FINAL REPORT AS ISSUED BY ECOVE ON 11 MAY 2016

European Association of Establishments for Veterinary Education

Association Européenne des Etablissements d'Enseignement Vétérinaire

REPORT on the STAGE 1 VISITATION to

Faculty of Veterinary Medicine,

Ankara University, Turkey

02 – 06 November 2015

by the EXPERT GROUP

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INTRODUCTION

The Ankara Veterinary School was established in Istanbul in 1842, transferred to Ankara in 1933 and became part of Ankara University in 1948. Until 1970, the Faculty of Veterinary Medicine of Ankara University (FVMAU) was the only faculty of veterinary medicine to offer veterinary education and research in Turkey. Since then, it has contributed to the establishment and development of other Faculties in the country.
FVMAU occupies a large wooded campus close to the city centre of Ankara, but separate from the main campus of the University. Some of the buildings date back to the foundation of the School and are now subject to protection orders – which makes renovation and updating of their facilities more difficult and more expensive.
The Faculty also utilises its Experimental and Applied Research Farm (EARF) of 238 hectares for practical teaching of undergraduates and research.
The Faculty admits high school and vocational school graduates *via* a national University Entrance Examination; it aims to educate veterinary undergraduates and to carry out research work in accordance with the economic and hygiene policies of the country. The undergraduate course is 5 years (10 semesters of 14 weeks) and graduates are awarded the degree of Doctor of Veterinary Medicine (DVM) on graduation.
The Faculty achieved Approved status under the EAEVE/FVE system in 2007. Although its organisational structure remains the same as at the last visitation, the internship programme has been revised and a new curriculum has been introduced. Changes have also been made to the examination system.
The FVMAU Animal Hospital, at present under renovation and reconstruction, will incorporate a Clinical Skills Laboratory; and new veterinary practice software has been designed for the Faculty which will allow real time tracking of patients and will be available on line both to students and staff.
A new curriculum for an undergraduate course in English has been initiated from the beginning of the academic year 2015-16.

1. OBJECTIVES & STRATEGY

1.1 Findings

The SER states that the main objectives of FVMAU cover undergraduate and postgraduate education in veterinary medicine, continuous education in the veterinary profession, scientific research and community services. However, although the overall objectives of FVMAU are officially listed in compliance with the Higher Educational Law, they are not defined in the SER. Also, they may be changed by the Executive Committee of the Faculty, the University Senate, the Higher Educational Council (HEC) of the Ministry of Higher Education and the Parliament of Turkey.

1.2 Comments

The strategic aims of the Faculty are centrally determined by the HEC, from which all its funding flows. So the aim of the Faculty to prioritise undergraduate education may not always be facilitated by the way it is financed.

1.3 Suggestions

The Executive Committee of FVMAU should develop, publish and publicise a clear and concise statement of its objectives.

2 ORGANISATION

2.1 Findings

The **Dean** of the Veterinary Faculty is appointed by the (national) HEC from among 3 professors suggested by the Rector of the University. The Dean serves a 3 year term, and can be re-appointed after the completion of his term. The Dean selects 2 academic staff of the Faculty as Vice-Deans.

The **Faculty Board** is chaired by the Dean; it comprises the Heads of Departments and 3 professors, 2 associate professors and one assistant professor, all elected by their peers. It is an academic unit which decides the educational and research activities of the Faculty. It also selects the **Executive Committee of the Faculty**, which is chaired by the Dean and comprises 3 professors, 2 associate professors and 1 assistant professor. It applies the decisions of the Faculty Board and is responsible for the administration of the Faculty; it prepares draft budgets for the Faculty and advises on student admission, course selection and assessment.

In addition, there are 21 **Commissions of the Faculty** each led by the Dean or a Vice-Dean and composed of academic employees of the Faculty. The numbers on each commission varies with its workload. The commissions advise the Faculty Board regarding their subject areas (e.g. academic evaluation and quality improvement; EARF; professional problem evaluation).

2.2 Comments

The administration of higher education was comprehensively restructured by the Higher Education Law, introduced in 1981. The system became highly centralised, with all higher education institutions closely controlled by the HEC. There is limited opportunity for influencing the HEC for development and evolution of veterinary undergraduate teaching.

There appears to be no formal provision for undergraduates to be involved in the administration of the Faculty, though the Team were informed that some students may attend meetings as non-voting observers.

2.3 Suggestions

The Faculty should make strenuous efforts to ensure that it is as effectively represented as possible at all levels in the University hierarchy and on the HEC. The geographical situation of the Faculty in the capital city of Turkey is an advantage, which should be exploited for the benefit both of the Ankara Faculty and of other Veterinary Faculties in the country.

The Faculty should meet and cooperate with representatives of the other veterinary Faculties, to provide an effective lobby with the intention of influencing the decisions of the HEC to its advantage.

As far as it is able under current legislation, the Faculty should seek to involve students in the Faculty Board, the Executive Committee and appropriate Commissions.

3 FINANCES

3.1 Findings

The financing of the Ankara Veterinary Faculty is highly centralised and rather inflexible. Funds for investment (for example for the renovation and refurbishment of the Veterinary Hospital, ongoing at present) are made available in response to a bid made by the Veterinary Faculty through the University to the Higher Education Council (HEC) of the Ministry of Higher Education.

The running costs budget for the Faculty, similarly, is allocated by the HEC and routed through the University to the Faculty; the University retains 10% of this and passes on the rest to the Faculty. This budget does not directly reflect the number of students in the Faculty, though it is weighted to take account of the costs of veterinary training. No tuition fees are allocated to the Faculty or the University.

All academic staff are paid directly from central government. The HEC sets quotas for the number and level of seniority of staff, but there is some room for flexibility in their allocation, both within the Faculty and the University.
Administrative and support staff are paid from the budget of the University and allocated to the Faculty. The Faculty also has freedom to use funds derived from its external activities (e.g. from the clinics and diagnostic tests carried out by departments of the Faculty) for the employment of "non-budgeted" staff.
Research grants are managed centrally and do not appear among the revenues of the Faculty.

3.2 Comments
Historically, the HEC has supported and promoted veterinary education in Turkey, not least by the establishment of a large number of veterinary faculties all over the country. And Turkish Faculties are well supported financially compared with other member establishments of EAEVE. So there is little scope for the Ankara Faculty to obtain more income from central funds. But the Team feels that the Faculty is not exploiting its potential for earning funds from external sources – e.g. in fees from its clinics, in providing referral and diagnostic testing services to local practising veterinarians and in attracting research funding from private sources.

3.3 Suggestions
The Team suggests that the Faculty should advertise and promote its clinical and diagnostic services and undertake a comprehensive review of the fees it charges. The Team believes that potential small animal clients in the city – and farmers in the surrounding countryside – would be prepared to pay higher fees than to local veterinary practices in return for access to the greater professional expertise and better facilities the Faculty possesses. Similarly, practicing veterinarians would be prepared to pay for high quality laboratory diagnostic services. This income could be used to employ more support staff and to further improve the facilities available to the Faculty.

4 CURRICULUM

4.1 GENERAL ASPECTS

4.1.1 Findings
The curriculum of FVMAU follows Section 5 Article 38 and Annex V point 5.4.1. of the Directive 2005/36/EC and 2013/55/EU on veterinary training. It is based on the decision of the Interuniversity Council of Veterinary Science Education consisting of deans of the Turkish veterinary schools, and it was adapted by the Faculty Board and the University Senate on the suggestion of the Educational Committee of the Faculty. It contains certain non-veterinary subjects outlined by the Turkish Higher Education Law.
The curriculum describes a five-year-long university level training, concluding with a DVM degree. Most subjects listed in the Directive can be found in the curriculum, however certain ones (Pharmacy, Preventive medicine, Therapeutics) are taught as part of other subjects.
The curriculum is an undivided one, so there is no Bachelor and Master phase. FVMAU provides Master training as a postgraduate training and PhD training. Writing a diploma work was not a prerequisite of the graduation, however writing a written thesis in the final year was just recently introduced.
The curriculum is well balanced; the proportion of practical, theoretical training, laboratory and desk based work and clinical work (Ratios R6-R8) meet the recommended values by ESEVT.
A semester consists of 14 weeks; students have to attend at least 70% of the lectures and 80% of the practicals.
Students have to spend 200 hours in extramural work under the supervision of a veterinary surgeon.

Students have to choose two elective subjects in semesters 1-8; the establishment offers a wide range of them.
The length of the study used to be limited to 8 years, but this limit was recently abolished.
In the 9th and 10th semester (Intern training program) students have to attend 20 mandatory 2-week-long rotations, 3 elective one-week-log rotations and a one or two weeks long elective certification program.

4.1.2. Comments
The outline of the curriculum meets the European Directives 2005/36/EC and 2013/55/EU.
The basic structure of the curriculum is identical at the Turkish veterinary establishments; however some modifications decided by the establishment can be implemented.

4.1.3 Suggestions
None.

4.2 BASIC SUBJECTS & BASIC SCIENCES

4.2.1 Findings
Basic subjects mentioned in the EU directives are included in the core curriculum.
Most members of the teaching staff are veterinarians, so basic subjects and basic sciences are taught from a veterinary point of view.
With the exception of Pharmacy all basic sciences listed in the EU Directive are in the curriculum but it is taught as part of Pharmacology.
The basic knowledge of the incoming students is variable.
Fresh, plastinated and fixated demonstration materials are used for anatomy teaching. The impressive Anatomy Museum serves not only students but the public, too.
The number of lectures and practicals in the case of basic subjects and basic sciences is proportional.
The number of students attending practicals of basic sciences at the same time is high (about 40-50 students), but there are several teachers and research assistants present to instruct them.
Biosafety measures and the necessary equipment were present at the departments responsible for teaching basic sciences.
The equipment of the students' laboratories meets the requirements, each student has individual microscope, and teaching is supported by using computers and projectors. The equipment of the research laboratories is generally up-to-date.

4.2.2 Comments
According to the SER, the knowledge background of the first year students is different but the amount of lectures on basic subjects is not high to equalise it.

4.2.3 Suggestions
None.

4.3 ANIMAL PRODUCTION

4.3.1 Findings
The establishment is organised in two sites. The main site is Diskapi campus and the second one is Kazan Campus. The Kazan Campus (the Experimental and Applied Research Farm EARF) functions as a teaching farm. The current stock of Kazan Campus is: 68 bovine (55 dairy and 13 beef cows) 234 small ruminants, 8 horse, 14 pigs, 4 canine, and 3982 poultry.

The establishment has access to another 6 institutions based on contractual arrangements, most of them being dairy farms and small ruminants farms (generous numbers), fisheries and one frozen semen station. The distance is between 100 and 400 Km from Ankara.
There is a consistent preclinical exposure to handling animals, starting in the first year (168 hours), second year (112), third year (194) of nonclinical animal work, with no species specification, according to the SER. Most of these hours are spent in Animal Husbandry, Animal Nutrition and Feeding, and take place in Kazan Campus (EARF) and Diskapi campus according to the subject discussed.
There is not an "Animal Production" specific subject in the curriculum. This subject is taught related to others (Animal Husbandry) that provide a sufficient number of theoretical/practical hours. There is not a" Veterinary Hygiene" as a specific subject in the curriculum.
Animal behavior and animal protection are taught only in theory, and there is no practical training in these subjects.
Other subjects are taught in sufficient hours with a good balance (2.4:1) between practical and theory. (See Animal Husbandry lecture/practice.)
There are a lot of subjects taken by electives (tab 4.3) and none of them have practical training, only lectures. Practicals are taken in the rotation of the fifth year (Intern rotation program).
Agronomy is taught together with Food Hygiene and Technology 28/28 hrs. according to the SER and seems to be enough. The lectures are focused more on nutrition, supplements, and additives and less on agronomic principles. They are in another elective subject in the 5th semester having only lectures. Animal production subjects seem to be well integrated in relation with other subjects (principles of AI, Nutritional Diseases).
State veterinary medicine, zoonoses, public health and forensic medicine are parts of the same subject in clinical subjects (28 lecture hours no practical training), and they also cover the principles of ethics and veterinary certification.
Animal protection and welfare is a specific subject comprising 14 lectures hours; practical training is provided in the Animal husbandry course.
Biosafety and biosecurity issues are respected in all the establishment's compartments in an adequate manner.

4.3.2 Comments
Animal production related subjects are well taught and well integrated into the curriculum. An appropriate number of theoretical hours are allocated for each subject even though the denomination of the subjects is not identical with those of the SOP. Most of the electives are taught only in theory but they have a practical correspondence in the Intern Rotation Program.
On the Kazan Campus there were potential welfare issues such as a mare being very thin and sheep/ goats with strikingly overgrown claws.

4.3.3. Suggestions
Increasing the practical teaching may offer additional possibilities to the students to spend more time in contact with the animals.
Attention should be paid to the housing of the sheep / goats and the condition of the mare on the Kazan Campus.

4.4 CLINICAL SCIENCES

4.4.1 Findings
Students generally receive a companion animal-based clinical training. The school operates a 24-hour emergency service that operates year round for small animal patients, and includes an inten-

sive care unit for companion animals. All students must take at least a 2-week rotation in the Emergency service and hospitalization. There is also a mobile clinic that takes 4-5 students per block for periods of about 20 hours in total. Emergency services for equine patients are not available. Use of animals in the EARF (research farm), slaughterhouses and protocols assigned with both governmental and private authorities are in place to offset the lack of caseload coming to the city campus. Equine patients, which are exclusively adult racehorses at the Ankara Hippodrome Jockey Club, are available for student training in equine practice.
Hands-on clinical subjects have an approximately equal allotment to areas of Clinical medicine, Surgery, and to Obstetrics and gynaecology, with somewhat lesser time allotment to Clinical examinations /diagnosis and laboratory diagnostic methods. Anaesthesia is taught in lecture format and then as a mandatory 2-week block in the intern training.
Pathology is taught in both theoretic and practical formats and is supplemented with ad hoc exposure by following patients that died in hospital. A 2-week block in the intern portion provides experience in on farm necropsies (poultry). Much of the scheduled hands on practical training is accomplished during the obligatory internship training rotations, that cover key clinical and paraclinical areas.

4.4.2 Comments

Students generally receive a companion animal-based clinical training and have very limited opportunity to see and treat sick large animals brought to the Faculty clinics. However, this is countered by regular farm visits where the interns see and manage first hand a wide variety of clinical cases in food animals. The equine caseload available to the students is almost exclusively composed of active racehorses in which students can only participate as observers.
The clinical portion of the curriculum appears to have a reasonable balance with the obligatory rotations during the internship portion ensuring hands-on practical training in the wide range of clinical and paraclinical disciplines. However, 6/20 (30%) of the obligatory rotations deal with elements of reproduction (Obstetrics & Gynaecology I, II, III or Animal Reproduction and AI I, II, III).
There is not a clear connection within the curriculum how research based medicine is accomplished in the teaching of various clinical disciplines.

4.4.3 Suggestions

The equine clinical training should include more hands on practical training of a greater proportion of clinical cases to ensure first day skills of managing equine emergencies.
The number of elective internship blocks could be increased to allow enrichment on selected clinical topics of the students' interest.

4.5 FOOD HYGIENE & TECHNOLOGY AND VETERINARY PUBLIC HEALTH

4.5.1 Findings

The teaching in Food Hygiene and Technology is the responsibility of the Department of Food Hygiene and Technology. The subject is taught as lectures (56 hours) and as supervised practical training (184 hours) for a total of 240 hours (R9=21,50). The department also offers two elective courses that are given if at least 10 students sign up for the course.
The practical training is taught at slaughterhouses and other food production enterprises and at courses at the faculty. Relationships are developed between FVMAU and commercial companies and governmental slaughterhouses to ensure hands on experience on food processing and official controls. Specifically, FVMAU has agreements with two slaughterhouses, one for feedlot animals and one for poultry.

The feedlot slaughterhouse is located about 40 km from the faculty, and the poultry abattoir is almost 200 km away from Ankara. The students are transported in groups on day-visits to the slaughterhouses, and are accompanied by a research assistant and an assistant professor who are responsible for the teaching at the premises. At both slaughterhouses the students observe and practice systematic ante- and postmortem examinations. The feedlot slaughterhouse is associated with a meat processing unit, and the students have the opportunity to do observations along the food chain from the live animal to finished product going out to retail and grocery stores. The slaughterhouse has a capacity of 44 cattle or 200 sheep.
The training takes place in the 6th, the 7th, and the 9th/10th semester; 56 hours of lectures and 56 hours of practicals in the 6th and 7th semester and 128 hours in th 9th and 10th semester. The 128 hours in 9th and 10th semester corresponds to two 2-weeks rotations in the intern training programme.
During the compulsory summer stage programme students can get extramural training in food hygiene. The summer stage programme (4.1.4) consists of a minimum of 200 hours extramural work, however, there are no restrictions to where the places of this training can take place. FVMAU has recently established cooperation with the Veterinary Faculty in Brno during which students can get training in food hygiene and safety by the summer school programmes; so far only 10 students have used this opportunity. Also student organizations arrange seminars and workshops on specific topics, such as bee/bee products and fish and fish products.
The milk/meat hygiene and technology course utilizes milk and meat samples from EARF and private enterprises for organoleptic, chemical and microbiological analyses. Students also participate in processing of dairy and meat products at the department's own facility. This training is part of the intern training programme.

4.5.2 Comments

Although the feedlot slaughterhouse is relatively small and the number of slaughtered animals is relatively low, the teaching staff at the department seem to have a well-functioning collaboration with the slaughterhouse staff. And in spite of their high teaching load, the teaching staff seemed to be very committed to their work.
The department's own food processing facilities offer a good opportunity for the students to learn food hygiene/safety in a real farm-to-fork-perspective. The teaching clearly focuses on this, but it can be further improved by better integration with the groups from animal production/animal health.
In the feedlot slaughterhouse, there is no stunning of the cattle and sheep before bleeding, while the poultry are being stunned by use of electrical baths. Even though the students are not exposed to the observation of stunning of large animals, the theory needs to be taught.
In the team's opinion the requirements regarding Food Hygiene/Safety and Technology as they are laid down in Annex I of the SOP are met.

4.5.3 Suggestions

During their first lecture in Food Hygiene and Technology the student are given an overview over the subject, they are presented to the expectations of learning outcomes and given guidance about textbooks and other information. However, specific learning outcomes/objectives should be presented in a written format, which the students can use as guidance for their studies.
In order to motivate the students for a career within food hygiene/food safety, motivation lectures are given by external veterinarians working within the field at specific career days. These career days are organized in collaboration with the student association and are for intern students. This is a very positive element that could be expanded also to students when the food hygiene teaching starts in the 6th semester.

Also putting more emphasis on Veterinary Public Health and the One Health concept than currently done could be used as a tool to increase the student's motivation for food hygiene/food safety. Similarly, there is a potential to increase the collaboration and integration with subjects such as animal production, pathology, animal health, prevention of zoonotic animal diseases and animal welfare in order to put food hygiene/food safety into a holistic veterinary medicine perspective.

4.6 ELECTIVES, OPTIONAL DISCIPLINES & OTHER SUBJECTS

4.6.1 Findings

The curriculum is largely set with no tracking. However students must take several elective courses each semester through the first 4 years. There is a wide range of elective subjects both in basic and clinical sciences. Each student has a faculty advisor to assist with selection of electives. The final year (year 5) of clinical rotation is largely obligatory but provides the opportunity for three one-week elective rotations.

Intern students can take these elective rotations as externships of any private veterinary clinics, government animal facilities or laboratories, etc., or abroad as well as being able to select from elective rotations offered by a Department of the faculty. The Erasmus programme is highly appreciated by students.

4.6.2 Comments

The current offering of electives is only a minor portion of the entire curriculum.

4.6.3 Suggestions

None.

5 TEACHING QUALITY & EVALUATION

5.1 TEACHING METHODOLOGY

5.1.1 Findings

The Commission of Education-Training develops the study program, which is decided upon by the Faculty Board.

The study program consists of 10 semesters; each semester lasts 14 weeks. Several courses are taught in parallel during semester 1-8, while the 9th and 10th semesters are the intern training programme. The intern training programme consists of 20 mandatory 2-week rotations.

Each semester consists of both compulsory and elective courses. The programme starts with the basic sciences subjects with anatomy as the most comprehensive subject taught in semester 1 and 2. In semester 3, emphasis is on biochemistry and physiology, both courses continue in semester 4. Immunology is introduced in semester 3, and infection biology subjects and pathology are introduced in semester 4. The infection biology subjects continue in semester 5, and pathology is taught through semester 5 and 6 as well. Food hygiene is introduced in semester 6 and continues in semester 7. More clinically related courses are introduced in semester 7, and continue into semester 8.

The teaching methods are traditional, such as theoretical lectures, more practically-oriented laboratory-based methods and group rotations, which focus on clinical and non-clinical training. The university does not demand that the academic staff have any pedagogical training in addition to their scientific backgrounds. However, there is a prerequisite to spend at least three months abroad at another establishment of veterinary education in order to qualify for an associate professorship.

During these stays abroad, each person is expected to learn and develop their pedagogical qualifications, and they should also be able to bring new and innovative ideas back to their faculty.
Relevant textbooks and lecture notes are available online, and websites as source of scientific information is discussed.
The intern training programme focuses on the acquisition of the Day One Skills. During the rotations the students work in small group of about 6 students in each groups, and they are guided by research assistants, PhD-students and assistant professors. The activity in the clinics is a combination of observing and hands-on practice. The students have their own log books in which their performance of compulsory activities are documented by the signing of their teachers.
FVMAU participates in the Erasmus cooperation, and in 2014 a total of 195 students participated in the exchange programme.
FVMAU has had a bilateral agreement with Tierärztliche Hochschule Hannover for a long time. Recently, a bilateral agreement was made with the University of Veterinary and Pharmaceutical Sciences in Brno, by which students can go to summer schools, and a joint master's degree programme with the Veterinary Faculty at Minnesota University is to be launched.
Exchange collaborations also exist with faculties in Japan, Kyrgyzstan, Azerbaijan and South Korea.
The students evaluate the teaching by filling out questionnaires. Changes and improvements of the curriculum are discussed in the Commission of Education-Training and in the Faculty Board, where decisions are reached by voting. The students representative has the right to express their views during these discussions, but they do not have voting rights.

5.1.2 Comments

The programme seems to follow a traditional structure of a veterinary curriculum, where the different subjects follows each other in a logical way. In this system, there is a challenge to integrate different disciplines into a holistic view of veterinary science. Some veterinary faculties now take a different approach to their curriculum design, where for example different disciplines are integrated into a system where the organ systems form the building blocks of the curriculum.
There are good opportunities for students to get involved in exchange programs thanks to bilateral agreements with a number of European and Asian veterinary schools.
Learning material (textbooks, electronic documents ready to download) is adequate and available for students. However, specific learning objectives for subjects and courses are not provided.
When the new Animal Teaching Hospital is taken into full use, the faculty intends to launch an electronically based system where all students' activities will be logged, together with all other relevant data about patients etc.
Although associate professors have spent a period at foreign establishments of veterinary education, the teaching methods in use are quite traditional. More interactive learning methods, where the focus is shifted from teaching to learning, and the teacher's role is more like a coach guiding the students in their own learning process, do not seem to be very much in use.
It is positive that the students have the possibility to engage in different research activities at the different Departments. However, such engagement is very dependent on the students' own initiative, and is not put into a system where research activities potentially could be categorized as elective elements in the curriculum.
It is the opinion of the team that the requirements regarding Teaching methodology as they are laid down in Annex I of the SOP are met.

5.1.3 Suggestions

The number of participating students in practical lessons (especially practicals held in laboratories) should be considered to be decreased.
Specific learning objectives for the veterinary programme, for each subject and course, should be provided and made available to the students in a written format.

The faculty should suggest that students' representatives in decision-making fora are given voting rights.
Updating teaching methods with more focus on interactive learning and less student-teacher contact time should be considered to be developed. This could also contribute to decrease the high teaching load on the teachers and release more time for research and income-gaining activities.

5.2 EXAMINATIONS

5.2.1 Findings

Each subject/course has an individual midterm examination and a final exam after the end of the teaching period. The prerequisite for taking the exams is attendance at theoretical and practical courses of 70% and 80%, respectively. Written exams can be essay questions, short answer questions or multiple choice. Oral exams take place with or without practical/clinical work. There is a mandatory practical exam in addition to theoretical exams (oral or written examination) for subjects where practical skills are essential. The teaching staff of the subject choose the appropriate form of "their" exam.
Failed exams can be retaken as many times as necessary, however, students who have not passed their exams of an academic year, can only take the courses belonging to the following year. Recently, the regulation that limited the maximum length for being a veterinary student to eight years was abandoned.
The rotation periods in intern training programme are evaluated by the respective department by either a written-oral exam or clinical performance by a pass or fail system. 20 % absence is allowed for intern students. Since the SER was written, the Faculty has introduced a thesis work as part of the internship programme.
No information is given on the use of external examiners, and this does not seem to be in use.

5.2.2 Comments

As the number of courses being taught in parallel each semester can be quite high, the number of midterm and final exams that have to be taken during the same exam period is correspondingly high. However, the students seemed quite happy with the system as midterm exams ensure that they have to learn during the semester, and that makes preparing for final exams easier in the examination period. The crowding of more than exam on one day was regarded as a challenge.
The newly introduced thesis in the internship work is commended.
As for the teaching methods applied, the use of examination methods is similarly traditional. More innovative examination methods, such as OSCE-exams, written assignments and presentations could be developed for a broader assessment of the students' qualifications, including professional skills and attributes.
The use of external examiners could be used as a tool to increase the contact with veterinary practitioners outside the faculty and also to increase contact and collaboration with other veterinary faculties in Turkey.
It is the opinion of the team that the requirements regarding Examinations as they are laid down in Annex I of the SOP are met.

5.2.3 Suggestions

The length of the final exam period at the end of each semester should be increased, to make the exam schedules for students less crowded.
Restructuring the examination system should be explored in order to improve the level of training and to broaden the qualifications assessed.

6 PHYSICAL FACILITIES & EQUIPMENT

6.1 GENERAL ASPECTS

6.1.1 Findings

Diskapi Campus is the main site of the Establishment and consists of 13 buildings where most departments operate. Most of the buildings are old, but recently renovated. Renovation is required for other buildings/laboratories (Biochemistry, Physiology). In some laboratories floors and walls are in poor condition. The sinks on the workbenches have lost their surrounding filler, which was crumbling away. There were gaps between the bench and the wall providing a soak-away for waste/water and reagents.

Small and large animal clinics are divided into: surgery, internal medicine, reproduction and obstetrics, artificial insemination. These are old buildings requiring renovation of flooring system/walls. The new FVMAU Animal Hospital is nearly finished but not yet operational. The premises currently being used are inadequate for an animal hospital.

The lecture rooms consist of 19 halls, the number of places between 20 (one) and 210 (one). The capacity of others is: 100 places (4 lecture rooms), 117 places (4 lecture rooms), 120 places (7 lecture rooms), 122 (one lecture room). The total number of places is 2170 places. The premises for group work summarise 380 places divided in 19 rooms (20 places for each). The laboratories summarise 798 places, divided in17 rooms as follows: 10 places (2 lab.), 20 places (2 lab.), 40 places (3 lab.), 48 places (one lab.), 60 places (8 lab.), and 80 places (one lab.). For lectures, the students are divided in two groups, while for practicals they are divided in other two groups. The capacity of each laboratory is generous (more than 50 places), and several academic staff conduct practical demonstrations.

The Anatomy Department has a plastination unit and a research laboratory. The marble dissecting tables in the department of anatomy were cracked and in one case had a large portion of the side broken leaving a jagged edge.

The Pathology Department has one necropsy unit and another 4 specialised laboratories. They provide good safety conditions for examination of large/small animals.

The Artificial Insemination Department currently operates in inadequate conditions. The laboratory does not provide optimal conditions for research and education.

The available transport consists of one bus and two minibuses (8 places each), which serve as the mobile clinic. A contract with a private transport company is functional at the moment and all requirements are accomplished. One vehicle is allocated for animal transport. There is protocol signed with the municipality destined for urban animals transportation involving two vehicles.

Laboratories are well equipped with health/safety issues (eyewashes, extinguishers, and showers). There is a good alarm system present in all laboratories. Chemicals are kept in secure conditions and drug storage is adequate.

The students/staff have access to the slaughterhouses and other food production enterprises, from Ankara, and poultry slaughterhouse 188 km from Ankara (agreement based). There is a meat processing unit located in Diskapi campus with a capacity of 35 kg /day.

Practical activities are also reinforced during the summer stage programmes in private/municipal slaughterhouses and summer school programmes in cooperation with Brno.

Samples for microbiology, toxicology, and organoleptic examinations are usually obtained from EARF (Kazan) and/or private sources, or from the central diagnostic laboratory.

According to the SER, 13 buildings are designated to serve the teaching, research and clinic activities. Teaching/research laboratories are provided for all departments of the establishment. The clinical support services are functional and adequate.

The BSL-3 Virology laboratory is just being completed as is the new microbiology research laboratory. Neither is currently operational.

6.1.2 Comments

The two locations of the establishment provide good premises for teaching and research. The buildings are old but most of them are renovated or in the process of renovation. Some of the laboratories require refurbishing and renewal. Completing the renovation of the Animal Hospital and its recommissioning will allow the reorganisation and refurbishment of some other facilities. The cooperation with Ankara Jockey Club is beneficial in providing teaching opportunities in equine medicine and surgery.

6.1.3 Suggestions

The Faculty is urged to ensure the new hospital becomes fully functional as quickly as possible. The premises currently being used are inadequate for an animal hospital.
Improving the transport capacity for extramural activities would provide more opportunities for improved hands-on clinical training for interns and will facilitate increasing the number of food animals and equines seen in the clinics.

6.2 CLINICAL FACILITIES & ORGANISATION

6.2.1 Findings

While the Animal Hospital is being renovated and re-furbished, the clinics are operating from temporary premises. These comprise 10 functional consulting rooms and two surgical suites. There are no dedicated hospitalisation rooms at present for any species. Animals recover from anaesthesia in mobile cages in consulting areas. There are currently no isolation facilities.
The LA surgery unit appears to be non-existent within the Faculty currently, though clinical cases are seen with the ambulatory clinic.
The Central Diagnostic Laboratory provides an efficient but under-utilised service; the Clinical Skills laboratory is not operational at present.
There is no computerised record system. Animal details are recorded in ledgers on entry to the hospital and then recorded again in each department. Case notes are kept in files.
The pharmacy within this unit functions well, though the key to the controlled drug cupboard was kept in an unlocked drawer, located close to the cupboard.

6.2.2 Comments

The current situation with no LA or SA hospitalisation and lack of exercise or isolation facilities is not satisfactory. The areas being used for small animal surgery consultations are overcrowded and difficult to maintain in a satisfactorily clean state. Animals being hospitalised are kept in mobile cages within a consulting room. The operating theatre was adequate but currently this Department, in general, is below the standard expected in a normal general practice. The Team therefore regard the clinical facilities as inadequate and a potential **major deficiency.**
It is understood that a new computerised record-keeping system, which will have on-line access both for staff and students, has been developed and will become functional when the animal hospital reopens.
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6.2.3 Suggestions

The new hospital must be commissioned as soon as possible to correct the above deficiencies.
The key to the controlled drug cupboard should be kept in a more secure location with access restricted to nominated persons.
The Faculty should consider using potential income generating sources to their maximum (eg, Virology, microbiology, Central Diagnostics) by advertising and marketing their services and expertise to veterinary practices.

7 ANIMALS & TEACHING MATERIALS OF ANIMAL ORIGIN

7.1 Findings

Live animals are used for anatomical practical training (ruminant, equine and avian). Few cadavers are used for dissection purposes (4-5 dogs, no ruminants, 2 equine cadavers). Most of the cadavers are avian, lab animals, and others. Materials are obtained from different sources for didactic purposes: clinics, euthanized, EARF, research animals and fresh organs from slaughterhouses are used. Chilled, plastinated and fixated cadavers are also used as teaching materials for students.
Necropsy material is not well balanced: food-producing animals (57,66, equine 7). The establishment provides adequate materials from poultry/rabbits and companion animals.
The provision of clinical material seems to be adequate in small animal/exotic cases. Among large animals, ruminants predominate and most of the cases are seen outside by the mobile clinic. Equine cases are few; there are no porcine cases.
During this transition phase, the FVMAU Animal Hospital currently does not have adequate capacity for small animals, large animals and equine cases. Insufficient horse cases are available at the animal hospital to enable undergraduate students to gain sufficient hands-on training within this species but this has been rectified by the recent agreement with the Hippodrome.
The Ambulatory clinic functions on two days a week for prearranged visits. Staff taking part may include persons from the LA surgery, Reproduction AI and LA medicine departments plus research fellows and students making a maximum total of 16 persons on each trip. Students allocated to each Department stay within their relative area during the visit. The transport vehicles are hired out contractually and meet the purpose required.
Student exposure to slaughtering seems to be adequate, as well as supporting materials.

7.2 Comments

Appropriate sources of animal material are available. The number of equine cases is low but is increasing following agreement with the Hippodrome. Necropsies of food-producing animals and equines are below the required ratio. The mobile clinic provides sufficient cases for farm animals (mostly small/large ruminant).

7.3 Suggestions

The Establishment should continue to try and increase the numbers of horses treated to meet the needs of the students. The mobile clinic should be a good source to increase the equine caseload, thanks to the Hippodrome arrangement.
The Faculty should increase the number of large animal and equine necropsies to enable it to meet the standard.

8 LIBRARY AND LEARNING RESOURCES

8.1 Findings

The library is conveniently situated on the veterinary campus, close to the student dormitories. It is open from early morning to late evening on weekdays, but not at weekends.
Shelving in the large reading room houses a wide range of textbooks and journals for study on site and most textbooks can be borrowed. There is a comprehensive electronic library system with lots of e-books and other documents available online for students and academic staff *via* the Faculty web-site from wherever students have web access. Scientific articles from all relevant publishers are available and downloadable free of charge for students and academic staff. Students can get help from the library personnel in finding appropriate literature for their purposes.
Several computer suites are available on the campus for students, each equipped with a sufficient number of modern computers with internet-access.

There is, in addition, a student reading room which is open long hours both during the week and at weekends
The library has a separate archive for theses and scientific articles written by members of the Faculty.

8.2 Comments
The library and learning facilities available are more than adequate for the needs of veterinary students and are, to some extent, more advanced than the students themselves, since there was little evidence of students making use of their own laptops, but there is excellent provision of on-line learning facilities available to them.

8.3 Suggestions
None.

9 ADMISSION & ENROLMENT

9.1 Findings
There is a nationwide selection system in Turkey; applicants have to reach a sufficient score at the National Entrance Examination (mathematics, physics, biology, chemistry, Turkish literature). In addition to this form of exam "number one" graduates of high schools and BSc graduates have an extra channel of admittance. Foreign students have to pass a special exam. Those applicants who graduated from a 2-year-long vocational school after completing the high school have a special exam but only a few students are admitted through this way.
The number of first year students is determined as 120 by the Faculty Board, but the average number of students with standard intake is 167.6 on the decision of the Higher Education Council, and further 24 students enrolled through other entry modes. About 4% of the students are foreign students.
The school has no information on the total number of applicants; however the first choice of 85% of the enrolled students is the Veterinary Faculty in Ankara.
The establishment is not financed on a per capita basis; there is no direct connection between the number of students and the state support.
Due to the high reputation of the establishment, motivated and good students are enrolled. The drop-out rate is about 20%.
Active students' mobility is made possible by the 22 Erasmus agreements of the establishment.

9.2 Comments
The number of first year students is nearly 60% higher than the optimal value decided by the establishment.

9.3 Suggestions
Reduction of the first year students is suggested especially in the light of the planned veterinary training in English.

10 ACADEMIC TEACHING & SUPPORT STAFF

10.1 Findings
Staff appointments are determined and allocated by the Ministry of Finances and the Higher Education Council. The posts determined are organised by the Rector and announced to the Faculty. The Faculty takes the final decisions about the allocation of staff according to the demands of the Departments.

Only two out of 113 academic staff are non veterinarians (98,33%). Staff ratios (R1, R2, R3, R4, R5) are satisfactory, being below the maximum limit according to the SOP. There are no shortages or disproportion. Staff can move within closely related departments, with the approval of the Faculty Board, Dean, Rector, and HEC. Posts that become vacant can be automatically filled with a person from the same department of the same establishment or from other establishments in the country. Staff can be flexibly deployed if certain conditions are met (e.g. resident PhD thesis) and if they meet specific conditions within closely related departments

Academic staff are regularly sent on exchange experience programmes abroad in other establishment that have scientific cooperation and join relevant international courses. Participating in teaching skill courses organised by the Faculty of Medicine of Ankara University represents other possibilities and international projects (Quality Culture Project and Joint Master Project) organised by EUA.

Other arrangements are available as bilateral agreements with UVM Hannover, Ankara University, to improve clinical/pedagogical skills. Academic staff are financially supported by the establishment to attend national/international conferences, seminars and workshops.

For progression within the academic field there are 2 types of criteria - mandatory and optional. The mandatory criteria differ according to the position, as follows:

For associate professor: at least 4 years in post; PhD thesis in appropriate to the field; publication of the PhD thesis; foreign language exam (English/German/French); at least 3 articles published in recognised international periodicals where the candidate is the first/second author or responsible. Also they must attend at least two presentations in international congresses/symposia. The optional criteria: The candidate can choose 10 out of 41 optional criteria.

For full professor: 5 years from associate professor is the minimum period required. The position is published in official newspaper. There are also mandatory and optional criteria. Mandatory criteria are: Publishing the PhD. Thesis, foreign language exam, at least 6 articles published in periodicals (ISI), at least 2 presentations in international meetings (conferences symposium). Optional criteria: the candidate can choose 15 out of 38 listed criteria. An exam is organised and conducted. 5-7 members compose the committee of analysis, and a real question-based exam must be taken.

Vacancies for professor are internationally advertised and according to the new regulation foreign participants can take part.

10.2 Comments

None.

10.3 Suggestions

None.

11 CONTINUING EDUCATION

11.1 Findings

The Faculty has close connections with the local veterinary chamber and staff members take an active part in the CPD meetings that are held.

11.2 Comments

There are no certified courses offered by the Faculty to practicing veterinarians who wish to improve their postgraduate knowledge.

11.3 Suggestions

There does appear to be a demand for CPD by practising veterinary surgeons at a practical rather than theoretical level. Topics of most use to the delegates aim to increase their day to day knowledge and practical skills in relatively common conditions.
FVMAU should be encouraged to use its staff members and facilities to provide Continuing Education for practicing veterinarians within the region who wish to further their knowledge. Large and small animal veterinarians as well as those working in public health, the Ministry of Agriculture and the Military could benefit and in return this could lead to an increased cooperation by these veterinarians with FVMAU and possibly an increase in the amount of teaching and research cases provided. The courses do not have to be certificated but a recognized qualification on completion is always beneficial.

12 POSTGRADUATE EDUCATION

12.1 Findings

As clinical specialties are not officially recognized by the government there are no EBVS residency programmes. On the other hand, Masters degrees (both with and without Thesis) and PhD degree training pograms are given in the clinical departments in cooperation with preclinical and basic sciences. The graduate degrees are structured with defined content of course work depending on degree. Non-thesis Masters submit a written report at the end of their program, and thesis Master and PhDs have research planning, experimental work, peer reviewed publications requirements and defence of their thesis.
A memorandum of agreement with the University of Zurich for conducting residencies in surgery and internal medicine is in place as is an agreement with the University of Minnesota for double degree programs in clinical sciences.

12.2 Comments

It appears that the faculty is using the post graduate education in the clinical disciplines to assist with the obstacle of lack of specialist training. Also, while there are a large number of masters and PhD candidates (148 non-thesis masters, 69 thesis masters, and 256 PhD candidates), only 40 PhD students are employed as research assistants at the school. The other postgraduate students are supported by different grants and scholarships, or are employed elsewhere.
The links with Zurich and Minnesota hold promise for enhancing the scientific and discipline specialist strengths of the clinical development of the school.

12.3 Suggestions

The Faculty is encouraged to continue lobbying efforts with the government for recognition of advanced clinical specialities and specialist training programs. If not already being done, those in masters/PhD programs who clearly also provide substantial input as teachers in the curriculum should ensure they use this opportunity to foster research-based teaching to their veterinary students.

13 RESEARCH

13.1 Findings

Organisation of research is centralised in Turkey, it is the responsibility of SCST. Research is financed by governmental organisations (TUBITAK) and by the university. The financial management of these research grants is also centralised, and they do not appear among the revenues of the establishment. There are 1-8 supported applications in a year.

The establishment has no formal research strategy, research is based on the individual activity of the different academic staff members.
Students are involved on a voluntary basis in ongoing reserach programmes at FVMAU, this activity is supported by grants of TUBITAK.
Students, who are involved in research activity of a department receive training (biosafety, animal experiments etc.) before commencing the work.
There are two students' organisations at FVMAU; one is promoting research activity of undergraduate students, the other one organises workshops and seminars for interested students.
Students' National Conferences are organised yearly where students can present the results of their research work and these works are also published in a journal.

13.2 Comments

Joining research programs is a great opportunity for interested students, it can widen their professional horizon, it can familiarise them with research and it can serve as a basis of their future PhD studies.
There are several up-to-date research laboratories at the establishment which could accom-modate more students interested in research.

13.3 Suggestions

Involvement of more students in research should be encouraged.

FINAL REPORT AS ISSUED BY ECOVE ON 11 MAY 2016

EXECUTIVE SUMMARY

The Faculty of Veterinary Medicine of the Ankara University was visited between 2nd and 6th November 2015. The Faculty achieved approval under the EAEVE scheme in 2007; and the aim of this visitation was to provide expert opinion to the European Committee of Veterinary Education (ECOVE) on the continuation of its approval. The visiting team had received the Self-Evaluation Report in advance of the visit and, during the week, visited the different Departments, clinics, laboratories, farm and some partners of the Faculty, had meetings and discussions with its management, senior and junior academic staff, as well as support staff and students.
The members of the visiting team were very much impressed by the continuing development of the Faculty, the large scale investments that have been carried out or are close to completion and its plans for the future. However, in accordance with the Standard Operating Procedures for Stage 1 evaluations, only the currently operational units within the Faculty were included in their considerations.
The internship program of the 5th year, the high level of biosecurity around the campus, the excellent up-to-date research laboratories, the lecture halls and student laboratories, the Anatomy Museum, the plastination technique in producing teaching material for anatomy, the meat processing unit, the library service, the newly introduced thesis in the internship work and the large number of Master and PhD students are to be commended.
Despite the great changes, there is room for further development. While the visiting team was happy to see a sufficient caseload of farm animals and companion animals together with successful efforts to increase the number of equine patients, the equine caseload is still below the desirable level. Similarly, necropsy cases regarding horses and farm animals should be increased in the future. Updating teaching methods and restructuring the examination system can also improve the quality of training. Offering laboratory services and continuing professional development courses to practising veterinarians would not only strengthen the connections between the establishment and the profession but it could also increase the income of the school. A reduction in the undergraduate students' number would decrease the workload of the teaching staff and the research assistants, resulting in more time for research and specialisation. In order to retain the leading position of this Faculty in Turkey, encouraging junior staff members in specialisation through residency programs is recommended.

Regarding the clinical facilities, the visiting Team unfortunately could evaluate only the present, temporary ones and their inadequacy was evident. **This is a potential major deficiency.**

The members of the visiting team were pleased to see that there is a good atmosphere at the faculty and both staff members and students are loyal to and like to work or study at the establishment.

The Team would also like to express their thanks for the excellent preparation and organisation of the visitation, the open and friendly discussions, the pleasant atmosphere and the kind hospitality.

In conclusion, the visiting team unanimously agreed that **conditional approval** of the Faculty of Veterinary Medicine of the Ankara University will be recommended to ECOVE due to inadequate clinical facilities at the time of the visitation.

At the exit meeting, the Dean and members of the Faculty were reminded that the visiting team only recommends the above conclusion and that the final decision will be made by ECOVE.

Annex 1 Indicators (ratios)

R1:	nº. undergraduate veterinary students / nº. total academic FTE in veterinary training	=	1128 / 197	**5.73**	GUIDELINES <8.381
R2:	nº. undergraduate students / nº. FTE total Faculty	=	1128 / 353 =	**3.20**	GUIDELINES <9.377
R3:	nº. undergraduate veterinary students / nº. VS FTE in veterinary training	=	1128 / 111 =	**10.16**	GUIDELINES <11.057
R4:	nº. of students graduating annually / nº. VS FTE in veterinary training	=	150 / 111 =	**1.35**	GUIDELINES <2.070
R5:	nº. total FTE support staff in veterinary training / nº. total FTE academic staff in veterinary training	=	156 / 197 =	**0.79**	GUIDELINES 0.505-1.907
R6:	Supervised practical training / theoretical training	=	2815 / 2090 =	**1.35**	GUIDELINES >0.602
R7:	Laboratory & non clinical animal work / Clinical work	=	1566 / 1249 =	**1.25**	GUIDELINES <1.809
R8:	Teaching load / Self directed learning	=	4569 / 336 =	**13.60**	GUIDELINES 2.59-46.60
R9:	Total n° hours vet curriculum / Total n° hours FH/VPH	=	5161 / 240 =	**21.50**	GUIDELINES 8.86-31.77
R10:	Hours obligatory extramural work in veterinary inspection / Total n° hours FH/VPH	=	200 / 240 =	**0.83**	GUIDELINES 0.074-0.556

R11:	nº. of food-producing animals seen at the Faculty / nº. of students graduating annually	=	2338 / 150	=	**15.59**	>0.758
R12:	nº. of individual food-animals consultations outside the Faculty / nº. of students graduating annually	=	408 / 150	=	**2.72**	GUIDELINES >8.325
R13:	nº. of herd health visits / nº. of students graduating annually	=	144 / 150	=	**0.96**	GUIDELINES >0.326
R14:	nº. of equine cases / nº. of students graduating annually	=	100 / 150	=	**0.67**	GUIDELINES >2.700
R15:	nº. of poultry/rabbit cases / nº. of students graduating annually	=	374 / 150	=	**2.49**	GUIDELINES >0.407
R16:	nº. of companion animals seen at Faculty / nº. of students graduating annually	=	14368 / 150	=	**95.79**	GUIDELINES >48.06
R17:	Poultry (flocks)/rabbits (production units) seen / nº. of students graduating annually	=	48 / 150	=	**0.32**	GUIDELINES >0.035
R18:	nº. necropsies food producing animals + equines / No. of students graduating annually	=	65 / 150	=	**0.43**	GUIDELINES >1.036
R19:	No. of poultry/rabbits / No. of students graduating annually	=	294 / 150	=	**1.93**	GUIDELINES >0.601
R20:	Necropsies companion animals / No. of students graduating annually	=	189 / 150	=	**1.26**	GUIDELINES >1.589

Annex 2 Decision of ECOVE

The Committee concluded that the following Major Deficiencies had been identified at the time of the visitation:

-) Inadequate hospital facilities for small and large animals.

-) Inadequate isolation facilities.

The 'Ankara University, Faculty of Veterinary Medicine' is classified after Stage 1 Evaluation as holding the status of: **NON-APPROVAL**.