SELF–EVALUATION REPORT 2019

VetNorth Japan

The Cooperative Veterinary Education Programme between Hokkaido University School of Veterinary Medicine and Obihiro University of Agriculture and Veterinary Medicine

Location of VetNorth Japan

■ Google Map

- Hokkaido University

https://www.google.co.jp/maps/@43.0797048,141.3359474,3259m/data=!3m1!1e3?hl=ja

- Obihiro Univeristy of Agriculture and Veterinary Medicine

https://www.google.co.jp/maps/@42.8893239,143.1935388,2041a,35y,221.7h,44.42t/data=!3m1!1e3?hl=ja

This is the Self-evaluation report (SER) of VetNorth Japan for Full Visitation by the European Association of Establishments for Veterinary Education (EAEVE). The SER was written in English in agreement with ESEVT (Uppsala SOP May 2016).

The SER consists of the report itself and an appendix with the most relevant information. The appendix is separately bound.

Other documents of interest for the experts will be available at the consultative site visit. If the experts need further information, please feel free to contact the Representative Liaison Officer.

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Abbreviations

AAALAC	Association for Assessment and Accreditation of Laboratory Animal Care International
ABSL	Animal Facility Biosafety Level
ACVP	American College of Veterinary Pathologists
ACVR	American College of Veterinary Radiology
AMED	Japan Agency for Medical Research and Development
AY	Academic Year
AiCVIM	Asian College of Veterinary Internal Medicine
BSC	Biosafety Cabinet
BSE	Bovine Spongiform Encephalopathy
BSL	Biosafety Level
CALL	Computer-Assisted Language Learning
CBT	Computer-Based Testing
COE	Center of Excellence
CT	Computed Tomography
CUEA	University Education Affairs Center (OU)
CUFM	Center for National University Finance and Management
DVM/OU	Department of Veterinary Medicine, Obihiro University of Agriculture and Veterinary Medicine
EAEVE	European Association of Establishments for Veterinary Education
ECG	Electrocardiogram
ECTS	European Credit Transfer System
EPT	External Practical Training
ESEVT	European System of Evaluation of Veterinary Training
ESG	Standards and Guidelines for Quality Assurance in the European Higher Education Area
EU	European Union
FCASA	Field Center of Animal Science and Agriculture
FD	Faculty Development
FSSC	Food Safety System Certification
FTE	Full-Time Equivalent
FY	Fiscal Year
GPA	Grade Point Average
HACCP	Hazard Analysis and Critical Control Point
HEI	Higher Education Institutes
HINES	Hokkaido University Information Network System
HPAI	Highly Pathogenic Avian Influenza
HU	Hokkaido University
IACUC	Institutional Animal Care and Use Committee
ICT	Information and Communications Technology
ICU	Intensive Care Unit
IEC	International Electrotechnical Commission
ILAR	Institute for Laboratory Animal Research
IPC	Information Processing Center (Obihiro University)
ISO	International Organisation for Standardization
IT	Information Technology
JAEVE	Japanese Association of Establishments for Veterinary Education
JCLAM	Japanese Association for Laboratory Animal Medicine
JCVP	Japanese College of Veterinary Pathologists
JCVS	Japanese College of Veterinary Surgeons
JCZWM	Japanese College of Zoo and Wildlife Medicine
JICA	Japan International Cooperation Agency
JRA	Japan Racing Association

JSPS	Japan Society for the Promotion of Science
JSVI	Japanese Society of Veterinary Imagings
JVMA	Japan Veterinary Medical Association
LAC	Large Animal Clinic (Obihiro)
LINAC	Linear Accelerator
MAFF	Ministry of Agriculture, Forestry and Fisheries
MEXT	Ministry of Education, Culture, Sports, Science & Technology
MHLW	Ministry of Health, Labour, and Welfare
MRI	Magnetic Resonance Imaging
NCUEE	National Center of University Entrance Examinations
NIAD-QE	National Institution for Academic Degrees and Quality Enhancement of Higher Education
NOSAI	National Agricultural Insurance Association
NUC	National University Cooperation
OIE	World Organisation for Animal Health
OPAC	Online Public Access Catalogue
OSCE	Objective Structured Clinical Examination
OSD	Office for Students with Disabilities
OU	Obihiro University of Agriculture and Veterinary Medicine
PDCA	Plan-Do-Check-Act
QA	Quality Assurance
SAC	Small Animal Clinic (Obihiro)
SCJ	Science Council of Japan
SD	Staff Development
SER	Self Evaluation Report
SEU	Standards for Establishment of Universities
SNS	Social Networking Service
SOP	Standard Operating Procedures
SVM/HU	Hokkaido University School of Veterinary Medicine
SWOT	Strengths-Weaknesses-Opportunities-Threats
TOEFL	Test of English as a Foreign Language
TOEIC	Test of English for International Communication
TR	Tutorial Room
UGSVS	United Graduate School of Veterinary Science, Gifu University
VAC	Veterinary Affairs Council
VCAT	Veterinary Common Achievement Test
VMC	Veterinary Medical Center (Obihiro)
VMMCC	Veterinary Medicine Model Core Curriculum
VNJ	VetNorth Japan
VTH	Veterinary Teaching Hospital
vetCBT	Veterinary Computer-Based Testing
vetESO	Veterinary Education Support Organization
vetOSCE	Veterinary Objective Structured Clinical Evaluation

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Introduction

Brief history of the Establishment and of its previous ESEVT Visitations (if any)

VetNorth Japan (VNJ) was established in 2012 with the aim of providing world-class veterinary education. The Cooperative Veterinary Education Programme joins the faculties of two national universities, Hokkaido University School of Veterinary Medicine (SVM/HU) and the Faculty of Veterinary Medicine at Obihiro University of Agriculture and Veterinary Medicine (DVM/OU).

Both universities are in Hokkaido, the largest and northernmost prefecture in Japan. Both are approved as national universities of Japanese higher education under the jurisdiction of the Ministry of Education, Culture, Sports, Science and Technology (MEXT).

Brief history of SVM/HU and DVM/OU before the VNJ establishment

Originally founded as Sapporo Agricultural College in 1876, Hokkaido University (HU) is one of the oldest, largest and most prestigious universities in Japan, and it now has 12 undergraduate and 25 graduate schools. The basic philosophies guiding HU's education and research include Frontier Spirit, Global Perspectives, Well-Rounded Education and Practical Learning.

Veterinary education at HU started in 1878 and professional veterinary education began in 1880. The Department of Veterinary Medicine was established in 1910. In 1952, it grew into the School of Veterinary Medicine.

OU was first established as Obihiro Higher Technical School of Veterinary Medicine in 1941 and it was the only national agricultural university in 1949 to provide a world-class education in agriculture, animal husbandry and veterinary medicine. OU is located in the middle of Tokachi District, which is called "Japan's food production base" and consists of the largest field crop and livestock zone in Japan. OU's basic philosophy is nurturing its characteristics through the creation and practical use of knowledge, and contributing to regional and international communities by developing human resources to support and protect food safety, animal health and people's livelihoods.

SVM/HU has actively engaged in research on zoonotic diseases, life sciences, ecosystem preservation, and companion animal medicine, while DVM/OU has focused on farm animal medicine and production, food safety/security and protozoan diseases.

The MEXT gave funding support for the establishment of education and research centers that provides leadership, best research and training for a focus area to strengthen the international competitiveness of Japanese universities as "21st Century Center of Excellence (COE)" programme. The research and education programmes presented by both universities were selected by MEXT as "21st COE programme" (HU: Programme of Excellence for Zoonosis Control; OU: Sustainability and safety in food animal production). Based on the evaluation of '21st Century COE Program', both universities were further selected to be a "Global COE Program" (HU: The Establishment of the International Collaborative Center for Zoonosis Control; OU: Animal Global Health).

Background on cooperative veterinary education

In 2004, all Japanese national universities were transformed into 'national university corporations (NUCs)'. Before that, the national universities had been parts of the government. MEXT is still the official authority that oversees the NUCs; however, each national university became a semi-autonomous public corporation, separate from the government and with more freedom in management.

In November 2008, MEXT revised the Standards for the Establishment of Universities and created a legal framework, called the 'Cooperative Education Program', to allow multiple universities to provide and utilize educational resources effectively.

The social need for veterinary medicine education has become more diversified and advanced, not only for animal practice but also for life science, worldwide infection control, public health, and environmental hygiene. Instilling a high quality of education, which will form the basis of veterinarians' qualifications, is important and necessary. To address the issue effectively and provide a comprehensive, international-level education, SVM/HU and DVM/OU established and MEXT approved the VNJ programme in 2012.

Combining the advantages of the two vet schools, VNJ was founded to formulate an educational framework for internationally acceptable veterinary professions with an up-to-date curriculum that covers all fields of veterinary medicine and sciences.

MEXT's project budget, 'Subsidy for National University Reform Plan', from FY2012 to FY2017, included an allocation to VNJ to intensively redevelop and strengthen the quality of university education (See details in Standard 2.1.).

Since 2012, when the new curriculum (Curriculum 2012) at the VNJ programme commenced, we have visited establishments that are approved/accredited by EAEVE in order to gather information on the current status of

veterinary education in European countries and discuss how to improve our own veterinary education. Further, we have also invited experts from the EAEVE establishments to conduct informal consultations.

We received consultative visitation by ESEVT experts in July 2017 in accordance with Uppsala SOP May 2016. The upcoming Full Visitation scheduled in July 2019 will be the first ESEVT FV for VNJ.

Main features of the Establishment

The VNJ programme, with a six-year term of study, was authorized by MEXT and is led by the VNJ Council, which consists of both universities' presidents. VNJ is well managed by the VNJ Executive Board and an organisation comprising various committees (Standard 1.1.4.).

The main feature of our veterinary education system is the cooperation between the two veterinary schools, which has significantly strengthened veterinary education and research fields.

The two veterinary schools, SVM/HU and DVM/OU, mutually utilize each other's outstanding educational resources in order to develop a rich curriculum that the individual vet schools would not have been able to formulate. In particular, a unique complimentary clinical rotation has been introduced to provide a sufficient number of caseload in various animal species.

Under the current curriculum, the teaching staff of SVM/HU instructs students in several subjects at DVM/OU and vice versa (from SVM/HU to DVM/OU: 31 subjects and 44 credits, from DVM/OU to SVM/HU: 26 subjects and 38 credits). This programme also allows students of both institutions to participate in seminars and practical training sessions offered on either campus and interactive remote classes.

Main developments since the last Visitation

We received a Consultative Visitation in July 2017 in accordance with Uppsala SOP May 2016. Three potential major deficiencies were identified by the ESEVT experts.

The main developments regarding the major deficiencies are as follows:

1. We renewed our internal regulations to involve students, junior staff and external stakeholders in the VNJ's organisational structure. Their input is useful for improving the quality of learning and teaching.
2. We increased the number of veterinarians, academic and support staff and opened a 24/7 clinical service for companion animals (SVM/HU) and equines (DVM/OU).
3. A facility for anatomy and necropsy was renovated to meet a biosecurity standard (SVM/HU).

<u>Other significant developments</u>

4. An Exotic Unit was opened at the VTH (SVM/HU), and cooperation with local zoos (Maruyama Zoo and Obihiro Zoo) was established in both locations.
5. A spay/neuter programme has been introduced in cooperation with local animal shelters (SVM/HU and DVM/OU).
6. Selective subjects were increased, including aquatic animal medicine, zoo practice, and VTH clinical rotation in foreign countries, via an international vet exchange programme (IVEP).
7. Increase the opportunities for EPT training at a meat inspection center were added under the cooperative agreement with the local government agency.
8. Animal welfare concept in teaching and research has been enhanced, e.g., environmental enrichment, the disclosure of animal experiment applications (DVM/OU) and reducing the use of live animals.
9. A VPN (Virtual Private Network) was introduced in April 2019 to make accessible OU's internal network. All students can now use internal network-based services (such as downloading references) from their computers or outside networks.
10. The remote lecture system was updated for sustainability, cost-effectiveness and user-friendliness.
11. The amount of e-learning content grew.
12. New tools, models and simulators were added to the Clinical Skills Labs.
13. Isolation facilities for companion animals were renovated (SVM/HU).
14. The main library was renovated to provide a better learning environment; the construction will be completed by September 2019 at OU.
15. Two mobile diagnostic imaging vehicles were introduced at a large animal clinic (ultrasound, x-ray, endoscope, blood analyser (CBC and biochemical), on-farm molecular diagnostic devices.
16. The current curriculum (Curriculum 2012) was reviewed. The external stakeholders, students and faculty members worked together to enhance student learning, engagement, experience and outcomes.
17. The VNJ Day One Competency List has been formulated.
18. New buildings for experimental animals were constructed (HU).

Major problems encountered by the Establishment

Several specific problems have been resolved. On the other hand, significant changes in the operational structures, curriculum and facilities have generated stress related to adopting the new system and they required a lot of extra work from the staff and students. The academic and support staff had to manage two curricula in parallel; it was a difficult period especially during the transition (2012- 2015) from the old curriculum to the current one (the VNJ Curriculum 2012).

<u>Resolved issues</u>

1. In the previous curriculum, the hands-on clinical rotation was too short. We increased the clinical rotation period from four to twelve weeks.
2. The caseload in the large animal practice was low. We increased the number of veterinarians and academic and support staff in the large animal clinic and renovated DVM/OU's VTH for large animals. Accordingly, the number of patients has increased year by year (See Table 5.1.2, 5.1.3 in Standard 5).
3. To meet the biosafety and biosecurity standards of EAEVE, we renovated and constructed several facilities

for veterinary education, including VTHs for small and large animals, necropsy and anatomy facilities, a hospitalization barn and isolation facilities.
4. We revised the VNJ curriculum to meet the requirements of EU Directive 2005/36/EC.
5. The number of necropsy cases in all common domestic animals, except companion animals, increased.
6. We improved the quality assurance (QA) system of VNJ in accordance with national and European standards and the requirements of EAEVE. Therefore, a system allowing input from external stakeholders and students in the form of an Advisory Panel has been introduced.
7. Access to poultry and pig farms is limited due to strict biosecurity. There was insufficient clinical and public health training with these animal species. Since June 2017, a herd visit and training programme at commercial farms of pig and poultry has started to improve the current situation.

Ongoing challenges

1. Students are not forced to work over the hours defined by the credit (1 credit for Hands-on training corresponds to 45 working hours). Accordingly, students have limited exposure to night/emergency duty (2 credits, 1.5 credits for companion animals and 0.5 credits for large animals).
2. Necropsy cases of companion animals are lower than the average of European establishments. Most of the owners do not donate the bodies of the deceased pets to veterinary schools. They generally have a pet funeral and cremate the bodies as they would for a human. It is traditionally believed that a body should be whole upon cremation. Thus, we do not have large numbers of necropsy cases of companion animals because of this cultural background.
3. Effective communication between all levels of staff and students is important. Enormous changes in the short term for the development process also impeded the understanding and communication among the faculty members from both locations. Since 2011, we have been operating annual joint meeting camps (VNJ Faculty Assembly). Every March, all academic staffs from both locations gather to share information and problems and discuss issues face-to-face. Employing a remote conference system also ensures frequent communication between the two locations. We will continue to improve communication at every level.
4. The funding for maintenance and renewal costs of medical equipment is limited.

Version and date of the ESEVT SOP which is valid for the Visitation

Uppsala SOP 2016, which was approved by the EAEVE at General Assembly on May 12, 2016.

Standard 1: Objectives and Organisation

1.1. Factual Information (Findings)

1.1.1. Details of the Establishment, i.e. official name, address, phone number, Email and website addresses, Establishment's Head, name and degrees of the person(s) responsible for the professional, ethical, and academic affairs of the VTH, official authority overseeing the Establishment

Official name

The Cooperative Veterinary Education Programme between Hokkaido University School of Veterinary Medicine and Obihiro University of Agriculture and Veterinary Medicine (VetNorth Japan, VNJ).

Website

Hokkaido University School of Veterinary Medicine (SVM/HU): https://www.vetmed.hokudai.ac.jp/
Department of Veterinary Medicine, Obihiro University of Agriculture and Veterinary Medicine (DVM/OU): https://www.obihiro.ac.jp/vet-med-prg

Head of the Establishment (Dean)

Name & degrees: Hisao Kurazono, D.V.M., M.S., PhD, Vice President of Obihiro University of Agriculture and Veterinary Medicine
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*The Deans of SVM/HU and DVM/OU shall serve as the Dean and Vice Dean of VNJ, alternating every four years. The VNJ Dean oversees and is responsible for all the programmes related to the professional, ethical and academic affairs of the education programme, is supported by the Vice Dean and Directors of the VTHs in the two locations (both hold D.V.M. and PhD degrees).

Official authority overseeing the Establishment:
HU was founded in 1876 as Sapporo Agricultural College. OU was established in 1941 as Obihiro Higher Technical School of Veterinary Medicine. Both universities are approved as national universities of Japanese higher education under the jurisdiction of the Ministry of Education, Culture, Sports, Science and Technology (MEXT).

The VNJ Council consists of Toyoharu Nawa, PhD, President of HU and Kiyoshi Okuda, D.V.M., PhD, President of OU, oversees the VNJ.

1.1.2. Summary of the Establishment Strategic Plan with an updated SWOT analysis, the mission and the objectives

On the basis of the SWOT analysis (Figure 1.1) of the current status of the VNJ, which was updated by the QA Committee and authorized by the Programme Executive Board in March 2017, we have developed the following strategic plans:

Mission

Our mission is to benefit society and the environment by providing veterinary professionals who have a solid foundation of knowledge, skills and ethics and who will contribute to the promotion of the health and welfare of both animals and humans.

Objectives

The primary objective of the VNJ is to provide, in agreement with the Quality Assurance (QA) Framework of Higher Education in Japan (MEXT, Japan), adequate, ethical, research- and evidence-based veterinary training and to produce new graduate veterinarians who:

1) Meet a competency threshold for entry-level professionals including licence eligibility;
2) Have a foundation with high ethical standards to address the growing and diversified social needs of veterinary medicine and the ability to contribute to the promotion of population health through improving animal health and welfare through a multidisciplinary approach;
3) Possess a global perspective with the 'One Health' concept in order to respond to and prevent environmental issues and infectious diseases, including transboundary animal diseases, zoonoses and foodborne diseases, which threaten animal and human health;
4) Understand the importance of lifelong learning and the need to obtain up-to-date information about evidence-based veterinary medicine through research-based education.

Strategic Plans (2016-2021)

1. Design an Innovative Curriculum and Educational Environment
   As a result of the last strategic plan (2010-2015), we coordinated the curriculum to meet the EU Directive 2005/36/EC, reinforced clinical hands-on training and renovated/constructed facilities for veterinary education. The curriculum and educational environment continue to be improved. We have also reviewed the current curriculum (Curriculum 2012) to introduce a student-centered pedagogy. The new curriculum will be introduced in 2019. We have started 24/7 emergency services for companion animals and equines and will strengthen the activity of the 24/7 emergency services.

2. Ensuring and enhancing the QA System for Veterinary Education
   In addition to the university-level QA that has been introduced under legal obligation, we enhanced our QA system at the VNJ program-level. We performed a systematic, impartial, objective and self-and stakeholder-based evaluation of how effectively our programme is working. By reviewing and analysing key indicators, we will be able to plan and continuously improve our education and research.
   To evaluate the quality of our programme, we are going to receive two external evaluations specific to

veterinary education by EAEVE (2019) and Japan University Accreditation Association (JUAA) (the date is not fixed yet). The acquisition of EAEVE accreditation is one of the landmark international standards we want our veterinary education to reach.

3. Enhancement of Research Activities
The VNJ intends to enhance research activities to cultivate students' scientific thinking and problem-solving ability. The VNJ promotes research activities by applying for external research funds and increasing the number of doctoral students and research staff. By offering an excellent research-based education, we can consolidate our position and produce outstanding human resources.

4. Enhanced Contributions to the Local Community and Society
By advancing knowledge and expanding our approach to practical learning, we will contribute to the regional and international community through developing human resources, who can respond to social demands and creating collaborations and strong partnerships between academia, government and industry. Agriculture is Hokkaido's major industry. We offer public services to support communities through our clinics, diagnostic laboratories and regional collaborative centers, contributing to animal and human health and ensuring food safety.

5. Globalization of Research and Education
The VNJ strengthens partnerships with overseas universities, with which we can exchange students and staff. We have contributed to international collaborations and education through the World Health Organisation (WHO) Collaborative Center and World Organisation for Animal Health (OIE) reference laboratories. We also support to capacity-building in developing countries with Japan International Cooperation Agency (JICA), which is the acting body of Japan's Official Development Assistance (ODA). The VNJ will take its research and education to the global-level.

6. Fostering Global Leaders of One Health
Contributing to veterinary science is strongly expected to help achieve "One Health" throughout the world. The VNJ will improve its education to share international perspectives and leadership skills with students as well as foster their expertise and sense of responsibility.

SWOT Analysis for VetNorth Japan

◆Summary of the SWOT analysis for VetNorth Japan updated in 2018

Strengths
- Academic staff with novel & broad specificities with high activities in scientific research
- Combined education system with totally complementary structure, facilities, resources & environment for veterinary studies and training
- Excellent facilities and infrastructure
- Students with high motivation & academic ability
- Harmonization of staff from two locations sharing periodical FD/SD for QA
- Leading VTH for small and large animals with eminent medical care in Japan
- Various active overseas collaborations in education & research

Weaknesses
- Insufficient 24/7 emergency services for companion animals and equine
- Insufficient patient numbers of porcine, poultry & exotic pets
- Insufficient necropsy cases of companion animals
- Time, labour, and operating costs for complementary education (transportation and accommodation for staff and students, etc)
- Insufficient QA procedures including the lack of organizations to take the input from students & external stakeholders
- Insufficient EPT programme & its management
- Low number of specialized veterinarians
- Absence of VPN at OU

Opportunities
- Strong demand for and interest in veterinary medicine through human-animal-nature bond concept from the community
- Veterinarian is one of the popular occupations.
- Big impact of education reinforcement in VetNorth Japan on other universities and the community
- Reputation, branding & competitiveness of VetNorth Japan due to renovation of veterinary education & QA, & entailed accreditation by the EAEVE
- Leadership of VetNorth Japan in Japan & Asia in veterinary education & QA establishment

Threats
- Continuous decline of budgets to national universities in Japan
- Financial difficulty for sufficient staffing
- Change in economic status & population ageing that would affect veterinary education & training
- Decrease in number of prospective students due to declining birthrates

Figure 1.1. SWOT analysis of VetNorth Japan

1.1.3. Summary of the Establishment Operating Plan with timeframe and indicators of achievement of its objectives

The detail the Operating Plans with a timeframe and indicators of past and current Strategic Plans are shown in Appendix 1.

The summary of operating plans with high priority given to the current Strategic Plan (2016-2021) is listed as follows:

Education

- Renovation of necropsy and anatomy facilities at SVM/HU to meet the biosecurity requirements (completed)
- Increase in the number of necropsies of companion animals (continuous)
- Strengthening clinical training for swine, poultry and emergency service for companion animals and equine (continuous)
- Strengthening extramural training for food safety and quality (continuous)
- Improvement of websites providing important and necessary information for the VNJ programme, such as strategic plans, quality assurance and biosafety and biosecurity procedures to ensure better understanding among the staff and students (continuous)
- Consolidation of QA system to better use input from students and external stakeholders for the continuous improvement of education (continuous)
- Updating information for better education from domestic and international organisations and experts (continuous)

Indicators include a student satisfactory rate, students' score/ grades, retention, graduation and dropout rates, pass rate of national examination for veterinarian licence, no. of specialized veterinarians, no. of applicants, no. of necropsy cases, and no. of clinical caseloads.
Accreditation by EAEVE is one important indicator of our veterinary education having met international standards.

Research

- Reforming graduate schools at HU and OU (completed, see detail in Standard 10)
- Promotion of basic, applied and translational research (continuous) and active release of research outcomes (continuous)
- Strengthening international collaboration and promoting the international exchange of staff and students (continuous)
- Increasing the acquisition of research grants (continuous)
- Increasing the number of significant publications (continuous)

Indicators include grant income, publications, PhD studentship, awards, publications with international co-authorship, no. of MOU, PhD students, internationally outbound students, international programmes, international symposium/seminars and international staff and feedback from graduate students.

Services

- Providing high-quality, advanced clinical services to support animal health (continuous)
- International accreditation for diagnostic services (ISO17025, OIE reference laboratories, HU and DVM/OU), milk plant and farm management (FSSC22000 and ISO22000, OU) (completed)
- Opening community practice services, such as spaying/neutering stray dogs and cats (completed)
- Opening a 24/7 emergency clinic for companion animals and horses (completed)
- Increasing collaborative activities with the local community in research and educational fields (continuous)

Indicators include international accreditation such as ISO17025, AAALAC, FSSC22000 and ISO22000, no. of collaborative and cooperative works with the community, number of caseloads, revenues from clinical and diagnostic services and satisfactory feedback from clients.

1.1.4. Organisational chart (diagram) of the Establishment

A diagram of the organisation of the VNJ is shown in Figure 1.2. The organisational chart of each location is provided in Appendix 2 (SVM/HU) and 3 (DVM/OU).

1.1.5. List of departments/units/clinics and councils/boards/committees with a very brief description of their composition/function/responsibilities

Common organisational structure of the VNJ

The VNJ Council consists of the two universities' presidents. As shown in Figure 1.2, the council is the highest decision-making body and it is responsible for ensuring efficient financial support for operating the VNJ programme.

The VNJ Executive Board consists of deans from the two locations and it decides most strategic issues. It must approve of all items submitted by the Programme Executive Board. The members of the Programme Executive Board are appointed by the VNJ Executive Board.

The Programme Executive Board is a practical decision-making body, which is responsible for all issues relating to the teaching, learning and research carried out in the VNJ programme. The board comprises ten professors from each location and directs the whole VNJ programme.

The VNJ Advisory Panel has been established since 2017. The panel consists of critical internal and external stakeholders, including student, public health and animal health sector representatives, graduates and members of local veterinarian associations and private companies. The panel meets twice a year to understand the needs and expectations for the programme, from different

perspectives. The panel's feedback is considered to improve the quality of the programme.

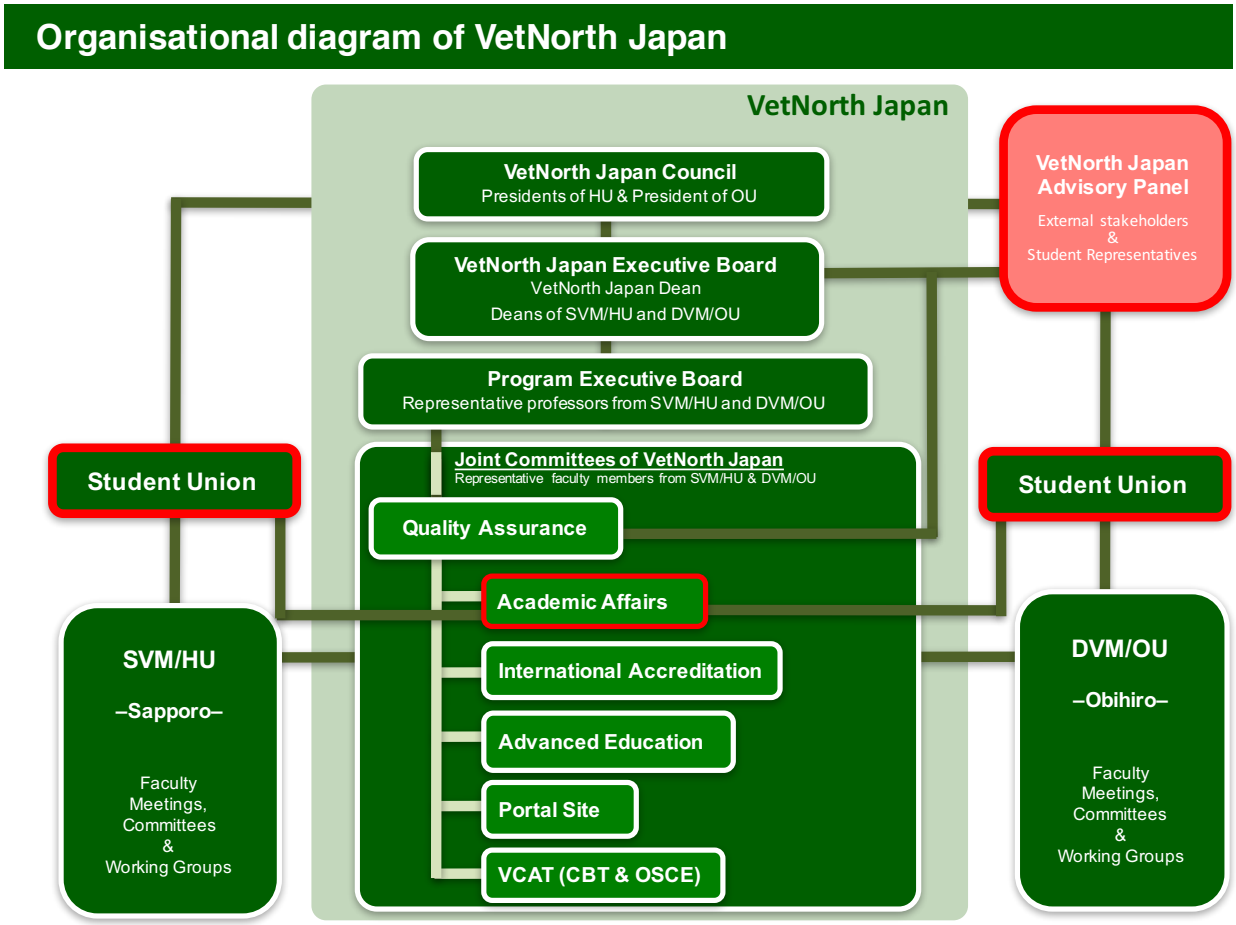


Figure 1.2. Organisational diagram of VetNorth Japan

We have six joint committees for handling and operating important common issues. These joint committees coordinate ideas and discussions from relevant local committees to make mutual agreements.

Details of the composition, function and responsibilities of each committee are provided in Appendix 4, 5 and 6.

- The Academic Affairs Committee plans and reviews the academic programmes and continued improvement of teaching and learning.
- The QA Committee is responsible for the quality management of our veterinary education.
- The International Accreditation Committee is in charge of developing a plan, and collecting and providing relevant information for our veterinary education to obtain international accreditations.
- The Portal Site Committee manages and improves the VetPortal site, an e-notice board to promote communications between the students and academic staff of the two locations.
- The Advanced Education Committee is responsible for the management of Advanced Seminars, which cover elective subjects and provide deeper knowledge and skills of special veterinary topics.
- The Veterinary Common Achievement Test (VCAT) Committee consists of two subcommittees (vetCBT and vetOSCE), which are responsible for operating the VCAT, which is held in Year 5 before participating clinical rotation.

The chairpersons of the common committees and the director of the VTHs all hold a veterinary degree.

Organisation of SVM/HU and DVM/OU

The detailed organisational chart of each location is shown in Appendix 2 and 3.

Sapporo

Briefly, Faculty of Veterinary Medicine consists of two divisions; one is the Division of Veterinary Medicine and the other is the Veterinary Teaching Hospital (VTH). The Division of Veterinary Medicine consists of six departments including Basic Veterinary Sciences, Disease Control, Environmental Veterinary Sciences, Applied

Veterinary Sciences, Preventive Veterinary Medicine, and Clinical Sciences. The teaching staff at the VTH consists of all academic staff members and residents in the Department of Clinical Sciences and the VTH Division.

Important issues in the faculty are deliberated and decided in monthly faculty meetings. The members of the faculty meetings include the SVM/HU dean, vice dean, professors, associate professors and lecturers. Assistant professors are also able to attend the faculty meeting. To strengthen the hearing from junior academic staff, SVM/HU dean established Dean Supporting Committee which consists of one professor and junior associate and assistant professors. In addition, SVM/HU dean convenes the faculty assembly in Sapporo several times a year to discuss the annual budget of the faculty among other agendas. The faculty assembly in Sapporo is a meeting that involves all academic staff, including assistant professors.

Obihiro
The VNJ education programme is determined by the faculty members of two research divisions – Veterinary Sciences and Clinical Veterinary Medicine - as well as the academic staff from Veterinary Medical Center (VMC), Diagnostic Center for Animal Health and Food Safety and National Research Center for Protozoan Diseases.

The faculty members of OU also assemble at two types of monthly meetings, the Veterinary Medicine Programme meeting and the Department Meeting. They include all academic staff (professors, associate professors, lecturers and assistant professors) who are responsible for the core subjects of the VNJ education programme. They deliberate educational and related subjects in the former meeting and research-related issues in the latter meeting. All information and results are shared with each other at both meetings.

1.1.6. Description of how and by who the strategic plan and the organisation of the Establishment are decided, communicated to staff, students and stakeholders, implemented, assessed and revised
Since the VNJ has a joint faculty from two universities, procedures for decision-making, communication, assessment and revision of strategic plans are conducted at the VNJ-level and at each university.

Each national university in Japan draws prepares its six-year mid-term goals for strategic plans and set operational plans to enhance administrative autonomy and achieve a distinctive presence, thus carrying out strategic university management.

The VNJ's strategic plan intends to reflect the strategic plans of both universities. Due to the difference in structure between the universities, the communication processes at each university are also distinct.

University level
Sapporo
The SVM/HU dean discusses with members of the Faculty Steering Committee how to compose the Six-Year Term Strategic Plan for education and research. The SVM/HU dean convenes the faculty assembly to collect opinions from the faculty staff including the junior staff. The SVM/HU dean submits the strategic plan to the Executive Office for Planning and Management of the university. The Board of Executives approves the strategic plan and finally submits it to MEXT. The SVM/HU dean reports the execution status of the strategic plan for the VNJ to the Evaluation Office of HU annually. After reviewing the report, the Evaluation Office sends the report to the university president. In the third year of the strategic plan, the president convenes a meeting of the Board of Executives to evaluate the execution report. According to the results of their evaluation, the SVM/HU dean convenes a Faculty Steering Committee to make an improved strategic plan and execute it.

Obihiro
The dean, university vice directors, the director of each centers and several professors appointed by the president are responsible for making the strategic (the Six-Year Term Strategic Plan) and operational plans based on the university's priorities. These plans are approved by the Executive Office, which consists of the president, two executive vice presidents for education and research and the director general. Every three months, the progress of the plans is reported to the president as a written document. Every half-year, the Executive Office meets with the dean, vice directors of the university and directors of the centers to exchange opinions about the progress of the operational plans. At the end of the FY, the president receives the annual reports that have been submitted from each section and evaluates the outcomes.

University's Six-Year Term Strategic Plan
https://www.obihiro.ac.jp/navi-evaluation

VNJ level
The draft of the VNJ strategic plan, which is made based on a SWOT analysis, is first discussed by the Faculty Meeting at both locations. The Programme Executive Board revises the plan and releases it to the VNJ Executive Board. The Executive Board finalizes the plan, followed by the approval of the VNJ Council.

Decisions are communicated to faculty members and support staff usually through internal mailing, regular and on-demand meetings and FD/SD seminars.

The strategic plans are implemented by the VNJ faculty members, whereas relevant committees, the Programme Executive Board assess and revise progress and outcome statements.

1.2. Comments

The objectives and mission of the VNJ for veterinary education and its improvement are primarily based on the cooperative education framework for the two veterinary schools.

Both veterinary schools have prominent academic staff dealing with education and research. They work in various fields of veterinary medicine and science and are experts, recognized by their global scientific communities. Unifying the staff from the two veterinary schools, therefore, is key to pursuing our goals for veterinary education and its improvement at the VNJ. To maintain and strengthen their harmonization, we aim to continue the monthly meetings of the Programme Executive Board and the annual VNJ Joint Faculty Assembly.

The VNJ has an advantage in veterinary education due to the environmental circumstances of Hokkaido. HU is located in Sapporo, the fifth largest city in Japan, which enables HU to have a large number of companion animal cases. On the other hand, Obihiro is in Tokachi District, which is a major food/livestock production area. Hokkaido has a wonderful natural environment with a variety of wildlife, to which we may have access suitable environmental resources for veterinary education within the 'One Health' philosophy.

1.3. Suggestions for improvement

To reduce the adverse effects of distance (e.g. cost and time required for transportation), we need to further renovate operating procedures and our curriculum.

In Japan, subsidies to national universities for education and research continue to decline year by year. The VNJ needs to make significant efforts to obtain subsidies for a sustainable veterinary education system. We should reinforce our efforts to collaborate with companies and regional governments and ask for donations for both universities.

Based on quality assurance principles, we will promote communication at various operating levels. It will be done with faculty members and consider the points of views of students and external stakeholders.

Our first students under the VNJ curriculum (Curriculum 2012) graduated in March 2018. We began revising the Curriculum 2012 for continuous improvement with internal and external stakeholders.

Standard 2: Finances

2.1. Factual Information (Findings)

2.1.1. Description of the global financial process of the Establishment

Sapporo (Appendix 7)
The main budget sources for the establishment are the "Subsidies for National Universities" from MEXT, project subsidies and research grants. The Subsidies for National Universities that HU received are allocated by the President to faculties based on a request and appraisal process (http://www.hokudai.ac.jp/jimuk/reiki/reiki_honbun/u010RG00000477.html). The subsidy for National Universities faculties receive can be used as ordinary expenses for managing faculty. Each relevant committee in the veterinary school submits budget requests to the dean of SVM/HU. The dean makes a draft budget, with the Budget Committee of the faculty, by considering committees' requests and transferring the draft budget to the Faculty Meeting. Then, the draft budget is discussed and approved by the Faculty Meeting. The budget execution is reviewed at the Faculty Assembly, ensuring efficient expenditure.

Most of the project subsidies at the faculty are funded by MEXT and are used specifically for each project's objectives. Project leaders make their budgets while steering committees discuss and approve the budgets. Project leaders report the budget execution to HU through the SVM/HU dean. HU sends the reports to MEXT. Programme officers or MEXT-assigned evaluation committees annually review the reports and recommend improvements if necessary.

Research grants at HU are funded by MEXT, Ministry of Health, Labour and Welfare (MHLW), Ministry of Agriculture, Forestry and Fisheries (MAFF), Japan Agency for Medical Research and Development (AMED), Japan International Cooperation Agency (JICA) and other ministries/organisations/companies.

All research grants are allocated to HU, which HU then transfers to the principal researchers responsible for the budget execution. Principal researchers render financial statements and send them to relevant ministries/organisations/companies through the SVM/HU dean and HU.

The Annual Finance Report includes information on expenditure and revenues while separately describing personnel, operating, maintenance and equipment costs.

Obihiro (Appendix 8)
The university's annual budget is adopted for the fiscal year beginning on 1 April and ending on 30 March. The process for the budget plan and allocation is shown in Appendix 8.

Main sources of revenues for DVM/OU are the "Subsidies for National Universities", project subsidies, and external research grants. MEXT refines annual subsidies, and then the university's Executive Office, which consists of the President, Executive Vice Presidents and Director General, decides the allocation of budget to each department.

The global financial process at OU is consistent with the Regulation for Budget Management (https://education.joureikun.jp/obihiro/act/frame/frame110000138.htm). First, the president releases an annual budget planning policy, which sets the framework for the university's strategic plan. Based on this policy, the Finance Section prepares an annual budget implementation plan. Each unit submits a budget request for the next fiscal year to the president every January. A budget hearing is held by the executive vice presidents and the Finance Division so that they can arrive at a precise understanding of the requests. These requests are considered to form a plan. The budget plan is revised by the University Executive Office, whose members include the President, Executive Vice Presidents and Director General. The Management Committee, which includes external experts and the Board of Directors, must approve the plan, then the president finalizes it and decides on the budget allocation.

The financial chart of SVM/HU's and DVM/OU's total expenditures and revenues is shown in Appendix 9 as well as in Table 2.1.1 -2.1.3.

2.1.2. Degree of autonomy of the Establishment on the financial process

Sapporo
The subsidies for National Universities are allocated from the university's Headquarters to the SVM/HU. These subsidies can be used for a variety of activities in education and research. The SVM/HU dean is responsible for making the budget plan for both the faculty and Graduate Schools.

Obihiro
The subsidies for National Universities are allocated to the DVM/HU. These subsidies can be used for a variety of activities in education and research. The DVM/HU dean has a fair amount of freedom with which to plan the budget from these subsidies.

2.1.3. % of overhead to be paid to the official authority overseeing the Establishment on revenues from services and research grants

Sapporo
The HU headquaters takes five % of the income from the VTH through the faculty. Ninety-five % of the VTH's income is used for operating and managing the VTH. The overhead percentage for each research grant varies, depending on grant rules and can go up to 30 % (the

University and veterinary school take 50 % of the overhead, each).

Obihiro
The percentage of overhead to be paid to the University is as follows: research funding (30%) and clinical and diagnostic service (0%, no overhead).

2.1.4. Annual tuition fee for national and international students

In general, the annual tuition fee for a national university in Japan is set by each university, based on the standard amount stipulated in Article 2 of the Ministerial Ordinance on Tuition and Other Expenses at National Universities, under the provisions of Article 22-3 of the National University Corporation Act (Act No. 112 of 2003). The annual tuition fees for HU and OU are based on this standard. The annual tuition fee for undergraduate students is approx. 4,228 euros (535,800 yen), regardless of nationality.

2.1.5. Estimation of the utilities and other expenditures directly paid by the official authority and not included in the expenditure tables

Sapporo
Most of the estate and buildings in the Veterinary Unit of HU are maintained by central funds from the HU, and the utility costs are paid directly by the establishment's Accounts Section. These costs are included in the expenditure tables. The utility costs for water, electricity and gas in 2017 were 50,096.16 euros (6,347,184 yen), 526,857.09 euros (66,752,793 yen) and 52,380.39 euros (6,636,596 yen), respectively.

Obihiro
Most of the estate and the buildings are maintained by central funds and facility maintenance fees (including repairs, utilities, water purification and cleaning) are paid directly by the official authority. These costs are included in the university's overall budget.

2.1.6. List of the on-going and planned major investments for developing, improving and/or refurbishing facilities and equipment, and origin of the funding

Sapporo
1) Ongoing investments
- Quantitative real-time PCR system and liquid chromatography-mass spectrometry (LC-MS) for the establishment of Center for Diagnosis and Disease Control (Grant from MEXT for World-leading Innovative and Smart Education Program).
- Improvements to the Clinical Skills Labs (Subsidy from MEXT for the Promotion of Functional Strength).
- Recruiting new clinical and support staff in preparation for a 24/7 equine emergency service. (Subsidy from MEXT for special purposes).

2) Planned investments
- Upgrading a paperless meeting system (Subsidy from MEXT for the Promotion of Functional Strength).
- A high-field magnetic resonance imaging (3T MRI) is planned for the VTH (VTH income).

3) Completed investments
- Renovation of the e-learning room (45 seats, subsidy from the Grant from MEXT for World-leading Innovative and Smart Education Program).
- Research facility for farm animals (Subsidy from MEXT for special purposes).
- Research facility for infectious diseases and chemical exposure (Subsidy from MEXT for the Promotion of Functional Strength).
- Renovation of the animal facility (Subsidy from MEXT for special purposes). The facility includes anatomy and necropsy areas.
- Establishment of sixth laboratory room for common use of chemical analysis equipment.
- Renovation of remote lecture system (subsidy from MEXT for the Subsidy for National University Reform Plan).
- Establishment of second e-learning room (ten seats, subsidy from the Subsidy for National University Reform Plan).
- Construction of e-Portfolio system for graduate students (Grants from MEXT for the Leading Graduate Schools).
- Advanced medical equipment. CT covered by hospital income while the following were purchased with subsidies from MEXT: a linear accelerator (LINAC), orthovoltage X-ray machine, laparoscopic surgery system, digital video recording system for surgical procedures, cardiac ultrasound machine and automated apheresis system
- Advanced research equipment. The following were purchased with subsidies from MEXT: isotope-ratio mass spectrometry (IRMS) system, visual communication system, digital slide scanner system, ultra-high-resolution scanning electron microscope, transmission electron microscope (TEM), ion proton system for next-generation sequencing, cell sorter, confocal laser scanning microscope, biological cabinet X-ray irradiator and Germanium semiconductor detector for gamma-ray spectrometry.

Obihiro
1) Ongoing and planned investments
- Formation of Education and Research Center for Food and Animals (2015-2020) (Subsidy for National University Reform Plan)
- Installation of new electronic medical record system for the large animal clinic
- Improvements to the Clinical Skills Labs, 15,153.91 euros (1,920,000 yen) (2018-2019)

2) Completed investments
- Facilitation of clinics with modern clinical equipment, including an MRI and CT for large and small animals (2013-2015, Subsidy for National University Reform Plan)
- Construction of Anatomy and Necropsy facilities (2014, Subsidies for National Universities, Subsidy for National University Reform Plan)
- Construction of a Diagnostic Center for Animal Health and Food Safety (2014-2015, Subsidies for National Universities, Subsidy for National University Reform Plan)
- Construction of a Large Animal Clinic (LAC),

hospitalization ward for large animals and isolation unit for large and small animals (2014-2015, Subsidy for National University Reform Plan)
- Recruiting new clinical and support staff for strengthen LAC clinical service including 24/7 equine emergency service.
- Equipements for a spay/neuter service
- ISO/IEC 17025 for a Diagnostic Center and OIE reference laboratories for the National Research Center for Protozoan Diseases (2016, Subsidy for National University Reform Plan)
- FSSC22000, ISO 22000 (2014-2016, Food Management System and Food Processing) for University Farm (Subsidies for National Universities)
- On-campus accommodation facility for HU students (2016, Subsidies for National Universities)

2.1.7. Prospected expenditures and revenues for the next 3 academic years

Sapporo

The maintenance costs will increase because of the above-mentioned construction projects. The VTH will employ five more associate professors in 2019 to strengthen the clinical service and education. Accordingly, the personnel costs will increase in next 3 years.

The amount of funding from the Japanese government and MEXT for the university ('Public authorities' in Table 2.1.2) is projected to decrease by 1.6 % per year in the next five years for Hokkaido University.

Other revenue sources are as follows: Two revenue sources from MEXT were obtained in 2018.
- The revenue in 2018 was 2,196,353.59 euros (278,278,000 yen) for the doctoral programme in World-leading Innovative & Smart Education (2018-2024); the amount may change in the following years.
- For the projects using the Official Subsidy for the Promotion of Functional Strength (2018-2021), the revenue in 2018 was 793,804.26 euros (100,575,000 yen) and the amount may change in the following years.

Obihiro

The prospected major revenues for DVM/OU are derived from the following sources:
- The Subsidy for National University Reform (Promotion of management reform of National University Cooperation), 1,031,633.78 euros (130,708,000 yen) (2018-2021).
- The Subsidy for the Formation of the Education and Research Center for Food and Animal Health, 14,546,006.31 euros (1,842,979,000 yen) (2016 – 2021), 4,805,966.85 euros (608,916,000 yen) (2018-2021) will be allocated to veterinary education and research.
- External services provided by the university, including the tuition fee, small and large animal clinics, diagnostic service and sales of agricultural products.
- In addition to the funding above, the academic staff will obtain government and/or private research funds (see detail in Table 10.1.5).

2.1.8. Description of how and by who expenditures, investments and revenues are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

Sapporo

The SVM/HU dean drafts the financial plan for the establishment, which included an action plan for a six-year term (the current term being 2016-2021). The plan is discussed and approved at the Faculty Meeting. The plan is submitted to the university and undergoes the budget appraisal process in the Executive's office. The dean also makes a draft of the annual budget and settlement and then sends it to the Budget Committee, which consists of academic and support staff. It is then approved by those at the Faculty Meeting. The budget is reviewed at the Faculty Assembly.

The VTH director is responsible for drafting the budget for the VTH and sending it to the Animal Hospital Steering Committee, which meets three times a year. The committee discusses and decides on the budget. The Faculty Meeting reviews and approves the VTH budget. The VTH meeting, which consists of around 20 faculty members from the Clinical Division and meets monthly, reviews the budget execution and possible improvements to it. The VTH clinical practice profits are used to cover VTH expenses and management; therefore, its financial condition is self-sufficient.

Once a year, the university opens the financial reports to the public on its website and in a brochure (http://www.hokudai.ac.jp/pr/johokokai/pub/22jo/finance/). The detailed budget and settlement report for each faculty is also circulated amongst faculty members and support staff but not provided to the students.

Obihiro

A budget plan, including expenditures, investments and revenues, is determined by the Executive Office which consists of the president, executive vice directors and director general, and the Financial Section. It considers the university's master plan and the nature of its budget as well as the budget requests from faculties, departments and other sections. The information pertaining to annual expenditures, investments and revenues is presented in a yearly financial report by the Financial Section to provide a broader financial picture. The Management Committee analyses it and then the Division Head Committee approves it. The report is open to the public and can be downloaded via the internet (https://www.obihiro.ac.jp/corporation-info-finance).

Table 2.1.1. Annual expenditures during the last 3 academic years (in Euros) (Appendix 9)

1 Euro=126.7 Yen

Sapporo

Area of expenditures	2018*	2017	2016	Mean
Personnel (permanent)	4,826,305.44	5,031,977.20	4,697,692.99	4,851,991.88
Personnel (temporary)	1,824,363.89	2,122,926.95	1,475,014.99	1,807,435.28
Operating costs	7,289,825.92	11,749,518.38	6,591,875.15	8,543,739.82
Maintenance costs	285,914.42	219,288.65	625,316.29	376,839.79
Equipment	1,775,367.01	725,725.82	774,545.87	1,091,879.57
Total expenditures	16,001,776.68	19,849,437.00	14,164,445.29	16,671,886.34

Obihiro

Area of expenditures	2018*	2017	2016	Mean
Personnel	4,360,377.76	5,024,464.93	4,919,437.81	4,768,093.50
Operating costs	2,903,534.18	3,260,144.35	3,043,923.65	3,069,200.73
Maintenance costs	144,675.36	273,736.50	165,641.25	194,684.37
Equipment	205,205.19	239,724.59	301,004.40	248,644.73
Total expenditures	7,613,792.49	8,798,070.37	8,430,007.11	8,280,623.33

Values are rounded to the closest whole number.

The mean of the total expenditures is calculated as the sum of the mean of the three years.

*The data of 2018 is rough estimate. The fixed data will be provided after the settlement date of FY2018.

Table 2.1.2. Annual revenues during the last 3 academic years (in Euros) (Appendix 9)

1 Euro=126.7 Yen

Sapporo

Revenues source	2018*3	2017	2016	Mean
Public authorities *1	6,817,384.74	13,198,971.35	5,156,005.64	8,390,787.24
Clinical services	3,049,616.00	3,046,378.60	3,147,011.92	3,081,002.17
Diagnostic services	0.00	0.00	0.00	0.00
Other services	2,123,657.62	2,060,495.16	2,342,501.64	2,175,551.47
Research grants	3,877,541.65	3,348,618.78	3,459,823.40	3,561,994.61
Continuing Education *2	0.00	0.00	0.00	0.00
Donations	298,333.58	414,583.01	354,617.52	355,844.70
Other sources(balance carried forward from the previous year, etc)	0.00	0.00	0.00	0.00
Total revenues	16,166,533.59	22,069,046.90	14,459,960.12	17,565,180.19

Obihiro

Revenues source	2018*3	2017	2016	Mean
Public authorities	4,931,579.71	5,992,725.24	5,184,299.10	5,369,534.68
Tuition fee (standard students)	1,163,295.75	1,164,272.83	1,112,286.49	1,146,618.36
Clinical services	744,599.00	643,133.54	553,548.65	647,093.73
Diagnostic services	59,124.44	59,709.08	54,616.42	57,816.65
Other services	134,439.68	498,557.16	434,562.96	355,853.27
Research grants	1,214,870.64	1,417,081.97	1,197,942.60	1,276,631.74
Continuing Education *2	0.00	0.00	0.00	0.00
Donations	603,607.98	631,664.61	645,812.63	627,028.41
Other sources (balance carried forward from the previous year, etc)	0.00	0.00	215,193.77	71,731.26
Total revenues	8,851,517.20	10,407,144.43	9,398,262.62	9,552,308.10

Values are rounded to the closest whole number.

The mean of the total expenditures is calculated as the sum of the mean of the three years.

*1: This revenue includes the personnel costs, tuition fee and parts of the Subsidies for National Universities, all of which are allocated from HU Headquarters to the SVM/HU.

*2: No charges for the continuing education that SVM/HU and OU offer.

*3: The data of 2018 is rough estimate. The fixed data will be provided after the settlement date of FY2018.

Table 2.1.3. Annual balance between expenditures and revenues (in Euros) (Appendix 9)

1 Euro=126.7 Yen

Sapporo

Academic year	Total expenditures	Total revenues	Balance
2018*	16,001,776.68	16,166,533.58	164,756.90
2017	19,849,437.01	22,069,046.90	2,219,609.89
2016	14,164,445.30	14,459,960.12	295,514.82

Obihiro

Academic year	Total expenditures	Total revenues	Balance
2018*	7,613,792.49	8,851,517.19	1,237,724.70
2017	8,798,070.36	10,407,144.42	1,609,074.06
2016	8,430,007.10	9,398,262.62	968,255.52

* The data of 2018 is rough estimate. The fixed data will be provided after the settlement date of FY2018.

2.2. Comments

MEXT provided financial support by allocating the "Subsidy for National University Reform Plan" for the VNJ to improve the veterinary education on both the local and international level (FY2012-2017). SVM/HU: 10,158,934.49 euros, OU: 8,891,539 euros, respectively.

The fund was used to install the latest educational facilities (including the equipment for clinical services, IT-related improvements, such as the development of bi-directional remote lecture system and e-learning system), purchase research equipment and develop the educational environment.

The fund was provided until the fiscal year 2017. Both SVM/HU and OU acquire the another public funding to affect the for sufficient running costs of equipment, personnel costs, transportation and accommodation for staff and students, those are required for sustaining the programme.

2.3. Suggestions for improvement

The gradual decline in the MEXT subsidies to the national universities is expected to continue in the future.

Therefore, the faculty must continue to obtain internal and external funds for maintaining the quality of education and research.

Standard 3: Curriculum

3.1. Factual Information (Findings)

3.1.1. Description of the educational aims and strategy in order to propose a cohesive framework and to achieve the learning outcome

Educational Aims

The VNJ programme aims to provide a world-class veterinary education by joining the higher education faculties and facilities of HU and OU. The VNJ programme combines the strengths and advantages of the two veterinary schools. The idea of this unique cooperative education programme is based on a complementary teaching framework that responds to wider public interests. It is underpinned by the strengths and distinctiveness of the educational and research resources at each of the universities.

Our mission is to benefit society and the environment by providing veterinary professionals with a solid foundation of knowledge, skills and ethics. They will contribute to the promotion of the health and welfare of both animals and humans. Our primary educational objectives are described in Standard 1.

VNJ's diploma policy

We train our students to be veterinarians with a firm sense of mission, ethical perspective, intelligence, creativity and humanity:

- They will acquire knowledge and techniques for the prevention of, as well as for diagnostics and therapeutics against, animal diseases, and for promotion of animal and public health.
- They will acquire knowledge and techniques for maintaining a stable food supplies and safety as well as preventing international transboundary animal diseases.
- They will acquire knowledge and techniques that will place them at the leading edge of life sciences and veterinary medicine research.

Global Educational Strategy

The six-year curriculum was built to prepare students for veterinary roles, as defined in the competency-based framework. Our cohesive framework helps the VNJ curriculum achieve our learning outcomes and consists of five pillars.

1. Veterinary Medicine Model Core Curriculum (VMMCC) (Appendix 10)

The VMMCC is a comprehensive subject-specific learning outcome catalogue (https://www.jaeve.org/cur/). It covers 51 theoretical subjects and 19 practical subjects, which correspond to two-thirds of the entire veterinary curriculum. The VNJ curriculum adheres to the VMMCC, as it guides the minimum requirements of standard education students must meet by graduation. The learning outcomes statement in the VMMCC represents the capabilities and competencies expected of every graduate of veterinary schools in Japan. Implementing the VMMCC is one method of quality assurance in veterinary education.

Our core curriculum is designed in accordance with VMMCC and EU-listed subjects to achieve the ESEVT Day One Competences (Table 3.1.2, Appendix 11 and 12).

2. Veterinary Common Achievement Test (VCAT)

The VCAT is a nationally defined veterinary common achievement test, which has been implemented by the non-profit organisation Veterinary Education Support Organisation (vetESO) since 2017 to qualify veterinary students' preclinical competencies. The vetESO provides and oversees a fair, standardized format for assessing pre-clinical competencies. The test is held prior to the clinical years (Year 5), and employs both Computer-Based Testing (vetCBT, a total of 300 multiple choice questions) to assess knowledge and Objective Structured Clinical Evaluation (vetOSCE) to assess basic clinical skills. Students who pass the VCAT can participate in clinical rotations. The VCAT information is available to the public.

vetESO: http://veteso.or.jp/exam/index.html

3. Complementary Clinical Rotations

A shortage of large animal cases at veterinary schools in urban areas has become a challenge in Japanese veterinary education, and the opposite situation is observed in veterinary schools located in small population areas. As described in "Introduction" and "Standard 1", we operate a unique rotation system, which takes advantage of each university's location, specialties, strengths and characteristics for our students.

HU's VTH receives many companion animal cases (the second largest caseload in Japanese national veterinary schools). The caseload for food-producing animals and equines at OU VTH is the largest among VTHs of national veterinary schools in Japan. OU's VTH for small animals accepts many primary cases in addition to referral cases. This complementary clinical rotation requires the movement of students between the two cities.

4. Tutorial Research

Research-based learning engages students in discovery-oriented, active learning and problem-solving and helps them to develop logical, critical-thinking and communication skills. Through this advanced course, students acquire skills in basic and advanced research methods/techniques, scientific writing, presentation and discussion. Their theses and oral presentations are reviewed and evaluated by the academic staff members. The benefits of this experience are not specific to laboratory research and are expected to help the students to cultivate lifelong learning skills in all veterinary disciplines.

5. Third-Party Quality Assurance Evaluation & Internationally Standardized Veterinary Education

To ensure the quality of our education, we will apply veterinary-specialized QA in addition to periodical external QA at institutional levels. To provide a high-quality education for our students, we will continue to

improve the facilities, educational resources and quality of teaching and learning as well as the programme. The VNJ programme has been refined over several years to meet national and international standards including EU Directive 2005/36/EC.

Assessing learning outcomes is critical to ensuring our graduates' competencies. In addition to the summative and formative assessment of each subject and the VCAT, the national examination for veterinary licence (Juishi Kokka Shiken) offers a final assessment of veterinary education. The examination is paper-based and conducted over two days by MAFF. Applicants who complete undergraduate veterinary education can take the examination. Those who pass this examination are granted a national licence for veterinarians and qualify for further professional training.

3.1.2. Description of the legal constraints imposed on curriculum by national/regional legislations and the degree of autonomy that the Establishment has to change the curriculum

Veterinary education must be comprised of six years of study, as established by the Basic Act on Education. The Standards for the Establishment of Universities (SEU) states that a total of 182 credits is the minimum requirement for graduation in veterinary education and that the university is autonomous in developing its curriculum and content.

In November 2008, MEXT revised the Standards for the Establishment of Universities. A legal framework called the "Cooperative Education Program" was created to allow multiple universities to provide each other with educational resources and to make it possible to utilize such resources effectively (MEXT Ordinance No. 35, 2008).

In addition to such national legislation, approximately 70 % of the education at veterinary schools must adhere to the VMMCC (see 3.1.1). The remainder can be composed of subjects that utilize the specific strengths and social needs of each university.

The current VNJ curriculum (Curriculum 2012) consists of 200 credits (corresponding to 360 ECTS), which complies with the VMMCC. HU offers 44 credits and OU offers 38 credits in the cooperative education programme. The list of all core subjects (Appendix 11) and the VNJ curriculum map are shown in Figure 3.1.

3.1.3. Description of how curricular overlaps, redundancies, omissions and lack of consistency, transversality and/or integration of the curriculum are identified and corrected.

Because a veterinary curriculum consists of a great deal of content and is highly integrated across disciplines, curricular problems can be difficult to accurately detect.

Curricular overlaps, redundancy, omissions and inconsistencies were discussed by the VNJ academic staff as part of the initial curriculum development.

Curriculum mapping also helps to understand the vertical, horizontal, disciplinary and interdisciplinary coherence of the curriculum (Figure 3.1). It is also useful for identifying how each learning outcome is assessed at the different stages of the curriculum.

Academic staff can access the syllabi (Appendix 13) and educational content of other related classes on the VetPortal website, a web-based class supporting system (see detail in Standard 6). By using the keyword search function, academic staff can retrieve a set of search results to identify possible overlaps and omissions in their class content. The academic staff finds such problems, and then they coordinate to resolve such issues with the relevant staff and counterparts.

Serious problems are reported to the Academic Affairs Committee and the Programme Executive Board to discuss a resolution. Curricular problems are shared at the Faculty Meeting of each university and at the annual VNJ Joint Faculty Assembly.

Student feedback is an important source for identifying unnecessary overlaps or other problems in the curriculum. The comments on student evaluations are released to each faculty member and are used as one of the tools for curriculum improvement. The course/subject coordinator has the responsibility to minimize overlaps and consistency issues. The curriculum's content, design and subject allocation are the responsibility of the Academic Affairs Committee, which meets monthly to discuss and review the curriculum.

3.1.4. Description of the core clinical exercises/practicals/seminars prior to the start of the clinical rotations

Year 1

In subjects of Introductory education for veterinary medicine, students learn handling and restraint, animal behaviour of major domestic animal species (cattle, pig, sheep, horse, poultry), farm biosecurity, milking, the slaughter process of pigs, and food processing of dairy and meat products.

Year 2-5

The clinical training that takes place before the clinical rotation.

Clinical Examination Training: blood tests (blood cell tests, biochemical tests, and endocrine tests), urine, faecal, biopsy, cardiac function, dermatological and neurological tests

Diagnostic Imaging Training: diagnostic imaging methods including X-rays, ultrasound, MRI and CT

Internal Medicine Training: diagnostic procedures, history taking, physical examinations, proper use of various clinical examinations, medical records, informed consent, drug administration methods and major clinical signs and differential diagnoses for representative diseases of cardiovascular, respiratory, gastrointestinal, urological,

integumentary, endocrine, blood, skeletal and nervous systems/organs

Surgery Training: preparation for surgery, ligature and closure techniques, anaesthesia, skin incision techniques, intra-abdominal surgery techniques, orthopaedic examination techniques, bandaging techniques and fracture repair techniques, and hoof trimming for farm animals (cattle).

Theriogenology Training: rectal palpation, artificial insemination, oestrus detection, pregnancy diagnosis, genital disease diagnostic techniques for farm animals (cattle/horses), embryo collection and transfer, vaginal cytology, and genital disease diagnostic techniques and reproductive management including analysis of reproductive records.

Communication Training: basic theory of communication skills, history taking, client communication in small and large animal practices, communication with co-medicals and colleagues.

3.1.5. Description of the core clinical rotations and emergency services and the direct involvement of undergraduate students in it

1. Timing, group size per teacher of core clinical rotation (see clinical rotation table (p23) and Appendix 14)

Small animals (6 weeks, 6 credits)
(Six weeks in total: Four weeks at HU's VTH and two weeks at the VTH of each location)
In Year Five, eight groups of students (maximum of ten per group) join a clinical rotation through two departments (Internal Medicine and Surgery) at HU's VTH for four weeks. A total of fourteen faculties from both departments supervise them (roughly one student per faculty member). An additional two weeks are allocated in Year Six.

Large animals (4 weeks, 4 credits)
(Four weeks total: three weeks at OU's VTH and mobile clinics and one week at each location)
Students in Year 5 (40 students from HU and 40 students from OU) must take participatory clinical training for farm animals (dairy cattle, beef cattle, horses, sheep and pigs). The size of the groups is variable depending on the registered number of students. In general, one or two clinical staff member(s) take care of one groups of five to seven students. Sometimes groups are subdivided in clinical rotation. The average group size is three to four per one clinical staff member.

They rotate through internal medicine, surgery and theriogenology for farm animals. Each academic staff member supervises one to three students and the students complete three weeks (3 credits). An additional week is allocated in Year 5 or 6.

Night duty/emergency (2 credits)
Companion animals: 1.5 credits
The night /emergency duty is conducted at intramural (HU VTH) and extramural private clinic (a local private clinic, Sapporo Night Animal Hospital Emergency and Critical Care). Students work for two nights at HU's VTH (two students per academic staff member and one veterinary technician) and one night at the private clinic. One academic staff member takes two students to the clinic.

Large animals: 0.5 credits
In addition to the daily duties, students participate in night and emergency services. Emergency rotation (three days) is integrated in the 4 weeks of large animal clinical rotation. Students are required to do night duty for one night. Students are involved in monitoring the status of hospitalised animals as well as in emergency cares. Faculty members and veterinarians on duty supervise them. A degree of hands-on experience as opposed to observation is variable, depending on the case. We provide a simulation case conference in case that students are not exposed to a sufficient number of emergency cases.

2. Activities and responsibilities
During their clinical rotation, students participate in all the work at the VTH, under the supervision of veterinary faculty and other staff members. The activities and responsibilities of students vary between departments and clinical services and should be carried out in accordance with the "Guidelines for Students Activities in Participatory Clinical Rotation". Clinical procedures are categorized into three levels, depending on invasiveness: level 1, low- invasive clinical procedures, are to be performed by ordinary-level students; level 2, moderately invasive clinical procedures, are to be performed only by selected, capable students; and level 3, highly invasive procedures, should not be performed by students. Students perform these activities under the faculty's direct and careful supervision.

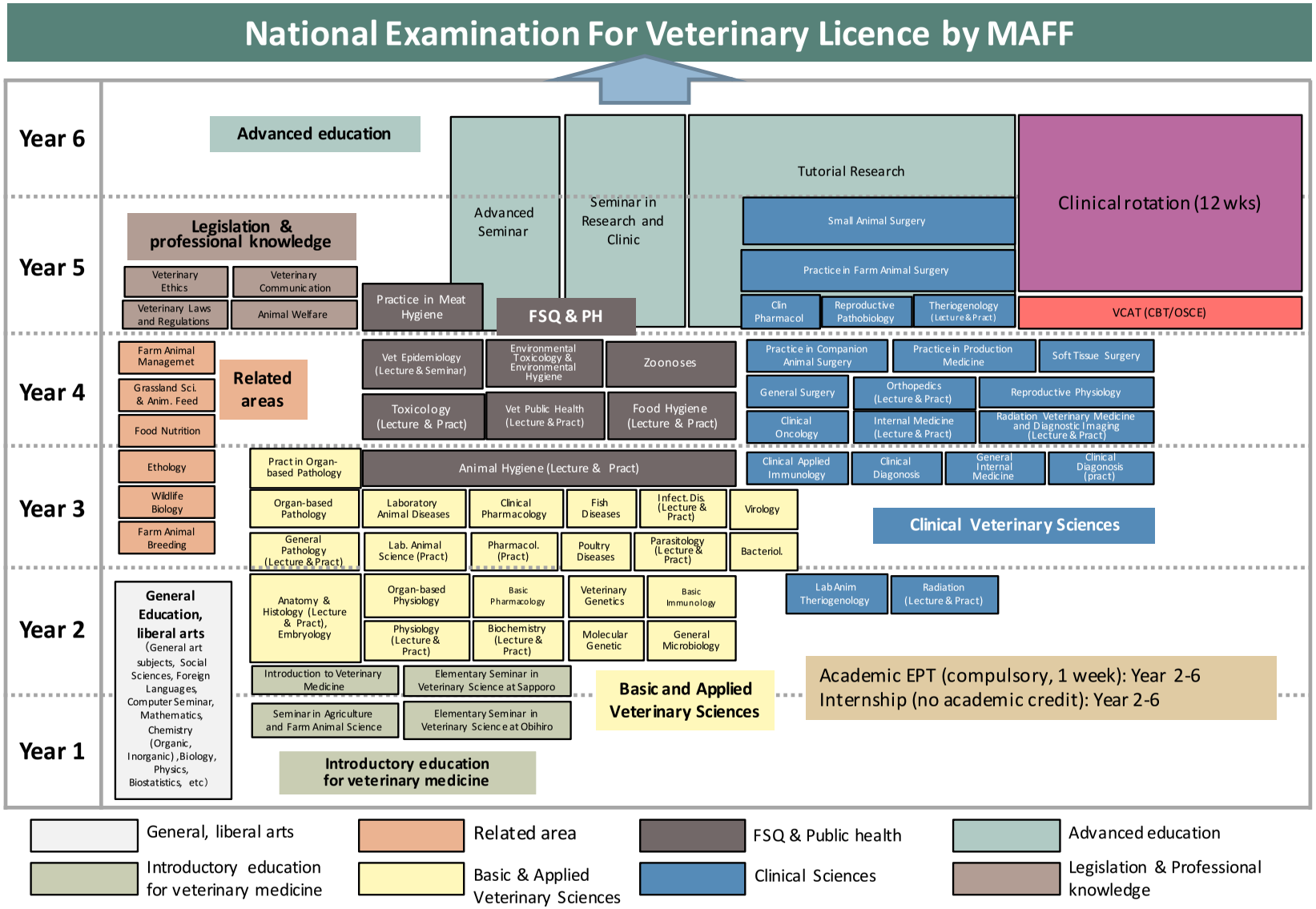


Figure 3.1 VNJ Curriculum

3.1.6. Description of the teaching in slaughterhouses and in premises for the production, processing, distribution/sale or consumption of food of animal origin

Intra-mural

OU has its own slaughterhouse and food processing facilities on campus (see detail in 4.1.4, p27).

For the veterinary curriculum, we use these facilities for the following subjects: Seminar in Agriculture and Farm Animal Science (Year 1) and Practice in Meat Hygiene (Year 5). During the first year, students learn about the slaughtering and meat processing of pigs (40 students per four or six academic staff members + five to six support staff members including TA).

During the rotation in the ninth semester (Year 5), groups of five to ten students per academic staff member undertake one week of training in meat inspection, including cattle slaughtering, ante- and post-mortem inspections, microbiological tests, toxicological tests, pathological analyses and BSE tests. The training is held at the slaughterhouse and food processing practice facility at OU.

Extra-mural

Excursions to public slaughterhouses and meat processing plants, milk processing plants of local private companies and rendering facilities are conducted in public health and food hygiene courses during the third and fourth years (approximately 40 students headed by two faculty members).

Under the contract with one of the biggest food company, students (Year 3) are allowed to visit the commercial mega farms of pig and poultry, slaughterhouse, and food processing plants in "Practice in Animal Hygiene" course. The group size is 13-14 students with two academic staff members.

Utilizing the internship program of Hokkaido prefecture, we started EPT of meat hygiene inspection at the two slaughterhouses of Hokkaido prefecture in 2018. Year 5 or 6 students who passed the VCAT visited the slaughterhouses and experienced the meat inspection (cattle and pig) for two days under the guidance of the veterinary specialists at the slaughterhouses. Although the capacity is limited, a total of 13 students were accepted for this FSQ EPT.

3.1.7. Description of the selection procedures of the Electives by the students and the degree of freedom in their choice

The VNJ programme does not have a track system. Instead, we provide students Advanced Seminars (Appendix 15) as elective subjects in six veterinary fields including Basic Veterinary Medicine, Applied Veterinary Medicine, Pathobiology, Public Health/Food Hygiene, Clinical Veterinary Sciences, International Veterinary Medicine. Students choose at least one seminar. These seminars give them a deeper background in specialized fields and enable them to have more choices for their future careers.

Students have a fair amount of freedom in choosing most of the elective subjects. Some subjects/courses in Advanced Seminars have a fixed number of participants due to the limitations of equipment or the capacities of the room and staff. If too many students select one specific subject/course, then the subject/course coordinator will adjust the number of students or arrange to allocate students to other subjects. In general, the selection of students is based on their academic records and interests.

3.1.8. Description of the organisation, selection procedures and supervision of the EPT

The obligatory EPT is a 1 credit (corresponding 1 week, 45 hour working load) self-directed and self-planned internship. Students are free to choose a supervisor and the location of external placements. The information of the EPT/internship is also provided by an EPT list, by an email, VetPortal, or on a bulletin board. The relevant sections (the Academic Affairs Section at SVM/HU, the Student Services Section at OU) helps students to find an EPT placement. The academic staff also advise students, based on their expertise. Once students select a supervisor and location for EPT, they must submit an EPT application to the academic affair section of each university. In addition to the obligatory EPT, our students proactively join a variety of internship programmes to gain real-life work experience.

3.1.9 Description of the procedures used to ascertain the achievement of each core practical/clinical activity by each student

The core subjects are designed to obtain Day One Competences (Appendix 11, 12).

Different procedures are used to evaluate students' achievements, depending on the nature of the learning outcomes being assessed:

1. Paper-based assessments include multiple choice questions, short answer tests, problem-solving questions and essays/written reports.
2. Practical tests include spot tests, oral questions and performance (skill) tests. Students' learning behaviour is also considered.
3. There are oral presentations of individual or group work, group discussions, and case presentations.

During the clinical rotation, there are multiple procedures for evaluating each student's achievement:

1. Logbooks (Appendix 16a)
2. Students' learning behaviour
3. Answers to oral questions
4. Case Log (Appendix 16b)
5. Round discussion (twice a week)
6. Case conference (once a week)
7. Self-evaluation Record of clinical competences (which will be introduced for Year 5 students in 2019)(Appendix 16c).

3.1.10. Description of how and by who the core curriculum is decided, communicated to staff, students and stakeholders, implemented, assessed and revised

Minor revision (subject level)
Minor revision at each subject level is routinely implemented by subject teachers during academic year. Subject Coordinator is responsible for updating students by VetPortal, online syllabus, or by email.

Major revision (curriculum level)
The present VNJ curriculum (Curriculum 2012) was first discussed between the academic staff members in the same disciplines at both universities. Details pertaining to the programme, such as the educational content, setting subjects, subject allocation, ratio of lectures to Hands-on training and timetables for each year group, were discussed and finalized by the local and joint Academic Affairs Committee. The joint committee consists of representative academic staff members from both universities. Then, the proposed curriculum was explained and discussed at the Faculty Meeting of each location and at the VNJ Joint Faculty Assembly. Feedback from students about the previous curriculum was taken into consideration.

The Academic Affairs Committee made a systemic decision and finalized the curriculum plan. The plan is approved by the Programme Executive Board and The VNJ Executive Board. All changes in course content are subject to the approval of the Programme Executive Board. The minutes of each meeting are provided on paper and/or electronically.

The Academic Affairs Committee monitors and periodically reviews the VNJ programme. This committee collects and analyses information on the current status of curriculum operations, student assessment, classwork evaluations by students, the use of self-learning aids, such as Glexa and Clinical Skills Labs. It then revises and plans an amended programme for QA.

Regarding curricular information, we communicate with students via various means, including the student handbook, VetPortal, the portal sites of each university, mailing lists, email, notice boards, guidance and direct announcements from faculty members. Programme information is also provided on the websites of both universities, in brochures, and at open-campus events for prospective students.

3.2. Comments

Revision of present curriculum (Curriculum 2019)
To ensure continuing quality and relevance of courses, VNJ formed an ad hoc Curriculum Review Committee in 2017 to review the present curriculum.

The committee consists of the academic staff including junior staff of both universities. It functioned as a subcommittee under the Academic Affairs Committee and collaborated with departments, faculty members and students to review and report its findings. The Curriculum Review Committee collected comments from all academic staff and students and conducted review process. The overlaps and omissions of the subjects were cancelled and improved in the newly revised curriculum. The QA committee supported to collect input from stakeholders at Advisory Panel. The Curriculum Review Committee releases its recommendations for improvements to the curriculum. The Academic Affairs Committee finalizes the revision of the curriculum according to the recommendation. In this process, draft plans were shared with academic staffs, students, and stakeholders to collect the feedback at every level.

Day One Competences List
As focusing on learning outcomes becomes more critical, we will need more details of the key competencies to design our courses effectively and foster students' proactivity to achieve their learning outcomes. The ad hoc working group identified and defined the expected knowledge and skills, and have made a List of Day One Competences and corresponding subjects. The "VNJ Day One Competences List" for the new 2019 curriculum was approved by the VNJ Joint Faculty Assembly in March 2019. We also made a Competency Self-Evaluation Record for the assessment of required clinical competences in clinical rotation. Students use the sheet as a tool for assessing their competences, and to help identify key areas of focus. We will further develop a new tool for monitoring each student's acquisition status of Day One Competences.

Feedback from the graduates
Alumni-based evaluations are progressively acknowledged as an important part of the process of ongoing curriculum improvement. In 2018, the Year 6 students were surveyed just before their graduation. The survey results are analysed, and shared across the academic staff of both universities for quality improvement of our programme.

3.3. Suggestions for improvement

Practices in poultry and pig farms
Access to farms, especially poultry and pig farms, is limited due to strict biosecurity measures and recent outbreaks of contagious diseases. To expose students to the industrial operation of poultry and pig farms, we began sending students to commercial farms in cooperation with food companies in 2017. In addition to this, DVM/OU has made a cooperative agreement with Obihiro Agriculture High School for further exposure to pig and poultry medicine. Hands-on training of these animal species at the high school farms is being planned.

Introducing Students' Portfolio System
An electric portfolio approach to a competency-based assessment will be discussed as one of the assessment tools.

Table 3.1.1. Curriculum hours in each academic year taken by each student

One credit is equivalent to 1.5-1.8 ECTS. The VNJ curriculum requires 200 credits in a six-year programme (300 – 360 ECTS). Approx. 50 to 60 ECTS per year.

Year	Theoretical training			Supervised practical training				
	Lectures	Seminars	Self-directed learning	Laboratory/desk-based work	Non-clinical work	Clinical animal work	Other	Total
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
Year 1	660	30	0	45	135	0	0	870
Year 2	381	45	60	57	267	0	0	810
Year 3	450	0	30	279	102	24	24	909
Year 4	465	15	30	144	75	138	18	885
Year 5	120	0	6	48	48	33	0	255
Year 5-6	0	0	0	0	0	540	0	540
Year 2-6							45	45
Total	**2,076**	**90**	**126**	**573**	**627**	**735**	**87**	**4,314**
Tutorial Research, Seminar in Research and Clinics	0	120	270					390
Total	**2,076**	**210**	**2,418**					**4,704**

Table 3.1.2. Curriculum hours in EU-listed subjects taken by each student

Subjects	A	B	C	D	E	F	G	H
Basic Subjects								
Medical physics	9.0	30.0						39.0
Chemistry (inorganic and organic sections)	60.0							60.0
Animal biology, zoology and cell biology	60.0			45.0				105.0
Feed plant biology and toxic plants	45.0							45.0
Biomedical statistics	30.0			15.0				45.0
Total number of hours	**204.0**	**30.0**	**0.0**	**60.0**	**0.0**	**0.0**	**0.0**	**294.0**
Basic Sciences								
Anatomy, histology and embryology	90.0		30.0		180.0			300.0
Physiology	30.0		30.0	24.0	66.0			150.0
Biochemistry	30.0			27.0	18.0			75.0
General and molecular genetics	30.0							30.0
Pharmacology, pharmacy and pharmacotherapy	75.0			9.0	36.0			120.0
Pathology	30.0		30.0	36.0	9.0			105.0
Toxicology	45.0		30.0	6.0	39.0			120.0
Parasitology	60.0			39.0	3.0	3.0		105.0
Microbiology	120.0			120.0	15.0			255.0
Immunology	30.0							30.0
Epidemiology	30.0	15.0						45.0
Professional communication *1	6.0				9.0			15.0
Professional ethics	15.0							15.0
Animal ethology	15.0							15.0
Animal welfare	15.0							15.0
Animal nutrition	30.0							30.0
Total number of hours	**651.0**	**15.0**	**120.0**	**261.0**	**375.0**	**3.0**	**0.0**	**1425.0**
Clinical Sciences								
Obstetrics, reproduction and reproductive disorders	60.0			21.0	12.0	12.0		105.0
Diagnostic pathology	60.0		30.0	39.0	6.0			135.0
Medicine and surgery including anaesthesiology	105.0			39.0	21.0	75.0		240.0
Clinical practical training in all common domestic animal species						540.0		540.0
Preventive medicine						45.0		45.0
Diagnostic imaging	21.0			18.0		27.0		66.0
State veterinary services and public health	45.0							45.0
Veterinary legislation, forensic medicine and certification	15.0							15.0
Therapy in all common domestic animal species	75.0							75.0
Propaedeutic of all common domestic animal species	30.0			18.0	15.0	12.0		75.0
Total number of hours	**411.0**	**0.0**	**30.0**	**135.0**	**54.0**	**711.0**	**0.0**	**1341.0**
Animal Production								
Animal Production and breeding	90.0							90.0
Economics *2	15.0							15.0
Animal husbandry	30.0							30.0
Herd health management	60.0			42.0	3.0	45.0		150.0
Total number of hours	**195.0**	**0.0**	**0.0**	**42.0**	**3.0**	**45.0**	**0.0**	**285.0**
Food Safety and Quality								
Inspection and control of food and feed	15.0			30.0	6.0		9.0	60.0
Food hygiene and food microbiology	30.0			27.0	9.0		9.0	75.0
Practical work in places for slaughtering and food processing plants	9.0	6.0		14.0	68.0		24.0	121.0
Food technology including analytical chemistry *3	6.0				12.0			18.0
Total number of hours	**60.0**	**6.0**	**0.0**	**71.0**	**95.0**	**0.0**	**42.0**	**274.0**
Professional Knowledge								
Professional ethics & behaviour (also listed in "Basic Science")	15.0							15.0
Veterinary legislation (also listed in Clinical Science)	15.0							15.0
Veterinary certification and report writing		6.0		3.0	3.0	6.0		18.0
Communication skills (also listed in "Basic Science")	6.0					9.0		15.0
Practice management & business	6.0							6.0
Information literacy & data management *4	30.0							30.0
Total number of hours	**72.0**	**6.0**	**0.0**	**3.0**	**3.0**	**15.0**	**0.0**	**99.0**

*1 Taught in "Seminar in Veterinary Communication" and at clinical rotation.

*2 The topics, economics in veterinary medicine, clinic management and economic impact in herd health, are taught in the following subjects "Practice in Production Medicine", "Farm Animal Management" and clinical rotation.

*3 Taught also at part of the "Practice in Meat Hygiene" and "Food Hygiene", "Basic Toxicology", "Environmental Toxicology"

*4 Taught in also 'Biomedical Statistics" and "Tutorial Research"

Table 3.1.3a. Curriculum hours as electives by each student

Elective subjects	A	B	C	D	E	F	G	H
Basic Subjects								
Elementary Seminar in Biosciences				45.0				45.0
Zoo Science	15.0							15.0
Introduction to Equine Science	30.0							30.0
Molecular Biology	30.0							30.0
Seminar in Wildlife Biology		15.0			9.0	36.0		60.0
Environmental Microbiology	30.0							30.0
Basic Sciences								
Medical Physiology	30.0							30.0
Environmental Microbiology	30.0							30.0
Biochemistry, Cellular and Molecular Biology	45.0							45.0
Clinical Sciences								
Medical Physiology	30.0							30.0
Animal Production								
Animal Breeding	30.0							30.0
Introduction to Fisheries	15.0							15.0
Food Safety and Quality								
Not Applicable								
Professional Knowledge								
Laws Concerning Agri. And Livestock Farming	30.0							30.0

Table 3.1.3b. Curriculum hours as compulsory electives by each student

Subject	Theoretical training			Supervised practical training			Other	Total
	A	B	C	D	E	F	G	
Advanced subjects								
Tutorial Research Seminar in Research and Clinics Advanced seminars	0.0	120.0	530.0	270.0			0.0	920.0
Total number of hours	**0.0**	**120.0**	**530.0**	**270.0**			**0.0**	**920.0**

Seminar in Research and Clinics: These are self-directed learning seminars which means students attend seminars, study by themselves and make presentations. Students gather information about themes related to the research fields, laboratory or tutor to which they are assigned and learn how to present findings.
Advanced Seminars: Students attend seminars given by their tutors in their specialist fields. Students freely select at least two seminar subjects. Students obtain a wide range of applied skills, such as methods of analysis and diagnosis, through fields related to research and study/medical care, and experiment with techniques and cutting-edge equipment in related fields. Most of the advanced seminars (year 5 to 6) are held over a week (some subjects require several weeks). Details are provided in Appendix 15.

Table 3.1.4. Curriculum days of External Practical Training (EPT) for each student

In the VNJ curriculum, all students must complete a mandatory EPT subject (academic EPT, 1 credit = 1 week duration in any veterinary filed).

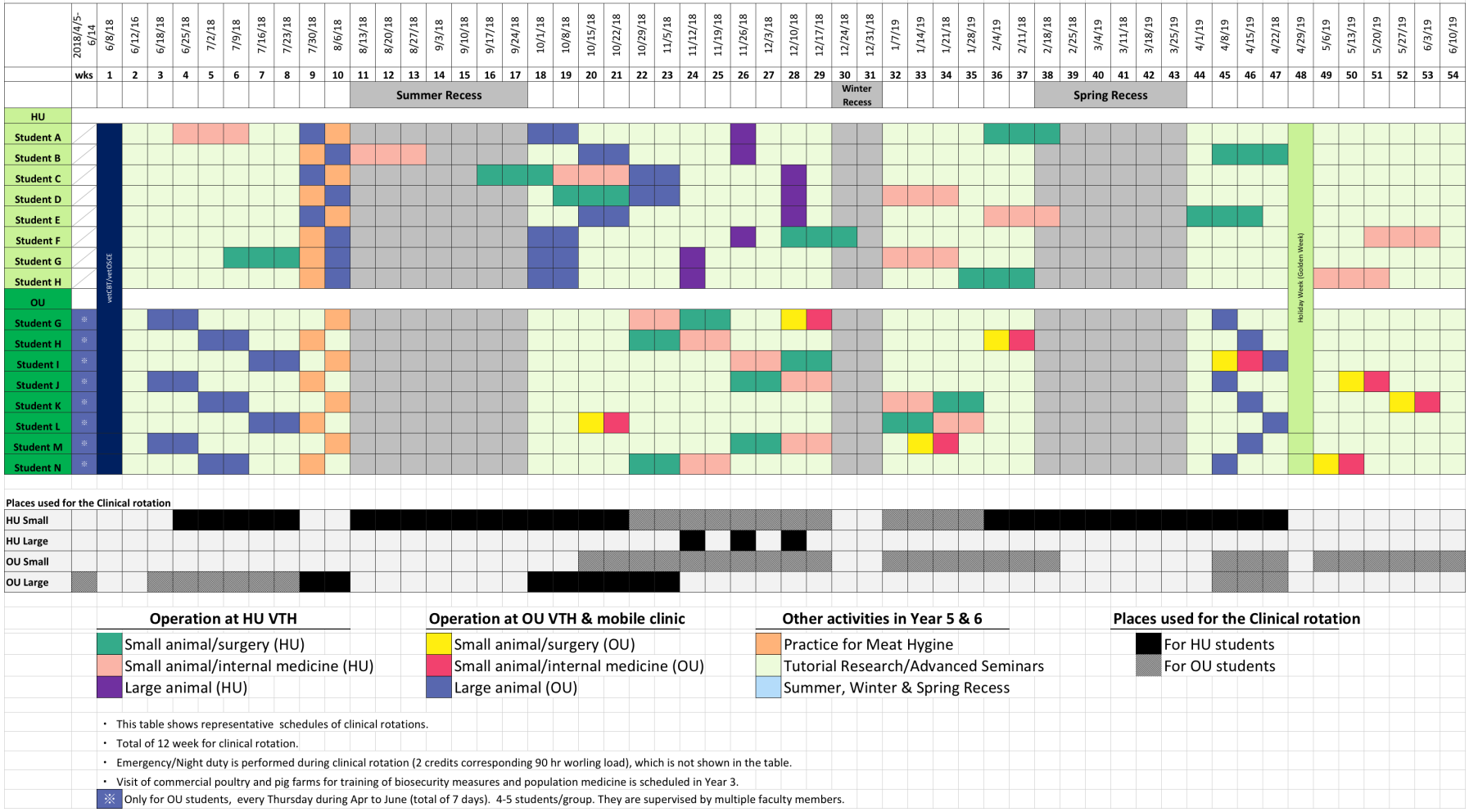
Table 3.1.5. Clinical rotations under academic staff supervision (excluding EPT)

Types	List of clinical rotations (Disciplines/Species)	Duration	Year of programme
Intra-mural (VTH) Extra-mural (Mobile clinic)	Small Animal Clinic	6 weeks	5
	Night shift/Emergency	2 weeks	5 or 6
	Large Animal Clinic including Mobile Clinics	4 weeks	5
FSQ & VPH (Intra-mural)	Milking, processing of dairy products, pig slaughter & meat processing	1 month for OU/1 week for HU students	1
	Meat Hygiene Practice (Cattle)	1 week	5
FSQ & VPH(extra-mural)	Commercial Poultry & Pig Farm	2 days	3
Electives	Aquatic animal medicine	1 week	5 or 6
	Zoo	1 week	5 or 6

Table 3.1.6. Optional courses proposed to students (not compulsory)

No optional courses

Table 3. 1 Clinical rotation table (June, 2018 - June 2019)



- This table shows representative schedules of clinical rotations.
- Total of 12 week for clinical rotation.
- Emergency/Night duty is performed during clinical rotation (2 credits corresponding 90 hr worling load), which is not shown in the table.
- Visit of commercial poultry and pig farms for training of biosecurity measures and population medicine is scheduled in Year 3.
- Only for OU students, every Thursday during Apr to June (total of 7 days). 4-5 students/group. They are supervised by multiple faculty members.

Standard 4: Facilities and equipment

4.1. Factual Information (Findings)

4.1.1. Description of the location and organisation of the facilities used for the veterinary curriculum

The direct distance between the two university campuses is approximately 180 km (Appendix 17 and 18). Public transport, including the JR Hokkaido Railway (travel time 2.5 hours) and an intercity coach, are available to connect the campuses.

Maps of the campuses are also available at the following links:
HU: https://www.global.hokudai.ac.jp/maps/
https://www.vetmed.hokudai.ac.jp/content/files/access/VetMed_map.pdf
OU https://www.obihiro.ac.jp/en/access

Sapporo (see Appendix 19)
The HU campus is in the center of Sapporo City. The School of Veterinary Medicine is located on this campus and mainly comprises the Management Research Building (Main Building, Buildings E and S; total area 8,844 m^2) and the General Research Building (2,801 m^2), with laboratories, experimental practice rooms and an administration department, as well as the Lecture Building (1,126 m^2), a Radiation experimental facility (763 m^2), a laboratory animal facilities (a total of 3,366m^2) and the VTH (3,027 m^2).

Obihiro
OU is located on the outskirts of Obihiro City, which is a core urban area of Tokachi District, Hokkaido, and a major farming region. The total site area of the university is 1,895,668 m^2 and the structure, building area and total floor space of the facilities used for veterinary education are shown in Appendix 20 and 21. All the teaching and clinical facilities for the veterinary programme are located on the campus.

4.1.2. Description of the premises for:

-) lecturing

Sapporo
The faculty has four lecture rooms (48, 84, 48 and 60 seats), a lecture hall (200 seats) and a common lecture room (48 seats). The second and the third lecture rooms and the lecture hall each have a bi-directional lecture system to deliver remote lectures between the two sites and transmit images of outdoor activities to the lecture rooms in real time (Appendix 19).

Obihiro
The faculty includes a total of 25 lecture rooms, all of which are on campus. The area and number of seats in the lecture rooms used for theoretical training are shown in Appendix 20 and 21.

The Main Lecture Building has undergone anti-seismic reinforcement, and the General Research Building 1 and the Auditorium have had heating/water supply installation and drainage/electrical system upgrades.

There have been functional improvements made to the audio-visual equipment and enhancements to the IT installations for remote classes.

-) group work

Sapporo (Appendix 19)
The General Research Building has six tutorial rooms (8, 8, 8, 6, 8 and 8 seats) and a common room (21 seats). The Main Building has three seminar rooms (8, 8 and 22 seats). All tutorial rooms are equipped with large touchscreen displays and terminals connected to the hospital LAN and the campus LAN. The Common Room and Seminar Rooms 1 and 3 are equipped with a bi-directional remote lecture system.

Obihiro
There are 26 group-work rooms on campus. The areas and numbers of seats in the rooms used for group work are shown in Appendix 20 and 21.

-) practical work

Sapporo (Appendix 19)
The main building has four practice rooms, practice room 1-4 (112, 112, 112 and 120 m^2), each of which has 45 seats. Practice room 1 has a virtual slide system for teaching histology, pathology and parasitology. Practice room 3 has five Class II biosafety cabinets (BSCs) and autoclaves for training in the handling of BSL-2 pathogens. The BSCs are tested and certified annually by academic staff members who are qualified to examine BSC. The sterilization function of the autoclaves is routinely checked by the academic staff.

The General Research Building houses practice room for clinical examination (104 m^2) and practice rooms for small animals (102 m^2) and large animals (125 m^2). The practice room for clinical examination is equipped with microscopes, centrifugal separators, and devices for biochemical examination and complete blood count. The practice room for small animals is equipped with operating tables, surgical lights, inhalation anaesthesia apparatus and biological information monitors for ECG, capnogram, gas concentrations, oxygen saturation, and blood pressure monitoring are used in the hands-on practice. The practice room for large animals is equipped with a recovery room for anesthetized animals, two retention treatment stalls, a movable hydraulic operating table and an inhalation anaesthesia apparatus.

The laboratory animal facility has an anatomy room (110 m^2), with a refrigeration room (18 m^2).

The necropsy room was refurbished in 2018 to satisfy safety levels and biosecurity standards. The room (103 m^2) is equipped with a refrigeration room (15 m^2), autoclave, safety cabinet and chemical hood, and has an underground water tank that can temporarily store the

wastewater to render it non-infectious by disinfection as necessary.

The entrances of anatomy and necropsy rooms are separated and the flow lines for these rooms do not cross each other.

There are two Clinical Skills Labs (28 m^2 and 30 m^2) in the Main Building and the General Research Building, respectively. These laboratories are equipped with the following models.

Canine models: lumber vertebra model, teeth/gum model, blood drawing training model (cephalic vein / jugular vein), endoscopy training model (oesophagus-stomach-duodenum), including endoscopy, spay surgery training model, castration surgery training model, skull anatomy model, foot / leg skeleton anatomy model, shoulder/ knee joint model, indicator-guided CPR training model, and bandage training model (foot/leg)

Feline models: hip joint model, teeth/gum model, reduction training equipment, shoulder/elbow joint model

Others: Intestinal anastomosis training model, Wire-connected intestinal anastomosis training kit, surgical suture training kit, ultrasound-guided fine-needle biopsy training kit, including ultrasonography, and cattle casting training model, 3D anatomy soft (dog, cat, cow, horse, pig, and bird), virtual slide system for histology and clinical biopsy samples, and video contents for clinical practice via Glexa system.

Obihiro
There are 21 practical work rooms on campus. The areas and numbers of seats in the rooms for practical work are shown in Appendix 20 and 21.

1. Most of the practical training rooms are equipped with a draft chamber.
2. Microbiology practice room S2101 has two Class II biosafety cabinets (BSCs) and two autoclaves, which are used for handling BSL-2 pathogens. Access to the laboratory is restricted when course work is underway. The BSCs are tested and certified annually, and the autoclaves are routinely checked with a biological indicator for assurance of their sterilization functions.
3. A surgical training room equipped with eight training sets of small animal operating tables and shadow-less lamps, an anaesthesia apparatus, artificial respirators and ECG/respiration/blood pressure monitoring equipment (five students per set).
4. The large animal necropsy room has a glass-walled observation room. Necropsy images transmitted from a video camera installed on the ceiling of the pathologic anatomy room can be viewed on a large monitor. Ancillary facilities include locker rooms and showers. The necropsy room is fully equipped with refrigerators, air conditioning, a formalin regulation room, a video monitoring system and a small animal pathologic anatomy room equipped with an autoclave and safety cabinets. Liquid waste is collected into an underground water tank and is disinfected as necessary.
5. The Clinical Skills Lab (82 m^2, 10 seats) is open 24/7 for all veterinary students.

4.1.3. Description of the premises for housing:
-) healthy animals

Sapporo
The laboratory animal facility can rear 50 dogs, 36 rabbits (or 54 guinea pigs), 27 chickens, 930 rats and 9,576 mice. The housing for large animals is equipped with an attached paddock (3,571 m^2), with the capacity to rear two horses (30 m^2 x 2), 10 cattle (free-burn with interlocking stanchion; 100 m^2) and eight goats (36 m^2). Also, the facility has a room for individual rearing (21 m^2) and a treatment stall for horse.

The Main Building has three BSL-3 infection laboratories that contain isolators and safety cabinets and can house 13 miniature pigs, 14 chickens, 675 rats and 1,134 mice in total. The Animal Facility has ABSL-2 rooms for large animals (2), poultry (16) and companion animals (4) as well as a chemical exposure experimental unit (five rooms for animal housing, 19, 15, 10, 12 and 31 m^2, respectively) on a floor of 301 m^2. There is also room to keep 60 mice for behavioural observation.

Obihiro
There are two laboratory animal buildings, i.e., a specific pathogen-free facility for mice, rats and rabbits and a dog-rearing facility. Each of these facilities can house 210 mouse cages (maximum of five mice per cage), 35 rat cages (maximum of two rats per cage), 15 guinea pig cages (maximum of two guinea pigs per cage), 30 rabbits, one cat room (housing a maximum of 12 cats) and a dog room (housing a maximum of 33 dogs). The laboratory animal buildings include an experiment laboratory and operating/treatment rooms that are managed and maintained by dedicated support staff. In addition, there are various mouse-rearing and infectious animal rooms (P2 and P3 containments) in the General Research Building 1, the Diagnostic Center for Animal Health and Food Safety and the National Research Center for Protozoan Diseases.

-) hospitalised animals

Sapporo
The faculty has dedicated hospital facilities for dogs and cat (63). There is an intensive care unit (ICU) for 47 dogs and 16 cats.

Obihiro
The faculty has hospital facilities for each species (no. of places) as follows: cattle (4, including 1 ICU), horses (4, including one ICU), dogs (21), cats (9) and three ICUs for dogs and cats.

-) isolated animals

Sapporo
The two isolation rooms for companion animals are separate from the VTH and located in the animal facility. One room (6 m^2) is for cats (2) and the other room (16 m^2) is for dogs (3).

Obihiro
There are isolation facilities for small animals (2 rooms, 20 m^2 each, with a preparation room) and large animals (2 rooms, 20 m^2 each, with a preparation room). For small animals, at least two dog cages or four cat cages can be kept in each room.

4.1.4. Description of the premises for:
-) clinical activities

Sapporo
The VTH (total floor space 3,027 m^2) has 12 consultation rooms, one treatment room, two ICU, two hospitalization rooms, five surgical suites for small animals, three ultrasound/echography rooms equipped with doppler ultrasound machines (6), two X-ray rooms with X-ray imaging apparatus and fluoroscopic apparatus, one endoscopic examination room (digital endoscope apparatus) and CT and MRI room equipped with 80-slice CT and 0.4-Tesla MRI machines. The surgery area has a C-arm six apparatus, mobile X-ray imaging apparatus laparoscopy, arthroscopy and cystoscopy apparatus, electroencephalographic system, polygraph machine, ultrasonic scalpel, vessel sealing system, four orthopaedic power units, patient warming systems and a semiconductor laser unit. There is also a radiation therapy room housing orthovoltage X-rays and a LINAC.

One of the operating theatres has an attached observation room and is equipped with a surgical video recording system. The images can be viewed in real time at the VTH and in the General Research Building and are stored on the surgical image server. Two operating theatres have a positive pressure ventilation system. There are four consulting rooms equipped with indoor cameras for image and voice recording, which can be watched in lecture, seminar and practice rooms over the hospital LAN. In addition, the Conference Room at the VTH is equipped with a bi-directional remote lecture system.

Obihiro
Small Animal Clinic (SAC)
The Veterinary Medical Center (VMC) for Small Animals (SAC) (total floor space 3,227 m^2) is centrally located on the Obihiro campus and is connected to the Diagnostic Center for Animal Health and Food Safety, the Large Animal Clinic (LAC) and the Clinical Research Building. The VMC is a two-story building that is used mainly for the medical care of companion animals, but it also functions as a VTH, providing a platform for participatory clinical education. It has one consulting room that are equipped with video and audio recordings system, which can be watched in the lecture, seminar and practice rooms over the hospital LAN. Clinical examination and imaging data are integrated with clinical records and can be viewed in the lecture, training, or seminar rooms. There are three operating rooms equipped with positive pressure ventilation systems. An ICU cage is installed in the treatment room. The hospitalization rooms for dogs and cats are separated by a treatment and preparation area. In addition, there is a physical therapy room for rehabilitation, a duty room, an ultrasound diagnostics room, a radiography room, radiotherapy room, a clinical laboratory and a dog run. Diagnostic CT and MRI rooms are in the Large Animal Clinical Research Building and are used for both small and large animals.

Large Animal Clinic (LAC)
The Large Animal Clinic is in the new Large Animals Clinical Research Building (total floor space 3,738 m^2), which was built in 2014 for clinical education on large animals. The building is divided into three blocks, comprising a LAC, lecture rooms and research laboratories. The clinic has consultation and treatment rooms for horses and cattle (2–3 retention treatment stalls per room), a preparation room, a padded anaesthesia/recovery room and an operating theatre with a movable hydraulic operating table and large animal gaseous anaesthesia apparatus, ECG/blood pressure monitoring equipment and an artificial respirator.

The VTH's imaging procedures for small and large animals include up-to-date diagnostic equipment (e.g. ultrasound, endoscopy, CT and MRI). Overnight accommodation rooms for male and female students for night duty were installed in 2016.

Hospital Ward for Large Animals
There are hospitalization stalls (633 m^2) for horses and cattle and ICU rearing rooms, the aisles and ceilings of which are equipped with running hoist rails. A garage for mobile clinic vehicles was also installed in this unit. There is an isolation unit for large animals that contains two isolation rooms and one preparation room (93 m^2).

-) diagnostic services including necropsy

Sapporo
The diagnostic imaging facilities comprise three ultrasonography rooms, two X-ray rooms, a CT scan room, an MRI scan room and a clinical blood testing room. Clinical examination and imaging data are integrated with the clinical records and can be viewed in the lecture, training and seminar rooms.

The Laboratory of Comparative Pathology offers the following diagnostic services: necropsy, histological and immunohistochemical diagnosis. The laboratory is equipped with a tissue examination room and a research laboratory that can handle BSL-2 pathogens.

Other laboratories offer the following diagnostic services: Laboratory of Toxicology (lead poisoning of wild birds, 50-100 cases per year; rodenticide resistance in wild rodents, pesticide poisoning in wildlife and sex determination of zoo animals, a total of 50-70 cases per year); Laboratory of Public Health (tick-borne encephalitis, 1-2 cases per year); Laboratory of Infectious Diseases (bovine leucosis, approximately 2,000-4,000 cases per year); The Laboratory of Microbiology handles the critical diagnosis of highly pathogenic avian influenza (112 cases in 2016 - 2018) and received ISO17025 accreditation for this purpose in 2017.

Obihiro

1. Diagnostic imaging facilities at the VTH
   These facilities comprise two ultrasonography rooms (small animal, large animal), two X-ray rooms (small animal, large animal), a CT scan room and an MRI scan room as well as a clinical animal blood testing room. The VTH staff offers this service for VTH sections and researchers at the university and veterinarians in the local community.

2. Mobile service for diagnostic imaging and reproduction.
   The VTH owns three diagnostic imaging vehicles. The biggest one is a mobile X-ray diagnostic cargo truck for large animals, which enables not only X-ray fluoroscopic examination but also X-ray imaging, ultrasonography, ECG, echocardiography and endoscopy for cattle. One professor of the VTH provides a health check service for dairy herds upon the request from local practitioners in various areas of Hokkaido. Health checks are performed approximately every month from spring to autumn excluding winter.

   The other two vehicles are smaller, but are equipped with an endoscope device and various blood test equipment, an X-ray fluoroscopy, an X-ray radiographing device, an ultrasound diagnostic device, etc. and will implement cutting-edge breeding techniques such as endoscopic artificial insemination, ovum pick-up and in vitro production of embryos on-farm to improve livestock productivity.

   Reproductive management service using a portable ultrasound machine, such as pregnancy diagnosis, examinations of ovary and uterus, are also supplied for cattle and horse farm.

3. Necropsy service
   The Laboratory of Veterinary Pathology accepts university and external cases for pathologic diagnosis. These cases (necropsy and biopsy) are used for educational and research purposes. The necropsy room is in the Building for Pathobiological Diagnosis, which also has hospitalization and clinical examination units for diseased animals. These animals are collected for educational and research purposes. Student groups and/or members of veterinary internal medicine groups check the disease states and make clinical diagnoses based on various clinical examinations (including physical and blood examination, blood chemistry, ECG, ultrasound and X-ray). Some animals are treated to confirm the clinical diagnosis. However, all animals transferred to this building are necropsied to confirm the disease state pathologically. In addition, there are three other histopathology laboratories (one of which is a P2 facility) in General Research Building 1 for research purposes.
4. The ISO17025-accredited Diagnostic Center for Animal Health and Food Safety has two floors. The ground floor has a laboratory section, and the second floor has an office and a conference area. In addition to this center, other individual laboratories list tests for infectious diseases in their areas of expertise. All examination procedures are in accordance with biosafety and laboratory safety standards.
5. The National Research Center for Protozoan Diseases is the first World Organisation for Animal Health (OIE)-collaboration center in Asia. It includes two reference laboratories that offer diagnostic services for equine piroplasmosis, bovine babesiosis and surra (ISO17025-accredited in 2017).

-) FSQ & VPH

Intra-mural slaughtering and food processing facilities in OU (Appendix 21)

OU has an intra-mural slaughtering and food processing facilities (1,639.6 m^2), which are within ten minutes' walk of the central campus. The facilities are accredited by HACCP/ISO22000/FSSC22000, and used for research and educational purposes. In the VNJ curriculum, we use these facilities for teaching the VNJ students of SVM/HU and DVM/HU as described in 3.1.4.

The facilities (1,315 m^2) are divided into three areas for slaughter, meat processing and milk processing. Each area has a separate entrance and locker room to minimize the risk of cross-contamination. The slaughtering area includes ante- and post-mortem examination rooms, a butchering/organ processing room, and a carcass processing room. A butcher from the private food company provide professional instruction in the practical aspect of slaughtering animals and meat processing.

Trainings for meat processing, sausage and canned meat production are taught in the meat processing area.

The dairy processing area supports dairy food processing and research and extension programme. It is equipped to make dairy products, such as butter, natural cheese and ice-cream, using milk from the university farm.

Extra-mural FSQ and VPH premises

Under the contract with one of the biggest food company, students (Year 3) are allowed to visit the commercial mega farms of pig and poultry, slaughterhouse, and food processing plants in "Practice in Animal Hygiene" course. The group size is 13-14 students with two academic staff members.

Students learn the farm biosecurity and herd health management, animal hygiene, prevention of infectious diseases, animal health check in the large farms, as well as slaughtering and meat processing procedures.

-) others

Sapporo

The carcass incinerator (160 m^2) is equipped with devices that can reduce smoke and dioxins to levels below those stipulated by law. The incinerator is adjacent to a large refrigeration room, where animal carcasses are frozen and stored. Carcasses are incinerated in bulk at least once a week.

Obihiro

The carcass incinerator facility locates near the dissection and necropsy areas. The facility adjoins a large refrigeration room, where the animal cadavers and body parts can be stored temporarily. The laboratory animals that are infected with pathogens must be autoclaved and then brought to the facility to be incinerated.

4.1.5. Description of the premises for:
-) study and self-learning

Sapporo

The faculty has two e-learning education rooms (45 and ten seats, respectively) and a library reading room (16 seats) in the Main Building. The Central, North and 14 other faculty/department libraries on the Sapporo campus (within a 15-minute walk from the faculty) are also available (see Standard 6).

Obihiro

Please see the "group work" section above, and Appendix 20, 21.

-) catering

Sapporo

The faculty has a small shop with a food court (ten seats, open from 10:00 to 17:00). There are seven campus dining halls (170, 390, 340, 90, 120, 1000 and 120 seats) and a restaurant (80 seats). There are many restaurants around the campus. An on-campus convenience store (open 24 hours) with a restaurant (around 100 seats) opened in 2018.

OU

There is one food court (open 11:00 to 14:00 for lunch, 18:00 to 20:00 for dinner) and one coffee shop (open 10:00 to 19:00).

-) locker rooms

Sapporo

The faculty has two locker rooms for male students (162 lockers) and female students (150 lockers) in the General Research Building. Both the animal facility and the veterinary teaching hospital have two locker rooms with showers and washing machines for male and female students and staff.

Obihiro

Students and staff are given their own lockers in which to keep their belongings. The practical training facilities (SAC, LAC, necropsy area, anatomy area, university farm, slaughter and food processing facility) have lockers and changing rooms for male and female students.

-) accommodation for on call students

Sapporo

The VTH provides two overnight rooms for male (40 m^2, four beds) and female (24 m^2, two beds) students.

Obihiro

At LAC: There are two overnight rooms for male students and female students (maximum of four people per room) in the LAC, which are also used for on-call students.

Akkamui: A two-storey, 258 m^2 facility was built in 2016 and includes eight rooms that accommodate 16 people, as well as a kitchen and lounge. It provides convenient on-campus accommodation for HU students.

The university also has a five-storey, 366 m^2 campus dormitory for male students (91 twin rooms) and female students (120 single rooms), located within a 10-minute walk from the hospital.

-) leisure

Sapporo

The faculty has a tennis court and a Veterinary Specimen Room. At the Sapporo campus, there are several welfare facilities (shops and bookstores), indoor and outdoor barbecue areas, several club buildings with rooms and sports facilities for extracurricular activities (including gymnasiums, an indoor athletic field, swimming pool and playgrounds), museums and botanical gardens. Students can easily access a variety of recreational facilities in Sapporo City.

Obihiro

To support extracurricular activities, the campus includes a club building containing rooms for each club, indoor and outdoor sports facilities (a gymnasium, martial arts hall, Japanese archery facility, training room, soccer pitch, rugby pitch, American football field, ice-hockey rink, baseball field, horse-riding facilities, tennis court) as well as campus facilities, including shared kitchens where students can cook for themselves, indoor and outdoor barbecue areas and rental spaces for cultural and social interactions. The Student Affairs Section provides a leisure equipment hire service.

4.1.6. Description of the vehicles used for:
-) students transportation

Sapporo

The faculty has two dedicated vehicles with five seats and eight seats for transportation of small size of group. For transportation of larger number of students, a chartered buses or public transport is used.

Obihiro

The university has one bus with 50 seats.

-) ambulatory clinics

Sapporo

The ambulatory service for cattle and other farm animals uses two vehicles (one has five seats, and the other has eight seats).

Obihiro

The ambulatory/mobile clinic has three vehicles (ten seats including the driver's seat), one station wagon (five seats including the driver seat) and three diagnostic imaging vehicles (three seats including the driver seat).

-) live animal transportation

Sapporo

A forwarding agent is available to transport large animals. A car that seats eight is used to transport small animals.

Obihiro
The university owns a two-tonne truck that is used to transport farm animals, mainly cattle and horses.

-) cadaver transportation
Sapporo
A forwarding agent is available for the transport of large animal cadavers.

Obihiro
The university has two small-sized pickup trucks for the transport of cadavers.

4.1.7. Description of the equipment used for
-) teaching purposes
Sapporo
The faculty has the following equipment: 10 touch screen displays (70 V-wide type), a wireless presentation system, an education support system, a bi-directional remote lecture system, a video conference system, a virtual slide system and fieldwork equipment (two notebook computers, a wearable camera and three loudspeakers). There are two Clinical Skills Labs (details are described in 4.1.2).

Obihiro
All lecture rooms in the lecture building are equipped with slide projectors and screens. Several lecture rooms are also equipped with video or DVD players for the use of audio-visual materials. Lecture Room 25 and Clinical Lecture Room 101 in the Large Animals Clinical Research Building are equipped with CCD and monitor cameras that are compatible with the HU bi-directional remote lecture system.

-) clinical services
The VTHs at both locations have the following equipment: X-ray television imaging apparatus, C-arm X-ray fluoroscopic apparatus, CT, MRI and Doppler ultrasound machines, a digital endoscope apparatus, an endoscopic surgery apparatus, an arthroscopic surgery apparatus, an inhalation anaesthesia apparatus, a blood chemical analyser and an orthovoltage X-ray machine. In addition, the HU VTH has LINAC for radiation therapy.

4.1.8. Description of the strategy and program for maintaining and upgrading the current facilities and equipment and/or acquiring new ones.
In the past ten years, SCM/HU and DVM/OU have strategically focused on construction, renovating according to the universities' master plans for improving its teaching and clinical competencies.

Further, the VNJ received a large budget for Promoting University Reform (2012-2017), with six years of financial support that has enabled the construction and renovation of the veterinary teaching environment.

Sapporo
Based on the six-year action plan, the Academic Affairs Committee (educational facilities), Facilities Committee (facilities in general), Shared Facilities and Equipment Steering Committee (research equipment), Animal Facility Steering Committee (animal facilities), Science Information Committee (library) and Animal Hospital Steering Committee (VTH) are responsible for maintaining and upgrading the facilities related to their specific roles, according to the students' and staff's opinions. These committees gather opinions from faculty members, if necessary, and propose strategies for the maintenance, improvement or installation of equipment and facilities to the SVM/HU dean. The local dean discusses with the professors the proposals from the committees and then approves the proposals.

Obihiro
The Facilities Section and the Student Educational Support Section at OU regularly check the lecture room usage (rate of operation) and equipment, in the lecture room building, to verify that room sizes are appropriate for use (in terms of number of rooms and capacity) and that they have been used appropriately since the large-scale refurbishment. The results of these self-checks help to determine future equipment needs and changes in room use.

4.1.9. Description of how and by who changes in facilities, equipment and biosecurity procedures are decided, communicated to staff, students and stakeholders, implemented, assessed and revised
Sapporo
1. Facilities and equipment (Appendix 22)
   The Facilities Committee and Shared Facilities and Equipment Steering Committee are generally responsible for managing the education and research facilities and their equipment. The Facilities Committee consists of eight academic staff members and one supporting staff member and convenes the meeting(s) once or twice a year. The Shared Facilities and Equipment Steering Committee consists of seven academic staff members. The Academic Affairs Committee and the Office of Veterinary Education Reform are responsible for the management of practical work and educational equipment, respectively. The Facilities Committee and relevant committees discuss reforming the facilities. The dean of SVM/HU makes the final decision regarding such reforms. The Accounts Section in the Administration Department is responsible for the practical maintenance of facilities.
2. Biosecurity procedures
   Changes in the animal facility, its equipment and its standard operating procedure for biosecurity are generally decided by the AFSC and the Pathogenic Agent Safety Committee (PASC). These decisions are assessed and confirmed by the Institutional Animal Care and Use Committees (IACUC). If necessary, the IACUC encourages the AFSC to revise them. The Carcass Incinerator Management Committee is responsible for waste management related to animal carcasses. HU's Office of Health and Safety oversees safety management through inspections, seminars and meetings. In the SVM/HU, the PASC, IACUC, AFSC, Radiation Safety Committee and Committee for Recombinant Nucleic Acid Molecules are responsible for the safety management of each specific area and

communication to the staff and the students. Medical and biological waste must be autoclaved and disposed of in a container within a lockable storeroom. Hazardous waste fluids are collected and treated by HU's Environmental Preservation Centre ($702m^2$).

3. Communication between stakeholders
   Information about facilities, equipment and biosecurity procedures are communicated to staff, students and stakeholders via the Faculty Meeting, faculty development, special lectures, notices and e-mail.

   Detail manuals for safety management: http://www.hokudai.ac.jp/bureau/safety/hu/7.html. Chemical substance handling guidance: http://www.hokudai.ac.jp/bureau/safety/hu/2016-2017_chemical-operation_eng.pdf.

Obihiro

1. Facilities and equipment
   A flow chart of the decision-making process for facility matters is shown in Appendix 23. Briefly, the Facility Section, in cooperation with several committees, is responsible for the planning, physical development, construction, maintenance, renovation and safe operation of the university's education and research facilities. The Facility Section and Facility Management Committee devise a strategic Campus Master Plan and landscape design for the campus environment, which provide a physical structure to the university's mission. The plan is open to faculty members for the collection of requests and comments. The plan is finalized in discussion between the Strategic Planning Committee and Management Committee and is approved by the university president. The Facility Safety Committee conducts monthly inspections of the teaching and research facilities to evaluate the safety procedures.
2. Biosecurity procedures
   All animal activities are approved by the IACUC, which conducts biannual inspections of all animal facilities and reviews all animal use protocols and standard operating procedures (SOP). The Facility Division is responsible for waste management. OU waste management regulations, based on related laws and ordinances, are established for the management and control of waste products and offensive odours produced on the premises at the Obihiro site. Students are advised of the university's health and safety information at the time of enrolment. The Biosafety Committee and Genetic Recombination Experiment Committee decide on internal regulations based on related laws and regulations. All training in the handling of pathogens and recombinant genes must be approved by these committees. All veterinary students must attend specialized guidance courses before using experimental animals, handling pathogens, or performing genetic recombination experiments. These courses are held twice a year, and organized and delivered by the academic staff of the responsible committees. Students are also provided with safety information in their course handouts or guidance by academic and supporting staff at the sites where the practical studies take place. First aid kit, AED, eye wash device are provided all around the campus.
3. Communication between stakeholders
   In compliance with the Occupational Safety and Health Act, hazardous procedures or substances at the university are risk-assessed, controls implemented, and a risk value assigned. The members of the responsible committees discuss changes in facilities, equipment and biosecurity measures and the ways in which these changes are communicated to stakeholders. In general, communications to staff and students are written (Facility Management Report, Water Quality Report, minutes, handouts, notices, signs, e-mail) and oral (face-to-face meetings, lectures and guidance) to ensure that all stakeholders are aware of changes. The related information is also available at the following related websites.

   Campus Master Plan and related information
   https://www.obihiro.ac.jp/facility-plan
   Facility Management Report
   http://faci.obihiro.ac.jp/environment/post-35.html
   Water Quality Report
   http://faci.obihiro.ac.jp/mng/suisitu/post-103.html
   Waste management and related information
   http://faci.obihiro.ac.jp/mng/waste/post-53.html
   Chemical Substances Management Office
   http://board.obihiro.ac.jp/bukyoku/shiyaku/index.html
   Pathogen Management Manual
   http://board.obihiro.ac.jp/bukyoku/kenkyu/files/jikken/byogentai/manual5.pdf
   Disaster Response Manual and related information
   https://www.obihiro.ac.jp/emergency

4.2. Comments

None.

4.3. Suggestions for improvement

Maintenance and upgradation of the facilities and equipment is a very important issue, and the submission of annual grant applications is ongoing to obtain financial support to maintain the high standards of our education programme.

Standard 5: Animal resources and teaching materials of animal origin

5.1. Factual Information (Findings)

5.1.1. Description of the global strategy of the Establishment about the use of animals and material of animal origin for the acquisition by each student of Day One Competences *(see Annex 2)*

Our global strategy regarding the use of animals and animal-derived materials is to provide a sufficient number of various animal species for the acquisition of Day One Competences. We take the following four measures to ensure necessary teaching resources of animals for teaching purpose, and to meet the international standards of veterinary education.

1. Complementary education (also described in 3.1.1)

Our students are able to access both normal and diseased animals during their pre-clinical and clinical training through a wide range of resources/services at both locations. In complementary clinical rotation students are exposed to a variety of clinical cases in companion animals and large animal practices at each location. A 24/7 emergency service for companion animals at HU VTH and for equine at OU VTH have been opened, providing students further opportunities to emergency cases and night duty to companion animals and equine.

2. Animal Welfare and Humane Teaching

We respect the concepts of 3R and 5F. All hands-on trainings using live animals must receive approval from the IACUC prior to use of animals. The IACUC is responsible for oversight animal use and care in accordance with Japanese legislation, guidelines and standard including "Act on Welfare and Management of Animals", "Act on Humane Treatment and Management of Animals", "Standard Relating to the Care and Management of Laboratory Animals and Alleviation of Pain", "Fundamental Guideline for the Conduct of Animal Experimentation in Research Institutions". The "EU Directive 2005/36/EC" is also taken into account. The number of live animals for terminal use is reducing year by year. The relevant information is also described in 5.1.10.

3. Clinical Skills Labs

As reducing the number of live animal use for harmful training, Clinical Skills Labs play an important role in competency-based veterinary education. A total of three Clinical Skills Labs for the VNJ students, providing students repetitive self-practice opportunities under stress-free conditions. We make an effort to improve the facilities, simulators and models in Clinical Skills Labs to ensure the acquisition of Day One Competences before handling live animals at pre-clinical and clinical trainings.

4. Monitoring the number of animals and caseload

We annually collect the information of the number of animals used for veterinary education as well as caseload of common animal species. The data shown in the Standard 5 Tables provide useful information when evaluating and improving our current strategy for the use of animals and materials of animal origins. To interpolate education in insufficient animal species and to increase caseloads, we created special contracts with local veterinarians, local food companies, farms.

5.1.2. Description of the specific strategy of the Establishment in order to ensure the relevant core clinical training before graduation, e.g. numbers of patients examined/treated by each student, balance between species, balance between clinical disciplines, balance between first opinion and referral cases, balance between acute and chronic cases, balance between consultations (one-day clinic) and hospitalisations, balance between individual medicine and population medicine

Sapporo

More than 90 % of the animals treated in the small animal clinic at the HU VTH were referral cases. So, students are also encouraged to be exposed to primary cases in their self-directed internship. In order to ensure the acquisition of Day One Competences, VTH installed a system of the Logbook, caselog and self-evaluation sheet, that are arranged by coordination between the two universities.

From 2019, the HU VTH opened a 24/7 emergency service for out-patient and hospitalized animals, which provides students with further opportunities to handle emergency cases. Students are trained in primary care for emergency cases at the private night hospital, Sapporo Night Animal Hospital Emergency and Critical Care. The HU VTH at Sapporo may accept patients that are referred from the private night hospital. These animals can be used for students' clinical training. Therefore, it is expected that students will be exposed to a wider variety of emergency cases. At the VTH and in the day shift duty, students must participate in night duty for hospitalized animals during their clinical rotation.

The VTH's newly opened Exotic Unit accepts various species of exotic animals. HU also has a contract with Maruyama Zoo to promote clinical practices in exhibition animals from wild origins and conservation medicine.

Under the agreement with the Animal Welfare & Management Centre in Sapporo concluded on Aug, 2018, students are provided opportunities for the practice of spay/neuter and shelter medicine.

Obihiro

To analyse the balance among the different disciplines and cases/animals, we regularly collect relevant information, such as the number of animals used for

anatomy, necropsy and preclinical training, number of caseloads at the VTH, percentage of first-opinion and referral cases, number of herd visits and animals for FSQ training. A log book given to each student at the beginning of clinical rotation helps to monitor students' training. Academic staff at the SAC and LAC distribute and balance experiences by checking the students' logbook.

The SAC has a more balanced percentage of first-opinion and referral cases (approx. 50-60 % in first-opinions vs. 40-50 % in referrals). Many of the referral cases are sent for hospitalization for intensive care, surgery, or post-operative care. Regarding large animals, more than 90 % of cases are first-opinion. Students have enough training for common diseases to comply with Day One Competences.

We opened a 24/7 equine clinic in 2018. The equine clinic includes patients for one-day consultation, the mobile clinic and hospitalization or surgery. We employed an expert of equine surgery as an appointed clinical professor. The number of equine surgery and referral cases has increased since then.

We have limited access to poultry and pig farms due to strict biosecurity. The outbreaks of highly contagious diseases of poultry and pigs in recent years deprive students of an opportunity for sufficient EPT training. We undertook special contracts with one of the largest food companies to provide students an opportunity to visit poultry and pig farms and slaughterhouses.

OU's VTH has been opened a community practice of spay/neuter surgery services for dogs and cats under a mutual agreement with the local animal shelter. The programme is integrated with the small animal clinical rotation at OU.

5.1.3. Description of the organisation and management of the teaching farm(s) and the involvement of students in its running

Both universities have their own farms that provide learning opportunities for various education and researches activities such as animal production, milk and animal hygiene.

Sapporo

At the HU campus, the Field Science Center for Northern Biosphere Animal Production Research Farm (1,247m^2) has facilities to rear 44 cattle, 3-5 adult pigs and 30 rearing pigs, 27 sheep and 278 chickens. This facility is a ten-minutes' walk from the SVM/HU. The farm also produces miniature pig for clinical training for surgery.

The farm is managed by the Management Committee of Experimental Farming, which consists of a director and support and academic staff.

At Year 3-4, students receive pre-clinical, hands-on training in the physical examination of farm animals, artificial insemination, body condition scoring, management of new-born calves, milking practices and rectal palpation. The Year 5 students join clinical rotation to experience birth assistance.

Organisational charts for staff members of the farms are provided on the following websites.
HU:http://www.fsc.hokudai.ac.jp/farm/en/outline/organization/

Obihiro

The Field Center of Animal Science and Agriculture (FCASA) occupies a total area of 54,400 m^2 and is located on the southern edge of the campus (approximately fifteen minutes' walk from the central campus). FCASA is a self-supporting model farm, comprising a cattle barn, a breeding cattle barn (251 m^2), a special management barn for sick or calving cows (13-cow stanchion stalls, seven calf stalls, eight calving stalls), a milking block (1,594 m^2) and a milk inspection room. The milk processing plant (507 m^2) is a HACCP-certified, ISO2200 and FSSC 22000-certified facility, producing university branded milk. It also includes crop corn and grass fields, which are used to feed the university's dairy cows and livestock. The farm usually rears around 100–150 dairy cows and 50–70 calves/breeding cows. In addition to dairy cows, the FCASA also has premises for sheep, poultry, pigs and horses. The FCASA provides a solid educational and research base for agricultural and veterinary practices, including the management of herd health, animal and food hygiene, public health and production and population medicine.

The FCASA at OU is run by a management committee consisting of a center director, the head of farm animal disease control and academic and support staff.

OU: https://www.obihiro.ac.jp/facility/fcasa/

The university farm of FCASA offers educational opportunities to students of SCV/HU and DVM/OU as follows.

・Year 1: Students receive hands-on training in farm biosecurity, handling of food-producing animals, the management of new-born calves, milking practices. In addition, DVM/OU students (Year 1) partake in the experience of fattening a pig at the FCASA as early exposure to animal husbandry and handling.

・Year 4 - 5: Students learn the following techniques including rectal palpation, physical examination, hoof trimming, body conditioning scoring, the management of herd health and udder care, pregnancy diagnosis, mastitis treatment, and a FMD simulation exercise, etc.

Students who belong to the Laboratory of Theriogenology at each university have more opportunities for advanced training experiences. They are responsible for the reproductive management of a herd, which includes breeding, pregnancy diagnosis, parturition and herd health management.

5.1.4. Description of the organisation and management of the VTH and ambulatory clinics

At present (March 2018), there are 16 specialized veterinarians in the academic staff at each location.

one ACVR (Radiation Oncology and Radiology), four JCVSs (Surgery), five JCVP (Pathology), one Asian College of Veterinary Internal Medicine (AiCVIM), two JCLAMs (Experimental Animals) and one JCZWM (Zoo and Wildlife Medicine), one JVCS (Clinical Oncology) and one JSVI (Veterinary Imaging).

Sapporo

The VTH is run by a management committee consisting of the VTH director, professors and associate professors of each section at the VTH, representative academic staff members from each department/division, and the SVM/HU dean and secretary general.

The VTH provides referral clinical services from Monday to Friday from 9:00 am to 5:00 pm. A 24/7 emergency service has started since April 2019. We also accept patients without a reference letter from private veterinarians.

Specialized areas of consultation and hospitalisation for companion animals include internal medicine, gastroenterology, cardiology, respiratory medicine, dermatology, haematology, oncology, radiation oncology, soft tissue surgery, orthopaedic surgery, neurology, radiology, animal blood bank, theriogenology, ophthalmology, exotic animal medicine and diagnostic imaging. For food-producing animals, the theriogenology section is also opened.

Obihiro

The VMC is composed of three sections, comprising a SAC, LAC and diagnostic resource service. The VMC is administered by a management committee consisting of the center director, academic staff at the VMC, the directors of the other departments/institutions at OU and external stakeholders. The management committee for the VMC convenes annually. This committee determines the principal agenda and policy for the VMC.

The VMC academic staff discuss practical subjects in weekly staff meetings.

The LAC has four departments, Farm Animals, Equine Medicine, Reproduction and Diagnostic Imaging, which accept first-opinion and referral cases. The LAC provides an ambulatory service from Monday to Friday, from 09:00 to 17:00. Emergency hours are from 17:00 to 09:00 on weekdays, all day on weekends. A 24/7 equine emergency service opened in October 2018.

We accept surgical, reproductive and ophthalmologic emergencies and provide 24-hour care for foals, sick animals and post-operative animals. Surgery for equine are carried out on Thursday and Friday. Ambulatory (mobile) clinics are maintained by the academic and support staff of the LAC. Specialized areas of consultation include imaging, internal medicine, surgery (soft tissue and orthopaedics), infectious diseases, and theriogenology for both small and large animals.

5.1.5. Description of how the cadavers and material of animal origin for training in anatomy and pathology are obtained, stored and destroyed

We purchase cadavers and live animals for anatomy practice. For necropsy training, we accept dead or diseased animals donated from the owners/veterinarians. Cadavers of unowned animals that died outside are also donated from Sapporo City to SVM/HU. In addition, materials from exhibition animals are donated from Maruyama Zoo and Obihiro Zoo for clinical pathology and necropsy.

Diseased food-producing animals sent for a pathologic diagnosis are first used for clinical diagnostic training. These animals are then euthanized and necropsied.

Anatomy and necropsy areas have individual refrigerator room and freezers and the cadavers used for training purposes are incinerated in the on-campus facility.

5.1.6. Description of the group size for the different types of clinical training

Pre-clinical hands-on training

Group size varies between depending on the number of enrolled students, generally, five to seven (less than ten) per group.

Clinical rotation

Small animals

Intramural: Clinical rotations take place in the VTH at both locations. Group size is as small as 1-2 students per one veterinarian for internal medicine and 1-2 students per one veterinarian for surgery.
Extramural: Group size is two students per 1-2 veterinarians.

Large animals

Intramural: Group size is standardized to 2-5 students per 1-2 teachers.
Extramural (ambulatory clinic): Group size is standardized to 4-5 students per 1-2 teachers.

5.1.7. Description of the hands-on involvement of students in clinical procedures in the different species, i.e. clinical examination, diagnostic tests, blood sampling, treatment, nursing and critical care, anaesthesia, routine surgery, euthanasia, necropsy, report writing, client communication, biosecurity procedures, .. (both intra-murally and extra-murally)

The hands-on involvement of students in the clinical training are shown in the following table (Table 5.1).

subjects (Year 2-5)	
HU and OU students learn following clinical techniques at each university.	
Examination and diagnosis	Animal restraint, animal behaviour, biosecurity procedures, bandaging, history-taking, physical examination, body condition scoring, neurological examination, angiography, myelography, diagnostic tests (complete blood count, biochemical test, urinalysis, faecal examination), diagnostic imaging (X-ray, ultrasonography, CT, MRI) and interpretation, endoscopy, blood sampling, rectal palpation, semen analysis, detection of oestrus, pregnancy diagnosis
Treatment	Treatment (placement of an intravenous catheter, subcutaneous and intramuscular injections, medication), preoperative preparation, aseptic technique, use of surgical instruments, methods for sterilization and disinfection, anaesthesia (sedation, injection and inhalation), skin incision and suturing, tying techniques (one-hand/two-hand/mechanical techniques), spay/neuter surgery, soft tissue surgery, orthopaedic surgery, artificial insemination
Necropsy	Euthanasia, necropsy and case presentation

Hands-on training in clinical rotation (Year 5-6)	
Small animals HU students: 6 weeks at VTH/HU, OU students: 4 weeks at VTH/HU and 2 weeks at SAC/OU	
Contents of training	
Animal handling	Restrain and handling
Physiological and clinical examinations	T.P.R. examination, auscultation of heart (heart murmur assessment), body condition scoring, mucous membranes examination (color, CRT), neurological examination, orthopedic examination, pain assessment, blood test (blood sampling, CBC, blood chemical analysis, blood smear, interpretation), urinalysis (urine sampling, interpretation), faecal examination (feces sampling, interpretation), dermatological examination (tissue sampling, interpretation), examination of a mass on the body surface (size, biopsy sampling)
Diagnostic imaging	X-ray imaging, Ultrasonography imaging, CT imaging, MRI imaging
Internal medicine	*s.c.* injection, placement of intravenous cannula, prescribe medicines (selection, determination of dosage)
Surgery and anesthesia	Anesthesia (endotracheal intubation, vital monitoring, respiratory control, pain management, anesthesia record), preparation for surgery (surgical site, scrubing of hands and arms, wearing gown and glove)
Emergency care	Triage (prioritize treatment and examination), first aid
Diagnosis	Differential diagnosis, making plans for examination and treatmen
Communications	Professional communication, communication with the owner smoothly to obtain accurate information, communication with a member of veterinary practice team smoothly, making a clinical record, review literatures and report appropriately at clinical conference

Large animals HU students: 3 week at LAC/OU and 1 week at VTH/HU, OU students: 4 weeks at LAC/OU	
Contents of trainig	
Animal Handling	Approaching and handling, holding of limb
Physiological and clinical examinations	T.P.R. examination, auscultation (heart, lung, abdominal organs), mucous membranes examination (color, CRT), evaluation of the nutritional condition (dehydration, Body Condition Scorering, rumen condition), intraoral examination (mounting of the mouth speculum, dental examination), musculoskeletal examination (hoof condition, pain assessment, lameness, joint examination), blood test (blood sampling, CBC, blood chemical analysis, blood gas, dehydration and acidosis, interpretation), urinalysis (urine sampling, interpretation), faecal examination (feces sampling, interpretation), milk test (milk sampling, mastitis diagnosisi), cytological examination (tissues and cells sampliing, interpretation), rectal palpation (gastroenteric organ, reproductive organ, pregnancy diagnosis)
Diagnostic imaging	X-ray imaging, Ultrasonography imaging, CT imaging, MRI imaging
Internal medicine	*s.c.* and *i.m.* injections, *i.v.* injection, placement of intravenous cannula, intubation of stomach (nasal) catheter, prescribe medicines (selection, determination of dosage)
Surgery and anesthesia	Sedation and local anesthesia, anesthesia (endotracheal intubation, vital monitoring, respiratory control, pain management, anesthesia record), preparation for surgery (surgical site, scrubing of hands and arms, wearing gown and glove), surgical treatment (trauma surgery, castration, dehorninig, hoof triming)
Emergency care	Pain assessment and first aid
Diagnosis	Differential diagnosis, making plans for examination and treatmen
Communications	Communication with the owner smoothly to obtain accurate information, communication with a member of veterinary practice team smoothly, making a clinical record, making a letter of introduction that accurately summarizes the medical history and the actual condition, making a case report and presetation
Heard health	Farm biosecurity, disease prevention, clinical problem, economical issue
Necropsy	Euthanasia and necropsy, making a necropsy report

5.1.8. Description of the procedures used to allow the students to spend extended periods in discussion, thinking and reading to deepen their understanding of the case and its management

Students deepen their critical thinking and understanding of case management in several problem-based learning at various pre-clinical and clinical rotations. To provide a deeper understanding of specific cases and their management, clinical staff and students have frequent group discussions and personal/group presentations during the clinical rotations.

At companion animal rotation at HU, students submit case-logs to clinical staff to deepen their knowledge of the diseased animal cases.

LAC in Obihiro accepts donation of diseased animals from farmers for educational purposes. Given the minimum information, students work on these cases with their classmates of small group. They discuss and perform physical examination, clinical examinations, and make a diagnosis and treatment plan. The teachers facilitate students to demonstrate ability in clinical decision making. The animals are finally euthanatized, necropsied, and analysed histopathologically. Students make a case report and give a case presentation to teachers and their classmates.

5.1.9. Description of the patient record system and how it is used to efficiently support the teaching, research, and service programs of the Establishment.

Consultation data at the VTH of HU and OU are managed using a fully computerized records system, and all data (patient medical records, surgical images, diagnostic imaging) are entered into and saved on the computers. The VTHs of SCM/HU and OU are equipped with a LAN and all patient records are searchable using text queries. The patient record system for the VTH is used for education and research. Students can access the electronic medical record system at the VTH to see various test results, including imaging.

At SVM/HU, image data of biopsy specimens and patient records in the VTH have been integrated into the server of the virtual slide system to enhance clinical education and research since 2018.

At DVM/OU, bovine and equine cases encountered in the mobile clinics (for herd health and breeding management) and cases for the pathobiological diagnosis programme are recorded by each academic staff member in charge. All pathobiological diagnosis case records are stored in a stand-alone computer, and authorized students and academic staff can access them freely for educational and research purposes.

5.1.10. Description of the procedures developed to ensure the welfare of animals used for educational and research activities

We respect and follow the 3R and 5F concept for animal use in our curriculum and research activities. Students must take 'Animal Welfare' and 'Veterinary Ethics' courses as mandatory subjects in veterinary curriculum.

All activities using animals for educational and research purposes are conducted in accordance with the Guide for the Care and Use of Laboratory Animals (ILAR Guide, Institute for Laboratory Animal Research, the United States, 2011), Japanese laws, government guidelines and the university's internal regulations.
All academic and support staff and students who handle live animals are required to attend a mandatory lecture on animal welfare and animal rights in addition to animal handling techniques for animal experiments. The practices involving live animals must be evaluated and approved by the IACUC. The Subject Coordinator submits the application and must specify the important information from the animal welfare perspective, including the number of animals, level of suffering, measures implemented to reduce pain, and the end-point in order to protect the animal from unnecessary suffering. The approved application is open to the public at OU.

The animal facilities are periodically monitored and evaluated by IACUC. Introducing environmental enrichment has been promoted.

At SVM/HU, the animal facility has been accredited by the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) International since 2007. Social animal species such as dogs, mice, rats, and cattle, are group-housed and single animal housing is not permitted unless there are special scientific reasons approved by IACUC. HU reformed and expanded its playing areas for dogs in the animal facilities. People who are found to have acted contrary to animal welfare must be reported to the report desk (SOP M19).

5.1.11. Description of how and by who the number and variety of animals and material of animal origin for pre-clinical and clinical training, and the clinical services provided by the Establishment are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

The VNJ pays detailed attention to the availability of learning materials for students. The process for the use of animals and animal-derived materials for Day One Competences is as follows.

1. The International Accreditation Committee and QA Committee collect the related information on animal resources and materials, including the required number of animals and animal-derived materials, animal species used in the programme, allocation of hours, number of patients at the VTH or mobile clinic, subject content and feedback from students and faculty members. The data are collected from the IACUC, and the electronic records are held at the VTHs and by the Subject Coordinators.
2. The International Accreditation Committee and QA Committee analyse the data (e.g. number of animals and animal materials per student, hours of pre-clinical and clinical training using the animals and animal materials) and whether the data meet the ESEVT standards (requirements).
3. If there are not enough animal resources available, a

recommendation is released from International Accreditation Committee and QA Committee to the Programme Executive Board and Academic Affairs Committee.

4. The International Accreditation Committee has discussions with the relevant faculty members, departments, divisions and sections to clarify the problems (e.g. budget and staffing issues) and devises an improvement plan to address the issues.
5. The Programme Executive Board and International Accreditation Committee cooperate to implement the plan.
6. Steps 1–5 are repeated periodically. We also assess the current status whenever relevant guidelines or SOPs (national legislation, the VMMCC, EAEVE SOP, an EU Directive 2005/36/EC, and OIE's guidelines) are renewed or revised. Opinions on the use of animals from students, animal technicians and researchers are collected and sent to the IACUC. The IACUC addresses and improves the problems.

Communication within and between staff takes place at regular Faculty and Faculty Meeting, the minutes of meetings, email, analogue/electronic notice boards and seminars.

Table 5.1.1. Cadavers and material of animal origin used in practical anatomical training

Sapporo + Obihiro

Species	2018	2017	2016	Mean
Cattle	173	173	172	172.7
Small ruminants	88	88	88	88.0
Pigs	79	80	80	79.7
Companion animals	194	192	187	191.0
Equine	121	121	120	120.7
Poultry & rabbits	114	118	116	116.0
Exotic pets	21	21	21	21.0
Others (specify)	89	91	62	80.7

*Cadavers and body parts, live animals, fixed preparations, whole bone sets, plastinates, anatomical models are used.
*Others: Species: rodents, aquatic animals and a variety of wildlife species.

Table 5.1.2. Healthy live animals used for pre-clinical training *(animal handling, physiology, animal production, propaedeutic, ..)*

Sapporo + Obihiro

Species	2018	2017	2016	Mean
Cattle	149	158	152	153.0
Small ruminants	11	11	12	11.3
Pigs	13	10	10	11.0
Companion animals	42	55	69	55.3
Equine	8	22	8	12.7
Poultry & rabbits	84	83	83	83.3
Exotic pets	0	0	0	0.0
Others (specify)*	2,497	2,614	2,629	2,580.0

*Others: zebrafish (Approx. 65% of total number of others), rodents, frogs and deer.

Table 5.1.3. Number of patients* seen intra-murally *(in the VTH)*[*1]

Sapporo + Obihiro

Species	2018	2017	2016	Mean
Cattle	180	161	100	147.0
Small ruminants	6	5	2	4.3
Pigs	0	2	1	1.0
Companion animals	17,797	18,320	16,987	17,701.3
Equine	418	240	100	252.7
Poultry & rabbits	9	1	3	4.3
Exotic pets	40	4	12	18.7
Others (specify)[*2]	3	22	12	12.3

*1The number of patients is the sum of patient visits at the VTHs of both locations. HU's and OU's VTHs use different electronic medical record systems, and neither record system can extract the episodes automatically. Therefore, we show the sum of the number of patient visits in this table.
*2Others: hamster, guinea pig, reptile, ornamental fish, Japanese monkey, clouded leopard, cheetah.

Table 5.1.4. Number of patients* seen extra-murally *(in the ambulatory clinics)* *1

Sapporo + Obihiro

Species	2018	2017	2016	Mean
Cattle *2	5,975	5,830	7,589	6,464.7
Small ruminants	746	54	106	302.0
Pigs	79	35	34	49.3
Companion animals	0	0	0	0.0
Equine *2	1,021	1,320	1,232	1,191.0
Poultry & rabbits	0	0	0	0.0
Exotic pets	0	0	0	0.0
Others (specify) *3	88	355	300	247.7

*1The number of patients is the sum of patient visits at the VTHs at both locations. HU's and OU's VTHs use different electronic medical record systems, and neither record system can extract the episodes automatically. Therefore, we show the sum of patient visits in this table.
*2The number of patients has increased in the past three years. It is attributable to the increase in the number of staff members at OU's LAC and the contracted farms.
*3Others: farm fish (salmon) and ornamental fish, brown bears and wildlife and zoo animals.

Table 5.1.5. Percentage (%) of first-opinion patients used for clinical training *(both in the VTH and ambulatory clinics, i.e. tables 5.1.3 & 5.1.4)*

Sapooro + Obihiro

Species	2018	2017	2016	Mean
Cattle	99.6	98.3	98.3	98.7
Small ruminants	50.0	100.0	100.0	83.3
Pigs	100.0	100.0	50.0	83.3
Companion animals	22.8	26.7	32.7	27.4
Equine	96.3	96.7	91.2	94.7
Poultry & rabbits	62.5	100.0	100.0	87.5
Exotic pets	100.0	100.0	50.0	83.3
Others (specify)*	100.0	100.0	100.0	100.0

*Others: frogs, pet birds, hamster, guinea pigs, reptile, salmon, ornamental fish, wildlife and zoo animals

Table 5.1.6. Cadavers used in necropsy

Sapporo + Obihiro

Species	2018	2017	2016	Mean
Cattle	123	114	93	110.0
Small ruminants	22	10	10	14.0
Pigs	8	56	53	39.0
Companion animals	56	39	34	43.0
Equine	17	23	18	19.3
Poultry & rabbits	276	26	163	155.0
Exotic pets	9	1	1	3.7
Others (specify)*	50	85	86	73.7

*Others: Species: rodents, aquatic animals and a variety of wildlife species.

Table 5.1.7. Number of visits in herds/flocks/units for training in Animal Production and Herd Health Management

Sapporo + Obihiro

Species	2018	2017	2016	Mean
Cattle	759	772	743	758.0
Small ruminants	35	22	6	21.0
Pigs	20	16	21	19.0
Poultry & rabbits	3	3	0	2.0
Others	200	216	683	366.3
Equine	198	212	681	363.7
Fish farm	2	4	2	2.7

*The number of patients has increased in the past three years. It is attributable to the increase in academic staff at the LAC.

Table 5.1.8. Number of visits to slaughterhouses and related premises for training in FSQ

Sapporo + Obihiro

Species	2018	2017	2016	Mean
Ruminant's slaughterhouses*	4	4	3	3.7
Pig's slaughterhouses*	4	4	2	3.3
Poultry slaughterhouses	2	2	0	1.3
Related premises	10	10	6	8.7
Others (specify)	0	0	0	0

* OU's slaughterhouse is included.

The FSQ programme includes a visit to the slaughterhouses of pigs and poultry, which was opened in 2017.

5.2. Comments

The caseloads at the clinics have increased in the past three years (Tables 5.1.3 and 5.1.4). This is mostly attributable to the increase in clinical staff for small and large animals.

Since 2012, OU recruited a total of eight academic staff members for the LAC (six) and SAC (two) and one appointed clinical professor of equine surgeon, three veterinarians as well as five LAC support staff members to strengthen the educational and research capabilities of clinical science. These improvements have increased the number of small and farm animal and equine cases, which are adequate for our students.

There is a new contract for collaboration in education and research activities between HU and Sapporo City. HU has started a spay/neuter training at the Animal Welfare and Management Center in Sapporo since 2018.

Necropsy caseload: OU has contracts with local pig and poultry farms for the donation of diseased/dead animals for necropsy training to ensure the sufficient number of necropsy cases of these species.

Further clinical trainings for pigs and poultry at farms in Obihiro Agriculture High School is being planned under the cooperation agreement with OU. The retired hens will be donated to DVM/OU, and used for a FSQ training such as ante- and post-mortem examinations.

5.3. Suggestions for improvement

Most companion animal owners in Japan do not request necropsies for their pets. One factor is the traditional cultural belief. Accordingly, the number of necropsies for companion animals is limited (even though they are performed free of charge). Our establishment is working on increasing the number of necropsies of companion animals, but it is also using biopsy samples as teaching materials.

Standard 6: Learning resources

6.1 Factual Information (Findings)

6.1.1. Description of the main library of the Establishment:
-) staff (FTE) and qualifications
-) opening hours and days -) annual budget
-) facilities: location in the campus, global space, number of rooms, number of seats -) equipment: number of computers, number of electrical connections for portable PC available software's for bibliographical search
-) number of veterinary books and periodicals
-) number of veterinary e-books and e-periodicals
-) number of other (e)books and (e)periodicals

Sapporo

The university has two main libraries (Central library, 18,381m^2, and North library, 6,250m^2) and 17 branch libraries that belong to individual faculties. The library at SVM/HU (Veterinary Library) is one of the subsidiary libraries of HU main library, which is located on the first floor of the main building and has a reading and study room (56 m^2) that is accessible 24 hours a day. Three PCs are connected to the library databases and available for all users. Students and staff are also allowed to access the library databases via Wi-Fi/LAN using their own PC from any places on or off campus. There are two stack rooms (112 m^2 and 56 m^2) and one librarian's room (28m^2) in the library. The librarian stays in the library from 08:30 to 17:00 from Monday to Friday. On weekends and holidays and after 17:00 on weekdays, students' and the staff's entry to the library is managed by an electronic card key system connected to the student and staff ID cards.

The budget for the two main libraries and veterinary library (euros)

Year	Central Library	North Library	Vet. Library
2016	288,334.65	150,386.74	14,996.05
2017	288,823.99	155,051.30	11,838.99
2018	304,830.31	124,972.38	11,838.99

The budgets for e-journals in the last three years are 5,295,809.00 euros (2016), 4,730,634.55 euros (2017) and 4,853,985.79 euros (2018).

Central Library HP: https://www.lib.hokudai.ac.jp/en/

Veterinary Library at SVM/HU

Staff (FTE) and qualifications	1 Librarian, 9:00-17:00
Opening hours and days	24 h, unman operation 17:00-9:00 on weekdays and whole day on weekends
No. of veterinary books and periodicals	35,884 books, 1,437 periodicals
No. of veterinary e-books and e-periodicals	e-books: 338, e-periodicals: 115 (265 audio-visual materials)

Obihiro

A description of the main library at the Obihiro campus can be found on the following website: http://www.obihiro.ac.jp/en/navi-library/
Currently, the entire property of the main Library has undergone major renovation due to ageing. The new library will open in summer 2019. Meanwhile, a temporal library is set up in the lobby of Building 1.

The following description is about the previous library (2018). Brief information of the new library is described in the 'Comments' section.

There is no dedicated library for the Faculty of Veterinary Medicine; rather, the OU library is a common facility for all education units. The library is a two-storey structure adjacent to General Research Building 1 and the Lecture Building. The total floor area is 2,254 m^2. The library includes a reading room (166 seats, 425 m^2) equipped with eight bibliographic search terminals and an area for audio-visual materials, three stack rooms (first floor stack room 849 m^2, including the reading area; second floor stack room 137 m^2, third floor stack room 137 m^2), an office (70 m^2), two group study rooms (24 m^2) and a PC browsing room (16 PCs, 50 m^2).

Annual budget of the past three years, excluding personnel and building renovation and maintenance: 426,243.09 euros (2016), 424,356.75 euros (2017), 434,301.50 euros (2018). Approx. 80 % of the budget is used for the contract of e-journals and e-database and purchasing textbooks, e-books and magazines.

Online access to the licensed journals and databases is available from a computer in the library or from any place on campus (off-campus access using VPN will be available from April 2019).

6.1.2. Description of the subsidiary libraries

Sapporo

See 6.1.1.

Obihiro

There is no subsidiary library on campus. However, there are reference rooms in the SAC and LAC, and most of them are placed in the common space, allowing students access to veterinary clinical books at any time. The LAC's Reference Room 223(33 m^2) is open 24/7 and has ten seats, approx. 300 books and one PC.

OU's Library Information

Staff (FTE) and qualifications	6.84 (4 permanent & 4 part-time staff) Three permanents and two part-time staff possess a Librarian certification.	
Opening hours and days	Weekdays	Weekends
During term-time	8:30 – 21:00	09:30 – 17:30
During vacations	8:30 – 17:15	closed
Examination period	8:30 – 22:00	Sat. 09:30 – 21:00
No. of veterinary books and periodicals	212,644 books, 6,122 journals	
No. of veterinary e-books and e-periodicals	e-journal: over 23,000 titles included (Science Direct, Springer Link, Wiley Online Library, Veterinary Record, Nature, Science, ProNAS, American Chemical Society, Journal of Biological Chemistry, BioOne, other Japanese e-journals) e-book: over 3,200 e-database: Web of Science, Journal of Citation Report, JDream III, other Japanese databases	
No. of other (e) books and (e)periodicals	2,413 audio-visual materials	

6.1.3. Description of the IT facilities and of the e-learning platform

Sapporo

The chairperson of Academic Affairs Committee and one IT support staff are responsible for managing the e-learning platform. Most students use their own PCs, but two PC rooms equipped with 45 and 10 PCs, respectively, are available 24 hours a day. Wireless LAN access points for the Eduroam and university LAN cover most of the campus area. The Information Initiative Center (IIC) is responsible for the management of Hokkaido University Information Network System (HINES), which covers the whole network of Hokkaido University with a connection speed of one Gbps. The IIC provides campus-licensed software (Adobe, antivirus application, Microsoft office, statistics, mathematics, Geographic Information System and so on) to students and staff.

Obihiro

IT facilities: Information Processing Center (IPC)
http://univ.obihiro.ac.jp/~ipcenter/

There are four full-time, dedicated staff members at the IPC. As well as playing a central role in the university's education and research on 'information processing', the IPC also manages and operates the campus network system. All parts of the campus, including the office of each faculty member, laboratories, the university library, the FCASA, the VMC and the administration building are connected by optical cables, facilitating the effective, mutual use of information via the campus and off-campus network systems. A connection speed of one Gbps is supported. In addition, there are many wireless LAN access points. Therefore, it is possible to connect wirelessly in most parts of the campus.

The IPC has also concluded corporate licence agreements for various software and applications that are useful in academic research and education (such as Microsoft Office, anti-virus software and statistical analysis software), which are provided free of charge to students and faculty members wishing to use them. It helps to prevent the unauthorized use of software. The IPC is endeavouring to strengthen network security on campus.

6.1.4. Description of the available electronic information and e-learning courses, and their role in supporting student learning and teaching in the core curriculum

VNJ provides VetPortal and Glexa as learning support systems through the Internet.

VetPortal system

https://veteducation.jp/login.go?AD=init

VetPortal is a learning support system accessed via the Internet and provides academic information such as each class's learning items, schedules, notification of cancellations, lecture room changes and examination timetables. Students can download the teaching materials uploaded by their teachers.

Glexa system

HU: http://ed.vetmed.hokudai.ac.jp/
OU: http://glexa.obihiro.ac.jp

Glexa is a self-study support system developed as an e-learning platform. Faculty members can create and upload their own e-learning content and track information such as students' access frequency and test scores on Glexa to understand each student's level of comprehension. The Glexa system is managed by two full-time system engineers at HU and OU to ensure the system operates smoothly.

The list of current e-learning contents is shown in Appendix 24.

6.1.5. Description of the accessibility for staff and students to electronic learning resources both on and off campus

The staff and students can access VetPortal and Glexa on- and off-campus using their user names and IDs.

The IPC and other areas for students' PC usage at the Obihiro Campus

Room	PC	Printer	Projector	Opening hours
Training room 1	60	2	1	8:50 – 17:00
Training room 2	30	1	1	8:50 – 17:00
Training room 3	32	1	1	8:50 – 17:00
Intermedia studio	15	2	—	9:00 – 21:00
CALL room	60	1	—	8:50 – 17:00
Browsing room*	16	2	—	8:50 – 21:00
Kashiwa Plaza (community space for students)*	6	—	—	Any time

- * Students can use the PCs in these two areas at any time.
- All printers are full-colour. A 3D printer, a large-format inkjet printer (for up to B0 size), a large-format scanner (up to A0), and full-colour printers are available.
- Free delivery of licensed software (Microsoft Office), anti-virus software, SAS Foundation (statistical analysis)
- The IPC staff gives annual sessions and training on network security.

6.1.6. Description of how the procedures for access to and use of learning resources are taught to students.

Sapporo

The university and veterinary school provide instructions (classes, seminars and FD/SD) on how to use web-based learning resources and online searches in academic databases and library contents. Further, librarians provide instruction sessions upon request.

Obihiro

The procedures required to access and use the learning resources are taught at the time of enrolment. The librarians also give a tour of the library and offer periodic sessions on performing online bibliographic, e-journal and e-book searches.

6.1.7. Description of how and by who the learning resources provided by the Establishment are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

Portal Site Committee

The Portal Site Committee is one of the joint committees, which is responsible for the maintenance and improvement of the portal sites such as VetPortal and Glexa. The committee gathers the feedback from students and academic staff for the improvement of the portal sites and e-learning contents. The relevant information is communicated at the Program Executive Board, the Faculty Meeting, or on the portal sites.

Sapporo

The Science Information Committee in HU, comprising six faculty members (professors or associate professors) in various fields and a librarian, is responsible for setting the budget and policy for the selection of books, periodicals and databases. The committee periodically collects requests on learning resources from students and staff. The budget and selection policy for library contents are decided by the committee. The Education System Reform Office Steering Committee decide the policies for the revision and maintenance of e-learning contents and related devices. The decisions of these committees are approved by the Faculty Meeting and announced to faculty members and students via notices, e-mails and website announcements. The library can purchase new books upon students' requests any time within the limits of the budget.

Obihiro

The library is managed by the University Library Management Committee and consists of a library director, seven faculty members from each of the research departments, the director of the University Educational Affairs Center (CUEA) and the director of the Academic Information Office. The committee is responsible for managing the budget and improving the holdings in consideration of the stakeholders' opinions and library policy. Much of the annual budget is spent on the purchase of books and subscription fees for e-journals and databases.

A library user guide is available in both printed and online versions. The library staff regularly hold orientation classes and tours to help users. The library catalogue (online public access catalogue: OPAC) allows users to search the library's holdings. Students, faculty members and staff can submit purchase requests (for books, periodicals, e-journals and databases) through the website. There is also a suggestion box in the library where users can post their requests and comments. Users' opinions and replies from the library are uploaded to the website.

6.2. Comments

All libraries at HU and OU are open to the public. Pre-registered users from outside the university can use books and periodicals during the library's opening hours.

Main library at OU is currently under construction. The notable changes from the renovation include an increase in the space and seats of the reading area, and increase of a group study area called the "Learning Commons"

6.3. Suggestions for improvement

We are trying to create more e-learning content to support students' self-directed learning. The feedback or input from students will be collected for further improvement of the contents (later in 2019).

The physical server lifespan for Glexa is five to six years. Replacing the server is needed in FY2019.

Standard 7: Student admission, progression and welfare

7.1. Factual Information (Findings)

7.1.1. Description of how the educational programme proposed by the Establishment is advertised to prospective students

Two universities run separate admission procedures.

Information on the educational programme offered by VNJ, including the admission policy, programme outlines, future career options and campus life, are available on the websites of SVM/HU and brochures issued by each of the veterinary schools. The SVM/HU and OU also offer annual 'open campus' tours and consultation meetings in Tokyo, Osaka, Nagoya and other cities for prospective students.

The websites for prospective students are as follows:
HU: https://www.hokudai.ac.jp/admission/
OU: http://www.obihiro.ac.jp/~nyushi/index.html

Open Campus Days
Both universities provide prospective students the opportunity to meet faculty members
HU: https://www.hokudai.ac.jp/admission/about/events.html
OU: https://www.obihiro.ac.jp/navi-open

Orientation and Consultation for Admission
HU: https://www.hokudai.ac.jp/admission/about/events.html
OU: https://www.obihiro.ac.jp/briefing

Digital book of university information
HU: https://edu.career-tasu.jp/p/digital_pamph/frame.aspx?id=7500000-0-2&FL=0
OU: https://web-pamphlet.jp/obihiro/2019p/html5.html#page=1

7.1.2. Description of the admission procedures for standard students:

-) selection criteria:

General Entrance Examination ("Ippan Nyuushi")
As mentioned above, HU and OU implement admission procedures independently. After completing high school or the equivalent education, all prospective students who want to apply to SVM/HU or OU must take the National Center Test for University Admissions (hereafter referred to as the Center Test) held by the National Center of University Entrance Examinations (NCUEE).

The Center Test is divided into many subjects. The university has its own prerequisites regarding what subjects in the Center Test are required for admission. For both for SVM/HU and OU, the applicants choose seven subjects from five categories: "Japanese Language and Literature", one subject from "Social Studies (Contemporary Society, Ethics, Politics and Economics, Geography, World History or Japanese History)", one subject from "Foreign languages (English, German, French, Chinese or Korean)", two subjects from "Mathematics" and two subjects from "Sciences (Physics, Chemistry, Biology and Earth Science)".

The Center Test score is used as an indicator of the applicant's academic performance. Applicants wishing to enter SVM/HU or DVM/OU are generally required to obtain at least an 85 to 88 % score on the Center Test (the average score of all applicants in Japan is around 62-64 %).

Each university administers its own examinations after the Center Test. Two entrance examination schedules are available (Primary and Secondary). In addition to the Center Test, the scores of these examinations are used for the evaluation of applicants.

1. General Entrance Examination (Primary)
   Applicants are selected based on their Center Test scores and a paper-based entrance examination of the major subjects ('Foreign Languages', 'Mathematics' and 'Science'). Regarding 'Foreign Language', applicants to HU can choose one from four languages (English, German, French and Chinese) and only English at OU.

   Additionally, HU has unique selection procedure after enrolment, students who have passed the Humanities/Science Track Entrance Examination choose a specialized course at the end of their first year. A maximum of five applicants are selected based on their GPA and are transferred to SVM.

2. General Entrance Examination (Secondary)
   At HU, applicants are selected based their scores on the Center Test and a paper-based examination (2 science subjects from Physics, Chemistry and Biology) and an interview. At OU, applicants are selected on the basis of their scores on the Center Test, an essay and an interview.

Special admission ("Tokubetsu Nyuushi", only available at HU)
Two types of special admission are offered, the selection criteria for which follow.

1. Returnee students ("Kikoku-Shijo Nyuushi"): The two-step selection is adopted for returnee applicants. In the primary selection, the applicant is assessed based on a high school evaluation report and recommendation or essay and records of social activities. The students who pass the primary selection can apply to the second examination step. The subjects of the second selection include a paper-based examination of Physics, Chemistry and Biology and an interview.
2. Privately financed international students ("Shihi Ryugakusei Nyuushi"): A two-step screening is

adopted for applicants. In the primary screening, the applicant is evaluated based on examinations of science subjects (Physics or Chemistry and Biology), mathematics and Japanese proficiency, which are conducted by the Examination for Japanese University Admission for International Students. In the second screening, the applicant is evaluated via paper-based examinations (Physics, Chemistry and Biology) and an interview and score of English proficiency examination.

-) policy for disable and ill students:
Since the Disability Discrimination Act issued by the Japanese Government, effective 1 April 2016, HU and OU have set policy and consultation procedures for disabled or ill students applying for admission to their schools. No applicant will be disadvantaged by disability, a health condition, or a learning difficulty during the admission process. The application (admission) guidelines include information for applicants with a disability and such applicants can attend a consultation prior to applying to discuss any adjustments they may require. The relevant weblinks are:

HU: https://www.hokudai.ac.jp/admission/exam/special-assistance.html
OU: https://www.obihiro.ac.jp/handicapped

-) composition and training of the selection committee:
Composition of the selection committee:
Sapporo
The Selection Committee for the Entrance Examination of university, which consists of the president, vice presidents and deans of the faculties, is responsible for the policy of entrance examination and for approval of enrollees at the university level (Appendix 25). The Admission Center of university conducts all procedures of General Entrance Examination and Special admissions, including development of examination questionnaires, scoring, public relations for examinees. The Admission Center consists of vice president, deans / director of several departments / centers, professors and associate professors selected by dean of each faculty. The members who create questions and score the entrance examination in the Admission Center are confidentially selected.

At the SVM/HU, the Entrance Examination Committee, consisting of 15 veterinary professors, is responsible for administering the returnee student entrance examination and the entrance examination for privately financed international students (Special Admissions). The Entrance Examination Committee members are selected by dean based on their expertise and experiences.

Obihiro
The committees and organisations responsible for admission are shown in Appendix 26 and 27. The Admission Council of the University Educational Affairs Center (CEAU) consists of the director of the center, executive vice president, department chair, heads of divisions, and other professors designated by the director, assisted by the Admission Unit (for administrative purposes).

The Entrance Examination Preparation Committee convenes in April each year (ten months before the examination) and usually consists of five to seven faculty members for each examination subject. The names of the members selected are withheld to maintain fairness. The committee is responsible for devising the entrance examination questions and scoring all examination papers.

Training relevant faculty members:
The faculty members who set the entrance examination questions or interview applicants are selected by the dean and relevant committees at both locations, based on their expertise and experience with the admission process. They perform their duties in accordance with the Guidelines for the Preparation of Entrance Examinations and Interviews. The Entrance Examination Preparation Committee undertakes several rounds of discussion on the content and quality of the entrance examination questions based on the guidelines, and the chairperson summarizes the outcome of these discussions. Both universities devise and implement guidance meetings and FD/SD training for the staff responsible for providing a comprehensive overview of the undergraduate admission process as well as theoretical and practical information concerning admission procedures. In addition, an external training programme for admission is provided by the National Center for University Entrance Examination.

-) appeal process:
According to the National Center for University Entrance Examination's Guidelines for Information Disclosure, developed by the Japan Association of National Universities, no appeal process is currently available for the selection process at national universities in Japan. However, test score can be provided upon request.

・Query process for the test score
HU: https://www.hokudai.ac.jp/admission/admission-info/31-32.html
OU: https://www.obihiro.ac.jp/result-disclosure

-) advertisement of the criteria and transparency of the procedures:
All the selection criteria (i.e., allotments/ratios of scores for paper-based examinations and interviews) are available to the public on the homepage of each university and in a brochure outlining the guidelines for admission issued by each university.

・Selection criteria for the 2019 entrance examination
HU: https://www.hokudai.ac.jp/admission/exam/
OU: https://www.obihiro.ac.jp/wp/wp-content/uploads/2019/02/H31gakubu_henkou.pdf

・At OU, previous exam questions and sample answers are officially released to the public
https://www.obihiro.ac.jp/past-problems

7.1.3. Description of the admission procedures for full fee students

Not applicable. Neither HU nor OU has a category for full fee-paying students.

7.1.4. Description of how the Establishment adapts the number of admitted students to the available educational resources and the biosecurity and welfare requirements

The admission quotas for SVM/HU and DVM/OU are a maximum of 40 at each location per year. This number is determined based on Article 18-2, Chapter V in Admission Capacity of Standards for Establishment of Universities. However, both universities have a slight degree of autonomy in that they can increase their admission quotas (by approximately 5% at HU and 10% at OU) based on entrance examination results. In general, the number of enrolled students is determined by the resources of the academic staff, facilities, equipment and the other educational factors. Thus, the current facilities and welfare requirements at both locations are designed to accommodate the maximum number of students. The educational resources suffice for the current number of students.

For pre-clinical and clinical training at onsite and offsite farms, we adjust the sizes of student groups and numbers of academic and support staff in accordance with the size of each facility and the biosecurity measures of each farm to meet its biosecurity protocol.

7.1.5. Description of:
-) the progression criteria and procedures for all students:

The requirements for progression to a subsequent year of the course are strictly adhered to and students who do not fulfil these requirements may not progress to the subsequent year (detention method). The requirements are as follow:

1. Students who have obtained at least 32 general education subjects (foundation/core education) credits may progress to Year 2.
2. Students who have obtained at least 46 general education subject (foundation/core education) credits and 79 credits (limited to required subjects) in specialist subjects (development education) may progress to Year 4.
3. Students who have obtained at least 120 credits in the required subjects progress to Year 5. Students who are detained must register again to obtain their credits after the next year. The grade appeal process is described in Standard 8.1.4. There is no appeal process for progression.

-) the remediation and support for students who do not perform adequately:

Retaking examinations

Students must pass the final examination held at the end of each semester to earn credits. Failed examinations generally can be reattempted during the examination period.

Learning support system

Concerned about the stressful nature of veterinary study, we carefully monitor students' learning performance using several indicators, including the number of required credits awarded, grade points, examination scores and attendance rate. If we identify a student who is not performing adequately, the class teachers, subject coordinators and other faculty members will offer a consultation, which may be informal or formal, in which they will make supportive suggestions to enable the student to continue with his/her studies.

Students are also advised to have a meeting with the dean of the faculty, the department chair (only at OU) and/or the Chairperson of the Academic Affairs Committee, if necessary, to discuss the problem and find an appropriate solution. Students whose poor course performance is associated with an emotional/mental or physical problem are encouraged to attend counselling with the doctors and counsellors on campus. If there are technical problems contributing to their inadequate academic performance, the students can receive peer learning support as described below.

Both universities have a learning support section.
HU: http://asc.high.hokudai.ac.jp/
OU: http://www.obihiro.ac.jp/~cea/ (Appendix 27)

These sections provide various services for students who have problems with learning. They can receive advice from tutors (senior undergraduate or graduate students), take seminars on study and academic skills, and have supplementary lessons and counselling. Student can also receive advice from more senior students in a peer support room. In addition, there is a student counselling room is available.

Office for Students Disability
https://www.obihiro.ac.jp/study-support
Office for Student Counseling:
https://www.obihiro.ac.jp/navi-student-counseling-room

-) the rate and main causes of attrition:

Over 95 % of students complete their courses of study. The main causes of attrition in the remaining five % are incomplete acquisition of the required number of credits or personal issues, which may be mental, physical, or financial.

-) the exclusion and appeal procedures:

Students are allowed a maximum of 12 years to complete their 6-year programme (maximum of two years for year 1, four years for years 2–3, two years for year 4 and four years for years 5–6). Students who cannot complete the full course in 12 years must leave the school. Students who cannot proceed to the next grade are notified of the maximum period for which they can remain in the course. Students who do not pay their tuition fees for two consecutive semesters are expelled from the university. From April 2019, students who do not pay their tuition fees for one semester will be expelled from HU. The Programme Executive Board makes the decision regarding an exclusion and its decision must be approved

by the VNJ *Council*. There is no system for appealing an exclusion.

-) the advertisement to students and transparency of these criteria/procedures
All criteria/procedures are explained to students at the year 1 orientation. Students can access all relevant information at any time either on the website or in the student handbook provided by each university.

7.1.6. Description of the services available for students (i.e. registration, teaching administration, mentoring and tutoring, careers advice, listening and counselling, assistance in case of illness, impairment and disability, clubs and organisations, ..).
Various services are available for veterinary students at HU and OU. Students are informed of these services via several channels, including the student handbook, notice boards, e-mails, websites, SNS, guidance/year 1 orientation and consultations.

Support for registration and teaching administration
Students have opportunities to attend an orientation and guidance programme to learn how they should approach the subjects required to complete the veterinary education programme. The class teachers and support staff of the academic affairs section/unit can help students to understand the class subject registration process. There is also a counselling room where students can discuss their problems with various aspects of life on campus. Both universities also have peer support rooms for learning, as described above.

Career support
The Career Center at each university undertakes: 1) dissemination of information; 2) consultation concerning job hunting (including a critique of resumes, mock interviews and career counselling); 3) job hunting seminars, 4) guidance on attending company research seminars; and 5) support for participation in an internship.

Health care service
There is the Health Care Center at each university (comprised of six doctors, one dentist, three clinical psychologists and two nurses at HU and one doctor and two nurses at OU) to support the health of students and staff. The services available include counselling on nutrition and first aid. Both universities have a counselling room (staffed by two doctors, one nurse and five counsellors at HU and by two counsellors at OU). They manage any emotional or personal problems students may experience in relation to their courses of study or everyday student life. All students are required to enrol in a student health insurance plan offered by the universities at a reasonable fee to cover any injuries or accidents that may occur during the programme.

Support services for students with special cares
Students who need special support (e.g. for specific learning difficulties, physical and mental disabilities, or autism spectrum disorder) can consult with the staff at the Office for Students with Disabilities (OSD) at both universities. These offices facilitate services and implement reasonable adjustments to provide equality of educational opportunity for all students, in cooperation with the relevant sections and health care and counselling staff.

FD/SD content on the latest information and skills to support students with special needs are provided for academic and support staff to update their knowledge.

For students in financial difficulty, the both universities provide a 25, 50, or 100 % waiver of tuition fees providing that they maintain an excellent academic record (25% waiver is not available in OU). Information on scholarships for domestic and international students are also available on the notice boards on campus, by e-mail and on the websites. Students who wish to obtain more information about these services should consult with the staff in the Academic Affairs Section and Student Services Section.

Clubs and organisations
At least 50 student clubs, organisations and groups are officially recognised by each university and cover sports, Japanese martial arts, traditional Japanese arts, music, dance and recreation. The Office for Student and Extracurricular Activities in Student Services Section in Academic Affairs at both universities deal with extracurricular activities for students. At least one academic staff member works as an advisor for each club. Club leaders are required to attend accident prevention seminars held at each location. Students who belong to clubs/organisations/groups should take an insurance plan to cover injuries or accidents during activities.

Other services
Dormitories, dining halls, university shops, club buildings with rooms and sports facilities for extracurricular activities, are available at both universities. Lodging and Learning Facility "Akkamui" is available at OU to accommodate HU students who have clinical rotation at OU.

7.1.7. Prospective number of new students admitted by the establishment in the next 3 academic years
The prospective number of new veterinary students at each university will be 40 for the next three years. Given that the number of applicants has been four to eight times the enrolment limit for the past three years, we expect to fill the admission quota.

7.1.8. Description of how and by who the admission procedures, the admission criteria, the number of admitted students and the services to students are decided, communicated to staff, students and stakeholders, implemented, assessed and revised.
The committees related to admission matters are shown in Appendix 5 and 25 (HU) and Appendix 6 and 26 (OU).

Planning, decision and approval of admission procedures
The Entrance Examination Committee and Admission Section at each university are responsible for drafting a plan of the admission procedures annually. The proposal

is discussed at the Faculty Meeting (SVM/HU) or Admission Council (OU) and approved by the president at each university.

Communication with students, staff and stakeholders
Approved admission procedures are communicated to academic and administrative staff in faculty and staff meetings, by notice, minutes, e-mail and FD/SD seminars.

As described in 7.1.1, information on admission procedures is open to the public. Applicants and prospective students can address their questions directly to the Admission Section by e-mail or telephone. A list of frequent questions and answers is available on the universities' websites.

Implementing, assessing and revising admission procedures
Implementation: The Admission Council and Admission/Academic Affairs Section are responsible for the implementation of admission procedures. The entrance examination is administered at each university by professors and support staff who are directed by the presidents of each university.

Assessment and revision: Admission procedures and criteria are reviewed by the relevant committees and approved by a faculty meeting at each location. The admission guidelines are reviewed annually and are open to the public via brochures and the university websites.

The selection process (including examination questions) and selection criteria are reviewed at least twice a year by the Test Development and Selection Committee for the Entrance Examination at each university and the Entrance Examination Committee at each veterinary school. They ensure that students are selected appropriately and improve or modify the process if necessary.

On the basis of the information on students' progress and learning outcomes, provided by the Academic Affairs Section and the Institutional Research Office, the review meeting of admission procedures analyses the adequacy and effectiveness of the admission procedure and recommends revisions as necessary.

Service to students
The Student Affairs Committee collects students' requests concerning academic services at the annual meeting with student representatives. Students can also post comments in a request/comment box. On the basis of students' feedback, the Academic Affairs Committee and the Student Affairs Committee assess and review the academic services, changing or improving them as necessary. If services are revised, the information is provided in the student handbook, on the notice board, by e-mail, on the university websites and via the VetPortal (see Standard 7.1.6).

Table 7.1.1. Number of new veterinary students admitted by the Establishment

Type of students*	2018	2017	2016	Mean
Standard students (SVM/HU)*2	35	37	37	36.3
Standard students (DVM/OU)	40	40	40	40.0
Total	75	77	77	76.3

*There are no full fee-paying students

*2 SVM/HU selects a maximum of 37 students as First year students through the entrance examination. Five students from the Humanities/Science Track will join SVM in the second year.

Table 7.1.2. Number of veterinary undergraduate students registered at the Establishment

Sapporo + Obihiro

Year of program	2018	2017	2016	Mean
First year	75	77	79	77.0
Second year	83	82	87	84.0
Third year	87	86	89	87.3
Fourth year	85	96	83	88.0
Fifth year	91	82	79	84.0
Sixth year	85	70	91	82.0
Total	506	493	508	502.3

The number of students is the sum of those at the HU and OU veterinary schools

Table 7.1.3. Number of veterinary students graduating annually

Type of students*	2018	2017	2016	Mean
Standard students (HU)	38	38	39	38.3
Standard students (OU)	44	32	42	39.3
Total	82	70	81	77.6

*There are no full fee-paying students

Table 7.1.4. Average duration of veterinary studies

Sapporo + Obihiro

Duration	Number of the students who graduated on AY2018		
	HU	OU	Total
+0**	34	32	66
+1 year	4	10	14
+2 year	0	1	1
+3 year or more	0	1	1

Table 7.1.5. Number of postgraduate students registered at the Establishment*

Sapporo

Programmes	2018	2017	2016	Mean
Interns	10	12	13	11.7
Residents	3	5	4	4.0
PhD students	112	107	102	107.0
Others (research students)	9	11	1	7.0

Research students

Obihiro

Programmes	2018	2017	2016	Mean
Interns	3	2	6	3.7
Residents	2	2	1	1.7
PhD students	3	19	12	11.3
MsC students	9	13	19	13.7
Special research students	14	14	8	12.0
Clinical trainee	0	1	1	0.7

* The tables are shown separately as postgraduate education at each location is not jointed.

7.2. Comments

The use of interviews as a part of the entrance examination ensures that students are selected according to suitability, knowledge and motivation for a career in veterinary science. The ratio of students who graduate from veterinary school has exceeded 97 % in the past five years, which is high in comparison with other departments at the universities. This excellent result can be attributed to the high performance of our students and the supportive guidance by teachers and staff during the programme.

HU established the Student Advice and Counselling Center in 2018, to integrate existing support systems (general counselling in Japanese and English, peer support system by senior students, health care, learning support, special assistance for disable students). In addition, to enhance the accessibility for disable students, HU set up the Accessibility Services Office in the center.

At OU, special admissions for returnees, privately financed students, recommended students and transfer applicants were discontinued from 2019. This is in response to the findings of a review of current admission procedures that indicated unsatisfactory learning outcomes for students who enrolled via these routes. The admission procedures will be modified with the aim of attracting more qualified applicants.

7.3. Suggestions for improvement

We will enhance a proactive advising culture to facilitate students' success. By identifying early signals from students who are potential retention risks, we would like to support them in proactive ways to intervene with students before they ask for help, provide solicitous support, and give solution options for their success.

Standard 8: Student assessment

8.1. Factual Information (Findings)

8.1.1. Description of the global student's assessment strategy of the Establishment

Students' achievement in each subject is evaluated by a subject coordinator using the following strategies: paper- and web-based and oral examinations, an oral presentation for a summative assessment, written essays/reports, interviews, learning logbooks, quizzes, small tests, multiple-choice tests and homework through e-learning systems (Glexa) for formative assessment.

Students are graded/credited based on the GPA system (detail in 8.1.4). Further, the VNJ education programme sets three barriers (minimum requirement for credits) allowing students to progress to the next year, i.e. one for entering the 2nd year, one for entering the 4th year, and one for entering the 5th year. These barriers ensure that students obtain the required competences before advancing to the clinical rotation. The VCAT provides a summative assessment of students' theoretical knowledge and basic skills in pre-clinical training. The tests are held in June of Year 5, and those who pass the tests can participate in clinical training at the VTH or mobile clinic.

For Year 5 and Year 6 students, a compulsory research-based training programme (tutorial research) is provided in which students acquire skills in basic and advanced research methods/techniques and scientific writing, presentations and discussion, culminating in a submitted thesis. The outcomes of their research-related performance tasks are evaluated by a supervisor and sub-supervisors.

At the end of Year 6, students take the national board examination, which is administered annually by MAFF, and each successful examinee is granted a veterinary licence. The examination pass rate is used as one of the indicators to assess the students' learning outcomes.

8.1.2. Description of the specific methodologies for assessing:

-) theoretical knowledge;

Almost all examinations on lectures for core curriculum content and other topics are evaluated by the subject coordinators, according to the results (scores) of course examinations (paper-based or web-based), written reports and the oral examination.

-) pre-clinical practical skills;

Preclinical practices are evaluated by the subject coordinators, according to results (scores) of course examinations (paper-based or web-based), written reports, the oral examination, presentations and practical tests.

-) clinical practical skills

All students proceeding to clinical rotation must pass the VCAT. During the rotation at the VTH or mobile clinic, students' clinical skills are evaluated by faculty members based on the basic skills listed in clinical logbooks, case log and the competences evaluation record (Appendix 16a, 16b, 16c). The quality of submitted case reports/presentations are also evaluated by clinical professors.

8.1.3. Description of the assessment methodology to ensure that every graduate has achieved the minimum level of competence, as prescribed in the ESEVT Day One Competences *(see Annex 2)*

We employ the following assessment methods to ensure the acquisition of the ESEVT Day One Competences.

Knowledge-based assessment

As described in 3.1.9, and 8.1.1, a paper-based and computer-based examination, an e-learning content, written reports, an oral examination, or an oral presentation is used for summative assessment of student learning outcome.

Clinical competences

Students use a logbook (Appendix 16a), case log (Appendix 16b) and a self-evaluation record (Appendix 16c) in clinical rotation in order to clarify the acquisition of the specific competences including the ESEVT Day One Competences. The logbook and self-evaluation sheet motivate students for the acquisition of clinical competences in a proactive way. Their personal records must be submitted to the Subject Coordinator for objective evaluation of the achievement of the Day One Competences by each student. This is also important for quality assurance of assessment of learning outcomes.

Competency qualification examination at national level

As described in 8.1.1, all veterinary students must take and pass two national level examinations to obtain a veterinarian licence, i.e. the VCAT prior to participating a clinical rotation at Year 5, and the national examination for veterinary licence.

8.1.4. Description of the processes for:

-) ensuring the advertising and transparency of the assessment criteria/procedures;

Students can access the relevant information at any time in the online syllabus system or the student handbook.

-) awarding grades, including explicit requirements for barrier assessments;

Evaluations have 11 grades based on the GPA system (A+, 100–95; A, 94–90; A-, 89–85; B+, 84–80; B, 79–75; B-, 74–70; C+, 69–65; C, 64–60; D, 59–50; D-, below 49; F, no evaluation). A+ to C grades signify the student "passed" and receives the credits. The minimum requirements (skills, knowledge) are set for each subject, as stated in the course syllabi (Appendix 13), and students who have completed only the minimum requirements will receive a

"C". Students who are assessed as D, D-, or F fail the subject.

-) providing to students a feedback post-assessment and a guidance for requested improvement;
Students can confirm their credit completion status at any time via the online student service system.
The guidance for unsuccessful students is described in Standard 7.1.5. Their academic records are also sent to parents or guardians.

-) appealing:
Students can appeal the grades/credits they receive within the term of an appeal period (approximately one week) at the end of each semester. The appeal process is shown in Appendix 28. Initially, the student should appeal to the subject coordinator in the event of any concern about their examination results, and early resolution is generally made at this level. If the discussion is not satisfactory, the student should complete an appeal form and submit it to the SVM/HU dean or CUEA (OU), who then organizes a meeting of the Appeal Examination Board, consisting of the dean, the chairperson of the Academic Affairs Committee, chairperson of the Student Affairs Committee and the subject coordinator, who review/examine and respond to the appeal.

8.1.5. Description of how and by who the student's assessment strategy is decided, communicated to staff, students and stakeholders, implemented, assessed and revised
The student's assessment strategy is discussed and proposed by the Academic Affairs Committee and then finalized and approved by the Programme Executive Board. It is shared with all faculty members at a local faculty meeting and joint FD, and the relevant documents are electronically distributed to each member. The course requirements and components of assessment are described in the syllabus. The term of appeal is explained to students in an e-mail from the Academic Affairs Section at the end of each semester. Once a year, the subject coordinators review the course syllabi, including course content and requirements, to consider the results of the learning outcomes and students' feedback. The Academic Affairs Committee revises the assessment strategy, if required, based on opinions and complaints from students, faculty members, the Academic Affairs Section and stakeholders.

Students' class/course evaluations are used as a tool for improving educational standards. The results of the evaluations are released to each subject coordinators. The replies from teachers are disclosed on online portal sites, such as VetPortal.

8.2. Comments

At OU, an online class/course evaluation system is being introduced and is convenient for students.

The pass rates for the national examination for a veterinary licence vary from year to year. The average of pass rates for VNJ students in the past 5 years are 83.5% in DVM/OU and 90.8% in SVM/HU, respectively.

8.3. Suggestions for improvement

Since we revised "VNJ Day One Competences List" for the new 2019 curriculum, we need to develop and introduce a suitable method for evaluation of each student's acquisition status of Day One Competences. We should consider "Entraustable Professional Activity (EPA)" based evaluation. E-portfolio with rubrics will greatly aid student's self-assessment of their acquisition status of Day One Competences.

Standard 9: Academic and support staff

9.1. Factual Information (Findings)

9.1.1. Description of the global strategy in order to ensure that all requested competences for the veterinary programme are covered and that staff are properly qualified and prepared for their roles

Because personnel affair issues operate in different ways at each university, the relevant factual information for each location is described separately.

Sapporo (Academic staff list is available in Appendix 29)
In most of the cases of academic staff recruitment, the applicants are required to have veterinary licence and PhD degree. Academic staff are selected for their educational history and performance as well as their research achievements. In the recruitment of academic and veterinary staff in VTH, the applicants should have veterinary licence. Applicants having a veterinary specialist certification are highly evaluated for the employment. The general criteria for selecting academic staff is described in the following website: http://www.hokudai.ac.jp/jimuk/reiki/reiki_honbun/u010RG00000500.html

The SVM/HU dean makes draft strategic plan for the recruitment under a careful deliberation at the Faculty Steering Committee. Then the Faculty Meeting approves the recruitment of academic staff and discusses on it at the Faculty Steering Committee and the Faculty Meeting. Faculty Meeting approve the recruitment of academic staff (see 9.1.2). Newly employed academic staff need to attend the training courses relevant to their job focusing on biosecurity, animal experiments, proper handling of chemical reagents, radiation safety and recombinant DNA experiments, which are offered by the university and/or SVM/HU. New academic staff can obtain the basic knowledge and teaching skills via workshop, FD, seminar and e-learning. The university selects "Excellent Teacher" and "Excellent Syllabus" every year. The information is opened to all academic staff including junior professors to improve the educational skills and knowledge. The class evaluation by students should be done in the end of every class and can be used for the improvement of the class by the academic staff.

Obihiro (list of academic staff is shown as Appendix 30)
The formal recruitment process of the university is described in 9.1.2. and 9.1.3.

Applicants for the veterinary education as academic staff are mostly required to have a veterinarian licence and PhD. At present, all faculty members have PhD. All permanent academic staff of DVM/OU have a veterinary licence. The applicants for the VTH must have veterinarian licence. Applicants having a Japanese or American/European specialization have a great advantage for appointment. Prospective staff are selected upon their research/clinical and educational background as well as good Curriculum vitae.

New staff members must attend an orientation for new employee that is held to welcome them and to give necessary information for performing a new job successfully as rapidly as possible.

Training courses of biosafety, animal experiments and animal welfare, information literacy and information technology are provided by the university twice a year. Guidance of biosecurity of university farm and the VTH are given prior to use these facilities.

There are two methods to qualify the teaching competences of academic staff: students' survey and the annual polyphyletic performance measurement (detail in 9.1.4). Students' feedback is a valuable source to identify the problems and promote continuous improvement. Class evaluation by students is collected at the end of the semester. The summery report of the evaluation is released by the Academic Affair Section. Teaching staff members utilize the class evaluation for further improvement. The executive board assesses the qualifications of present academic staff using the annual polyphyletic performance measurement. The information is used for university's QA strategy.

The CUEA provides Faculty Development/Staff Development seminars/workshops of didactic and pedagogic training, good assessment practices, and student welfare issues.
All academic staff members including new employee are encouraged to participate in these workshops/seminars. The CUEA also provides "Open Class" to teaching staff. The model lectures are selected from the classes that have a good reputation from students. It is recommended that academic staff members attend these lectures for their self-improvement.

9.1.2. Description of the formal programme for the selection, recruitment and training to teach and assess students (including continuing education) of the academic staff

Sapporo
Based on the strategic plan, SVM/HU has increased the number of staff members for small animal clinics to enhance HU's strengths in educational resources for its involvement in the VNJ programme. According to this plan, the SVM/HU dean decides the number of staff members needed to replace or strengthen the field of education or support. SVM/HU dean is responsible for deciding the number and positions of academic staff. Members of ad hoc committees for recruiting academic staff (consisting of the SVM/HU dean and professors, associate professors and lecturers) are selected and approved at the Faculty Meeting. The committee decides on the recruitment criteria, including a veterinary licence and PhD degree and the schedules of employment. The recruitment information for academic staff is available internationally. The committee selects prospective staff

members from each year's candidates using their application forms, essays on their motives, educational/clinical career experiences, skills, awards and research archives. The committee reports the results of the selection at the Faculty Meeting, where they are approved.

New academic staff members are expected to join an orientation training course and an FD/SD seminar to obtain the basic knowledge necessary for the job. The university and the faculty conduct seminars and provide e-learning materials on general risk management, biosafety, animal experiments, proper handling of chemical reagents, radiation safety and recombinant DNA experiments. The university and the faculty also offer opportunities to visit classes conducted by faculty members who have strong teaching capabilities so that the new staff members can learn teaching skills. New staff can also attend seminars on building educational technique skills.

Obihiro
OU's labour regulations:
https://education.joureikun.jp/obihiro/act/frame/frame110000125.htm
OU's selection policy and regulations:
https://education.joureikun.jp/obihiro/act/frame/frame110000107.htm

The chairs of all departments, centers and institutes to submit personnel plan every year. The president and the executives deliberate the resulting plan and decide the personnel planning for the entire university every year. According to the plan, the president orders the executive vice president to convene an ad hoc selection committee to appoint an academic staff member. The ad hoc selection committee consists of the executive vice presidents, two professors from the same scientific field as the candidate and two professors from different scientific fields. The committee prepares the entrance requirement lists and recruits academic staff internationally in the Executive Vice President's name. The committee then chooses candidates from among the applicants according to their research achievements, educational experience, proposals for research projects and teaching at OU and letters of recommendation. The committee conducts interviews with the candidates and, if necessary, requests that they submit a mock lesson plan. The committee finally selects a candidate and nominates her/him to the Education and Research Council. The new academic staff member is balloted at the next meeting of the Education and Research Council.

9.1.3. Description of the formal programme for the selection, recruitment and training to perform their specific duties (including continuing education) of the support staff

Sapporo
The selection policy for support staff can be found at:
http://www.hokudai.ac.jp/jimuk/reiki/reiki_honbun/u010RG00000447.html

Applicants for HU support staff positions must pass a first-round document review, a job-site visit (technical staff only) and an interview. Candidates are selected based on their personality and skills.

HU conducts a general orientation to obtain the necessary knowledge needed for the task and provides the relevant materials for new support staff to train them in specific knowledge and skills. Support staff also acquire such information through the guidance of academic and other support staff, and the universities provide periodical SDs for support staff.

Obihiro
Every year the dean and the chairs of all departments and centers related to VNJ education draft a plan for the recruitment of supporting staff and submit it to the president. The president then deliberates on it, with the executives of the Education and Research Council, and informs the dean and the chairs of the departments. Each department chair prepares a requirement list with her/his colleagues and recruits candidates through the Public Employment Security Office. Each department chair and her/his colleagues examine the applicants' documents minutely and choose candidates from among the applicants. They interview the selected candidates carefully to evaluate whether they are sufficiently capable of supporting VNJ. New and junior support staff are instructed by the senior academic staff. The academic staff hold development workshops as necessary.

The dean and the department chair requests a budget to hire support staff. The selection and recruitment of support staff are carried out by the faculties in each department/division. The academic staff is responsible for educating, verifying the qualifications of and mentoring supporting staff so that they can perform their specific duties, mainly through on-the-job training. The universities also provide periodical SD seminars for support staff.

9.1.4. Description of the formal programme for the appraisal, development, promotion criteria and procedures, supporting and mentoring of both academic and support staff

Sapporo
The president releases a formal programme for the annual appraisal of academic and support staff.

The university and veterinary school provide various FD/SD seminars for their staff, such as the development of English abilities, education, leadership and management skills, research ethics and grant application techniques and on research activities (experiments for recombinant DNA, animal, radiation, chemical reagents and biosafety).

Academic staff who are contracted as employees in the annual salary system are evaluated every year by the SVM/HU dean on the following items: education, research, contribution to society, the management of faculty and the university and clinical work. The SVM/HU dean submits the results of these evaluations to the

evaluation committee, which then reviews, decides on each evaluation and sends the results to the president. The president makes final decision on the evaluation of academic staff and the results are reflected in each employee's salary.

The evaluation criteria and procedure are described here: http://www.hokudai.ac.jp/jimuk/reiki/reiki_honbun/u010RG00000823.html#e000000177.

The criteria and procedure for academic staff not contracted in the annual salary system are based on HU's 'Basic Policy of Evaluation System for Academic Staff'. Academic staff members are evaluated annually by the SVM/HU dean and their activities pertaining to education and research, contribution to society, the management of faculty and university and clinical work are comprehensively evaluated. The SVM/HU dean reports the result to the president and evaluation results are reflected in each employee's salary.

The formal promotion criteria and procedures for support staff can be found at http://www.hokudai.ac.jp/jimuk/reiki/reiki_honbun/u010RG00000542.html#e000000042.
Skills, punctuality, planning ability, positive attitude and capacity for improvement, cooperativeness, responsibility, management ability, leadership, reliability, honesty, creativity, expressiveness, problem-solving skills, knowledge, mental resilience and comprehension are evaluated by the General Secretary. Support staff are also interviewed by the General Secretary every year. Promotions are decided based on the comprehensive evaluation and results of the interview. The president receives the result of the evaluation report from the General Secretary of the veterinary school and approves the promotion of support staff.

Obihiro
The formal process for the appraisal and promotion of academic staff is described here: http://www.obihiro.ac.jp/~joureisv/JoureiV5HTMLContents/act/print/print110000107.htm
In brief, all academic staff members must submit two documents every year: a self-evaluation report and an evaluation sheet called "the polyphyletic performance evaluation sheet" describing their activities in teaching, research (acquired grants and publications), administrative or management duties and social contributions. The Executive Office determines the appraisal and promotion of academic staff according to their educational performance and research achievement based on these documents. Recommendations by the department chairs are also considered.

The support staff of administrative sections are evaluated by their chiefs or department chairs twice a year based on the performance evaluation form submitted by each staff member.

For newly appointed staff, the Human Resources Section arranges an ID card and the network access on the first day. The university offers a freshman orientation, which provides important information, including the university's mission, policy, organisational structure and university tours. In the orientation, academic matters, information security are discussed and library tours given.

There is no official mentoring system for staff, but junior academic staff members are generally mentored by senior professors from the same laboratory or from closely related disciplines. Senior professors support new members of staff as they familiarize themselves with their roles in order to work effectively and efficiently in the new environment.

The university also provides various FD/SD programmes to improve their teaching and research capabilities.

9.1.5. Description of the formal rules governing outside work, including consultation and private practice, by staff working at the Establishment

Sapporo
Approval for external appointments or contracts must be obtained in advance. Staff who deal with outside work, such as lecturers, consultants and governmental committee members, should apply to the SVM/HU dean. The dean will approve a request if the objective and conditions of the external work satisfy the rules: https://www.hokudai.ac.jp/jimuk/reiki/reiki_honbun/u010RG00000466.html. The outside work should not disturb the work of the university and must not constitute any conflicts of interest.

Obihiro
Regulation for outside work: https://education.joureikun.jp/obihiro/act/frame/frame110000123.htm

Full-time faculty members are compensated for contributing their professional effort full-time to the University. On the other hand, the university recognizes that, through consulting and other associations with the government, industry and other bodies outside the University, its faculty members can make valuable contributions off-campus while enhancing their expertise in their disciplines. A faculty member must submit a written application (Form 2) for any outside work to the Human Resources Section before engaging in such work. The university will approve or deny such applications depending on the nature and public interest of the outside work.

9.1.6. Description of the formal programme of the Establishment for the assessment of teachers by students and its outcome

The VNJ has a course evaluation system based on student input. In paper-based (SVM/HU) or web-based (DVM/OU) systems, students can comment anonymously on teachers' performance and the contents of the subjects/course at the completion of each semester. The results of the student evaluations are released to each subject faculty member and used as a tool for education improvement.

9.1.7. Prospected number of FTE academic and support staff of the veterinary programme for the next 3 academic years

Sapporo

The number of FTE academic and support staff has increased gradually over the last 10 years due to the subsidy, competitive grants for research and education, and hospital income. The numbers of FTE will increase in next three academic years because the VTH will employ five more assistant professors.

Obihiro

We will maintain the current FTE number of academic and support staff. Recruitment plan for faculty members will be decided based on the expected number of retirement faculties for the next three academic years.

9.1.8. Description of how and by who the strategy for allocating, recruiting, promoting, supporting and assessing academic and support staff is decided, communicated to staff, students and stakeholders, implemented, assessed and revised

The two universities have different processes.

Sapporo

The dean deliberates the personnel plan based on the approved strategic plan to the Faculty Steering Committee that consists of the dean, vice dean, VTH director, department chairs, and several professors designated by the dean. The dean has also established a consulting working group with early career academic staff members to collect idea and opinion from the young generation. Incorporating opinions and suggestions from the VNJ Advisory Panel constituted by external stakeholders and student representatives, the Student Union, as well as feedback from students, academic and support staff, the Faculty Steering Committee prepares the draft of the strategy by cooperation with relevant committees in the faculty depending on the subjects. The strategy for personnel plan is finalized through discussion at the Faculty Meeting and finally implemented. The strategy is explained to all the academic and support staff at the FD/SD meeting, and students at the Student Committee and/or ad hoc student briefing if required.

Obihiro

The formal recruitment process of the university is described in 9.1.2. and 9.1.3. The university's personnel strategies for academic and support staff are communicated at the Management Committee consisting of president, executive vice presidents, director general of administrative bureau, external executive director, dean of the VNJ and seven external stakeholders. Personnel plans are also informed to all staff through meeting minutes, or at the Faculty Meeting. Recruitment information is published on the university's websites, advertisement on related journals and websites. The president and the executives evaluate all academic staff with annual achievement report, and the polyphyletic performance evaluation sheet (as described in 9.1.4.). Students' feedback, such as class evaluation by students, is utilized to identify the problems and promote continuous improvement of teaching staff members.

Table 9.1.1. Academic staff of the veterinary programme**

Sapporo + Obihiro*

Type of contract	2018	2017	2016	Mean
Permanent (FTE)	80.00	82.00	84.00	82.00
Temporary (FTE)	37.00	39.00	36.00	37.33
Interns (FTE)	11.03	12.84	12.06	11.98
Residents (FTE)	3.00	5.00	4.00	4.00
PhD students (FTE)	10.10	10.57	11.35	10.67
Veterinarians (FTE)	6.70	4.14	2.39	4.41
Others (specify)	0.00	0.00	0.00	0.00
Total	147.83	153.55	149.80	150.39

*Staff members of DVM + FCASA

Table 9.1.2. Percentage (%) of veterinarians in academic staff

Sapporo + Obihiro*

Type of contract	2018	2017	2016	Mean
Permanent (FTE)	82.62	83.04	84.53	83.40
Temporary (FTE)	87.73	85.84	84.11	85.89

*Staff members of DVM + FCASA

Table 9.1.3. Support staff of the veterinary programme

Sapporo + Obihiro

Type of contract	2018	2017	2016	Mean
Permanent (FTE)	45.00	47.00	45.00	45.67
Temporary (FTE)	101.62	95.77	90.71	96.03
Total (FTE)	146.62	142.77	135.71	141.70

Table 9.1.4. Research staff of the Establishment

Sapporo + Obihiro

Type of contract	2018	2017	2016	Mean
Permanent (FTE)	0.00	0.00	0.00	0.00
Temporary (FTE)	30.69	26.59	21.33	26.20
Total (FTE)	30.69	26.59	21.33	26.20

9.2. Comments

The dean, vice dean and heads of veterinary-specific departments/centers/divisions/committees are all veterinarians.

Additional staff members are recruited to clinical science departments in response to expanding clinical education in new curricula, which increases the number of patients seen intra- and extra-murally and thus the opportunities to expose students to larger numbers of cases.

DVM/OU has employed three more veterinarians to operate the 24/7 horse clinic service in 2018. SVM/HU has decided to employ a total of five assistant professor to operate the 24/7 clinical service and to enhance education function at the VTH. Two have been appointed from April 2019 and the recruiting process has completed for the remaining three and the date of their arrival is being adjusted.

9.3. Suggestions for improvement

At SVM/HU, the class evaluation by students is done by a paper-based questionnaire form. The recovery rate of the form is around 90 %. Now an online questionnaire system is planned to be established. An FD committee is responsible for analysing the data from the students.

Both universities have a sabbatical leave programme for permanent faculty members who have completed seven or more years of full-time service. However, it has not been utilized effectively due to the lack of a backup system for absent staff. Establishing a support system to enable academic staff to engage in intensive study would improve their teaching and research competencies, which would enhance their services to their establishment.

Standard 10: Research programmes, continuing and postgraduate education

10.1. Factual Information (Findings)

10.1.1. Description of how the research activities of the Establishment and the implication of most academic staff in it contribute to research-based undergraduate veterinary education

All academic staff members are involved in their own research projects and publish their research in scientific journals continuously. Research activities (e.g. lists of publications) of both universities are also available in annual reports and on the following websites and Appendix 31 (SVM/HU) and 32 (DVM/OU).

SVM/HU:
https://www.vetmed.hokudai.ac.jp/about/detail/report/
DVM/OU: https://www.obihiro.ac.jp/wp/wp-content/uploads/2018/12/kenkyu.pdf

Undergraduate students must write a graduation thesis through the Tutorial Research (6 credits), Seminar in Research and Clinic and Advanced Seminar (4 credits). Students become involved in the research activities under the supervision of academic staff to complete their graduation thesis. Students are required to pass their theses presentation. Students are encouraged to present their research outcomes at scientific conferences and/or in scientific journals.

10.1.2. Description of how the postgraduate clinical trainings of the Establishment contribute to undergraduate veterinary education and how potential conflicts in relation to case management between post- and undergraduate students are avoided

More than half of the postgraduate students are employed as teaching assistants and are involved in undergraduate education, particularly in subjects involving experimental practice. Interns/residents and postgraduate students majoring clinical sciences are also actively involved in the clinical rotations of undergraduate students. The VTH academic staff members are responsible for case management and avoiding conflicts between the postgraduate and undergraduate education programmes. Although not all clinical cases are officially divided between trainees/PhD students and undergraduates, the common cases are used to train undergraduate students, while the rare cases are reserved for postgraduate clinical training.

10.1.3. Description of how undergraduate students:

-) are made aware of the importance of evidence-based medicine, scientific research and livelong learning;

Evidence-based medicine is an integral part of our veterinary curriculum. We believe that student involvement in evidence-based research is important for making future scientists and veterinary professionals. All students in Years 5 and 6 must include research activity in their thesis papers. This experience encourages students to cultivate competencies in critical thinking, assessment of evidence and careful observation. These competencies are required when making critical decisions about individual cases and evaluating published papers and case reports.

Undergraduate students can learn the importance of evidence-based medicine in clinical training via case studies, including a pathobiological diagnosis programme. Similarly, students can learn to appreciate the significance of scientific research by undertaking laboratory work for their graduation theses. Extramural works, such as an internship, also provides opportunities for understanding the importance of lifelong learning.

-) are initiated to bibliographic search, scientific methods and research techniques, and writing of scientific papers;

In VNJ, undergraduate students learn how to perform a bibliographic search, acquire scientific method and research techniques and write scientific papers in the course of their research work for the compulsory graduation thesis. Some students present their research work at academic meetings and/or publish this work in international peer-reviewed journals.

-) are offered to participate to research programmes on a non-compulsory basis

Undergraduate students may have an opportunity to take part in scientific researches in a laboratory or in collaborative research at another institution with grant support and under supervision, regardless of whether the research theme is directly related to their graduation theses. Undergraduate students can present the outcomes of their research at scientific conferences and/or in scientific journals, provided there is no conflict of interest.

10.1.4. Description of how the continuing education programmes provided by the Establishment are matched to the needs of the profession and the community

Sapporo

SVM/HU offers bimonthly continuing education programmes, such as workshops and seminars, in advanced small animal practice for local veterinarians upon requests from the community.

There is a tremendous need globally for more education on zoonosis and chemical hazard control. Additionally, the demand for advanced veterinary clinical service is increasing. HU provides an outstanding postgraduate education programme for controlling zoonosis and chemical hazards and integrated veterinary clinical science, and those who complete the graduate programme are certified as Zoonosis Control Experts, Chemical Hazard Control Experts and Integrated Veterinary Clinical Experts, respectively, with their PhD degrees.

Obihiro
OU locates in Tokachi District, which is one of the largest food-producing regions in Japan. Moreover, Tokachi and neighbouring Hidaka District are well-known horse-breeding areas. Accordingly, we offer various continuing educational courses related to food producing animals, horses and food safety to address the life-long learning needs of the profession and the local community.

10.1.5. Prospected number of students registered at post-graduate programmes for the next 3 academic years

Sapporo
In FY2017, we reorganized the Graduate School of Veterinary Medicine into two graduate schools. One is the Graduate School of Veterinary Medicine, which has the capacity for 16 students per year, and the other is the Graduate School of Infectious Diseases with a student capacity of 12 per year. In 2018, 13 postgraduate students were enrolled at the Graduate School of Veterinary Medicine, and 18 were enrolled at the Graduate School of Infectious Diseases. Based on the current number of PhD candidates in the two graduate schools and the results of the questionnaire, we anticipate full intakes at both Graduate Schools for next three years.

We have been conducting a prominent graduate course programme called the "Leading Programme for Graduate Schools", which is supported by MEXT (AY2011 to AY2017). Our graduate course programme has just been selected for the following prominent graduate course programme called the "World-leading Innovative and Smart Education (WISE) programme", supported by MEXT (AY2018 to AY2024), which strengthens research on zoonosis, infectious diseases, chemical hazard, clinical veterinary science and life science and aims to foster PhD contributions to One Health and promoting Zoobiquity.

The HU VTH has 2 residents at present. Depending on the employment and situation of applicants for residencies, the same number of residents may be maintained for the next 3 academic years.

Obihiro
At present we run three postgraduate courses: the United Graduate School of Veterinary Science at Gifu University (UGSVS), the Doctoral Programme in Animal and Food Hygiene, and Graduate School of Animal and Veterinary Sciences and Agriculture (GSAVSA). The former two courses have stopped to accept new students since 2018. The GSAVSA is a new graduate school that established in 2018. The quota for the PhD programme of Veterinary Sciences is five students per year. Three students were enrolled in 2018, and eight students in 2019. The prospected number of PhD students in the next three years will be around 5.

10.1.6. Description of how and by who research, continuing and postgraduate education programmes organised by the Establishment are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

Sapporo
The main body for planning and conducting the postgraduate education programme is the Academic Affairs Committee, which comprises approximately 15 academic staff and 11 students, including professors, associate professors, lecturers, assistant professors and students from the School of Veterinary Medicine and Graduate Schools. The VTH staff are also involved in planning and conducting the postgraduate education programme for interns and residents.

The Student Affairs Committee (comprising approximately 13 academic staff, including professors, associate professors, lecturers, assistant professors and 11 students from the School of Veterinary Medicine and Graduate Schools) oversees communication with students. The International Affairs Committee (comprising approximately 11 academic staff, including professors, associate professors, lecturers) oversees international student affairs, including the selection of PhD candidates as part of special admission quotas. The final decisions on postgraduate education are made at a Faculty Meeting (comprising all the professors, associate professors and lecturers in the Graduate School of Veterinary Medicine and Graduate School of Infectious Diseases) after consultation. This meeting takes full responsibility for postgraduate education. Information on the postgraduate programme and its activities are distributed to PhD students and faculty members by e-mail, website, or paper-based communications. An electronic portfolio system, called "VetLog", has been installed to provide PhD students and faculty with the opportunity to review, communicate and support student life, including sharing information, schedules and messages on the postgraduate programme and activities. The Academic Affairs Committee is the main body that assesses and resolves problems concerning the postgraduate programme and its activities.

Obihiro
UGSVS
All issues, apart from special educational and research topics, are discussed by a delegate committee comprising the dean and senior tutors at UGSVS and board representatives from all four universities and are approved by the Graduate School Committee, which comprises the dean of UGSVS and all professors qualified to supervise PhD students. All students are assigned a main academic advisor and two assistant academic advisors to guide them in performing the research for their PhD theses. Information on the postgraduate programme and its activities are distributed to all faculties and PhD students in a printed annual report, by e-mail and on the website.

Programme in Animal and Food Hygiene
The course programme is organized based on discussions between senior faculty members and the needs approved by the University Research and Education Council. All students are assigned a main academic advisor and at least two assistant academic advisors to guide them while

performing the research for their PhD theses. Information on the postgraduate programme and its activities are distributed to all academic staff and PhD students by e-mail and on the website.

GSAVSA
The course programme is organized on the basis of discussions among senior faculty members and must be approved by the Graduate School Education Council at the university. All students are assigned a main supervisor and two assistant supervisors to guide them in performing the research for their PhD theses. Information on the postgraduate programme and its activities are distributed to academic staffs and PhD students by e-mail, handouts, academic portal site and on the website.

Clinical training
The VTH staff meeting is also involved in planning and implementing the postgraduate education programme for trainees.

Continuing education programme
Topics on the continuing education programmes are discussed, determined, assessed and revised by the professors of the adjunctive sections and administrative staff of the university. The programmes are announced on the university website, or as advertisement on related journals.

Table 10.1.1. Number of students registered at postgraduate clinical training

Note: The tables are shown separately as postgraduate education at each location is not jointed.

Sapporo

Training	2018	2017	2016	Mean
Interns:				
Companion animals	10	12	13	11.7
Equine	0	0	0	0.0
Production animals	0	0	0	0.0
Others (specify)	0	0	0	0.0
Total	10	12	13	11.7
Residents:				
Veterinary Anaesthesia and Surgery	2	4	3	3.0
Pathology	1	1	1	1.0
Total	3	5	4	4.0

Obihiro

Training	2018	2017	2016	Mean
Interns:				
Companion animals	2	2	2	2.0
Equine	1	0	1	0.7
Production animals	0	0	3	1.0
Others (specify)	0	0	0	0.0
Total	3	2	6	3.7
Residents:				
Pathology	2	2	1	1.7
Total	2	2	1	1.7

Table 10.1.2. Number of students registered at postgraduate research training*

Sapporo

Degrees	2018	2017	2016	Mean
PhD	112	107	102	107.0
Research students	7	14	10	10.3
Special research students	2	0	0	0.7
Clinical trainee	1	1	2	1.3
Total	122	122	114	119.3

Obihiro

Degrees	2018	2017	2016	Mean
PhD				
UGSVS*1	-	7	7	4.7
Animal and Food Hygiene*1	-	12	5	5.7
GSAVSA*2	3	-	-	1.0
Subtotal	3	19	12	11.4
MsC				
Animal and Food Hygiene*1	-	13	19	10.7
GSAVSA*2	9	-	-	3.0
Subtotal	9	13	19	13.7
Research students				
Special research students	14	14	8	12.0
Clinical trainee	0	1	1	0.7
Subtotal	14	15	9	12.7
Total	26	47	40	37.8

*1 "Postgraduate programmes (PhD and MsC) of Animal and Food Hygiene" and UGSVS has been closed for acceptance of new students since 2018.
*2 New postgraduate course GSAVSA has been opened since 2018.

Table 10.1.3. Number of students registered at other postgraduate programmes (including any external/distance learning courses)

Sapporo

Programmes	2018	2017	2016	Mean
Research student	0	0	0	0
Auditor	0	0	0	0

Obihiro

Programmes	2018	2017	2016	Mean
Research student	0	0	0	0
Auditor	0	0	0	0

Table 10.1.4. Number of attendees to continuing education courses provided by the Establishment

Location	Courses	2018	2017	2016	Mean
Sapporo	Veterinary teaching hospital continuing education seminars	85	192	127	134.7
	MEXT Global brain circulation sheme for One Health	0	1	2	1.0
	Chemical Hazard Control Expert Certification Program	5	9	4	6.0
	Zoonosis Control Expert Certification Program	6	9	13	9.3
	JICA Training program Short term	5	0	0	1.7
	JICA Training program long term	2	7	0	3.0
	JICA training: Capacity building of veterinarian in Mongolia	6	11	11	9.3
	Technical training of animal gross anatomy	12	0	0	4.0
	Training Program for Asian Veterinarians Second (TP-FAV II)	1	1	0	0.7
	Total	122	230	157	169.7
Obihiro	Hokkaido meat inspection histopathology personnel workshop	10	12	12	11.3
	Food Valley Tokachi Personnel Training Project. Food safety management course: Foodborne pathogens seminar [Basic]	15	0	10	8.3
	Food Valley Tokachi Personnel Training Project. Food safety management course: Foodborne pathogens seminar [Intermidiate]	0	7	7	4.7
	Food Valley Tokachi Personnel Training Project. Food safety management course: Foodborne pathogens seminar [Advanced]	0	1	0	0.3
	Technical Training in Production Medicine (Basic Course):Facts of production medicine in dairy cattle	40	37	40	39.0
	Technical Training in Production Medicine (Advanced Course): Facts of production medicine in dairy cattle	15	13	10	12.7
	Horse reproduction efficiency improvement technique workshop	9	9	0	6.0
	JICA programme: Hygiene and Quality Management for Animal Source Foods	8	7	8	7.7
	JICA programme: Local industry development through the enhancement of hygiene and quality management for animal-sourced foods	8	6	12	8.7

	Application of Rapid Methods in Food Processing (Chiang Mai University and Veterinary Public Health Center for Asia Pacific, Thailand)	-	-	20	6.7
	Basic Gene Cloning, Protein Expression and Purification (Chiang Mai University and Veterinary Public Health Center for Asia Pacific, Thailand)	-	27	-	9.0
	Basic technical training for ultrasound diagnostic imaging of bovine female reproductive organs	11	7	-	6.0
	Technical training on artificial inseminator for improvement of conception rate in cattle	5	2	-	2.3
	Technical training on artificial insemination with frozen semen in horses	15	-	-	5.0
	Technical Training in Production Medicine (Advanced Course): Basic training for diagnostic imaging in reproductive management of dairy cattle	7	-	-	2.3
	Total	143	128	119	130

Table 10.1.5. List of the major funded research programmes in the Establishment which were on-going during the last full academic year prior the Visitation (AY*)

Location	Scientific topics	grant/2018 (Euros)	Duration (Years)
HU	Science and Technology Research Partnership for Sustainable Development Program (SATREPS)	238,321.86	5(2016-2020)
	WISE Program(Doctoral Program for World-leading Innovative & Smart Education)	2,196,353.59	7(2018-2424)
	Grant-in-aid for Scientific Research (from MEXT)	2,579,755.33	1-5
	Grants from Japan Agency for Medical Research and Development	187,845.30	1-3
	Grants from MHLW	138,121.55	1-3
	Other external research funding	2,763,462.87	1-5
	Total	8,103,860.50	
OU	Science and Technology Research Partnership for Sustainable Development Programme (SATREPS) (JICA-JST)	193,204.42	5(2013-2017)
	Grant-in-aid for Scientific Research (from MEXT)	1,054,775.06	1-5
	Other external research funding	937,869.29	1-5
	Total	2,185,848.77	

10.2. Comments

Sapporo

The PhD students come from diverse nationalities and backgrounds; 45 % are international students from 17 countries. Nearly half are Japanese students who come from other universities or other schools at HU. All lectures, seminars and practices are provided in English in the Graduate School of Veterinary Medicine and Infectious Diseases. The curriculum includes basic and advanced veterinary science and medicine, infectious diseases and life sciences. The graduate programme also offers students opportunities to gain work experience and/or collaborative research in internships abroad. The Graduate Schools provide adequate financial support for the students, including scholarships, teaching and research assistant positions and support for traveling expenses, with support from the Programme for Leading Graduate Schools (by AY2017). HU can provide similar financial support via the WISE programme (from AY2018), which operates under the auspices of MEXT in Japan. Outstanding educational and research resources in the field of infectious diseases, particularly zoonoses, are one of its strong points. The Graduate Schools have well-established systems for qualifying examinations, mentoring and supervision whereby a chief supervisor and professors from other laboratories supervise PhD students in a multidisciplinary manner. In addition to providing standard PhD education, the Graduate Schools offer many programmes that foster multidisciplinary knowledge and transferrable social skills, including communication, collaboration, explanation, problem-finding and problem-solving. The Graduate Schools also provide various programmes to improve English proficiency in students who are not native English speakers.

Obihiro

None.

10.3. Suggestions for improvement

Many of the activities at the Graduate Schools require support from competitive external funding. Maintaining a world-class ranking and high levels of education and research at the Graduate Schools depends heavily on the continuous acquisition of external funding. We devote a lot of energy to acquiring external funding and strongly encourage donations to our academic veterinary institutions.

Standard 11: Outcome Assessment and Quality Assurance

11.1. Factual Information (Findings)

11.1.1. Description of the global strategy of the Establishment for outcome assessment and Quality Assurance (QA), in order to demonstrate that the Establishment:
-) has a culture of QA and continued enhancement of quality;
-) operates ad hoc, cyclical, sustainable and transparent outcome assessment, QA and quality enhancement mechanisms;
-) collect, analyse and use relevant information from internal and external sources for the effective management of their programmes and activities;
-) informs regularly staff, students and stakeholders and involves them in the QA processes; -) closes the loop of the QA Plan-Do-Check-Act (PDCA) cycle;
-) is compliant with ESG Standards.

The VNJ has an explicit strategy and procedures for quality assurance (QA) at the university and programme levels. Since VNJ Programme is a cooperative veterinary education programme by SVM/HU and DVM/OU, the QA of VNJ complies with the home universities' QA systems. Both universities have individual internal and external QA systems to enhance the quality of their education and research.

QA at the university level (Appendix 33, 34, 35, 36, 37)
QA culture is well formed in Japanese higher education institutes (HEIs), as it is in European HEIs. For details on the QA system in Japanese HEIs, please refer the following site (English page).
http://www.niad.ac.jp/english/overview_jp_e_ver2.pdf.

MEXT bears the primary responsibility for QA in HEIs. All HEIs in Japan are obligated to undergo a cyclical comprehensive evaluation of their educational, research and organisational operations and facilities by evaluation agencies.

The QA frameworks for national universities were legally established under the School Education Law and the National University Corporation Act:

1. The approval system for the Establishment of New Universities by MEXT
2. Mandatory self-assessment
3. Certified evaluation and accreditation (CEA)
4. National university corporation evaluation

Both HU and OU have QA policies as follows;
HU:
http://www.hokudai.ac.jp/jimuk/reiki/reiki_honbun/u010RG00000434.html
OU:
https://www.obihiro.ac.jp/edu-evaluation-policy

HU and OU conduct systematic self-assessments as prescribed by the Plan-Do-Check-Act (PDCA) cycle for internal QA, which is legally required by MEXT.

The National Institute for Academic Degrees and Quality Enhancement (NIAD-QE) is one of the agencies in charge of CEA, which is certified as an evaluation and accreditation body for HEIs by MEXT (http://www.niad.ac.jp/english/). Its accreditation is highly regarded and only awarded to HEIs whose education and research conditions are satisfactorily evaluated. The legal framework of self-assessment and CEA supports each institution's continual and autonomous process of quality assurance.

As national corporation universities, both HU and OU must undergo CEA every seven years (rather than six) by the NIAD-QE. Both universities have been accredited individually by the NIAD-QE, which verifies compliance with the minimum standards. The latest accreditation at each university is as follows: HU in 2016 and OU in 2018 (Appendix 37).

In addition to the periodic external evaluation and accreditation by the NIAD-QE, all national universities in Japan must be evaluated by MEXT's National University Corporation Evaluation Committee (NUC-EC) every fiscal year and at the end of each six-year mid-term period (Article 35 of the National University Corporation Act). That committee is responsible for evaluation of the progress, outcomes of mid-term and annual plans for education, research and management. The annual strategic plans and results of the previous FY's achievements are released to and assessed annually by MEXT. It influences the Subsidies for National Universities.

Evaluation, certification and review results as well as self-assessment reports are made public to ensure transparency. Related information is also available on the official websites of MEXT, the NIAD-QE and the website of each university.

NIAD-QE: http://www-old.niad.ac.jp/english/unive/index.html
HU:
https://www.hokudai.ac.jp/pr/tenken/hyouka/accredited/
OU:
https://www.obihiro.ac.jp/ce-and-a

Table 11.1 Types of obligatory external quality assurance systems for national university corporations

Types of QA system	Frequency	Evaluator	Evaluation Standards	Results
Approval for the establishment of universities	No expiration date	MEXT's Council for University Chartering and School Corporation	10 standards: General provisions, Educational and research structure, Academic staff organisation, Eligibility criteria for academic staff, Student capacity, Academic programmes, Graduation/completion requirements, Facilities and equipment, Administrative organisation, Miscellaneous provisions	HU: Approved (1918) OU: Approved (1949)
Certified evaluation and accreditation (CEA)	7 year-cycle (not over 6 years)	NIAD-QE	10 standards: The mission of the University, Teaching and Research Structure, Academic Staff and Teaching Supporting Staff, Student Admissions, Academic Programmes, Learning Outcomes, Facilities and Student Support, Internal Quality Assurance System of Teaching and Learning, Finance and Management, Public Information on Teaching and Learning	HU: Satisfied (2016) OU: Satisfied (2018)
Evaluation of national university corporation	Annually basis in a 6-year cycle (mid-term objective period)	NUC-EC	Performance-based evaluation of the NUCs based on their mid-term objectives and plans and the annual plans for education, research and management	HU: Progressed as planned (2017) OU: Progressed as planned (2017)

QA at the VNJ level (Figure 11.1)

The QA policy of VNJ is as follows.

1. We offer high-quality education, research and service to all parties concerned.
2. We establish common values in the quality policy for all internal and external persons concerned.
3. We use measurable criteria in the QA system, and monitor and revise them regularly for quality improvement.
4. We share all QA information with all internal and external persons concerned.

The QA policy of VNJ is shared with academic staff, students and stakeholders.

As described above, each University's QA system provides the necessary structure and procedures for QA. In order to further enhance QA at the various operating levels of veterinary teaching, we established the VNJ Quality Assurance Committee (VNQAC) in 2017. The VNQAC consists of the members of the local QA Committees of SVM/HU and DVM/OU. The VNQAC oversees the development and implementation of QA procedures, and continuously encourages quality enhancement through the monitoring and self-evaluation of the VNJ educational activity by incorporating opinions and suggestions from students and stakeholders.

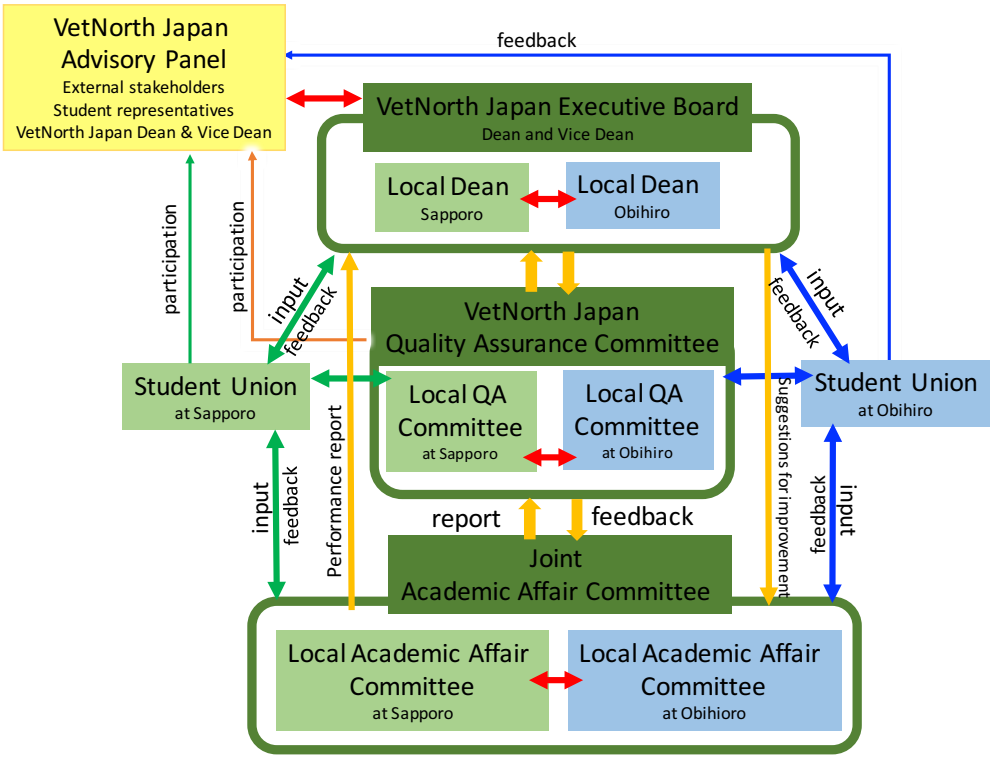


Figure 11.1. VNJ QA structure

VNJ has a system to elicit input from external stakeholders and students through the Advisory Panel, which is included in the VNJ organisational structure (Standard 1).

The VNQAC collects, analyses and uses relevant information from internal and external sources for the effective management of our programme. The feedback suggestions from QA committee are sent to the Programme Executive Board including deans and the Academic Affairs Committee or relevant committees. The plans for improvement are set by the relevant committees and implemented. The outcome of the plans is assessed by QA committee and the results are communicated to external and internal stakeholders through the Advisory Panel and the Academic Affairs Committee, meeting with the Student Union, respectively.

11.1.2. Description of the form by which the strategy, policy and procedures are made formal and are publicly available.

All general information on the quality management of HU and OU, as well as self-assessment and results of external evaluations, are published on the universities' websites as described in 11.1.1.

Both universities have an 'Evaluation Policy', which is equivalent to the QA policy, and perform QA in accordance with the procedures stipulated by the NIAD-QE and MEXT. The strategy, policy and procedures for QA at national universities are presented on the NIAD-QE website:

English: http://www.niad.ac.jp/english/unive/

11.1.3 Description of the regular publication of up to date, impartial and objective information, both quantitative and qualitative, about the educational programmes and awards the Establishment is offering.

HU and OU release public information in annual reports and on their websites, updating the information every year. Both quantitative and qualitative information is available, including the contact details of students, alumni and staff, career path information, subsidies and research grants, international activities, social contributions, VTH activities, collaborative activities with academia, industry and the government and awards received by students and staff.

HU:
https://www.vetmed.hokudai.ac.jp/about/detail/report/
OU: https://www.obihiro.ac.jp/navi-factbook

11.1.4. Description of the QA processes not yet described in the other 10 Standards

AAALAC (SVM/HU)

HU has an animal facility that has been accredited by AAALAC International since 2007. The facility is in good operating condition and all animal experiments are conducted after strict reviews by the IACUC. An attending veterinarian from the veterinary school (HU) observes all animals reared in the facility and makes records every day. The Animal Experiment Committee and the IACUC from the veterinary school inspect all areas of the facility and point out problems twice a year. The Chairman of the IACUC reports the results of these inspections to the SVM/HU dean, who then orders the Chairman of the Animal Facility Steering Committee to correct the problems. The committee is responsible for determining the appropriate solutions to the problems. The review committee members of AAALAC International visit the animal facility every three years and decide whether to renew the facility's accreditation.

ISO17025 for Laboratory Diagnosis (SVM/HU and DVM/OU)

The following VNJ laboratories have ISO17025 accreditation:

- HU: Laboratory of Microbiology for HPAI
- OU: 1) the Diagnostic Center for Animal Health and Food Safety for Aerobic Plate Count of Meat and Dairy Products and 2) the National Research Center for Protozoan Diseases for Surra, Horse piroplasmosis and Bovine babesiosis

Both universities have their own QA manuals, according to which their laboratories are evaluated annually. The special QA committees conduct these evaluations and include internal and external auditors. In addition, several subcommittees (steering committees) concerning quality controls meet every one to three months.

HACCP/ISO22000/FSSC22000 for Food Safety Management System (OU)

The milk and food management processing system of the university farm, slaughter facility and food processing facility are accredited by HACCP/ISO22000/FSSC22000. The QA for the management of these facilities is evaluated once a year by a special committee, which is composed of internal auditors. In addition, the Committee for Food Safety meets every month to discuss incidents and avoiding similar problems in the future.

11.1.5. Description of how and by who the QA strategy of the Establishment is decided, communicated to staff, students and stakeholders, implemented, assessed and revised

The overall strategic planning including QA strategy at the university level is determined by each university. Presidents of both universities are responsible for all decisions regarding QA strategy. The strategy is communicated to staff, students and stakeholders through meeting minutes, universities' outline, or the websites. The implementation, assessment and revision are performed by administration, relevant sections, faculties and committees.

The VNJ's QA strategy is focused on the programme and discussed and decided on by the Program Executive Board based on the information provided by feedbacks from students, teaching staff, graduates, the Advisory Panel, VNQAC and other joint committees, or individuals. The strategy is shared in meeting minutes, handouts, orientation sessions, VetPortal, or by emails.

Implementation, assessment, and revision are described in each of the Standards of this report.

11.2. Comments

According to the evaluation results by the NUC-EC, MEXT rated both SVM/HU and DVM/OU very highly for the following reasons: 1) the improvement of the veterinary education system using the cooperative veterinary education system; 2) the development of an e-learning system to support students' self-learning; 3) the establishment of the Diagnostic Center for Animal Health and Food Safety and the experimental animal facility accredited by the AAALAC; and 4) the renovation of new hospitals for both companion and farm animals to provide high-quality education and clinical services.

Systematically receiving input from external stakeholders is an important for our QA. The Advisory Panel (see also Standard 1) has been organized since 2017 to ensure our veterinary training meets the needs and expectations of students and society.

Besides, the VNQAC plans to conduct a survey of our alumni, employers and professional partners to assess the quality, relevance and impact of teaching and learning. Their input is valuable to the development and review of the curriculum. The students' training should be monitored for quality at the subject and institutional levels, establishing a basis for a robust QA system.

11.3. Suggestions for improvement

At present, we don't have a common website for VNJ.

12. List of ESEVT Indicators

12.1. Factual Information (Findings)

Calculated Indicators from raw data		Establishment value	Median value	Minimal value	Balance[3]
I1	n° of FTE academic staff involved in veterinary training / n° of undergraduate students	0.299	0.16	0.13	0.173
I2	n° of FTE veterinarians involved in veterinary training / n° of students graduating annually	1.300	0.87	0.59	0.711
I3	n° of FTE support staff involved in veterinary training / n° of students graduating annually	1.824	0.94	0.57	1.258
I4	n° of hours of practical (non-clinical) training	1279.000	905.67	595.00	684.000
I5	n° of hours of clinical training	735.000	932.92	670.00	65.000
I6	n° of hours of FSQ & VPH training	266.000	287.00	174.40	91.600
I7	n° of hours of extramural practical training in FSQ & VPH	84.000	68.00	28.80	55.200
I8	n° of companion animal patients seen intramurally / n° of students graduating annually	227.914	70.48	42.01	185.905
I9	n° of ruminant and pig patients seen intramurally / n° of students graduating annually	1.961	2.69	0.46	1.498
I10	n° of equine patients seen intramurally/ n° of students graduating annually	3.253	5.05	1.30	1.955
I11	n° of rabbit, rodent, bird and exotic seen intramurally/ n° of students graduating annually	0.296	3.35	1.55	-1.249
I12	n° of companion animal patients seen extramurally/ n° of students graduating annually	0.000	6.80	0.22	-0.223
I13	n° of individual ruminants and pig patients seen extramurally/ n° of students graduating annually	87.760	15.95	6.29	81.465
I14	n° of equine patients seen extramurally/ n° of students graduating annually	15.335	2.11	0.60	14.740
I15	n° of visits to ruminant and pig herds/ n° of students graduating annually	10.275	1.33	0.55	9.727
I16	n° of visits to poultry and farmed rabbit units/ n° of students graduating annually	0.026	0.12	0.04	-0.019
I17	n° of companion animal necropsies/ n° of students graduating annually	0.554	2.07	1.40	-0.846
I18	n° of ruminant and pig necropsies/ n° of students graduating annually	2.099	2.32	0.97	1.128
I19	n° of equine necropsies/ n° of students graduating annually	0.249	0.30	0.09	0.156
I20	n° of rabbit, rodent, bird and exotic pet necropsies/ n° of students graduating annually	2.991	2.05	0.69	2.299
I21	n° of FTE specialized veterinarians involved in veterinary training/ n° of students graduating annually	0.193	0.20	0.06	0.130
I22	n° of PhDs graduating annually/ n° of students graduating annually	0.601	0.15	0.09	0.513

1 Median values defined by data from the establishments with approval status in April 2016

2 Recommended minimal values calculated as the 20th percentile of data from the establishments with approval status in April 2016

3 A negative balance indicates that the indicator is below the recommended minimal value

12.2. Comments

Overall the ESEVT indicators show good values, indicating an efficient educational activity by the VNJ to provide enough hands-on training for students. However, four indicators (I11, I12, I16 and I17) are below the ESEVT Minimal value.

I6: We introduced a rotation visit to commercial pig and poultry farms in 2017. It increased the hour of extramural practical training in FSQ and VPH.

I11: The balance is lower than the Minimal value due to the low caseload in 2016 and 2017. The VTH of SVM/HU opened Exotic unit in 2018. In addition, the number of people who have exotic pets is gradually increasing in Japan. We expect the increase of exotic pet cases in future.

I12: We don't have mobile clinic for companion animals, and we have not had such a request so far. The pet owners prefer to visit the VTH to receive an advanced treatment.

12.3. Suggestions for improvement

I16: Further training of basic clinical skills for health assessments of pigs and poultry is being planned. The Establishment value will be better in future.

I17: Most companion animal owners in Japan do not request necropsies of their pets because they arrange their funerals instead. Accordingly, the number of necropsies for companion animals is very limited. We further make an effort to obtain the understanding from pet owners.

Appendix List

1 Operating plans with its timeframe and indicators
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3 The organizational chart of OU
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5 Committee List (HU)
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8 Flowchart of budget decision making (OU)
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12 Correspondence table of core subjects to Day One Competences
13 Examples of course syllabi
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15 Advanced seminars
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17 Map and intra-mural facilities of university (HU)
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19 Facilities at HU
20 Premises for lecture, group and practical work in OU
21 Facilities at OU
22 Flow chart of the decision-making process for facility matters (HU)
23 Flow chart of the decision-making process for facility matters (OU)
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30 List of academic staff, qualifications, affiliations, teaching responsibilities (OU)
31 Publication list of academic staff in peer reviewed journals (2016-2018) (SVM/HU)
32 Publication list of academic staff in peer reviewed journals (2016-2018) (DVM/OU)
33 QA systems for Japanese national universities
34 Internal/External QA Framework in VetNorth Japan
35 QA system in HU
36 QA system in OU
37 Certification of NIAD-QE (formally known as NIAD-UE)
38 Glossary

Additional Appendix

1) Conclusion of the Consultative Visitation by ESEVT experts (an extract of the Visitation Report)
2) NIAD-QE evaluation guideline
3) Overview of quality assurance system in higher education