



Perspective
Veterinary Education



Perspectives on veterinary education in Thailand

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ABSTRACT

Veterinary education is the foundation of veterinary services in the country. Starting from the service sector in the army, veterinary education and practice in Thailand have been standardized and progressed toward international veterinary standards. The 6-year Doctor of Veterinary Medicine core curriculum is deployed to develop the curriculum for each Veterinary Education Establishment (VEE). The challenges for veterinary education and practices reflect the country's expectations of veterinary services. With regional and global collaboration, the VEEs have been developing tools and learning platforms for delivering qualified veterinary graduates that fit fast-growing society needs.

Keywords: Veterinary education; Thailand

HISTORICAL INSIGHTS OF VETERINARY EDUCATION AND PRACTICE IN THAILAND

Fig. 1A provides a brief history of veterinary education and practice in Thailand. Since the establishment of veterinary practice and the veterinary school in 1912 and 1935, respectively, veterinary education in Thailand has been modernized according to the models from western countries. The establishment of the Veterinary Council of Thailand (VCT), which serves as the Veterinary Statutory Body (VSB) of the country, led to a significant shift in national veterinary standards, including the Veterinary Education Establishment (VEE) accreditation system, harmonization of Doctor of Veterinary Medicine (DVM) core curricula, veterinary licensure system, and post-graduate training. Several subcommittees were set up to execute the VCT tasks, as shown in **Fig. 1A**. With the trend of globalization, some VEEs are in the process of international accreditation. In addition, the harmonized accreditation system for the Association of Southeast Asian Nations (ASEAN) members is currently being developed.

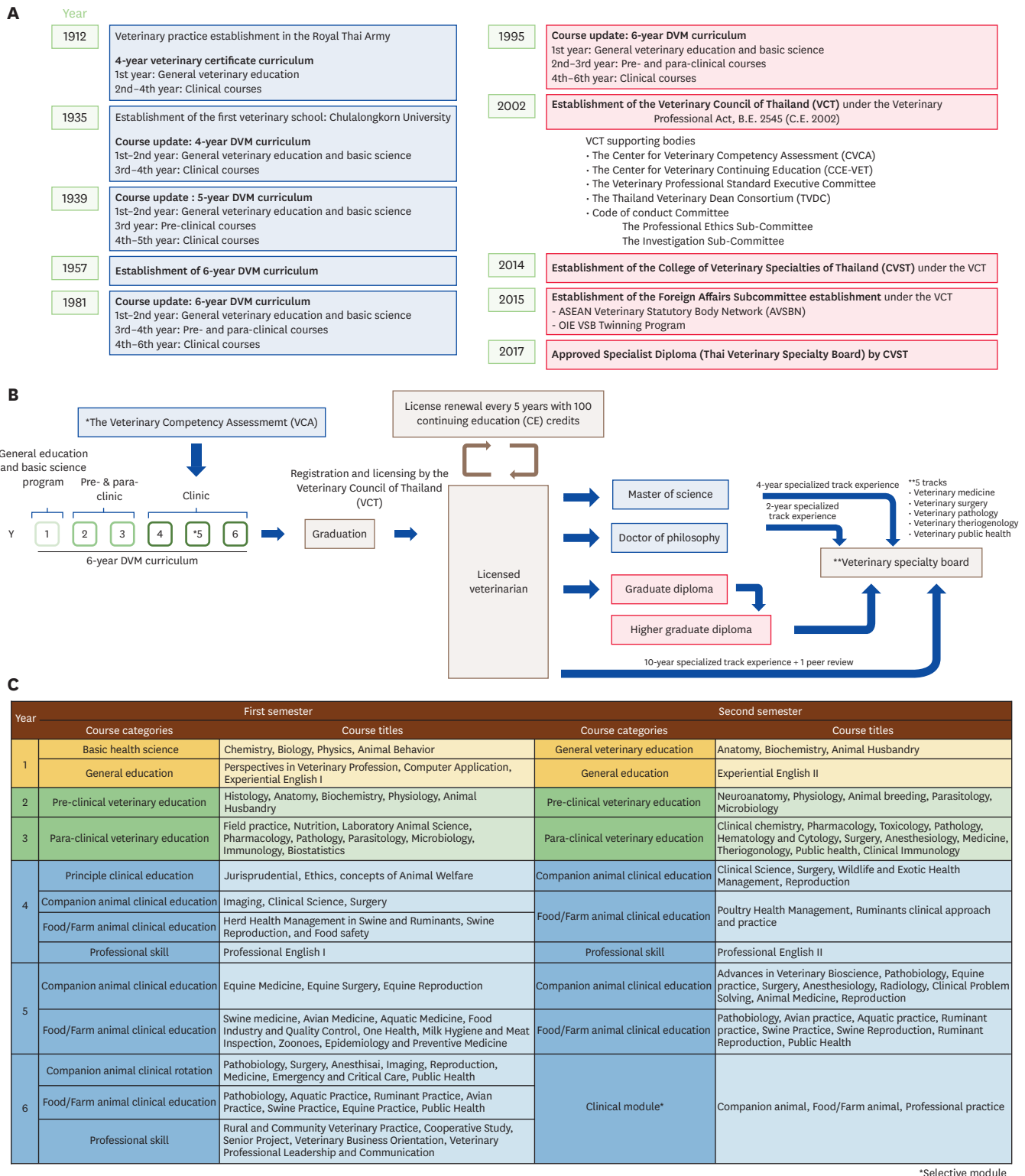


Fig. 1. Summary of veterinary education and practice in Thailand. Brief history of veterinary education and practice in Thailand (A). Overview of the DVM core curriculum, licensure system, and post-graduate training and certification in Thailand (B). Diagram of the Faculty of Veterinary Science, Chulalongkorn University curriculum as a representative Veterinary Education Establishment curriculum (C). DVM, Doctor of Veterinary Medicine.

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Conflict of Interest

The authors declare no conflicts of interest.

The VSB is the official authority regulating veterinary practice and service in the country, which closely cooperates with the VEEs and academic consortiums to harmonize the quality of veterinary education and specialty board certification. The VCT accredits and allows the VEEs to use the harmonized DVM core curriculum to design their 6-year DVM program. **Fig. 1B** gives an overview of the DVM core curriculum, licensure system, and post-graduate training and certification in Thailand. **Table 1** lists the current Thai VEEs.

For example, the DVM curriculum of the Faculty of Veterinary Science, Chulalongkorn University (CUVET) is explained here. CUVET uses a tracking curriculum with additional tailored 8-credit study modules to fulfill its 244-credit DVM program. CUVET employs its day-1 competencies, so-called CUVET D1Cs, to design theme-based education. The CUVET D1Cs comply with the D1Cs endorsed by the European Association of Establishments for Veterinary Education (EAEVE) [1], VCT [2], and the World Organization for Animal Health [3,4]. Furthermore, CUVET has developed additional platforms to accommodate student learning and practice efficiently, e.g., the blended-learning platform, online learning management system (e-LMS), skill practice center, Chulalongkorn University Innovation Center for Veterinary Clinical Training, and electronic training log system (CUVET Smart School). In addition, 21st-century skills and innovative and entrepreneurial training have been incorporated into the curriculum. **Fig. 1C** presents a diagram of the CUVET curriculum as a representative VEE curriculum.

CHALLENGES AND OPPORTUNITIES FOR VETERINARY EDUCATION AND PRACTICE IN THAILAND

The continuous changes in society’s needs and the expectation of veterinary services have posed challenges for veterinary education and practice in Thailand. Therefore, to efficiently serve society’s needs, veterinary education and practice in the country should be adaptable to the fast-growing social demands. Owing to the transboundary diseases and borderless veterinary service and cooperation, veterinary practitioners should be capable of serving local and international stakeholders. As part of the essential workforce to secure the food supply chain both in the livestock production and food production line, well-trained veterinarians are required to serve both national and international levels. Smart farming and automated

Table 1. VEEs in Thailand

Name of VEEs ^a	Accreditation status by VCT	No. of students (approximately)
Faculty of Veterinary Science, Chulalongkorn University	Fully accredited	768
Faculty of Veterinary Medicine, Kasetsart University	Fully accredited	720
Faculty of Veterinary Medicine, Mahanakorn University of Technology	Fully accredited	600
Faculty of Veterinary Medicine, Khon Kaen University	Fully accredited	500
Faculty of Veterinary Medicine, Chiang Mai University	Fully accredited	396
Faculty of Veterinary Science, Mahidol University	Fully accredited	282
Faculty of Veterinary Science, Rajamangala University of Technology Srivijaya	Fully accredited	288
Faculty of Veterinary Science, Mahasarakham University	Fully accredited	250
Faculty of Veterinary Medicine, Rajamangala University of Technology Tawan-ok	Fully accredited	171
Faculty of Veterinary Science, Prince of Songkla University	Fully accredited	149
Faculty of Veterinary Medicine, Western University	Fully accredited	68
Akkraratchakumari Veterinary College, Walailak University	In progress for accreditation	127 (1st–5th yr-current operation)
Faculty of Veterinary Medicine and Applied Zoology, Princess Chulabhorn College of Medical Science, Chulabhorn Royal Academy	In the progress of program development	86 (1st–3rd yr-current operation)
Faculty of Veterinary Medicine, Maejo University	In progress for accreditation	0

VEE, Veterinary Education Establishment; VCT, Veterinary Council of Thailand.

^aAs of August 2022.

production system have been integrated into frontline business sectors. Therefore, graduate veterinarians must be trained to familiarize themselves with such systems. In terms of health security, veterinary education and service should incorporate one health concept into the education system. This concept of harmonizing human, animal, and environmental health will help all stakeholders efficiently address global health security issues.

Interestingly, the trend of pet owners in Thailand has expanded tremendously. Thus, the qualification of companion animal practitioners at the same level as their medical counterparts is expected. This leads to significant advances in companion animal veterinary practices. With the trend of wildlife and conservative veterinary practices, the need for specialized veterinarians working on zoo and wildlife animals is increasing. This has led to the establishment of the zoo and wildlife veterinary society in the country.

A robust veterinary education system has been established and maintained with the establishment of the national VSB, the VCT, and the harmonization of the Thailand Veterinary Dean Consortium. Owing to the coronavirus disease 2019 outbreak, however, the study platform to fulfill the curricular requirement is reduced. The lack of hands-on skill practice, animal cases, and on-site staff availability affected the quality of veterinary education. In addition, the social concerns on animal welfare led to the avoidance of healthy animal sacrifice for teaching. Many tools have been employed to improve and ensure the students' clinical skills, including the skill practice and simulation center, e-LMS, and electronic training log system.

Regarding the opportunity for veterinary education and practice, many tools have been developed and applied to overcome the current weaknesses and threats. New technologies based on artificial intelligence and the internet of things have been incorporated into all medical and veterinary services ranging from disease diagnosis and surveillance, health monitoring and management, smart farming, and food production pipeline. This leads to the vast opportunity for modernizing veterinary education and practice in the country. In addition, the trend of hands-on training utilizing the simulation model and soft cadavers has been used to enhance practical skill training and assessment. Furthermore, the collaboration among stakeholders via the Public-Private-Partnership and the global connection has helped improve the quality of academic and research platforms in the country. Currently, some VEEs have started the process for international accreditation. The EAEVE, the American Veterinary Medical Association, and the Australasian Veterinary Boards Council are attractive international standards owing to their recognition and robust accreditation system. The international accreditation process and approval will shape the quality of the VEEs and modernize veterinary practice in Thailand.

ASIAN PERSPECTIVES OF VETERINARY EDUCATION AND PRACTICE

According to the Asian perspectives on veterinary education and practice, the trend of lifelong learning, shared learning resources, and international collaboration in academia, research, and innovation will provide sustainable ways to strengthen veterinary education and practice in the region. It is well accepted that the improvement of veterinary education and service in major Asian countries has led to positive changes in these countries. The flexible study program that fits local and global needs will be an invaluable platform for

sharing among the VEEs' partners. These shared platforms may include shared credits, subjects, programs, and even the curriculum. On the other hand, a flexible educational policy is needed to achieve this platform. Shifting from traditional outcome-based and competency-based education to theme-based education was challenging, but it was valuable for all stakeholders. Improving an international language is indisputable for establishing borderless veterinary education and practice at regional and global levels. Thus, settling down on international language training and assessment in the veterinary curriculum is much required.

The establishment of harmonized veterinary education and accreditation system among the Asian countries will lead to the harmonization of regional veterinary services. The ASEAN member states have been developing a harmonized veterinary accreditation system via the ASEAN Veterinary Statutory Body Network in collaboration with the Southeast Asia Veterinary School Association [5,6]. This standard will be a good starting point for harmonizing veterinary education and practice in the region. Another challenge in Asian veterinary education and practice is the sustainability of the VEEs standards. The lessons learned from the international accreditation highlight the significance of the quality assurance process for maintaining a robust veterinary education system. Finally, as a global trend, veterinary graduates equipped with an innovative and entrepreneurial mindset will be desirable for coping with disruptive changes and leading technology development and translation. Along with 21st-century skills, including communication and decision-making skills, veterinary graduates will be the future frontline task force for veterinary services.

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REFERENCES

1. European Association of Establishments for Veterinary Education (EAEVE). Standard operating procedure (SOP) 2019 as amended in September 2021 [Internet]. Wien: EAEVE; <https://www.eavee.org/esevt/sop>. Updated 2021. Accessed 2022 Jul 24.
2. Veterinary Council of Thailand (VCT). Guide to veterinary professional standards (revised version of the Criteria Description B.E. 2559) [Internet]. Nonthaburi: VCT; http://student.vetcouncil.or.th/index.php?option=com_content&view=article&id=737:2559&catid=25&Itemid=146&lang=th. Updated 2016. Accessed 2022 Jul 24.
3. World Organisation for Animal Health (WOAH). OIE guidelines on the Veterinary Education Core Curriculum [Internet]. Paris: WOA; https://www.woah.org/en/document/veterinary_education_core_curriculum/. Updated 2013. Accessed 2022 Jul 24.
4. World Organisation for Animal Health (WOAH). OIE recommendations on the Competencies of graduating veterinarians ('Day 1 graduates') to assure National Veterinary Services of quality [Internet]. Paris: WOA; <https://doc.woah.org/dyn/portal/index.xhtml?page=alo&aloid=19018&nobl=1>. Updated 2012. Accessed 2022 Jul 24.
5. World Organisation for Animal Health (WOAH). Veterinary education and VSB [Internet]. Paris: WOA; <https://rr-asia.woah.org/en/projects/vee/>. Updated 2022. Accessed 2022 Jul 24.
6. World Organisation for Animal Health (WOAH). The AVSBN virtual workshop on VEE accreditation standards [Internet]. Paris: WOA; <https://rr-asia.woah.org/en/events/the-avsbn-virtual-workshop-on-vee-accreditation-standards/>. Updated 2020. Accessed 2022 Jul 24.