

**European Association of Establishments for Veterinary Education  
and the Federation of Veterinarians of Europe**

**European System of Evaluation of Veterinary Training**

**REPORT ON THE STAGE 1 VISIT TO THE FACULTY OF  
VETERINARY MEDICINE, SELCUK UNIVERSITY, KONYA, TURKEY**

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## **INTRODUCTION**

A full introduction to the Faculty of Veterinary Medicine of Selcuk University (FVMSK) in Konya, Turkey can be found on pages 6 and 7 of the SER Stage 1.

The Konya Faculty was evaluated initially by an EAEVE/FVE Visiting Team in 2002 and it was revisited in 2008.

Two EAEVE/FVE Expert Teams visited the FVMSK from 26 to 30 October 2009 and carried out a full evaluation of:

- *for Stage 1*, the facilities, educational courses, student aspects and the staff
- *for Stage 2*, the quality assurance procedures in place. As has become the normal situation since January 2009, a student member was present within the Visiting Teams, an ENQA requirement.

This report deals with the Stage 1 visit. The Self-Evaluation Report (SER) for Stage 1 was adequate and the organization of the visitation schedules, which followed the guidelines, was good. Special needs were handled promptly and efficiently. There were some linguistic problems especially with un-translated documents, but in general, where necessary, interpreters were employed.

## **1. OBJECTIVES & STRATEGY**

### **1.1 Findings**

The Mission Statement of the FVMSK can be found on page 6, SER 1 and is as follows:

*“The mission of the FVMSK is to graduate well-educated veterinarians who treat animal diseases, protect animal and human health, ensure breeding, caring of and feeding of animals, oversee production of animal products under suitable conditions, pursue scientific and technological development, comply with the ethical rules of the profession, are aware of environmental problems and of the importance of continuous education.”*

The Objectives can be found on page 8, SER 1 and these are followed by a SWAT Analysis on pages 8 and 9, SER 1.

### **1.2 Comments**

- It is clear that there is a very heavy emphasis upon teaching, at the cost of research. Since veterinary training is a research-based course, this needs to be addressed. As will be seen in the Chapter 3 Finance, a new remuneration system is about to be introduced in the near future in which academic staff will be evaluated both on teaching and research results.

### **1.3 Suggestions**

#### **1.3.1 The balance between teaching and research needs to be adjusted in order to broaden the research base of the FVMSK.**

## **2. ORGANISATION**

### **2.1 Findings**

The Organization of the FVMSK is well outlined on pages 12 and 15, SER 1.

Student representation is present in the Faculty Executive Committee (FEC) and in the Faculty Administration Committee (FAC). In both committees, one student member is included. The FEC responsibilities include curricular and educational organization, and quality assurance of 'teaching, research and scientific activities'. The FAC responsibilities include budget planning, student intake and dismissal and exchange programs. Student representation: students from every year choose a representative. They choose one candidate to represent all students in the Faculty Commissions (both FEC and FAC). No student representative is present in the Curriculum Commission. In the FEC and FAC, the student representative does not have a veto-right and in the end, the Dean is responsible for enacting the final decision. The students do not feel heard enough by the staff through this representative construction and would like more power or influence. On the other hand, teachers are very open to discussion with students and students feel free to address matters with their teachers at any time.

### **2.2 Comments**

- FVMSK Organization and Structure is common to all Universities/Faculties in Turkey and is very centralized. Nevertheless, in Konya, the FVMSK seems to be assigned a significant degree of independence and is well represented by the Rector and University Staff at the Ministry of Finance in Ankara.
- Research finance comes mostly from the Ministry of Agriculture together with the Scientific and Technological Research Council of Turkey (TUBITAK) and Selcuk University Scientific Research Projects (BAP) and the contacts to these entities by the Dean and staff of the FVMSK seemed to be good.

### **2.3 Suggestions**

**2.3.1 Increase student influence in decision making on various levels: education, research, and clinics. Students are the main output of this Faculty and represent the future of your profession and future staff as well.**

**2.3.2 Although there is an open one-on-one communication structure at FVMSK, student involvement in decision making should be improved. It is not enough to have a representative present pro forma if he or she does not have any influence.**

## **3. FINANCES**

### **3.1 Findings**

The findings on the financial situation can be found on pages 16 to 17 SER 1.

Central Funds are applied for by the University following presentation of the budgets by each Faculty and are then assigned by the Ministry of Finance to the University. In principle, virtually the total central funds assigned via the University from the Ministry of Finance are used to pay salaries and benefits and teaching support only.

Remaining budget needs are generated by income from services provided and are close to 50% of the total annual income.

Research is funded either by the University or an organization under the umbrella of the Ministry of Agriculture, not generally by the FVMSK. The research project leader receives the money directly.

The Ministry of Agriculture also contributes to building support.

### **3.2 Comments**

- Virtually all the funds allotted to the University by the State Planning Institute are assigned to paying salaries and benefits only via the University.
- The University funds all facilities, administration and maintenance, which means that there is no full-cost FVMSK annual budget. It also means that the FVMSK has no financial autonomy other than the funds generated separately.
- Almost one half of the total annual budget is generated by the FVMSK, since the central budget sources are very limited, inflexible and inadequate. This means that each Department has a separate independent budget for its own use. This system certainly does not make for efficient use of available resources.
- There are no obstacles to financing essential equipment.
- The Faculty has some freedom in the fact that temporary staff can be hired directly, the University and Government needing only to be informed.
- Most research projects are financed by the Ministry of Agriculture by project and the funds are paid directly to the project leader, who seems to have total answerability for this money. This system by-passes the University, the FVMSK and the Departments.
- There does not appear to be any involvement of the Veterinary Pharmaceutical and animal food Industries in financing research projects.

### **3.3. Suggestions**

- 3.3.1 It is essential that the Central Government recognises that the training of a veterinarian is one of the most expensive higher education courses primarily because of its length of study and also the advanced facilities as well as teaching intensity necessary. The team suggests that the Deans of approved and/or visited Faculties should get together to approach to national government, maybe with the assistance of EAEVE, to convince it [plural?] that a much larger investment should be made to enable Veterinary Teaching Establishments to produce veterinary graduate acceptable across the Greater European Scene. Plus: focus on 3 or 4 “top”-faculties in Turkey?**
- 3.3.2 The small Departmental Budgets should be merged and become part of a Faculty Budget administered by the Dean and staff, but strictly managed and prioritized.**
- 3.3.3 The FVMSK should administer the funding of all Research Projects and distribute the funds in line with a strict Faculty Research Priority Plan. This would improve the efficiency of utilization of the limited money available.**

**3.3.4 Efforts should be made to try to offer Research Services attractive to the Industry in order to achieve additional income sources.**

**4. CURRICULUM**

**4.1 GENERAL ASPECTS**

**4.1.1 Findings**

FVMSK offers a five-year full-time theoretical and practical curriculum in Veterinary Science. The curriculum includes teaching of Atatürk's principles and history of the Turkish revolution. These, and some other subjects must be included (by law) in all curricula in higher education.

The Faculty Executive Committee also functions as Curriculum Committee, and is responsible for the composition of the curriculum.

The allocation of hours and the balance between theoretical teaching and practical training is performed on the basis of the EU directive 2005/36/EC.

The curriculum offered seems in general to be appropriate. Concerning this, the following remarks can be made:

Table 2 (page 19) provides data on the curriculum hours per subject. For some basic subjects (e.g., biochemistry) a considerable numbers of hours are allocated in the column "clinical training".

The subjects involving clinical lectures, preventive medicine, therapeutics, agronomy - as such - are not mentioned in the Tables 4.2 through 4.6. These subjects are provided in one of the other subjects listed.

During the tenth semester, some subjects seem to be rather basic for the stage of training or otherwise over-represented (e.g., artificial insemination in companion animals, zootechnics).

For data on supervised clinical work, see chapter 4.4 (clinical teaching) and elective subjects are discussed in chapter 4.6.

**4.1.2 Comments**

- Curricular changes are implemented after "consensus" of the Heads of Departments.

**4.1.3 Suggestion**

**4.1.3.1 The ratios R6 and R7 should be improved upon. A contributing factor in aiding this issue might be to lower the number of enrolled students.**

## **4.2 BASIC SUBJECTS & SCIENCES**

### **4.2.1 Findings**

Most Basic Subjects and Basic Sciences mentioned in the EU Directive are taught as independent subjects or parts of other subjects. These subjects are taught by teaching staff included into Departments of three Divisions of Basic Sciences, Preclinical Sciences and Animal Nutrition (Fig. 3, page 13).

The curriculum hours in the Basic Subjects taught to veterinary students are shown in SER Table 4.2 page 19. Overall, the hours taught in Basic Subjects and Sciences amount to 3077 out of 7800 indicated as a total number in Table 4.1, page 19.

Biology is taught in the Department of Genetics (Division of Animal Nutrition), Biostatistics in the Department of Biostatistics, Chemistry in the Department of Biochemistry and Epidemiology and Immunology in the Department of Bacteriology.

No Preventive Medicine, as an independent subject, is taught. It is included in different health and clinical subjects.

Poultry Diseases is an independent subject taught by the Division of Preclinical Sciences.

Four elective Basic Sciences are offered to be taken by students (table 4.4): Topographic Anatomy, Biochemical markers, Clinical Physiology and Clinical Biochemistry. During the 9th semester students have a rotation period in some Basic Sciences during 1 week (Table 4.5).

Most of the Professors in Basic Sciences have a Degree in Veterinary Medicine and a PhD.

Coordination (in terms of teaching and sharing resources) amongst Basic Sciences Departments is reasonable following the input of Professors belonging to these Departments.

### **4.2.2 Comments**

- Teaching programmes in human resources subjects, teaching material and facilities visited within Departments involved in Basic subjects and Sciences are acceptable for veterinary undergraduate students to acquire the knowledge of the structure and functions of healthy animals.
- The number of students is considered too high by all interviewed academic staff in terms of quality of teaching.
- Organization of practical teaching, in some basic sciences subjects (e.g. Anatomy), putting together high number of students (several groups) in the same laboratory at the same time, does not seem ideal in terms of teaching quality.

### **4.2.3 Suggestions**

**4.2.3.1 Theoretical and practical activities given in Basic Sciences during the rotation period (9th semester) should be clearly detailed in order to give a better appreciation of their function e.g. an approach to getting a more integrated clinical and health education.**

## **4.3 ANIMAL PRODUCTION**

### **4.3.1 Findings**

Regarding mandatory courses, Agronomy is not given as specific course, but it is included in the course of Animal Nutrition and Feeding. Environmental protection is included in the Toxicology course (table 4.2 page 19-20 SER). Elective courses cover many aspects of animal production (table 4.4 page 21-22 SER).

There is a working farm and an equestrian centre where students can carry out part of the practical work. The farm is located close to the Faculty. Cattle, small ruminants, pigs, poultry are present for the practical teaching students

### **4.3.2 Comments**

- The basic topics of Animal Production are taught in a satisfactory way. There are sufficient hours of teaching in Animal Production with a good balance between theory and practical training.
- Amongst mandatory courses, Agronomy is not given independently, but it is taught within the Animal Nutrition course.
- Textbooks used for Animal Production courses are relatively new, and some of them have been edited by professors which are in charge of the course (animal nutrition). Professors provide up-to-date information to students according to new technologies and new findings.
- Information on EU legislation (animal welfare, animal protection, animal transportation, feed additives) is given within the mandatory and elective courses, although more effort should be made to let students become fully aware of these EU Directives/Regulations, especially in Animal Welfare and Protection.
- Teaching facilities are satisfactory. Many classrooms are equipped with computers and video projectors. A room for feedstuffs collection is also available, although the number of collected feed samples could be increased, i.e. feedstuffs, minerals and vitamins. Students have access to a computer room (20 pc are available) where a software for rations formulation is installed. Laboratories for students are provided with basic equipment for feed analysis. NIR (1<sup>st</sup> abbreviation) is not available, whereas it is extensively used in several laboratories for feed analysis in real time. PCR and HPLC technologies are available for Animal Production research and internal training in other Departments. Analyses are performed for research projects at the Faculty and on feed from private farms (average 100 per year).
- There are an Experimental Farm and an Equestrian Centre (see facilities) where students may perform training on different aspects of Animal Production. Three private farms (dairy, beef and poultry) are also available to be visited in a coordinated activity within animal production training. They also offer to internal and volunteer students the opportunity of a one week session. As expected, practical work with pigs seems limited because there are only 7 pigs at the University Farm. Moreover, no swine farms are located in the area.
- The Department of Animal Production is involved in organizing courses supported by the Ministry of Agriculture and Agricultural Research Department for farmers, and people working in private companies. Moreover, an assistance service in animal production is provided to farmers and practitioners in Konya and other regions.



- Coordination and integration of teaching programme, seminars, and external course in animal production seemed to be sufficient. Connections with practitioners also exist.
- Animal breeding, genetic and animal husbandry are also represented in a satisfactory way and the activities carried out involve internal students in practical training.

### **4.3.3 Suggestions**

**4.3.3.1 Because of the importance of Animal Production in the Konya area more lectures and training in Agronomy should be given. Moreover, some nutritional diseases in sheep and cattle are caused by deficiencies of some trace minerals in soil and therefore in pasture and forage.**

**4.3.3.2 Although information on EU legislation (animal welfare, animal protection, animal transportation and feed additives) is given within the mandatory and elective courses, more efforts should be made to increase student awareness of these EU Directives/Regulations.**

**4.3.3.3 The low level of training activity on pigs at Konya is clearly due to religious reasons and to the virtually non-existent pig market, because of minimal demand for swine products in Turkey. However, because knowledge and training in pig production are very important in EC countries, it is strongly suggested that teaching on pig production be significantly improved.**

## **4.4 CLINICAL SCIENCES**

### **4.4.1 Findings**

The staff, facilities and organization concerning clinical teaching are adequate.

Clinical training starts in the third year and students' responsibility is increased in the fourth and fifth year. Students perform diagnostic and therapeutic actions under supervision and in the fifth year the students use a report card to document all 'essential applications' that were practiced during this period. The fifth year report card includes procedures that a student must see or perform during his or her education in the clinics. Some of these procedures for example are suturing, anaesthesia, parturitions, injection techniques, clinical examinations and artificial insemination. Students do not perform surgeries in the Faculty Clinics, but they do so in peripheral practices. Students feel that their level of clinical capabilities after graduation is sufficient to be self employed in veterinary peripheral practice. They feel they have had enough hands on experience in anatomy and pathology and also in animal handling and clinical cases in all species. Students spend at least one week at a peripheral farm where they are taught on farm management and they can practice many skills (AI, blood sampling, foot care, parturitions) under supervision of a veterinarian. Also, collaborations have been established with an equestrian centre, a jockey club and a companion animal pound where students can practice animal handling and procedures (e.g. vaccination). However, they get very limited animal handling education in pigs and are taught only husbandry, breeding, food hygiene and zoonotic aspects. Education in minor species (small mammals, reptiles, birds) is limited and is mainly centred in elective courses. The compulsory education on these species contains nutrition, husbandry and disease. However, students feel they are adequately educated on these minor species.

In the fifth year (both ninth and tenth term) no curriculum hours are scheduled for diagnostic imaging. No laboratory and desk based work hours are included in the curriculum for 'Clinical examination and diagnosis and laboratory diagnostic methods'. Students are not educated on the practical use of blood analysis and urinalysis machines. They do get enough practical experience in faecal examination and ECG reading.

Animal welfare, ethology, ethics and professional attitude are taught in the deontology classes.

There is an elective course in the first year on communication, which is taught by a communication expert. This is very popular amongst students and is much appreciated. In the clinics, students practice communication with patient owners under supervision of a teacher who will provide feedback. Students expressed the wish for more education on various small animal breeds, for example dog breeds and their specific properties.

The level of competence regarding specialization of the clinical teachers is unclear. It is also unclear to which extent organizational disciplines are responsible for teaching specific (specialized) clinical subjects (e.g., endocrinology, oncology).

The clinical case load that students encounter is described in ratios R11 up to R20. The denominators suggest that the number of clinical cases per graduated student exceeds the EAEVE requirements for all species, except for companion animal cases. The number of companion animals seen at the Faculty is limited compared to the number of graduated students. In contrast, a large number of individual food animal consultations outside the Faculty are performed.

The Faculty runs an emergency service organized 24 hours a day and 7 days a week. During the non-office hours, two students and one (postgraduate) assistant from the research section are on duty (compulsory teaching for internal students). If there is a farm animal emergency case, the person on duty informs the responsible colleague of the large animal clinic.

Emergency service facilities can be seen in chapter 6.2.

The ambulatory clinic owns three vehicles.

#### **4.4.2. Comments**

- On the basis of discussions with both students and practitioners, the "differentiation" period, i.e. the present last semester, is short.
- The number of hours spent on compulsory and elective subjects (artificial insemination, diagnostic imaging, ophthalmology, clinical laboratory) appears to be imbalanced.
- The relatively low level of specialization within the clinical disciplines prevents adequate development of clinical disciplines (e.g., oncology, etc.).
- In the Clinical Departments, especially in companion animal medicine and surgery, patient numbers are somewhat low. Over the past few years, the SER shows a trend towards higher numbers in companion animal patients. The spectrum of species treated is rather limited.
- In clinical teaching, student groups are sometimes quite large.

- Ambulatory clinic: the two ambulances present are not equipped to transport animals. In addition there is one pickup with a cart for transport of farm animals. The students are offered clinical clothes and boots which are afterwards laundered by the Faculty.
- Although students do not complain about their clinical case load and think it is generally sufficient, this might not be true for pigs, companion animals and minor species. This has partly to do with the rural location of FVMSK and the relatively small limited availability of these species. Students express the wish to see more companion animal cases as well. As 20% of the students in the final semester chooses a Companion Animal Track, it is important to increase the number of companion animal cases at the Faculty to ensure adequate education.

### **4.4.3. Suggestions**

- 4.4.3.1 The Faculty should think about extending the practical year. In this way, the differentiation period could be expanded to one year.**
- 4.4.3.2 The Clinical Curriculum should be adapted as the requirements of the present and future needs in society.**
- 4.4.3.3 The Clinical Departments should aim at a higher and internationally recognized level of specialization.**
- 4.4.3.4 The Clinical Departments should try to increase the patient numbers. The above mentioned trend would support this aim. As the companion animal case load is limited, efforts could be made to establish collaborations with other institutes to expand the number of dogs and cats seen by the students. For example, there are 6 companion animal practices and 2 mixed companion and farm animal practices in Konya at the moment. These practices see clinical cases that FVMSK needs to participate in.**
- 4.4.3.5 Currently, the pig unit is closed for student because of the influenza epidemic, so animal handling education is not possible. If it is not possible to see, handle and treat pigs at this Faculty, efforts could be made to show video material on these subjects and invite specialists from other countries to inform the students (and possibly also staff) on pig handling, pig health and disease. Nevertheless, the pig unit at FVMSK should offer pig handling education as well.**
- 4.4.3.6 In addition, the number of “minor” species should be increased through connection with one or more zoo’s or other establishments which house exotic animals, as well as with experimental animal units in other Faculties/Universities, Industry etc.**
- 4.4.3.7 The Faculty Farm could be used to a greater extent for the purpose of clinical training of students on food-producing animals.**
- 4.4.3.8 Group size in clinical teaching should be decreased by either smaller student numbers (admission), or higher patient numbers.**
- 4.4.3.9 The report card should also include clinical cases that a student must have encountered to ensure proper experience for every undergraduate student with different diseases.**

**4.4.3.10 The communication course should be made into a compulsory course instead of an elective, as it constitutes a major aspect of the veterinary profession these days.**

**4.4.3.11 It might be an idea to implement one week of diagnostic imaging education in the tenth term for the Companion Animal and Equine Track instead of one week of artificial insemination (Companion Animals) and instead of one week of nutrition (Equine).**

**4.4.3.12 It would be beneficial for students to perform laboratory tasks in the course on 'laboratory diagnostic methods and not just hear about it in lectures. Effective hands-on experience in a laboratory setting can only improve knowledge and understanding of possibilities and limitations of laboratory. Also, clinical cases of diagnostic imaging should be taught in the fifth year.**

## **4.5 FOOD HYGIENE & TECHNOLOGY AND VETERINARY PUBLIC HEALTH**

### **4.5.1 Findings**

In Food Hygiene and Veterinary Public Health the students have compulsory study in the 7<sup>th</sup> semester "Food Science and Technology" (A-basic subjects) for altogether 14 weeks (270 curriculum hours). Then there are 7 weeks in the 8<sup>th</sup> semester and 1 week in the 9<sup>th</sup> semester with compulsory theoretical and practical work mainly connected to the slaughterhouse KONET AS and there is also some meat cutting, meat processing and dairy work done in "Production and Research Unit" in the Department. In the 10<sup>th</sup> semester there are 12 weeks studies in a rather practical way in Food Hygiene and Food Technology as an elective.

There is a general policy to handle the students who do not show up for theoretical and practical compulsory curriculum sessions. The students have to be present at least during 70% of the theoretical lessons and during 80% of the practical lessons. They are not allowed to attend examination until they have fulfilled those requirements.

Overall, the course in "Food Hygiene and Technology and Veterinary Public Health" is comprehensive in a rather practical way. For example there are 7 weeks of practical and theoretical Meat inspection and 7 weeks practical and theory in meat cutting, meat processing and dairy.

The basic HACCP training is given in the compulsory course "Food Hygiene and Technology" (7<sup>th</sup> semester) and in addition in the compulsory "Meat Inspection" course in the 8<sup>th</sup> semester.

There is no slaughter of pigs and horses in Turkey (no market). Information about the slaughtering of pigs is presented in a 45 minutes film.

There is no slaughterhouse for broilers in the Konya region so there is no practical Meat Inspection training for Poultry. Under the so-called field weeks, the students visit a broiler slaughterhouse. In the course "Poultry" there are some theoretical applications about broilers which are demonstrated visually.

The practical training in Food Hygiene Bacteriology (laboratory) is done with separate equipment and premises from the other Departments. There are two rather small "Food Hygiene Laboratories". Those laboratories are used for teaching in small student groups and research. They are rather well equipped. The Department also uses the big Chemistry Laboratory and the Microbiology Laboratory but only for rather simple procedures. Pathogenic bacteria are handled in the Food Hygiene Laboratory.

There is a large, well equipped laboratory for “Biochemistry in Food”.

There are 270 curriculum hours in department of “Food science and technology” (7<sup>th</sup> semester). Around 1/3, 94 curriculum hours, is self directed learning and that seems to be a rather high number.

Veterinary Public health is given in a theoretical but comprehensive way in the 7<sup>th</sup> semester.

The department has not started Quality Assurance program for “Food hygiene lab”. For example there was not any documented control over the temperatures in the incubators and the refrigerators.

#### **4.5.2 Comments**

- The “Production and Research Unit” is significant in this Department and surprisingly they produce (and teach), in a practical way, some animal related food like cheese and sausages. The students should, when they are educated, be one of those persons that will “sell” the hygienic concept to the producers of food.
- A central point in the hygienic concept is HACCP. There is a need to think over the production lines of their own products in the light of HACCP. Every product needs its own HACCP. Probably some rebuilding of the premises may be needed. If some CCP could be removed by rebuilding the premises it would be of great advantage. For example there is a need for hands free washbasins (plus paper towels and paper basket) in the “Milk room”, the “Meat room” and the toilets. Implementing a HACCP concept for every product could be an interesting and useful task for the students.
- The slaughterhouse, KONET AS, slaughter up to 400 cattle and 600 sheep a day and, of course, all slaughtering is halal. The slaughterhouse is not EU approved. The premises and facilities were rather worn out in the old line for cattle. There were not any facilities for knife sterilization and hand washing on the platforms. They had started to build a new parallel line for cattle but it was not ready. Probably there will be difficulties to get KONET AS approved for EU. There were some examples of bad handling of the cattle and it was not a normal EU standard of animal welfare. Some handling of the carcasses in the cold stores was not exemplary and some material was not easy to clean. HACCP was not implemented. This slaughterhouse is not a good example for the students.
- The slaughterhouse YILET is newly built and it is planned for 250 cattle and 400 lambs per day. Trial slaughtering has just started in this building and the veterinarian that we met was employed by the slaughterhouse. The Official Veterinarian would be present when the trial period was completed. The two slaughter lines seem to have been well designed but they were not ready at the time of the visit. The wash basin in the slaughter hall was of a hands- free model but every slaughter position did not have their own. There was a lack of paper towels equipment and a paper basket in every position. Knife sterilization units were planned for every slaughter position but they were not present at the time. Unfortunately the line for carcasses and the line for meat products crossed each other. A shower cabinet for carcasses was installed. All surfaces inside the building were of an easy-to-clean type. A cold store for suspect carcasses was present but inaccessible at the time. A system was installed which ensured that the connection between the carcasses and the organs could be made. The cold stores were purpose-built. The changing room for clothes was well equipped but there was a need for two small wardrobes for each person, one for working clothes and one for personal clothes. The wash basins in the changing rooms were not of a hands-free type, and that is essential. The organ-handling-system in the

cellar seemed to fit its purpose. There was a need for a system to fill the gap between the gates and the trucks when loading carcasses for example. There is a lot of positives in this brand new plant when comparing with the old KONET. Maybe, it could be possible, with improvement of course, to get this plant EU-approved. The use of this plant in the teaching the students will in any case be a great improvement.

### **4.5.3 Suggestions**

**4.5.3.1 Practical meat inspection training on poultry and video, e-learning on pigs should be included.**

**4.5.3.2 The Department should enact a Quality Assurance Programme for the Food Hygiene Laboratory.**

**4.5.3.3 The Production and Research Unit should implement the HACCP concept and there is also a need of improvements of the equipment.**

**4.5.3.4 YILET should be used exclusively for practical training on Meat Inspection and Food Hygiene.**

**4.5.3.5 At the YILET Slaughterhouse, the following improvements should be made: Every slaughter position should have their own hands-free wash basin and paper towels and a paper basket should be installed together with knife sterilization units: The changing room for clothes should be equipped with two small wardrobes for each person, one for working clothes and one for personal clothes: The wash basins in the changing rooms should be of a hands-free type.**

## **4.6 ELECTIVES, OPTIONAL DISCIPLINES & OTHER SUBJECTS**

### **4.6a Elective Subjects:**

#### **4.6.1a Findings**

A considerable number of elective subjects are available to be chosen by students (Table 4.4; pages 21-22 SER).

Electives are only offered if a minimum number of 10 students intend to enrol.

#### **4.6.2a Comments:**

- The number of elective subjects is considered to be very high, some of which, taking notice of subject titles might be overlapping contents of obligatory subjects.
- Electives are only offered if a minimum number of students (20?) intends to enrol; together with the large number of possible electives, this means that many electives are never provided.

#### **4.6.2a Suggestions**

**4.6.2a The number of electives should be either reduced or maybe combined and some electives should be included in the compulsory programme (preferably at the “cost” of unnecessarily expanded items such as AI in small animals)**

## **4.6b Teaching**

### **4.6.1b Findings**

A Faculty Executive Committee made up of Faculty Staff, and supervised by the Dean and Vice-Dean, is responsible for Teaching Coordination.

Professors from Basic Subjects and Sciences are satisfied with the current teaching coordination system.

The Turkish National Academic Qualification Framework requires a specific level of computer and foreign training. Veterinary students have to learn English (two semesters) during the first year at the School of Foreign Languages of Selcuk University.

Theoretical and practical Basic Subjects and Sciences, including Pathology and Parasitology, are presented as veterinary-oriented teaching programmes. Generally, in all subjects theoretical teaching is performed by the same lecturers in two groups of 80 students and practical work in groups. The number of students in each group is depending on subjects (Anatomy 16 / teacher; Microbiology 20 / teacher; Parasitology 20 / teacher).

The number of students in each practical training group in Pathology (Necropsy Room) is 8. Every 2-3 students carry out by themselves the necropsy of the animal.

The classical theoretical (lectures) and practical teaching system is used in all Basic Subjects and Sciences.

Epidemiology and Genetics have limited practical training sessions.

The University Library with a significant veterinary section is situated on the University Campus. Books and journals are directly available “in situ” as well as “on-line” with access by students and teachers. Most of the standard veterinary textbooks referenced in Table 5.1 are in English (Table 5.1) as well as scientific journals.

Books recommended to students in Basic Sciences are in Turkish and some of them are written by and/or edited by Professors.

E-learning has not been established in Basic Subjects and Sciences, but Professors are clearly in favour of setting up this system.

The Veterinary Faculty has a teaching and advisory tutor system for each student. An extramural practical training period (minimum 2 months) is mandatory.

### **4.6.2b Comments**

- The Veterinary Faculty supported by national requirements is making a great effort to improve English as a second language amongst teachers and students.
- An individual student advisory system represents an important and positive effort.
- No E-learning has been set up yet in Basic Subjects and Sciences, including Pathology and Parasitology.

### **4.6.3b Suggestions**

**4.6.3.1 E-learning implementation in all Basic Subjects and Sciences is strongly recommended.**

## **5. TEACHING QUALITY & EVALUATION**

### **5.1 TEACHING METHODOLOGY**

#### **5.1.1 Findings**

In table 5.1 a list is provided of veterinary textbooks used by FVMSK. The departments decide on which books to use. Generally, the international textbooks are of high quality and they are up to date. However, the textbooks used by the internal medicine department are all from FVMSK authors. Two books are more than twenty years old (Veterinary Reproduction and Obstetrics, Arthur *et al*, 1989, and The Artificial Insemination of Farm Animals, Perry *et al*, 1960) and might not be considered up to date anymore. There are no readers/syllabi used by the departments. It is also not required for students to search for additional information (articles) on the internet. In fact, they are not educated on how to search the internet for reliable sources and they have never heard of PubMed.

As English is not a native language in Turkey, FVMSK is making much effort to have students being educated in the English language at the School of Foreign Languages. First year students must have basic knowledge of the English language, otherwise they have to follow a one year program at the School of Foreign Languages before they are enrolled in the veterinary faculty. This is the case for approximately 70% of all students that apply at FVMSK. In addition, English language is taught throughout the first year of veterinary school. Unfortunately, many students skip these classes and speak only a few words of English. The same is true for a large number of staff members. Although the SER states that up to 30% of theoretical lectures is given in English, this seems unlikely. Therefore, it might be difficult for the students to search for international publications as they will experience a language barrier.

There is no compulsory research project for students where they can learn about scientific writing but many students participate in voluntary research programs.

Visual, tactile and auditory learning techniques are applied in both theoretical and practical education.

Interaction is included in up to 20% of the seminars, making use of a student quiz as well. Problem-orientated learning is the preferred teaching method, making use of both clinical and scientific information.

Two to three times a year, an international scientific meeting is organised. Both staff and students can attend these meetings free of charge and the results are transmitted to other students orally and in written form.

Twice a year the students fill in an evaluation form on their teachers. These forms differ slightly between departments. These forms are anonymous and also contain a blank space where the student can make additional remarks. As a result of these evaluations, teachers can either be punished or rewarded. The Faculty says that so far, no negative evaluations were received. However, the students commented that although they are very content with most of their teachers and have a very good relationship with most of them, about 5% of teachers lacks didactic skills and are disliked by the students for that reason.



In order to improve teaching and education, FVMSK aims to increase relationships and exchange programs with national and international faculties, to improve educational infrastructure (e.g. computer centre) and to evaluate student satisfaction.

### **5.1.2 Comments**

- The fact that students are not educated on how to search the internet for reliable information is a large problem anno 2009. In the first year, all veterinary students should be taught the academic principle of evidence-based medicine. There is a lot of information online that a student gets confronted with and he/she should be able to recognise the scientifically correct information. Also, patient owners will search the internet (Google) for information and it is up to the veterinarian, being the professional, to have an answer to this.
- As indicated in the SER, the human factor is the most restrictive element in optimizing teaching methodology and human errors will continue to take place. The discrepancy between the staff's opinion and the students' opinion on teacher evaluation suggests that the system does not work. In order to improve teaching quality at FVMSK, this evaluation should be taken seriously. It seems highly unlikely that all teacher evaluations come back positive. It should be recognised that it is not a problem when teacher evaluations come back negative (as this is the case in any organisation), as long as there are active measures taken to solve the problem. Only through honest self-reflection can one really improve teaching quality.

### **5.1.3 Suggestions**

**5.1.3.1 Internal medicine textbooks should include at least one international textbook (e.g. Nelson *et al* for companion animal internal medicine). The textbooks used by the Departments of Obstetrics and Gynaecology and Reproduction and Artificial Insemination could be substituted for more up to date textbooks, especially since this is a rapidly developing research area.**

**5.1.3.2 All students must be educated on how to gather and critically judge scientifically correct information, both written and online. This is a prerequisite for an academic study. It is also highly recommendable that all students perform a small research project and produce a scientific report about it (preferably in English).**

**5.1.3.3 As most international publications are written in English, it is very important that students master a basic level of English. To this purpose, it might be best to make all English lessons compulsory, so that it is not allowed to miss a lesson. If after a year the level of English is not satisfactory, additional lessons should be taken.**

**5.1.3.4 In order for something to change, one has to formulate a plan and preferably implement a system to assess and monitor teaching quality continuously.**

## **5.2 EXAMINATIONS**

### **5.2.1 Findings**

Courses are given during 2 semesters and each course lasts 4 months (see SER page. 33). After 2 months the courses stop temporarily for 2 weeks for students to take a mid-term examination, At the end of the regular course (4<sup>th</sup> month) students have 4 weeks during which they can prepare, take and eventually retake the final exam (I wk= preparation; II and III wk= take the exams; IV wk= retake if necessary).

The final score for course examinations in a semester is assessed as 40 % from the mid-term examination and 60 % from the final examination. A failure in the final examination requires a re-sit examination. If students fail 4 or more examinations they are not admitted to any course in the following semester.

### **5.2.2 Comments**

- Courses are given during 2 semesters and each course last 4 months (see SER page 33). After 2 months the courses stops temporary for 2 weeks so that students are invited to take a mid-term exam. During the first week they will prepare for the examination, whereas during the second week they can take it. At the end of the regular course (4<sup>th</sup> month) students have 4 weeks during which they can prepare, give and eventually retake the final exam (I wk= preparation; II and III wk= take the exams; IV wk= retake if necessary).
- Examinations can be given in written, practical and oral form. If the course has a practical approach, the mid-term examination consists of a practical approach, whilst the final one can be theoretical, practical or oral depending upon the lectures and lecturer. Students who have failed the practical form are not allowed to take the theoretical examination. The final score is made up of 40 % from the mid-term examination and 60 % from the final examination. If they fail in the final examination, they have to retake the examination for each course in a semester. If students fail 4 or more examinations they are not allowed to take any course in the following term.
- On the whole, the examination system appears to be effective in controlling quality.

### **5.2.3 Suggestions**

**5.2.3.1 There should be an increase of time available to retake an examination and there should be more coordination amongst teachers in evaluating students.**

## **6. PHYSICAL FACILITIES & EQUIPMENT**

### **6.1 GENERAL ASPECTS**

#### **6.1.1 Findings**

Since 1992 the Faculty of Veterinary Medicine is on the main University Campus which is located 25 km from downtown (page 6). A diagram with different areas of the Veterinary Faculty is presented in Figure 6.1 (page 36).

The FVMSK has nine lecture rooms each with capacity for 50-96 students. Computers and projection units are available in the lecture rooms as well as connection to internet (including wireless) which is also available on the University Campus (page 38).

Sufficient facilities are available for performing adequately the programmed Basic Subjects and Sciences Programmes, including Pathology and Parasitology. Academic staff stated that infrastructures and facilities are enough to carry out their teaching tasks. Some Departments requested more supporting staff for teaching and research activities.

Each Basic Science Department has one or two laboratories for student practical training and research. In some cases, both activities are shared in those laboratories.

There are emergency clinics for small animals, a Consulting Room with 2 consulting tables, an Injection Room, an Intensive Care Room, a Diagnostic Imaging Room with 2 scanners (250 Pie Medical and Mindray DC6Vet = ultrasonography and Doppler), a flexible endoscope with the cleaning and disinfecting system, laboratory with 3 binocular microscopes and a Vet-test chemistry analyser, a pharmacy where medicines can be picked up from the clinics, a companion animal clinic with an examination room, an operative room and a post operative care room, used for small animals obstetrics. There is also a surgery department with digital X-Ray, 2 operating rooms, companion animal examination room and a radiology unit. The Farm Animal Department has the large animal clinics, internal medicine, obstetrics and gynaecology operation room with inhalation anaesthetics, kennels for bovine and sheep and isolation facilities for large and small animals, ventilated by forced extraction.

The Horse Clinics Department has an operation room with an adaptable surgery table and recovery room

The Artificial Insemination (AI) department has a semen collection room for small mammals, equipped to prepare semen straws with liquid nitrogen storage.

The Ambulatory Department uses a human ambulance, a minibus and a tractor with a transportation unit for large animals.

There is also an Experimental Animal Department with cages for rabbits,

First year students mainly live in dormitories at the campus. These are provided by the government and by the university. These facilities are relatively cheap and there is a selection procedure (based on parents income) to appoint a dormitory place to a student. Many students in the later years rent an apartment (private sector) together with other students for a relatively low price.

With respect to social activities, there is a veterinary students club that provides education, seminars and field trips for students. This club receives financial support from the rector. The campus is very lively, with a busy shopping centre where students can spend their free time, socialize and enjoy a cheap meal. On campus, there are numerous facilities for sport and recreation, such as football, volleyball, basketball, swimming and riding. There are 77 social clubs in the university which students can join.

With respect to safety, students receive rabies vaccination before clinical courses start in the third year. Students receive adequate education on animal handling and personal safety. Gloves are worn when an animal is suspected of rabies (or when the possibility cannot be excluded). When accidents happen, students are taken to a medical centre or to the medical faculty.

Students are also educated about the other risks involved in the veterinary profession (e.g. radiation safety, inhalation anaesthetics, zoonotic disease, ergonomics, risks for pregnancy in both veterinarian and patient owner).

In the laboratories, there was an overall lack of safety measures. There was no hand disinfectant, no (eye) shower, gloves were lacking in a number of laboratories (e.g.

microbiology laboratory) and there was no apparent first aid kit sign. Also, there was no adequate ventilation system to prevent inhalation of formaldehyde and xylene. Students receive a safety instruction in writing before they start their work in the laboratory.

Student well-being is supported with advisors for all students. Students can turn to this person for counselling and (professional) advice. Student advisors were instructed in a seminar on communication skills by a specialist from the Faculty of education. Students can make an appointment with their advisor whenever they have problems or would like some advice. In general, there is a very open communication between students and their teachers. Students feel free to ask their teachers for help and in some cases even financial aid. In case of more serious problems (e.g. sexual harassment, psychological issues) students can seek help of a psychological advisor from the Medico-Social centre of the university. They can reach this person independently or ask their faculty advisor to make an appointment for them.

### **6.1.2 Comments**

- The FVMSK is located on the University Campus and is able to take advantage of common general University facilities and services.
- There is insufficient fire fighting equipment and where present, evidently unserviceable
- Operating rooms are well equipped both rooms with iso-fluorane anaesthetics, 2 students per surgery are allowed to watch. There is no specific surgery day.
- The husbandry of the horses and the calves should be improved, bedding material is present but hardly used.
- Isolation facilities for large animals are able to house horses, eventually cows and small animal facilities are poor from a hygienic point of view.
- The available human ambulance is not equipped either for the transportation of the pets or for the students.
- Disposable clothes are distributed to students when on farm visits.
- In principle, the AI centre is well equipped. During this visit, the filling machine for the semen straws was, and had been unserviceable for as long as 6 months; no records of the activities in this Department could be shown to the experts.
- Significant improvements in old and new facilities have been made in the last years (page 36 SER).
- Accommodation and other services (non-academic services) for students in the University Campus and/or school are not described in detail in SER.
- Tissue samples are embedded manually in paraffin in the histology laboratory involving students, which could pose a health risk for students and staff.
- A transportation system to carry dead animals from outside of the Veterinary Faculty to the Faculty's Post-mortem Room would help to increase the necropsy case load.
- Safety measures in the laboratories were not sufficient. This results in possible dangerous situations for both students and staff members.

- Students can also turn to their teachers for financial aid. This is an extremely unwanted situation and should be strictly prohibited in any case.

### **6.1.3 Suggestions**

**6.1.3.1 Safety measures to minimize the detrimental effects of handling formalin-fixed materials should be implemented in the teaching laboratories for Anatomy.**

**6.1.3.2 Automatic equipment for embedding fixed tissues in paraffin should be implemented in the histology laboratory for user safety reasons.**

**6.1.3.3 Specific facilities for performing and storing large animals (horses and cows) should be developed in the Post-mortem room. This would increase the available teaching necropsy load of large animals.**

**6.1.3.4 A transportation system for carcasses from outside the Veterinary Faculty to the Post-mortem Room would help to increase the number of animals and species for necropsies as well the use of the pathological diagnostic service for farmers and practitioners.**

**6.1.3.5 In order to increase the hands-on training, equipment e.g ultrasound should be used on every single case presented at small animal clinics, if it is needed or not.**

**6.1.3.5 Isolation facilities should be installed even outside the Faculty. There should be an isolation facility for horses. Bio-security measures should be respected and strengthened.  
The human ambulances should easily be transformed and equipped for animal purposes.**

**6.1.3.6 The fire fighting equipment should be brought up to a functioning level and maintained regularly.**

**6.1.3.7 It is important to update all safety procedures and preventive measures in order to create a safe working environment in the laboratories. This also serves an educational purpose, as it is important to educate students on how to protect themselves from microbiological dangers, for example. There should be adequate protocols (in writing and actively made available to everyone present in the labs) with adequate practice (e.g. periodical fire drills), adequate personnel (e.g. someone who can perform first aid in close proximity to all laboratories), and adequate safety measures (e.g. hand disinfectant, an (eye) shower, gloves, a clearly visible first aid kit, a clearly visible escape route sign, etc).**

## **6.2 CLINICAL FACILITIES & ORGANISATION**

### **6.2.1 Findings**

The facilities concerning clinical teaching are generally adequate and there is adequate waiting space for patient owners, a room for patient administration, and a pharmacy.

### **Premises for Clinical Work and Student Training (SER Table 6.2, slightly modified)**

Small animals	No. consulting rooms	6
	No. operation rooms	3
Equine and food animals	No. examination areas	4
	No. operation rooms	2

### **Artificial insemination**

The housing of this unit is adequate. However, some of the equipment (e.g., the straw filling machine) was not in order. There is a room for collecting semen from smaller animals (up to sheep), but collection of semen from large animals (bull, stallion) has to be performed at the Faculty Farm.

At the moment of the visit, the records concerning artificial insemination were unavailable to the team.

### **Ambulatory Clinic**

The two ambulances present are not equipped for transport of animals, but there is one pick-up with a cart for transport of farm animals. The students are offered clinical clothes and boots that are afterwards laundered by the faculty. The possibilities of transportation of the students to external patients are poor. See also chapter 4.4.

### **Diagnostic Laboratories and Clinical Support Services:**

- Diagnostic laboratories  
*Radiology Unit (1 stationary, 1 mobile)*  
*Ultrasound diagnostics (2 in surgery, 2 in Obstetrics and 1 in Internal Medicine, 1 Doppler in Internal Medicine)*  
*Endoscopy (Internal Medicine and Surgery Departments)*
- Central clinical support services  
*Hematology, Biochemistry, Microscopic examinations, Blood gases analysis*

### **Emergency Clinic Facilities:**

The emergency clinic for small animals offers the following facilities:

One 'Consulting Room' with 2 consulting tables  
One 'Injection Room'  
One 'Intensive Care Room' with new cages, but as yet unused and not equipped  
One 'Diagnostic Imaging Room' with two ultrasound scanners (one 250 Pie Medical)  
One Mindray DC6Vet Ultrasonography and Doppler  
One flexible endoscope with a cleaning and disinfecting system.

### **Isolation units**

Isolation units (2) are present for both farm animals and companion animals. The unit for companion animals (dogs only) is poorly equipped. A unit for horses is present.

### **6.2.2 Comments**

- The FVMSK has a Teaching/Production/Experimental Farm that is located about 0.8 km away from the Faculty buildings. The Farm is regularly used for Animal

Production, Breeding and Nutrition practical training. It is also used to let students handle animal in other training courses. The Farm can house dairy cattle, beef cattle, sheep, poultry, pigs, and dogs for commercial breeding (see SER, page. 43).

- There is also a small feed unit where animals feed are prepared, but only for research purposes. The feed unit is also used for teaching. At the moment feedstuffs are purchased from external feed companies.
- The Institution also has access to a University-owned horse riding club which is located outside the campus area. The horse-riding complex can accommodate 20 horses (8 belong to Faculty).
- Another 3 private farms (dairy, beef and poultry) may offer 1-week courses to internal and volunteer students under Faculty supervision.
- Actually the farm can house:
  1. Brown Swiss cattle (40)
  2. South Anatolia cattle (85)
  3. Sheep of different breed (400)
  4. Pigs (7)
  5. Poultry (200)
  6. Dogs (80)
- Dog breeding aims at preserving and developing the native Turkish shepherd dog breed. Sheep and beef cattle are bred in order to carry out Faculty research and preserve and develop native Turkish breeds (statement research). The farm usually sells some dogs (to private persons).
- Dairy cattle are milked and milk is generally sent to the Food Hygiene Department to manufacture cheese and other local dairy products. Two Friesian cows are rumen-fistulated in order to collect samples for rumen fermentation research. The other South Anatolia cattle are housed in order to evaluate genetic characteristics to preserve and develop the native cattle breed.
- Most of sheep are used for genetic research supported by the Turkish Agricultural Ministry to preserve the local breed.
- There are a limited number of pigs which are specifically housed for teaching purposes only. These are housed separately but not properly with respect to animal welfare.
- Students have a good opportunity to train at the Faculty farm, although not all the animals housed at the farm are commonly handled by the students during their training. South Anatolia cattle can be quite wild and this can be dangerous for students.
- Economic management of the Farm is presented appropriately; however more efforts should be made in Animal Production, because of strategic position of the Faculty within an important area for such production. Feedstuffs quality control is undertaken on a regular basis only by gross analysis. Mycotoxins analysis is carried out in collaboration with the Toxicology Department.
- The dairy is provided with 2 mobile milking machines and the hygienic conditions leave something to be desired. The dairy will be provided with a new milking system in the near future. Milk quality (basic analysis) is checked, but interest is not high because of the limited production.

- Research on breed preservation and development at the Experimental Farm seem to be developed as a priority and this limits the other activities of the Farm. Animal Production (meat and milk) is currently limited, i.e. dairy cattle are fed a very low energy diet so that milk production is very low.

### **6.2.3 Suggestions**

**6.2.3.1 The team acknowledged the efforts made in housing a minimum number of pigs at the Faculty Farm. However it is essential that care of these and other animals housed at the farm be improved in order to meet EU Welfare Legislation. Professors, practitioners, nutritionists from European countries with more experience in pig production could be invited by the Faculty to offer their knowledge in this field together with the use of audiovisual means of teaching including e-learning.**

**6.2.3.2 At the Faculty Farm, consideration should be given to improving production at the farm so that the profit can be increased, students can get more knowledge on economic management and more collaboration can arise amongst the other Departments, i.e. Food Hygiene. Moreover more data on healthy animals and milk quality could be checked as routinely performed in commercial farms therefore giving more practical knowledge of these topics and their implications to students and practitioners.**

## **7. ANIMALS & TEACHING MATERIALS OF ANIMAL ORIGIN**

### **7.1 Findings**

Sufficient cadavers and organs for practical teaching in Anatomy are fixed and stored in tanks with formalin.

A small cold room annexed to the Anatomy Laboratory is used to stored fresh material. At the time of the visit, the room was not in service since animal dissection is taught in the second semester.

Skeletons and plastic models of animal bodies are available for practical teaching. Students can use these materials for self learning in an open laboratory system.

An important effort has been made in the Pathology Department to increase the number of animals and species for necropsies during the last years.

Students participate adequately “hands on” in performing necropsies and the number of students in each group is reasonable for the current load of animals and facilities.

Microbiology, Virology, Parasitology and Pathology provide external veterinary services and samples are used for student practical training.

### **7.2 Comments**

- No fresh material was available for practical teaching in Anatomy, at the time of the visit.
- Rabbits are housed In the experimental animals department



### **7.3 Suggestions**

**7.3.1 More fresh material should be made available to improve the practical teaching and knowledge of undergraduate students.**

**7.3.2 A closer collaboration between the Slaughterhouse and the Pathology Department should be established in order to provide materials on a routine basis for teaching students in detecting lesions on slaughtered animals.**

## **8. LIBRARY & EDUCATIONAL RESOURCES**

### **8.1 Findings**

The Faculties of Selçuk University do not have their own libraries. Instead, a main University Library is used that is housed in a new building and serves 38,000 students. It stores 2000 m<sup>2</sup> general reading area and 64 reading places in the veterinary section. The veterinary section stores 900 books (including a large percentage of international textbooks of high academic standard) and there is a large budget allocated to the purchase of more books on request of both staff members and students. Students can read these books in the library or borrow them to study at home. All items are catalogued in a database and there are always library staff members present. The library is open during the week (evenings included), during the weekend and also on weekdays during holidays. Students are educated in information technology and can also take a course in the library on the use of bibliographic resources.

In the University Library, which is visited by 4,000 people every day, 22 computers with internet are present and an additional 16 computers are present for accessing library information. The library is subscribed to 22,000 journals online that can be accessed anywhere on campus through a wireless internet connection that is free of charge to students.

There is a new computer centre that has over 2,000 computers connected to the internet available to university students. Although it is very popular among students, the facilities meet students' demands as there are always enough computers available. In addition, about 60% of veterinary students own their own personal computer or laptop at home. On the Faculty, there is a computer room with 18 computers for students and one computer for each staff member.

The Faculty has some 'E-learning' facilities on the website. Some lectures are made available online, but there is no virtual learning environment. Students would like the opportunity to skip theoretical lectures during the day (for example to make an appointment at the bank), but there is no alternative means for them to master the theory in their own time.

### **8.2 Comments**

- Both the library and the IT Centre are well used by the veterinary students, who can register with their student card as a routine regular user or on an occasional basis. The library computer showed that in excess of 450 veterinary students were registered regular users.
- There is a compulsory IT training course at the beginning of the course.
- There does not appear to be any emphasis on e-learning, despite the highly developed IT Services offered. Although the computer facilities are excellent, the Faculty does not provide 'E-learning' or a virtual campus at the moment.

### **8.3 Suggestion**

**8.3.1 'E-learning' applications such as an internet forum with online lectures, assignments, quizzes and animations should be initiated. This would give the students the opportunity to study the theory and practise exercises in their own time. The Team gave a strong suggestion to establish a Virtual Campus and with it full E-Learning Facilities,**

## **9. ADMISSION & ENROLMENT**

### **9.1 Findings**

Details of the admission and enrolment can be found on pages 59-60 of the SER

### **9.2 Comments**

Undergraduate students applying for a university have to complete a national multiple-choice entrance examination (OSS). This examination is provided and checked by the Higher Education Council. Based on the grade of the OSS, the student is admitted to the discipline he/she applied for. For example, a student who wishes to study veterinary medicine can only enrol if his/her grade in the OSS is high enough. If this is not the case, the student can enrol in his/her second choice study or retake the OSS next year. There is no limit in the number of times a student can retake the OSS. FVMSK must accept 150 first year students each year.

Undergraduate students are taken from a variety of backgrounds based upon the National Examination for University Courses.

The number of entrants is fixed each year by the Higher Education Council in Ankara. For Konya it has been set at a minimum of 150, which is considered by the Faculty to be far too high, which would prefer a level of 80 students. 162 were admitted in 2008/09.

The drop-out rate of 15% is very high but only occurs between years 1 and 2. Approximately 80% complete the course and the average study time is 6.2 years.

### **9.3 Suggestion**

**9.3.1 In order to ensure quality of teaching, the team recommended that the number of the new student intake be reduced to 100 or less per annum.**

## **10. ACADEMIC & SUPPORT STAFF**

### **10.1 Findings**

The academic staff comprises 131 budgeted posts (teaching staff plus research staff) which are clearly attributed to specific departments. The 51 non-budgeted research staff members are predominantly external PhD students (see SER page 64). Research assistants, studying for a PhD degree, are included in table 10.1 (see SER, page 62).

The Teaching Staff membership is made up of 67 Full Professors, 21 Associate Professors, 7 Assistant Professors (see SER, tab. 10.2 page 63), most of whom are veterinarians. The ratio of teaching staff to students is about 1:8. The ratio of teaching staff support staff is 1 to 5 (research assistants not included).

## **10.2 Comments**

- The number of staff at the Faculty is above 95 which is generally regarded as minimum “critical mass” for a free-standing veterinary school.
- The ratio of teaching staff to students is satisfactory. The number of staff is sufficient for both theoretical and practical activities.
- The ratio of teaching staff to support staff is not satisfactory if compared to the recommended level of 1:1. However the main problem in this respect is that most of support staff is part of the general staff of the Faculty, working at the farm, administration, cleaning, etc. The number of support staff engaged in Department/Academic activities is very low. This staff shortage has the impact of detracting academicians in many Departments. Such a lack of technical support also means that the tasks normally undertaken by support staff (i.e. preparation of practical, technical maintenance services, cleaning, disinfection, etc.) must be undertaken by academic staff or research assistants which is both wasteful and non-motivational and means they have less time to devote to their primary tasks (teaching & research). In some instances students also have to perform such tasks.
- In terms of the distribution of academic responsibilities, Departmental staff are not generally well proportioned (the number of full professors is quite high when related to the number of assistant professors).

## **10.3 Suggestions**

**10.3.1 There is a definite need for additional support staff in laboratories and other areas, where researchers, junior staff and students are doing their work.**

## **11. CONTINUING EDUCATION**

### **11.1 Findings**

There are several Continuing Education Courses offered as required, 9 over the past 2 years. Details can be found on pages 66-67 of the SER.

### **11.2 Comments**

- The Veterinary Chamber also runs CPE courses in practice management etc. Cooperation with the FVMSK seems to be reasonable.
- The courses offered appear to be quite limited in number and could easily be increased to take into account the needs of the practising arm of the profession.

### **11.3 Suggestion**

**11.3.1 The Team felt that closer cooperation and coordination between the FVMSK, the Chamber and the Practitioners could result in a broader selection of courses which would stimulate further interest and greater attendance.**

## **12. POSTGRADUATE EDUCATION**

### **12.1 Findings**

Students graduating from the veterinary course have already been awarded a Masters degree. However, the Faculty participates in four 2-year Master programmes run in other Faculties (see SER page 68).

The FVMSK is one of the veterinary faculties in Turkey where postgraduates can register for a PhD degree, and all the 16 departments of the FVMSK have people working on 4-year studies toward this qualification (teaching programme followed by examination after 2 years, followed by another 2 years working on a thesis).

Many of the PhD students are external, working elsewhere in Turkey, but registered at the Faculty, and many others are Research Assistants employed at the FVMSK (see also chapter 10) and working towards their PhD at the same time (see SER page 69).

There are very few full-time PhD students per se. About 78 % of people studying for their PhD are veterinarians. The Commission that judges the theses of PhD students is composed of academics from different Turkish Faculties, and it includes members from the Selcuk Faculty. Besides a summary in English, a PhD thesis is required to be presented in Turkish. There are no formal publication requirements. A PhD is required by law for starting an animal clinical practice. There are no intern or residency positions that provide structured postgraduate clinical training.

### **12.2 Comments**

- On page 69 to 70 of the SER there is some useful information to develop Postgraduate education (Doctorate study). However many of these items do not seem yet done, but it is hoped that they can be developed in next future.

### **12.3 Suggestions**

**12.3.1 It could be useful to reduce the number of areas where PhD are offered, and concentrate efforts and resources in particular fields supporting research at the highest level. In such a way the PhD work should be oriented along the main research lines established by the Faculty/University, (see also chapter 13).**

**12.3.2 Students should be encouraged to find financial and academic support to spend a study period in foreign universities or research centres in order to improve their knowledge and research activity.**

**12.3.3 Because the theses are written and discussed in Turkish, there is a limit in the publication of the results of the research activity. The evaluation of the theses would also benefit from a greater level of international involvement.**

**12.3.4 Cooperation amongst different research fields represents the most suitable way to create highly qualified professionals in veterinary science. It is also important to create more opportunities to take part in international and interdisciplinary programmes.**

## **13. RESEARCH**

### **13.1 Findings**

Research has been to date very subsidiary to teaching in the FVMSK, with little or no involvement of students. Nevertheless, the number of publications has been rising consistently over the past 10 years.

### **13.2 Comments**

- Among others, research is the only basis for teaching of evidence based (veterinary) medicine.
- The situation is expected to change as the new policy is brought in, whereby research and publications become a requirement for promotion and salary rises.

### **13.3 Suggestions**

**13.3.1 The FVMSK needs to focus its research. A long-term visionary research policy should be implemented. This can be achieved by appointing a research committee with the task of identifying lines of research in which the Faculty might be expected to be internationally competitive. Following this process, interdisciplinary research groups with sufficient “critical mass” to become and/or stay competitive could be implemented.**

**13.3.2 It is strongly suggested, that student involvement in research projects should be initiated and established and consideration be given to establishing a thesis as part of the final requirement for the undergraduate degree.**

## EXECUTIVE SUMMARY

The Self Evaluation Report has been a useful base to explore the main aspects that EAEVE take into account to help Faculties that accept the visit to check their standards and possibly improve them through selected suggestions.

Several positive aspects emerged during the visit, which consistently fit the Self Evaluation Report content. Amongst the most relevant ones, the Visiting Team would highlight the following points:

1. The excellent standing of the Faculty both within the Veterinary Profession in Turkey as a whole and in the region of Konya with special emphasis on cattle, sheep and poultry.
2. The friendly atmosphere that is clearly evident in the establishment, mirroring the good relationship between the students and the teaching and support staff.
3. The physical facilities, which are spacious, well equipped, pleasant and functional and which offers an useful environment for students to study.
4. The availability of both an excellent University Library, which is much used by the students and of the Computer Centre, with its more than 2,000 computers available to students from all Faculties.
5. The teaching and support staff appear to be very motivated.
6. The commitment and enthusiasm of the clinical staff despite the shortage of both support staff and small animals (dogs, cats, exotics) trying to increase the exposure of the students to an adequate caseload of all species of major veterinary interest.
7. The Dog Pound in Konya, which ought to be able to be developed as a model arrangement for hands-on training in basic surgery by all students.
8. The new slaughterhouse, which could and should be developed into a top teaching establishment.

Nevertheless there are some defects that, in the opinion of the visiting team, *must* be corrected and the following main items are highlighted:

1. The Visiting Team expressed their concern about the existing shortage of support staff which may, in the medium-term, adversely affect the quality of practical teaching, delivery of services to students, veterinarians and the general public and also research opportunities in the Veterinary Faculty in Konya.
2. In the clinical disciplines, there are relatively low numbers of patients with a limited species spectrum, but it must be emphasized, that the number has increased significantly over the past 2 years. Isolation facilities are also limited.
3. In the area of Animal Production, it was clear to the Visiting Team, that the Research Farm is vastly underused, which is a pity because it has enormous potential and could be stocked with other species and become a major centre for student hands-on activities, increased research and profit-making activities.

4. It is recognised, that Turkey is currently aiming at putting into local law the European Union Directives and Regulations on Animal Transport and Animal Welfare and it is understood that legislation on the Welfare of Laboratory Animals has recently come into existence. Nevertheless, the Visiting Team found the teaching in Animal Welfare to be deficient and several severe cases of animal suffering were observed in the Clinics, on the Research Farm and in the Slaughterhouse, a situation which is totally unacceptable in a teaching establishment. ***This is considered to be a potential Category 1 Deficiency.*** The Visiting Team strongly suggests that the Konya Faculty should take the lead in Turkey in developing a full educational programme for the Veterinary Profession and for the General Public in Animal Welfare ensuring, that animals are not unnecessarily subjected to suffering, especially on Faculty premises.
5. Students are involved in some University and Faculty Committees, although they have no representation on the important Curriculum Committee for example. The student voice is heard but does not appear to pass the higher decision-makers in the Faculty.

It is clear, that the Animal Welfare situation is a potential Category 1 Deficiency and this will be presented to the European Committee of Veterinary Education (ECOVE) in Vienna to make the final decision.

## Annex 1 Indicators

Ratio	Numerator/Denominator raw	1/Denominator	Established range of denominators	Indicator
R1	93/783	1/0,12	8.85-10.42	8.3
R2	139/783	1/0.18	8.75-12.54	5.55
R3	129/783	1/0.16	10.62-12.62	6.25
R4	129/81	1/1.59	4.91-7.21	0.63
R5	93/46	1/2.02	0.53-2.20	0.49
R6	4022/1524	1/0.38	0.51-0.36	2.63
R7	604/920	1/1.52	1.88-2.21	0.65
R8	38/5546	1/2.48	0.51-7.87	0.4
R9	5546/360			15.4
R10	360/430			0.83
R11	81/697	1/8.6	2.47-1.73	
R12	81/7234	1/89.3	0.51-7.87	
R13	81/62	1/0.77	0.20-0.09	0.77
R14	81/870	1/10.7	1.78-0.92	11.1
R15			0.58-0.37	
R16	81/90697	1/0.0009	48.74-37.94	26.3
R17	81/6	1/13.5	0.07-0.02	0.07
R18	81/196	1/2.42	0.75-0.46	2.43
R19	81/125	1/1.54	0.26-0.12	1.53
R20	81/190	1/2.35	1.26-0.89	2.32