation of design strategies. Salama (2016) also argued that students in the studio class build essential intellectual capabilities, such as imagination, creativity, and innovation, while translating strategies into their design projects.

Previous studies have also emphasized the balance between studio and non-studio courses. Programs that provide insufficient studio classes risk producing graduates with inadequate design practice, while programs that place more emphasis on the design studio may overlook other areas of learning (Ceylan et al., 2024; Deamer, 2020; Salama, 2016). Therefore, the six Knowledge Domains identified by the UNESCO-UIA Charter should inform and enrich studio learning. Together, they ensure that design decisions are supported by cultural, social, environmental, technical, and professional knowledge.

Skills Competency

While knowledge provides the theoretical foundation and design focuses on studio practice, skills provide students with the ability to collaborate, communicate, and apply design ideas (UNESCO-UIA, 2023). According to UNESCO–UIA (2023, p. 6), architects need to possess the "ability to work in collaboration with other architects… to act and to communicate ideas through collaboration, speaking, numeracy, writing, drawing, modelling, and evaluation." Salama (2016) argued that successful architectural practice depends not only on design ability but also on the capacity to respond to complex professional contexts. Architectural practice requires soft skills such

as communication, research, analysis, ethical reasoning, teamwork, and management. National accreditation systems in Australia, South Korea, the United States, and the United Kingdom have similar expectations (Architects Accreditation Council of Australia, 2021; Korea Architectural Accrediting Board, 2024; National Architectural Accrediting Board, 2020; RIBA, 2021).

Another important aspect of Skills Competency is the ability to represent and communicate design ideas. During architecture school, students learn traditional representation methods such as hand drawing, model making, and digital methods such as computer-aided design, artificial intelligence tools, and analytical software (Butt et al., 2025; Ceylan et al., 2024). These skills allow students to explore, develop, define, and communicate design proposals (UNESCO-UIA, 2023). As architectural practice changes, digital proficiency has become more important, and these competencies are either taught directly through technical courses or developed indirectly through studio learning (Samudro et al., 2025). Developing these competencies alongside knowledge and design helps prepare graduates for contemporary architectural practice.

Architectural education in Cambodia

Three national bodies and frameworks guide Cambodia's architectural education system. Firstly, the Cambodia Qualifications Framework (CQF) provides a national structure for higher education under the oversight of the Ministry of Education, Youth, and Sport ([MoEYS], 2012). The CQF defines learning outcomes for higher education in terms of knowledge, skills, and attitudes (MoEYS, 2012). Secondly, quality assurance is supported by the Accreditation Committee of Cambodia (ACC), which establishes standards relating to institutional governance, academic staff, curriculum design, student services, and infrastructure (ACC, 2018). Lastly, upon graduation, professional practice is regulated through the Board of Architects Cambodia (BAC), which operates under the Ministry of Land Management, Urban Planning and Construction (BAC, 2013). The BAC is responsible for professional registration and links educational qualifications with the requirements for architectural practice in Cambodia (BAC, 2013; Ministry of the Royal Palace, 2012).

Although these national bodies provide guidance for higher education and professional registration, their primary roles concern qualification standards, institutional quality assurance, and professional registration rather than the curricular composition of architecture programs. The CQF and ACC do not

specify how Design Studio should be balanced with supporting Knowledge Domains or assess curriculum alignment with internationally recognized competency frameworks (ACC, 2018; MoEYS, 2012). The primary focus remains on qualification standards, quality assurance, and professional registration rather than the structure of architecture curricula.

Existing studies on architectural education in Cambodia also remain limited. Few studies have documented the historical development of architecture and have indirectly described architectural education (Baumgärtel, 2012; Raintree, 2024). At the broader curriculum level, Opertti et al. (2018) examined Cambodia's national curriculum framework as part of a comparative study of five countries, highlighting its competency-based approach and emphasis on knowledge, skills, and attitudes. More recent studies have examined higher education quality, reform, and skills mismatches in Cambodia, including concerns regarding curriculum relevance and the alignment between graduate skills and labor-market demands (Heng et al., 2023; Heng & Sol, 2023a, 2023b). While these studies provide useful background, they do not critically compare undergraduate architecture curricula across Cambodian universities or examine how curriculum content is distributed among different knowledge domains.

Taken together, the absence of discipline-specific curriculum guidance and the limited body of comparative research suggest that a comparative benchmark for undergraduate architecture curricula in Cambodia remains lacking. This study addresses that gap by examining curriculum structures using an analytical framework adapted from the UNESCO–UIA Charter.

Research methodology

This study employed a comparative curriculum analysis to examine undergraduate architecture programs in Cambodia. Curriculum data were analyzed using a framework adapted from the UNESCO–UIA Charter for Architectural Education, focusing on the Design Competency represented by Design Studio and six Knowledge Domains: Cultural and Artistic Studies, Social Studies, Environmental Studies, Technical Studies, Design Studies, and Professional Studies.

Data was collected exclusively from publicly available sources. Between 6 and 10 April 2026, official Cambodian university websites were systematically

reviewed to extract curriculum structures, course lists, and credit information. Universities were included if they (1) offered an undergraduate architecture degree and (2) provided a complete, publicly accessible course list. Institutions lacking sufficient curriculum information were excluded from the comparative analysis but included in the geographical mapping of architecture programs. Based on these criteria, 20 universities offering undergraduate architecture-related programs were identified, of which 12 provided sufficient curriculum information for the comparative curriculum analysis.

All non-studio courses were classified into one of the six Knowledge Domains based on course titles and, where available, official course descriptions. When a course could reasonably fit more than one domain, classification was determined according to its primary stated learning focus. Design Studio courses were analyzed separately to represent the Design Competency.

To reflect the curricular structure commonly observed across Cambodian architecture programs, Design Studio courses were assigned a weighting of two units, while all other courses were assigned one unit. This weighting was adopted because Design Studio typically carries approximately twice the credit value of lecture-based courses in Cambodian architecture programs and occupies a central role in architectural education.

The analysis involved mapping course distributions, calculating domain proportions, and comparing curriculum patterns across institutions. The results were then interpreted using the analytical framework developed from the UNESCO–UIA Charter to identify similarities, differences, and areas of emphasis within Cambodian architectural education.

A limitation of the study is that the analysis relied solely on publicly available curriculum information. As a result, differences in course content that were not reflected in published curriculum documents could not be assessed.

Results and discussion

Geographical distribution of architecture programs

Table 2. Geographical distribution of Cambodian universities offering undergraduate architecture programs

No	Name of University (Abbreviation)	Name of Department/School/ College/Faculty	Type of degree (BA/BSc/ B. Arch)	Name of degree	Total credits	Location
1	Beltei International University (BIU)	Faculty of Architecture	B.Arch	Architecture and Urbanism	174	Phnom Penh
2	Build Bright University (BBU)	Department of Architecture, Faculty of Engineering and Architecture	BA	Architecture and Urban Planning	160.5	
3	Cambodia University of Technology and Science (CamTech)	Department of Architecture and Interior Design, Faculty of Built Environment	BSc	Architecture	156	
4.	Cambodia University of Management and Technology (CUMT)	Department of Architecture, Faculty of Sciences and Technology	No data	Architecture	No data	
5.	Digital University of Cambodia (DUC)	Faculty of Engineering and Architecture, Department of Architecture	No data	Architecture	No data	
6	Institute of Technology of Cambodia (ITC)	Department of Architectural Engineering, Faculty of Civil Engineering	B.Engr.	Architectural Engineering	165	
7	Limkokwing University of Creative Technology	Faculty of Architecture & Design	BA	Architecture	No data	
8	National Technical Training Institute (NTTI)	Department of Civil Engineering	B.Tech	Architecture	177	

9	National Polytechnic Institute of Technology (NPIC)	Faculty of Civil and Architecture	B.Tech	Architecture	No data	
10	Norton University (NU)	Department of Architecture and Urbanism, College of Sciences	BSc in Engr.	Architectural Design	No data	
11	Paññāsāstra University of Cambodia (PUC)	Department of Architecture, Faculty of Architecture and Urban Planning	BA	Architecture	157	
12	Paragon International University (ParagonU)	Faculty of Engineering, Department of Architecture	BSc	Architecture	135	
13	Phnom Penh University of the Arts (PPUA)	Faculty of Arts and Design	BA	Architecture and Interior Design	127	
14	Royal University of Fine Arts (RUFA)	Faculty of Architecture and Urbanism	BA	Architecture and Urbanism	161	
15	University of Technology and Entrepreneurship (UTE)	No data	BSc	Architecture and Urban Planning	130+	
16	Western University (WU)	Faculty of Architecture, Engineering, and Construction	No data	Architecture	No data	
17	Life University (LU)	College of Architecture and U-city Design	B.Arch	Architecture	169	Sihan-ouk Ville
18	National University of Battambang (NUBB)	Faculty of Arts, Humanities and Education	BA	Architecture	157.5	Battam Bang

19	University of Southeast Asia (USEA)	Faculty of Sciences & Technology	BA	Architecture	160	
20	Angkor University (AU)	Faculty of Engineering and Architecture	No data	Architecture and Interior Design Architecture and Urbanization	No data	Siem Reap

Twenty universities were identified as offering undergraduate architecture-related programs through their official websites. Most of these programs are located in Phnom Penh, accounting for 80% (16 of 20) of the identified institutions. The remaining 20% (4 of 20) are located outside the capital, including two universities (10%) in Siem Reap and one university each (5%) in Battambang and Sihanoukville (see Table 2). The distribution reflects the broader concentration of higher education institutions in Phnom Penh.

The analysis also revealed considerable variation in degree titles, majors, and graduation requirements. Universities award qualifications such as Bachelor of Architecture (B.Arch), Bachelor of Arts (BA), Bachelor of Science (BSc), Bachelor of Engineering (B.Engr), and Bachelor of Technology (B.Tech). Program titles range from Architecture and Urbanism to Architectural Engineering and Architecture and Interior Design. Where credit information was available, graduation requirements ranged from 135 to 177 credits. Such variation suggests that architecture education is currently framed in different ways across Cambodian higher education institutions, reflecting diverse academic and professional orientations.

Course distribution across Design Studio and six UNESCO–UIA Knowledge Domains

Of the 20 programs identified, only 12 provided sufficient curriculum information for detailed analysis. Courses were classified into the six UNESCO–UIA Knowledge Domains: Design Studies, Technical Studies, Environmental Studies, Professional Studies, Cultural and Artistic Studies, and Social Studies. Design Studio courses were analyzed separately to represent the

Design Competency. To maintain consistency and avoid institution-specific comparisons, programs are identified numerically from Prog. 1 to Prog. 12.

Table 3. Distribution of undergraduate architecture curricula across Design Studio and six UNESCO–UIA Knowledge Domains in Cambodian architecture programs

Program	Design Com-petency	Knowledge Competencies					
	Design Studio (%)	Design Studies (%)	Technical Studies (%)	Environ-mental Studies (%)	Professional Studies (%)	Cultural & Artistic Studies (%)	Social Studies (%)
Prog. 1	29.0	14.5	13.0	7.2	21.7	10.1	4.5
Prog. 2	30.0	11.6	35.0	7.4	7.0	4.0	5.0
Prog. 3	21.7	6.5	34.8	13.0	10.9	8.7	4.4
Prog. 4	33.9	11.9	18.6	8.5	10.2	8.5	8.4
Prog. 5	24.5	16.3	14.3	10.2	12.2	10.2	12.3
Prog. 6	29.2	8.3	20.8	10.4	8.3	10.4	12.6
Prog. 7	28.6	7.1	16.7	14.3	7.1	9.5	16.7
Prog. 8	25.0	17.5	15.0	7.5	12.5	15.0	7.5
Prog. 9	32.7	14.3	16.4	14.3	4.0	10.2	8.1
Prog. 10	23.0	11.5	23.0	14.8	8.2	9.8	9.7
Prog. 11	30.3	15.2	15.2	9.1	7.6	13.6	9.0
Prog. 12	25.0	10.9	17.2	14.1	4.7	9.4	18.7

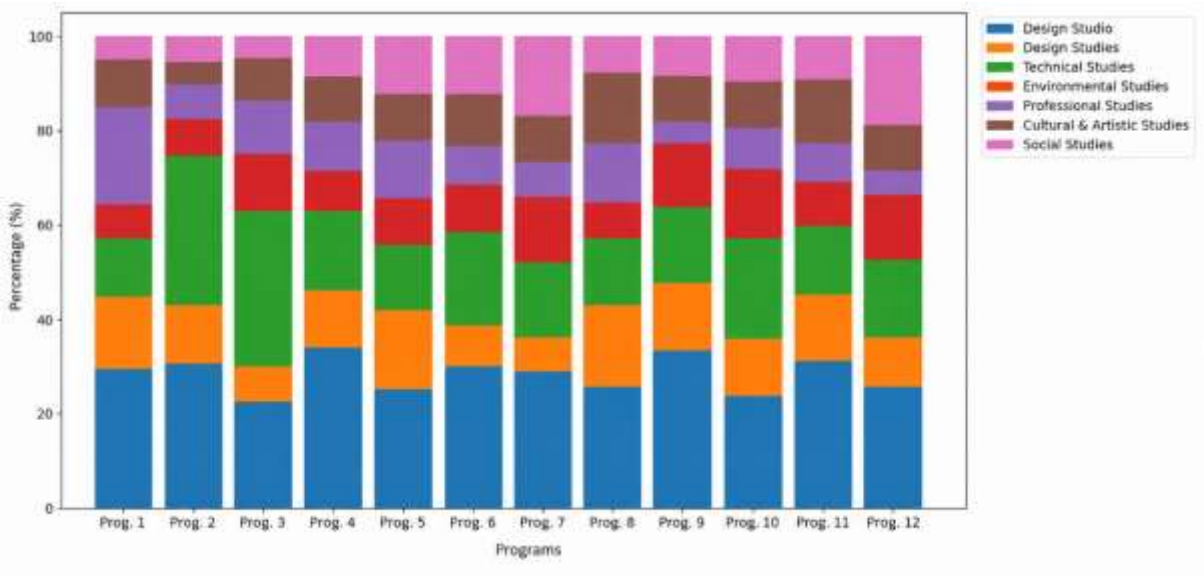


Figure 2. Distribution of undergraduate architecture curricula across Design Studio and six UNESCO–UIA Knowledge Domains in Cambodian architecture programs

Table 3 and Figure 2 show noticeable differences in curriculum composition across the 12 architecture programs. Despite this variation, three broad patterns can be observed. First, Design Studio occupies the largest share of curriculum content in every program. Second, Technical Studies vary substantially among institutions, suggesting different approaches to architectural education. Third, Professional Studies generally receive a relatively small allocation across most programs. Together, these patterns indicate that while Cambodian architecture programs share a common studio-based foundation, they differ considerably in the balance of their supporting knowledge areas.

Design Studio

Design Studio occupies the largest share of curriculum content across all 12 programs, ranging from 21.7% to 33.9% (Table 3). In several institutions, including Prog. 4, Prog. 9, and Prog. 11, studio courses continue through most semesters and culminate in a thesis or capstone project. This finding is not surprising given the long-standing role of studio teaching within architectural education. Studio courses provide a setting where students bring together knowledge acquired from other subjects and apply it to design problems.

The prominence of Design Studio is also evident in architecture programs throughout Southeast Asia. Previous studies in Thailand (Jitrojanaruk et al.,

2021) and accreditation frameworks in South Korea (KAAB, 2024) similarly identify studio learning as the core component of architectural education. While Cambodian programs share this studio-based foundation, the distribution of supporting Knowledge Domains varies considerably across institutions.

Knowledge Domains

The greatest variation occurs in Technical Studies, which range from 13% in Prog. 1 to 35% in Prog. 2. Programs with higher proportions of Technical Studies generally include more coursework related to engineering, construction, building materials, and technologies. By contrast, other institutions allocate more curriculum space to design theory, architectural studies, and history.

Cultural and Artistic Studies account for between 4% and 15% of curriculum distribution. Programs such as Prog. 8 and Prog. 11 allocate relatively more attention to architectural history and cultural subjects while maintaining lower proportions of Technical Studies. Design Studies show a similar pattern. This domain ranges from 6.5% to 17.5% and includes courses related to architectural theory, design research, drawing, and visual representation. Collectively, these differences suggest that Cambodian architecture programs are not all based on a singular educational model. Some institutions appear to prioritize technical preparation, while others prioritize design thinking, representation, and understanding of culture. While some variation between universities is to be expected, the results suggest that there is currently no common benchmark informing the balance of the UNESCO–UIA Knowledge Domains across Cambodian architecture programs. This does not necessarily imply differences in the quality of education, but it does suggest a need for greater discussion about curriculum consistency and graduate competencies at the national level.

Social Studies also vary substantially, ranging from 4.4% to 18.7% of curriculum content. Most of these courses are concentrated in the foundation year and include language, economics, administration, geography, and critical thinking. The variation reflects different approaches to general education and the role of broader social knowledge within architectural training. Environmental Studies account for approximately 7.2% to 14.8% of curriculum distribution. Subjects in this domain include urban planning, urban design, landscape architecture, sustainability, infrastructure, and building services. As climate resilience, sustainability, and environmental responsibility become increasingly

important in contemporary architectural practice, the relatively modest allocation of Environmental Studies in many Cambodian architecture programs deserves further attention. A stronger emphasis on Environmental Studies would better reflect the growing importance of climate resilience and the Sustainable Development Goals, both of which are identified as priorities in the UNESCO–UIA Charter (Burton & Salama, 2023; UNESCO-UIA, 2023).

Professional Studies

Among the six Knowledge Domains, Professional Studies generally receive a relatively small allocation across the 12 programs. The only notable exception is Prog. 1, where this domain accounts for 21.7% of the curriculum, while the remaining programs allocate between 4% and 12.5%. Courses in this category commonly include professional practice, law, project management, ethics, and internships.

The limited presence of Professional Studies contrasts with the increasing emphasis placed on professional competence, regulatory knowledge, and multidisciplinary collaboration within contemporary architectural education (UNESCO-UIA, 2023). This issue is also relevant within the Cambodian higher education context, where previous studies have highlighted skills mismatches and the need to strengthen the alignment between university curricula and labor-market demands (Heng & Sol, 2023b). Similar priorities can be observed in accreditation systems in Australia (AACA, 2021), South Korea (KAAB, 2024), the United Kingdom (RIBA, 2021), and the United States (NAAB, 2020), where professional preparation forms an important part of curriculum requirements. Although most Cambodian architecture programs include internships or practice-related courses, their credit weighting remains relatively small. This raises questions about how effectively students are prepared for professional registration and employment after graduation, particularly as regional and international mobility become increasingly important.

Conclusion and implications

Using the UNESCO–UIA Charter as a point of reference, this study has examined the curriculum structures of twelve undergraduate architecture programs in Cambodia. The study provides the first comparative overview of how architectural education is currently organized across Cambodian higher education institutions.

Across all programs, Design Studio remains the central component of architectural education. Beyond this shared foundation, however, considerable variation exists in the distribution of supporting Knowledge Domains. In some programs, structures, construction, and technical subjects occupy a substantial portion of the curriculum. In others, greater space is given to architectural history, theory, drawing, and cultural studies. These differences reflect the variety of ways architecture is currently taught in Cambodia. In addition, one common pattern that appears across most programs is the limited presence of Professional Studies. As architectural work becomes increasingly collaborative and regulated, the place of professional preparation within the curriculum deserves further discussion.

Several implications can be drawn from the findings. First, the generally low proportion of Professional Studies suggests a need to strengthen connections between academic learning and professional practice. Internship requirements, project management, professional ethics, and regulatory knowledge could receive greater attention within future curriculum revisions.

Second, the analysis demonstrates substantial variation in curriculum structure across Cambodian architecture programs. While institutional diversity is expected, the findings indicate the absence of a common reference point for balancing Design Studio and supporting Knowledge Domains. In this regard, the UNESCO–UIA Charter may provide a useful benchmark for future curriculum development, quality assurance, and accreditation discussions.
Thirdly, curriculum transparency remains an important issue. Only 12 of the 20 identified programs provided sufficient information for detailed analysis. Greater public access to curriculum information would support future benchmarking exercises, facilitate accreditation processes, and help prospective students make more informed educational decisions.

Finally, this study relies entirely on curriculum information published on university websites. As a result, it cannot capture what happens inside the classroom, studio, or internship environment. A course title alone cannot reveal how a subject is taught or how students experience it. Thus, the findings should be read as a picture of curriculum structure rather than educational practice. Despite these limitations, the study provides an initial benchmark for

examining architectural curricula in Cambodia and provides a basis for future curriculum evaluation and comparative research.

Acknowledgments

The authors would like to thank the editors and anonymous reviewers of the *Cambodian Journal of Educational Research* for their helpful comments on earlier versions of this article.

Conflict of interest

No potential conflict of interest was reported by the author(s).

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

AI use statement

Generative artificial intelligence (ChatGPT) was used solely to improve grammar, language, and readability. The authors take full responsibility for the content, analysis, interpretation, and conclusions presented in this article.

The author(s)

Pisith Hun is an instructor at Paragon International University (ParagonU), Cambodia. He holds a Master of Urban and Regional Planning from the University of Queensland. Prior to joining ParagonU, he served as an adjunct lecturer at the Royal University of Fine Arts and the Kirirom Institute of Technology. His research interests include architectural education, urban planning, and landscape architecture.
Email: hunpisith@gmail.com

Chanrachna Nou is an architecture and interior design instructor and currently serves as a deputy head of the Quality Assurance Office at the Cambodia University of Technology and Science (CamTech). She holds a Master's degree in Architecture from Naresuan University. Her research interests include Architectural Education Pedagogy, Architectural Design for Sustainability, Green Infrastructure (GI), and Smart and Sustainable Buildings and Urbanization.
Email: chanrachnanou@gmail.com

References

Accreditation Committee of Cambodia. (2018). *Guidelines and rubrics for national standards for accreditation of higher education institutions*. Royal Government of Cambodia.

Al-Sayed, K., Dalton, R. C., & Hölscher, C. (2010). Discursive design thinking: The role of explicit knowledge in creative architectural design reasoning. *AI EDAM*, *24*(2), 211–230. https://doi.org/10.1017/s0890060410000065

Architects Accreditation Council of Australia. (2021). *National standard of competency for architects*. Architects Accreditation Council of Australia. https://aaca.org.au/wp-content/uploads/2021-NSCA.pdf

ASEAN. (2007). *ASEAN mutual recognition arrangement on architectural services*. https://asean.org/wp-content/uploads/2021/09/21137.pdf

Attia, A. S. (2019). International accreditation of architecture programs promoting competitiveness in professional practice. *Alexandria Engineering Journal*, *58*(3), 877–883. https://doi.org/10.1016/j.aej.2019.08.002

Baumgärtel, T. (Ed.). (2012). *Sthapatyakam*. Department of Media and Communication.

Board of Architects Cambodia. (2013). *Decision on registration conditions and determination of contributions of the Board of Architects Cambodia*. https://library.ncdd.gov.kh/detail/3422

Burton, L. O., & Salama, A. M. (2023). Sustainable Development Goals and the future of architectural education–cultivating SDGs-centred architectural pedagogies. *Archnet-IJAR: International Journal of Architectural Research*, *17*(3), 421–442. https://doi.org/10.1108/ARCH-08-2023-0201

Butt, A. N., Salama, A. M., & Rigoni, C. (2025). Agile by design: embracing resilient built environment principles in architectural and urban pedagogy. *Architecture*, *5*(3), Article 45. https://doi.org/10.3390/architecture5030045

Ceylan, S., Şahin, P., Seçmen, S., Somer, M. E., & Süher, H. K. (2024). The contribution of digital tools to architectural design studio: A case study. *Ain Shams Engineering Journal*, *15*(7), Article 102795. https://doi.org/10.1016/j.asej.2024.102795

Deamer, P. (2020). Design pedagogy: The new architectural studio and its consequences. *Architecture_MPS*, *18*(1), Article 2. https://doi.org/10.14324/111.444.amps.2020v18i1.002

Fahmy, A. (2025). A review on structural literacy in architectural education. *Buildings*, *15*(23), Article 4312. https://doi.org/10.3390/buildings15234312

General Department of Housing. (2016). *Cambodia national report for Habitat III preparation*. Ministry of Land Management, Urban Planning and Construction. https://habitat3.org/wp-content/uploads/Cambodia-National-Report-for-Habitat-III.pdf

Heng, K., Doeur, B., & Din, L. (2023). Promoting higher education quality in Cambodia: Challenges and recommendations. *Cambodian Journal of Educational Research*, *3*(1), 92–109. https://doi.org/10.62037/cjer.2023.03.01.05

Heng, K., & Sol, K. (2023a). Challenges facing higher education in Cambodia and ideas for reform. *Cambodian Journal of Educational Research*, *3*(1), 1–19. https://doi.org/10.62037/cjer.2023.03.01.01

Heng, K., & Sol, K. (2023b). Skills mismatches in Cambodian higher education: Major causes and possible solutions. *Cambodian Journal of Educational Research*, *3*(1), 76–91. https://doi.org/10.62037/cjer.2023.03.01.04

Jitrojanaruk, A., Suebsiri, P., Janjamsai, M., Buranasing, B., & Vadhanasindhu, P. (2021). The development of architectural education in Thailand under the ASEAN Community. Journal of Mekong Societies, 17(3), 148–165. https://so03.tci-thaijo.org/index.php/mekongjournal/article/view/249768

Korea Architectural Accrediting Board. (2024). *KAAB conditions and procedures for professional degree programs in architecture*. Korea Architectural Accrediting Board. https://eng.kaab.or.kr/files/KAAB_Certificate2024_eng.pdf

Lawson, B. (2006). *How designers think*. Routledge. https://doi.org/10.4324/9780080454979

Masri, S. S., & Arnaouty, H. (2015). Architecture program accreditation: A pathway to graduates international mobility. *Athens Journal of Architecture*, *1*(1), 65–80. https://doi.org/10.30958/aja.1-1-5

Ministry of Education, Youth and Sport. (2012). *Cambodia qualifications framework*. Royal Government of Cambodia.

Ministry of the Royal Palace. (2012). *Royal decree on the establishment of the Board of Architects Cambodia.* https://library.ncdd.gov.kh/detail/415

Muszynska-Lanowy, M. (2021). Technical and soft competencies in teaching architecture in the context of industry 4.0. *World Transactions on*

Engineering and Technology Education, *19*(2), 203–208. https://www.wiete.com.au/journals/WTE%26TE/Pages/Vol.19%2C%20No.%202%20%282021%29/08-Muszynska-Lanowy-M.pdf

National Architectural Accrediting Board. (2020). *Conditions for accreditation*. https://higherlogicdownload.s3.amazonaws.com/NAAB/21e8eae7-e532-47c0-bff1-4111ca0d4fb0/UploadedImages/2020_NAAB_Conditions_for_Accreditation_Rev_3_19_2026.pdf

Nikezić, A. (2022). Responsible education of architects–experience from international research projects at the University of Belgrade–Faculty of Architecture. *AGG+ Journal for Architecture, Civil Engineering, Geodesy and Related Scientific Fields*, *10*(1), 30–45. https://doi.org/10.7251/AGGPLUS/2210030N

Opertti, R., Kang, H., & Magni, G. (2018). *Comparative analysis of the national curriculum frameworks of five countries: Brazil, Cambodia, Finland, Kenya and Peru*. UNESCO International Bureau of Education. https://www.ibe-unesco.org/inprogressreflections-sub/comparative-analysis-of-5-countries-curriculum-frameworks

Raintree. (2024). *Roots + revival: Exploring new Khmer architecture*. https://www.raintreecambodia.com/news/2024/12/4/roots-revival-exploring-new-khmer-architecture

RIBA. (2021). *RIBA procedures for validation and validation criteria for UK and international courses and examinations in architecture*. https://www.riba.org/media/xn0howh3/riba_validation_procedures_2022pdf.pdf

Şahin, M. N. (2024). Evolution of practice in undergraduate architecture education through institutional formations. *Proceedings of the International Conference of Contemporary Affairs in Architecture and Urbanism-ICCAUA*, *7*(1), 58–64. https://doi.org/10.38027/ICCAUA2024EN0094

Salama, A. M. (2016). *Spatial design education: New directions for pedagogy in architecture and beyond*. Routledge. https://doi.org/10.4324/9781315610276

Samudro, H., Bahar, M. A., Firmansyah, A. Y., & Darma, M. A. S. (2025). Enhancing Architectural Learning: Integrating Building Technology with Innovative Pedagogy. *Edukasi: Jurnal Pendidikan dan Pengajaran*, *12*(01), 18–37. https://doi.org/10.19109/1qy4kx12

UNESCO-UIA. (2023). *UNESCO–UIA Charter for Architectural Education (2023 revision)*. https://www.uia-architectes.org/wp-content/uploads/2023/08/FINAL_UNESCO-UIA_CHARTER2023.pdf