

Veterinary education in UTokyo in the COVID-19 situation



**The University
of Tokyo**



Contributing to humankind and society
through veterinary & animal sciences



Taisuke HORIMOTO
Department of Veterinary Medical Sciences
The University of Tokyo (UTokyo)

Outline

1. Overview of COVID-19 in Japan (Tokyo)
2. Educational system of UTokyo
3. Current status of veterinary education
 - safety issue
 - lectures
 - practices
 - graduation thesis
4. Challenges and solutions

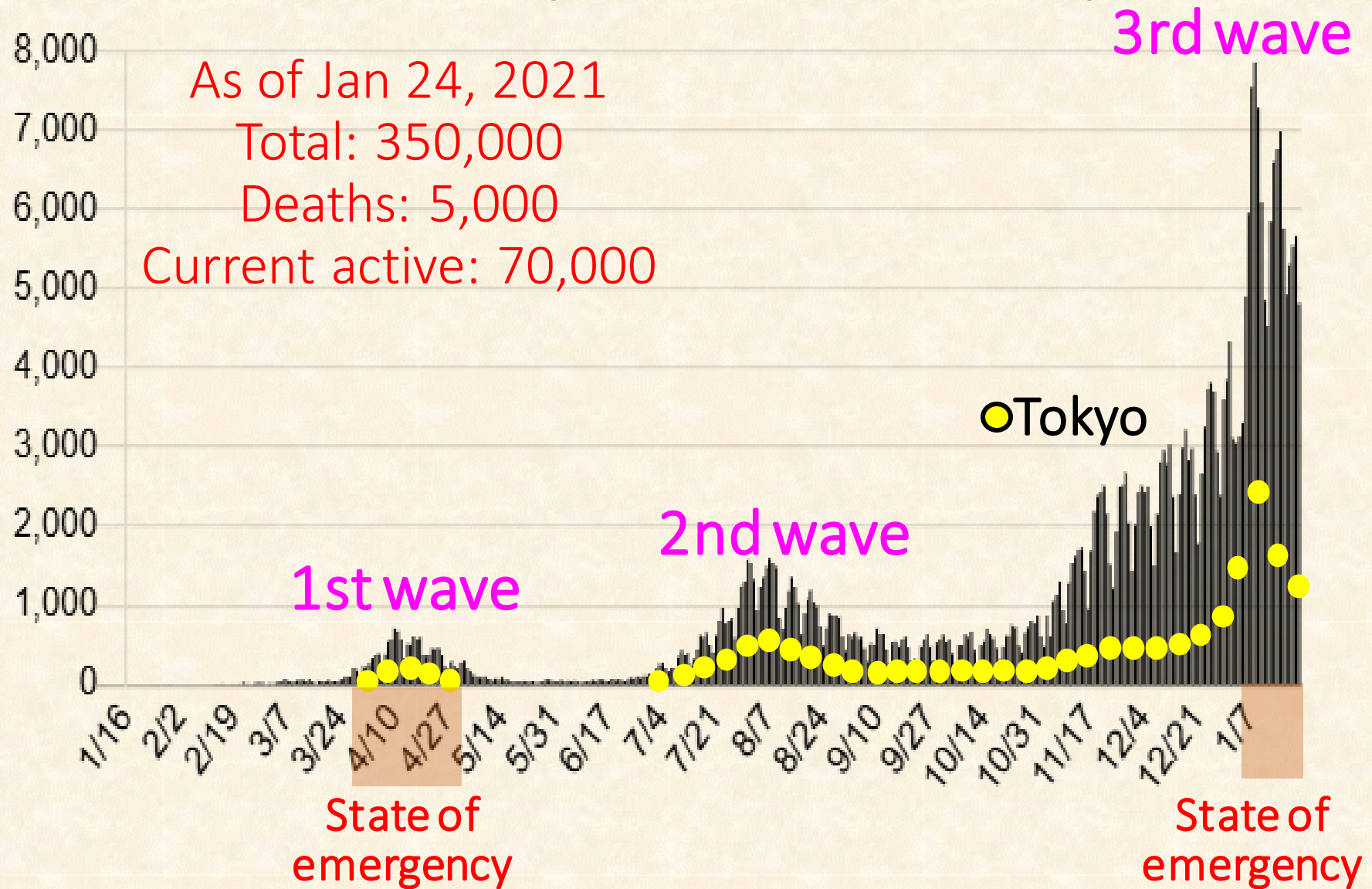


Outline

1. Overview of COVID-19 in Japan (Tokyo)
2. Educational system of UTokyo
3. Current status of veterinary education
 - safety issue
 - lectures
 - practices
 - graduation thesis
4. Challenges and solutions



COVID-19 positives in Japan



Data from MHLW

Stop the spread of COVID-19

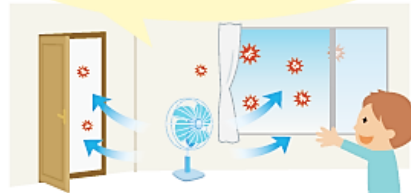
Avoid Closed spaces, Crowded places, and Close-contact settings!

• Even in open spaces, be mindful of other Cs. We should aim for "Zero C."

Make enough space with others.



Open doors and windows. Ventilate frequently.



Avoid exercise with many people even outdoors.

Walking or running in a small group is fine.



Make space in restaurants.

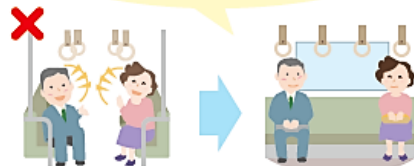
- Avoid dining in a large group
- Leave one empty seat between you
- Sit diagonally across the table



Wear a mask when talking.



Refrain from talking inside the train or elevator.



Stay home

Avoid gatherings in crowded places

Avoid gatherings in close contact settings

Avoid gatherings in closed spaces



Ventilate

Coughing etiquette

Wash hands



Coronavirus Contact-Confirming Application
"COCOA"

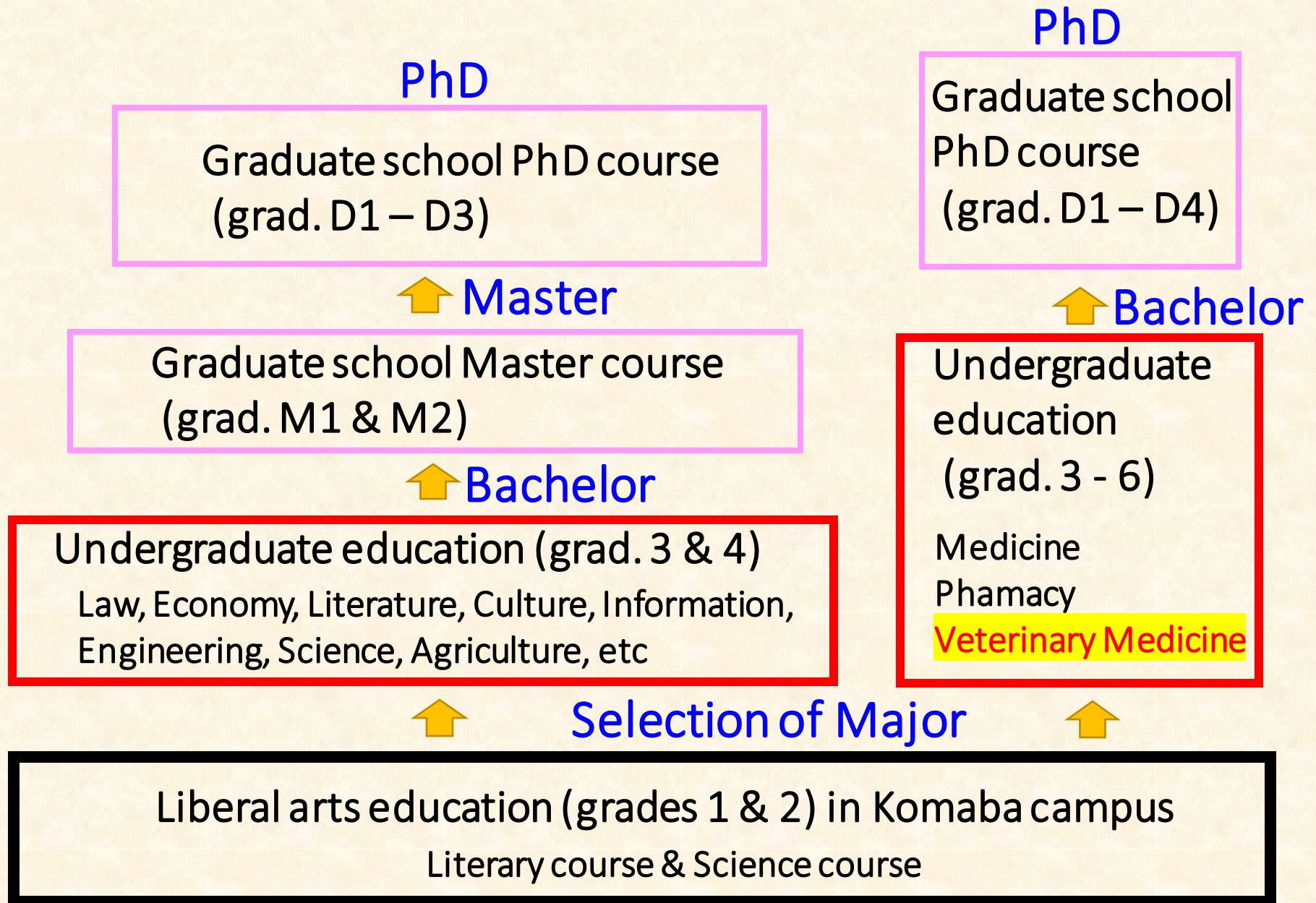


Outline

1. Overview of COVID-19 in Japan (Tokyo)
- 2. Educational system of UTokyo**
3. Current status of veterinary education
 - safety issue
 - lectures
 - practices
 - graduation thesis
4. Challenges and solutions



Educational system of UTokyo



Veterinary school in UTokyo

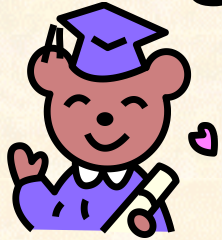
Established in 1874 Period: 6-year-course

Students: 30 enrolled for each year Faculties: about 50

Educational policy

1. We raise **civil servant veterinarians** who can solve various problems related to one health, public health promotion, environmental conservation, food and livestock, and animal hygiene/welfare in government and international organizations.
2. We raise **veterinary clinical specialists** with international standards backed by a wide range of clinical knowledge and skills, who provides advanced veterinary medicine, and **veterinary clinical researchers** who conducts advanced clinical and translational researches.
3. We raise **veterinary basic researchers and world-class educators** who acquire deep knowledge of animal life sciences, create new research fields, and carry out cutting-edge research activities and next-generation veterinary education.

Undergraduate veterinary education



Veterinarian license (DVM)



Graduation (>203 credits)

Graduation thesis

Clinical rotation (trainings) at Veterinary Medical Center

Internships (clinics, farms & public health)

Clinical veterinary subjects (lectures & practices)

Applied veterinary subjects (lectures & practices)

Basic veterinary subjects (lectures & practices)

Go on to Veterinary school

Common subjects of Agriculture (lectures)

Liberal arts education (lectures & practices)

Admission

6

5

4

3

2

1

grade

Senior

Junior

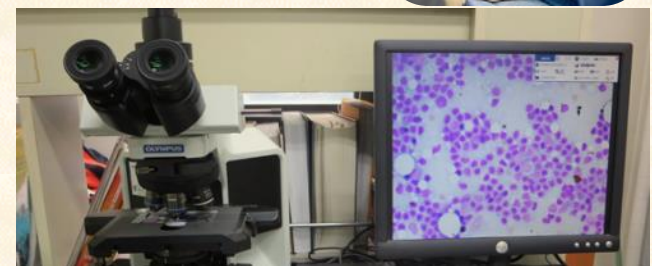
Clinical practices & trainings



Veterinary Medical Center (VMC)



Educational & Research Farm



Laboratories

- Veterinary Theriogenology
- Vet. Anatomy
- Vet. Physiology
- Vet. Pharmacology
- Vet. Microbiology
- Vet. Public Health
- Vet. Pathophysiology
- Vet. Pathology
- Vet. Internal Medicine
- Vet. Surgery
- Vet. Clinical Pathology
- Vet. Emergency Medicine
- Vet. Ethology
- Biomedical Science
- Infectious Control & Disease Prevention
- Molecular Immunology
- Applied Genetics
- Cellular Biochemistry
- Global Animal Resource Science
- Animal Life Science and Biotechnology
- Food-borne Pathogenic Microbiology
- Laboratory Animal Research Center



Outline

1. Overview of COVID-19 in Japan (Tokyo)
2. Educational system of UTokyo
- 3. Current status of veterinary education**
 - **safety issue**
 - lectures
 - practices
 - graduation thesis
4. Challenges and solutions



UTokyo Activity Restriction Index in the COVID-19 situation

Level	Restriction	Research	Classes	Others	Meeting	Gate
0	No					
0.5	Minimum	Research activities are allowed with the utmost consideration taken to prevent the spread of infection.	Hybrid	Some extracurricular activities are allowed, with the utmost consideration taken to prevent the spread of infection.	In-person meetings can take place with the utmost consideration taken to prevent the spread of infection.	In principle, only gates with guards present remain open, and entrants must show their ID.
1	Partial	Research activities can be continued; however, while taking the utmost consideration to prevent the spread of infection, students, researchers and research staff (laboratory staff) must reduce the amount of time they stay on-site and, if possible, consider working from home.	Online only	Prohibited	Videoconferencing only	Only gates with guards present remain open, and entrants must show their ID.
2	Severe	Only the minimum number of laboratory staff necessary are permitted to enter the laboratories in order to continue experiments and research in progress. The staff members entering the laboratories reduce the amount of time they stay on-site, and other staff members should work from home.	Online only	Prohibited	Videoconferencing only	In principle, only gates with guards present remain open, and entrants must show their ID.
3	Maximum	The following research staff (depending on circumstances, may also apply to graduate students and researchers) are permitted to enter their laboratories. 1) Research staff who are currently conducting long-term experiments would experience a significant loss to their research if stopped; 2) Research staff who are involved with finishing or stopping experiments in progress 3) Research staff who will enter the laboratories briefly to take care of living organisms, replenish liquid nitrogen, conduct maintenance to preserve research materials such as repairing freezers, or conduct server maintenance.	Online Only	Prohibited	Videoconferencing only	Only gates with guards present remain open, and entrants must show their ID.
4	All suspended	In order to maintain a minimum level of university functions, research staff may enter laboratories briefly only for such actions as taking care of living organisms, replenishing liquid nitrogen, repairing freezers or conducting server maintenance with permission from the departmental or other organizational representative.	Online only	Prohibited	Videoconferencing only	Only those who must perform duties with a high degree of urgency may enter the campus. Only gates with guards present remain open, and entrants must both show their ID and record their purpose of coming to campus in a ledger.

Practices that require in-person instruction will be allowed with permission.

Level 0 \Rightarrow 2 (4/6) \Rightarrow 3 (4/8) \Rightarrow 0.5 (7/13) \Rightarrow 1 (1/11)

Outline

1. Overview of COVID-19 in Japan (Tokyo)
2. Educational system of UTokyo
3. Current status of veterinary education
 - safety issue
 - lectures
 - practices
 - graduation thesis
4. Challenges and solutions



Forms of classes

Lecture, Seminar: **All online (Zoom)**

Practice, Training: **Online**, **In-person** (face-to-face), or **Hybrid**

Basic practice	Form	Remark
Histology	Online	Virtual slides, etc
Biochemistry	Hybrid	
Experimental animal	Hybrid	Handling of mouse, etc
Pharmacology	Hybrid	
Physiology	In-person	
Anatomy	In-person	Partially online (wildlife on zoo)
Microbiology, Food hygiene	In-person	Aseptic operation, etc
Parasitology	Online	Virtual slides, etc
Pathology	Hybrid	Virtual slides, etc
Pathological anatomy	In-person	
Livestock breeding, Hygiene	In-person	Handling, etc (at University Farm)
Toxicology	Hybrid	
Public health	Hybrid	Visit to for Animal Welfare Center, etc

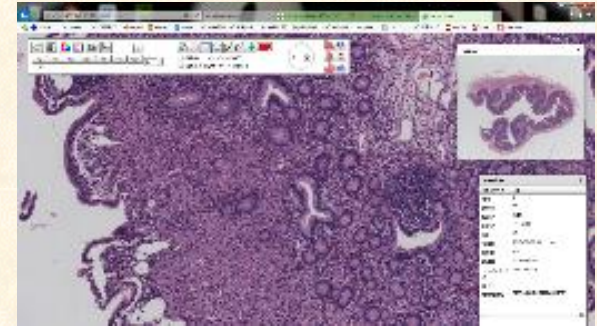
Clinical practice	Form	Remark
Basic internal medicine	In-person	Partially online
Basic surgery (Imaging)	Online	
Basic surgery (Operation)	In-person	Partially online
Large animal clinics & breeding	In-person	At University farm & Yayoi campus
Clinical rotation of internal medicine & surgery for companion animals	In-person	Small groups at VMC
Internship	Form	Remark
Internship for clinical veterinary medicine (Overseas)	Cancelled	Kasetsart Univ., National Taiwan Univ., Seoul National Univ.
Internship for clinical veterinary medicine internship (Domestic)	Cancelled	
Internship for applied veterinary medicine	Cancelled	Public health, Animal hygiene
Thesis	Form	Remark
Graduation thesis presentation	Hybrid	Applicable student & Labo members at Yayoi auditorium, others online
PhD thesis review board	Online	Now in progress

Example of **online** basic practices

Anatomy

Teachers

(Dr. Kimura from SNU , Dr. Hiramatsu)



Virtual slide

Zoom meeting grid showing participants and their avatars. The sidebar on the right displays a list of participants and a chat window.

Participants (from top-left to bottom-right):

- Junpei KIMURA
- YKanai
- 平松 竜司
- 能美 伶奈
- 新美 智之
- 山崎 拓海
- Jin Sasazu
- 谷口 太一
- 阪本 晴香
- 沼澤 安寿子
- 皆川 夏奈子
- 美里 菊澤
- 並木 裕人
- 鈴木 生真
- Hiroto Ito
- Mirei Takeda
- 中山 雄太郎
- 友紀子 浅井
- 鷺己 山田
- 隼太郎 浦西
- Ryosuke Ota
- airi tanaka
- Hiromi Sakai
- 石田 七海
- 木川 智尋

Chat window content:

上野動物園 エゾシカの落角 動画1:20
ころ
https://www.tokyo-zoo.net/movie/information/0304_01/index.html

Example of **in-person** basic practice

Anatomy (2020)



Physiology (previous)



(2020)



30 students in 1 room



Dr. Matsuwaki



15 students in the classroom (with protections)
15 students at home (online)

Example of **in-person** practice at farm

(previous) → (2020)



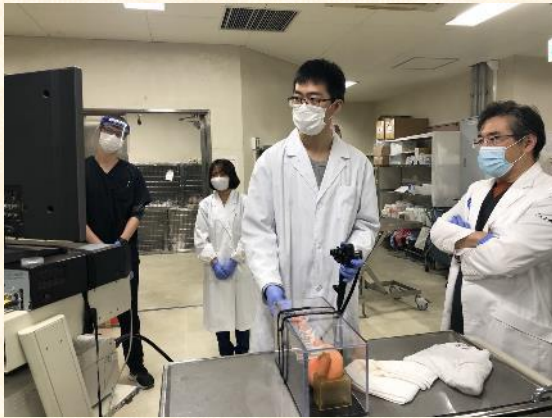
Pre-PCR test:
all students
negative



Example of **in-person** clinical practice



Non-contact thermometer,
Disinfection,
Record at entrance of VMC



Mask,
Faceguard,
Distance



Well-ventilated outside

Graduation thesis **hybrid** presentation

In person at auditorium (limited participants) (2020.12.18)



Operator for
web delivery



Chairpersons



Restricted seats



Doors always open



Camera for web

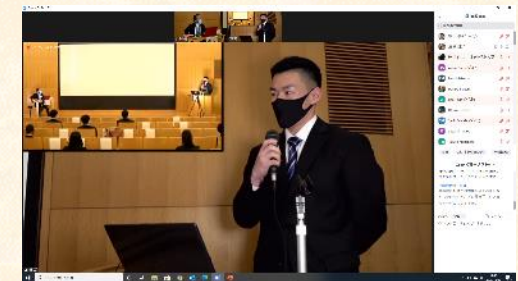
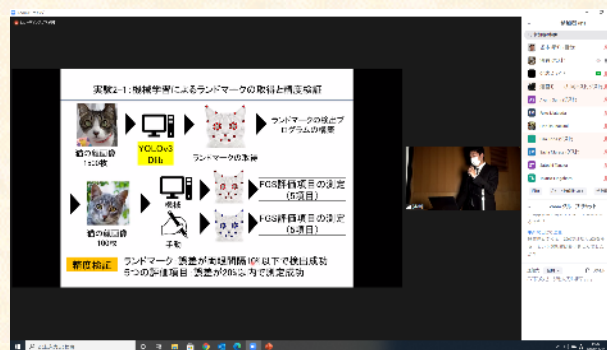
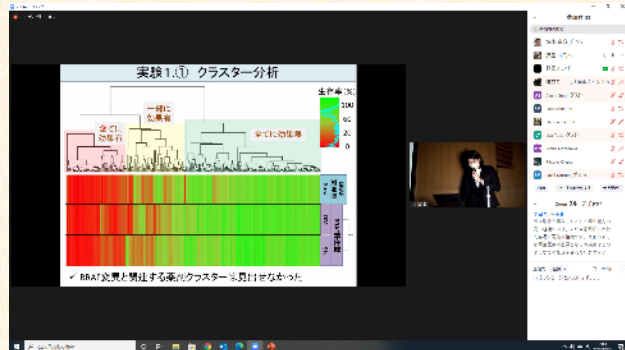
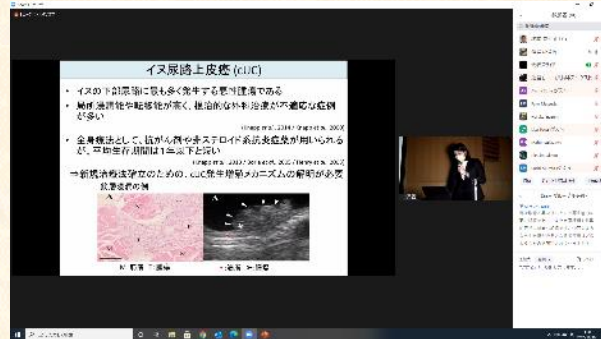


Restricted audience

Graduation thesis **hybrid** presentation

Online from auditorium

Presentors
Question-and-answer



Under presentation

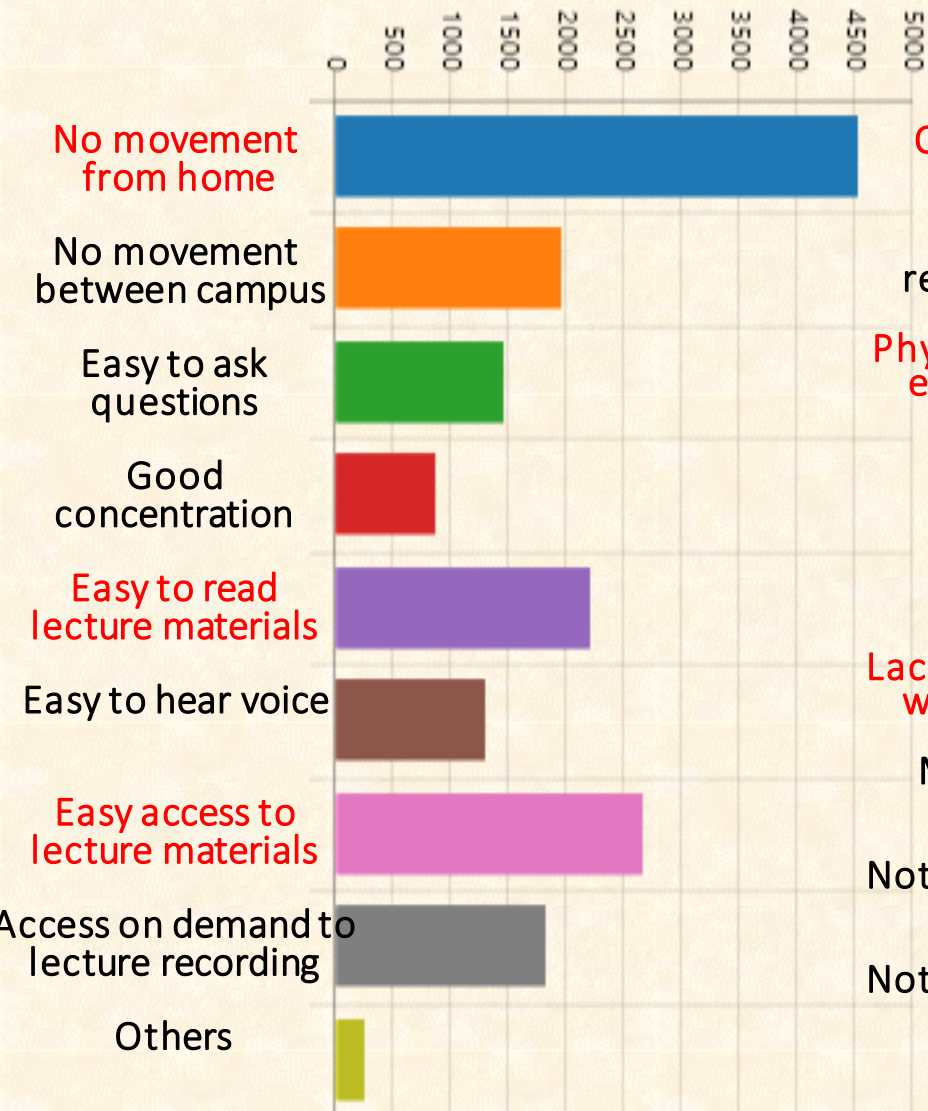
Outline

1. Overview of COVID-19 in Japan (Tokyo)
2. Educational system of UTokyo
3. Current status of veterinary education
 - safety issue
 - lectures
 - practices
 - graduation thesis
4. Challenges and solutions

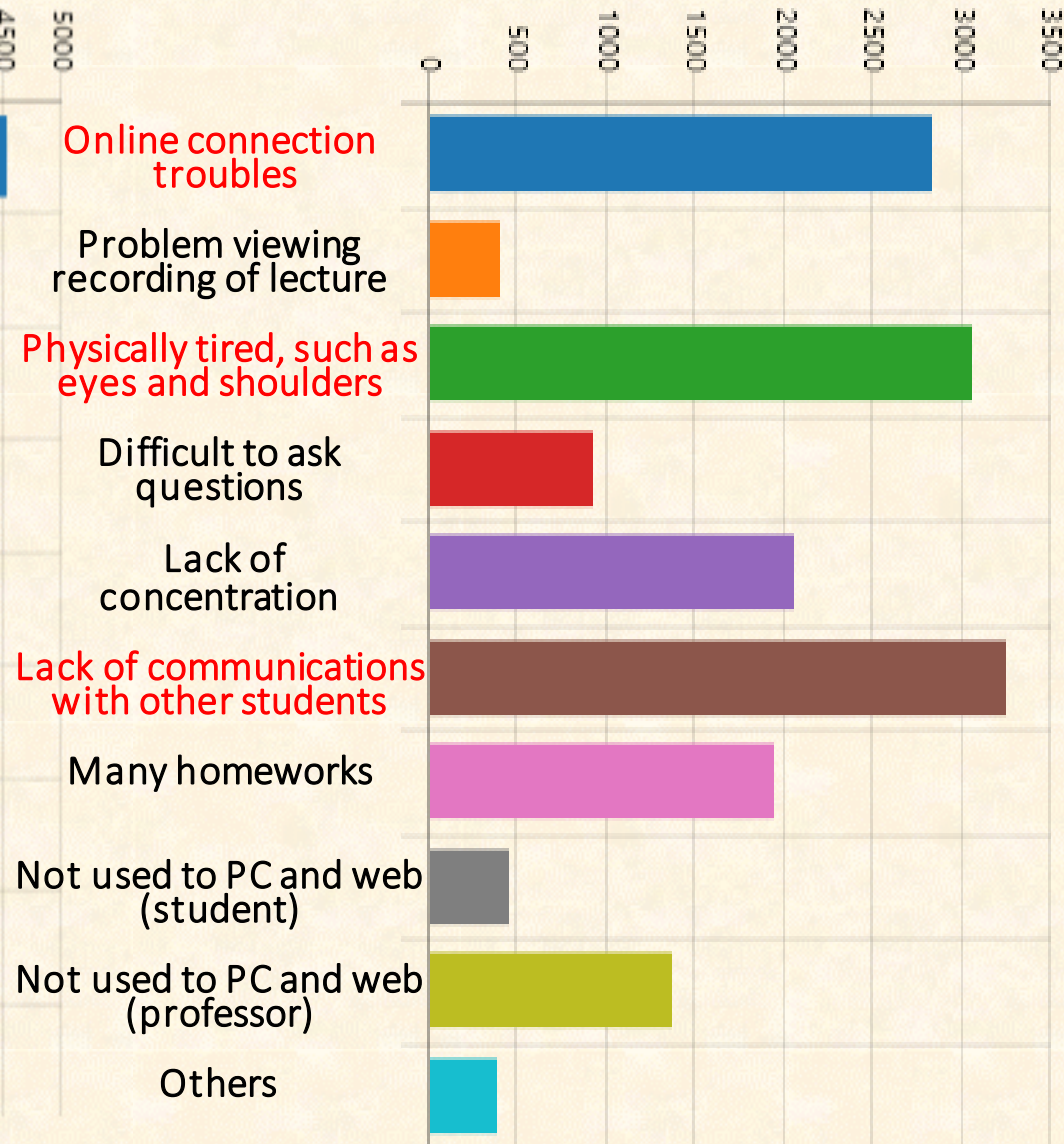


Opinions from students at UTokyo

Advantage of online classes?



Disadvantage?



Other opinions from students at UTokyo

Money problems

- It cost money to buy a PC and others.
- Expenses have increased, such as utility bills and internet environment maintenance.
- I got fired from a part-time job.

Study problems

- I can't use the library at campus.
- There is no interaction between students and between teachers and students.
- I can't do fieldwork and my research is stagnant.
- Since I couldn't go to overseas field research, I had to change the direction of my research.

Extracurricular activity problems

- I can't participate in student club activities or group activities.
- There is no sport team match with other universities.

Physical problems

- It is inconvenient that the entrance of the campus is restricted at the gate.
- I feel health effects and lack of exercise due to studying at home.

Mental problems

- I'm mentally tighter because I don't talk to people.
- I had a hard time adjusting my daily mental rhythm.
- My mind has become more unstable than ever.
- Staying home alone for months is more likely to be really depressed.

Future solutions for veterinary education in UTokyo

- Increase in-person classes.
- Establish infrastructure equipments for safety.
- Enhance virtual slides for basic and clinical classes.
- Develop virtual reality materials for clinical trainings.
- Increase communications between teachers and students.
- Provide more active-learnings and seminars with good communications between students.
- Provide clinical and public health internships that can be carried out safely.
- Consider online mutual classes with domestic and overseas universities.
- Recommend vaccination when available.
- Others.



Acknowledgments

For information & photos

- Dr. Hori, Dean, Department of Veterinary Medical Sciences, UTokyo Laboratory of Vet. Pharmacology
- Dr. Haga, Lab. of Infectious Control & Disease Prevention
- Dr. Kanai, Lab. of Vet. Anatomy
- Dr. Sekizawa, Lab. of Vet. Pathophysiology & Animal Health
- Dr. Yonezawa, Lab. of Clinical Pathology
- Dr. Matsuwaki, Lab. of Vet. Physiology
- Dr. Chambers, Lab. of Vet. Pathology
- Other members

We are challenging for
better veterinary education!

