

A study on veterinary training in Turkey within the context of European Union standards*

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Summary: Accreditation of veterinary medical programs and institutions in the world was first introduced by the American Veterinary Medical Association. The EAEVE, the official accreditation authority for veterinary schools in Europe, was established in Paris in 1988. This study was conducted to assess the structure and functioning of education in veterinary schools in Turkey within the framework of the selected parameters of the EAEVE. The data were collected via information forms, then calculated and evaluated within the context of the *Main Indicators* (R1-R20) to be used in the evaluation of veterinary schools. The results were interpreted and shown in tabular form. According to the results, 13 out of 24 veterinary schools in Turkey were members of the EAEVE as of December 2015. Nine schools were visited; four of them succeeded in passing Stage 1 evaluation and obtained approval status. There were no accredited veterinary schools that fully comply with the EU standards. The durations of education, courses in the curriculum, and ratios of theoretical courses to practical courses of these schools were generally in compliance with the European Union (EU) Directive 2005/36. However, despite this positive picture, it is foreseen that the accreditation periods of Turkish veterinary schools, which have tried to complete their processes, will be difficult because of the unreliable records related to the numbers of animals examined, diagnosed, treated and necropsies performed, and the lack of data related to some R values.

Keywords: Accreditation, European Union, internationalisation, Turkey, veterinary education.

Avrupa Birliği standartları çerçevesinde Türkiye’de veteriner hekimliği eğitimi üzerine bir araştırma

Özet: Dünyada veteriner hekimliği alanında program ya da kurumlara yönelik akreditasyon uygulamaları, ilk kez Amerikan Veteriner Hekimleri Birliği tarafından başlatılmıştır. Avrupa’daki veteriner okullarının resmi akreditasyon otoritesi olan EAEVE ise Paris’te 1988 yılında kurulmuştur. Bu çalışma, Türkiye’deki veteriner hekimliği eğitim-öğretiminin yapısını ve işleyişini, EAEVE’nin seçili parametreleri çerçevesinde değerlendirmek amacıyla gerçekleştirilmiştir. Çalışmanın verileri, bilgi formları aracılığıyla toplanmış, veteriner okullarının değerlendirilmesinde kullanılan “Ana Göstergeler” (R1-R20) çerçevesinde değerlendirilmiş ve ulaşılan sonuçlar, tablolar halinde verilerek tartışılmıştır. Çalışma, 2015 yılı Aralık ayı itibarıyla Türkiye’de mevcut 24 veteriner fakültesinden yalnızca 13’ünün EAEVE’ye üye olduğunu, dokuzunun ziyaret geçirdiğini, dördünün 1. basamak değerlendirmeyi geçerek “*approval*” statüsünü sağladığını, AB standartlarını tam anlamıyla karşılayan “akredite” bir veteriner fakültesinin ise halen bulunmadığını ortaya koymuştur. Çalışmada ele alınan veteriner fakültelerinin, öğretim süreleri, müfredat dersleri ve teorik derslerin pratik derslere oranları bakımından genel olarak 2005/36 sayılı AB Direktifi ile uyumlu olduğu görülmüştür. Ancak bu olumlu tabloya rağmen; bu fakültelerin muayene, teşhis, tedavi ve nekropsi sayıları ile ilgili verilerinin güvenilir olmaması ve bazı R değerlerinin hesaplanabilmesi için gerekli verilerin ise hiç bulunmaması yönündeki saptamalara dayanarak Türkiye’de akreditasyon sürecini tamamlamaya çalışan veteriner fakültelerini zorlu bir sürecin beklediği de öngörülmektedir.

Anahtar sözcükler: Akreditasyon, Avrupa Birliği, Türkiye, uluslararasılaşma, veteriner hekimliği eğitimi.

Introduction

Accreditation of veterinary schools in the world was first introduced in 1946 by American Veterinary Medical Association (AVMA), founded in 1863¹. The two EU Directives adopted on December 18, 1978 laid the

foundation for accreditation practices in the field of veterinary medicine in Europe. The Council Directive 78/1026/EEC² concerning the mutual recognition of diplomas, certificates and other evidence of formal qualifications in veterinary medicine and the Council

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¹ Access: [<https://www.avma.org/Pages/home.aspx>] and

[http://kurullar.home.uludag.edu.tr/RAK/kitap/metin.htm#_Toc519305033]. Date Accessed:03.04.2016

² 78/1026/EEC [Access:http://eur-lex.europa.eu/legal_content/EN/TXT/PDF/?uri=CELEX:31978L1026&from=EN]. Date Accessed:14.02.2015

Directive 78/1027/EEC³ concerning the coordination of provisions laid down by Law, Regulation or Administrative Action in respect of the activities of veterinary surgeons regulated the minimum requirements for veterinary training with respect to education conditions, curriculum and course durations. Based on a third Directive (78/1028/EEC)⁴, (European Union – Advisory Committee on Veterinary Education- EU-ACVT) was established with a view to giving ideas and making suggestions regarding veterinary education to Member States and serving the purpose of making veterinary medicine a profession with acceptable and high standards in the EU. The European Association of Establishments for Veterinary Education (EAEVE), the official authority for accreditation of veterinary schools in Europe, was established in Paris in 1988 upon the recommendation of the ACVT. The first evaluation cycle by the EAEVE in relation to veterinary schools was conducted between 1992 and 1999(6).

Today, the evaluation of the veterinary schools in Europe is carried out by the EAEVE in cooperation with the Federation of Veterinarians of Europe-FVE. The evaluation system is managed by the EAEVE via the ECOVE, again in cooperation with the FVE. Until completion of this study, the evaluation system had consisted of two stages with similar mechanical steps but different approaches and purposes. Stage 1 had been about the approval of a school, meaning that the veterinary training complies with the requirements of the EU Directive 2005/36, whereas Stage 2 had been about the accreditation of a school, meaning that it complies with the generally accepted and appropriate academic standards and provides training with an acceptable level of quality (6).

As of December 2015, the EAEVE had 96 member veterinary schools, 11 of which had been accredited and 48 had approval status.⁵

In 1991, Ankara University Faculty of Veterinary Medicine (AUFVM) and subsequently other veterinary schools from Turkey initiated their accreditation process by becoming members of the EAEVE (Table 1). There is no scientific-academic study conducted with an integrated and systematic approach to assess the structure and functioning of veterinary education in Turkey within the framework of the applicable standards in Europe with which the veterinary education establishments seek to comply. So, the present study was conducted in an attempt to fill this gap within a restricted framework as well as to become a source of reference for more detailed future studies and contribute to the policies to be followed in the

process of harmonisation with the EU in relation to veterinary medicine education.

Materials and Methods

The main material of the study consists of the data collected via “*Veterinary Faculty Information Forms*” filled in between October 2013 - April 2014. The data had been updated till the end of December 2015. The deficiencies identified in the data collected were remedied by additional correspondence and face-to-face meetings performed with Deans, Vice Deans, authorised members of Accreditation Committees, etc. When data collection was completed, two of 15 veterinary schools (Ondokuz Mayıs University Faculty of Veterinary Medicine and Mustafa Kemal University Faculty of Veterinary Medicine) were expelled from the membership of the EAEVE. That is why the collected data of only 13 veterinary schools were calculated and evaluated within the context of the *Main Indicators to be used in the Evaluation of Veterinary Schools (R1-R20)*. The results were interpreted and shown in tabular form. The constraints of the study were also considered in the interpretation of the results.

Results

The dates of establishment and commencement of education, membership to the EAEVE and as of December 2015 the statuses of 13 veterinary schools (Ankara University Faculty of Veterinary Medicine (AUFVM), Fırat University Faculty of Veterinary Medicine (FUFVM), İstanbul University Faculty of Veterinary Medicine (İUFVM), Uludağ University Faculty of Veterinary Medicine (UUFVM), Selçuk University Faculty of Veterinary Medicine (SUFVM), Yüzüncü Yıl University Faculty of Veterinary Medicine (YYUFVM), Kafkas University Faculty of Veterinary Medicine (KUFVM), Adnan Menderes University Faculty of Veterinary Medicine (AMUFVM), Erciyes University Faculty of Veterinary Medicine (EUFVM), Harran University Faculty of Veterinary Medicine (HUFVM), Mehmet Akif Ersoy University Faculty of Veterinary Medicine (MAEUFVM), Afyon Kocatepe University Faculty of Veterinary Medicine (AKUFVM) and Atatürk University Faculty of Veterinary Medicine (AUFVM)) that were in the accreditation process are shown in Table 1. As it is seen in this Table that AUFVM has been the first veterinary school from Turkey to have been a member of the EAEVE and firstly earned *approval* status. Besides this school, three other schools have this status too.

³ 78/1028/EEC Access: [http://eur-lex.europa.eu/legal_content/EN/TXT/PDF/?uri=CELEX:31978D1028&from=EN].
Date Accessed:14.02.2015

⁴ 78 /1027/EEC Access:[http://eur-lex.europa.eu/legal_content/EN/TXT/PDF/?uri=CELEX:31978L1027&from=EN].
Date Accessed:14.02.2015

⁵ Access: [http://www.eaeve.org/fileadmin/downloads/establishments_status/EAEVE_Establishments_Status_approvedbyExComJan2016.pdf] Date Accessed:02.02.2016

Table 1. Dates of establishment and beginning of education of Veterinary Schools, their membership process to the EAEVE and accreditation status.
Tablo 1. Veteriner fakültelerinin kuruluş ve eğitim-öğretim başlama tarihleri, EAEVE'ye üyelik ve akreditasyon süreçleri.

| School | Establishment Date | Beginning of Education | EAEVE Membership Date | Application Date for Accreditation | Number of Visit | Status |
|---|--------------------|------------------------|-----------------------|------------------------------------|-----------------|-----------------------|
| Ankara University Faculty of Veterinary Medicine | 1842 | 1842 | 1991 | 2001 | 2 ^a | Approval ¹ |
| Firat University Faculty of Veterinary Medicine | 1967 | 1970 | 1994 | 2006 | 3 ^b | Approval ² |
| İstanbul University Faculty of Veterinary Medicine | 1964 | 1972 | 1997 | 1998 | 2 | Non Approval |
| Uludağ University Faculty of Veterinary Medicine | 1978 | 1978 | 1992 | 2004 | 3 ^c | Approval ³ |
| Selçuk University Faculty of Veterinary Medicine | 1982 | 1982 | 2000 | 2000 | 4 ^d | Approval ⁴ |
| Yüzüncü Yıl University Faculty of Veterinary Medicine * | 1982 | 1983 | + | 2002 | - | - |
| Kafkas University Faculty of Veterinary Medicine | 1982 | 1985 | 2003 | 2006 | 1 | Non Approval |
| Adnan Menderes University Faculty of Veterinary Medicine * | 1992 | 1993 | + | 2003 | 1 | Non Approval |
| Erciyes University Faculty of Veterinary Medicine | 1992 | 1995 | 2009 | 2012 | 1 | Non Approval |
| Harran University Faculty of Veterinary Medicine | 1995 | 1995 | 2006 | - | - | - |
| Mehmet Akif Ersoy University Faculty of Veterinary Medicine | 1992 | 1996 | 2008 | 2013 | - | - |
| Afyon Kocatepe University Faculty of Veterinary Medicine | 1995 | 1997 | 2009 | 2010 | 1 | Non Approval |
| Atatürk University Faculty of Veterinary Medicine | 1997 | 1999 | 2010 | 2010 | - | - |

¹ Approval Date: April 17-18, 2007

² Conditional Approval Date: November 30, 2011; Approval Date: October 30, 2013

³ Conditional Approval Date: April 2008; Approval Date: June 2010

⁴ Approval Date: October 30, 2013

^a The first visitation by the EAEVE committee to Ankara University Faculty of Veterinary Medicine was carried out in April 2003, and the second one in March 2007.

^b The first visitation by the EAEVE committee to Firat University Faculty of Veterinary Medicine was carried out in 2007, and the second one in November 2-4 2011, third in May 2013.

^c The first visitation by the EAEVE committee to Uludağ University Faculty of Veterinary Medicine was carried out in 2004, and the second one in April 2008, third in June 2010.

^d The first visitation by the EAEVE committee to Selçuk University Faculty of Veterinary Medicine was carried out in 18-23 March 2002, and the second one in April 10-11, 2008, third in May 3-4, 2011, fourth in May 8-9 2013.

* Veterinary Faculties have informed about their membership to the EAEVE but didn't state any application time.

¹ Onay Tarihi: 17-18 Nisan 2007

² Şartlı Onay Tarihi: 30 Kasım 2011; Onay Tarihi: 30 Ekim 2013

³ Şartlı Onay Tarihi: Nisan 2008; Onay Tarihi: Haziran 2010

⁴ Onay Tarihi: 30 Ekim 2013

^a Ankara Üniversitesi Veteriner Fakültesinin EAEVE heyeti tarafından ilk ziyareti Nisan 2003, ikinci ziyareti Mart 2007 tarihinde gerçekleştirilmiştir.

^b Firat Üniversitesi Veteriner Fakültesinin EAEVE heyeti tarafından ilk ziyareti 2007, ikinci ziyareti 2-4 Kasım 2011, üçüncü ziyareti Mayıs 2013 tarihinde gerçekleştirilmiştir.

^c Uludağ Üniversitesi Veteriner Fakültesinin EAEVE heyeti tarafından ilk ziyareti 2004, ikinci ziyareti Nisan 2008, üçüncü ziyareti Haziran 2010 tarihinde gerçekleştirilmiştir.

^d Selçuk Üniversitesi Veteriner Fakültesinin EAEVE heyeti tarafından ilk ziyareti 18-23 Mart 2002, ikinci ziyareti 10-11 Nisan 2008, üçüncü ziyareti 3-4 Mart 2011, dördüncü ziyareti 8-9 Mayıs 2013 tarihinde gerçekleştirilmiştir.

* Veteriner Fakülteleri EAEVE'ye üye olduklarını bildirmiş ancak üyelik başvuru tarihini belirtmemişlerdir.

Table 2. Education capacity parameters of Veterinary Schools (2012-2013 Education Period).
Tablo 2. Veteriner fakültelerinin öğretim kapasitesi göstergeleri (2012-2013 Eğitim-Öğretim Yılı).

| School | R ₁ ^a ECOVE's reference value: (8,832) | R ₂ ^b ECOVE's reference value: (9,619) | R ₃ ^c ECOVE's reference value: (11,389) | R ₄ ^d ECOVE's reference value: (2,203) | R ₅ ^e ECOVE's reference value: (0,474-1,944) |
|---|--|--|---|--|--|
| Ankara University Faculty of Veterinary Medicine | 163/1017 | 331/1017 | 53/1017 | 53/136 | 163/168 |
| Firat University Faculty of Veterinary Medicine | 132/792 | 153/792 | 31/792 | 31/109 | 132/21 |
| İstanbul University Faculty of Veterinary Medicine | 151/1001 | 262/1001 | 53/1001 | 53/112 | 151/111 |
| Uludağ University Faculty of Veterinary Medicine | 135/743 | 258/743 | 38/743 | 38/151 | 135/123 |
| Selçuk University Faculty of Veterinary Medicine | 110/1015 | 167/1015 | 10/1015 | 10/176 | 110/57 |
| Yüzüncü Yıl University Faculty of Veterinary Medicine | 86/826 | 125/826 | 21/826 | 21/115 | 86/39 |
| Kafkas University Faculty of Veterinary Medicine | 97/427 | 122/427 | 9/427 | 9/96 | 97/25 |
| Adnan Menderes University Faculty of Veterinary Medicine | 98/461 | 141/461 | 25/461 | 25/67 | 98/43 |
| Erciyes University Faculty of Veterinary Medicine | 74/361 | 95/361 | 17/361 | 17/56 | 74/21 |
| Harran University Faculty of Veterinary Medicine | 50/402 | 65/402 | 4/402 | 4/43 | 50/15 |
| Mehmet Akif Ersoy University Faculty of Veterinary Medicine | 66/440 | 83/440 | 7/440 | 7/44 | 66/17 |
| Afyon Kocatepe University Faculty of Veterinary Medicine | 90/471 | 119/471 | 26/471 | 26/66 | 90/29 |
| Atatürk University Faculty of Veterinary Medicine | 58/320 | 70/320 | 8/320 | 8/55 | 58/12 |

^aNumber of total academic FTE in veterinary training/number of undergraduate veterinary students

^bNumber of FTE total faculty/number of undergraduate students at faculty

^cNumber of VS FTE in veterinary training/number of undergraduate veterinary students

^dNumber of VS FTE in veterinary training/number of students graduating annually

^eNumber of total FTE academic staff in veterinary training/number of total FTE support staff in veterinary training

FTE (Full Time Equivalents) It is a concept developed to be able to compare data of different nature. It is used to calculate how many people's performance is required to carry out a work performed by people working part-time and full-time. By dividing the FTE value, calculated on the basis of the working hours of full-time employees and part-time employees/persons engaged in more than one activity, by the actual or normal working hours, it is possible to calculate the number of employees required for that work. For instance, the FTE value of an organization with 10 full-time employees, 2 half-time employees and 1 employee working at 80% is calculated as $[10 + (2 \times 5/100) + (1 \times 80/100)]$, and the full-time equivalent value of this organization is 11,8. The ratio of work per 1 FTE can be calculated as $R=1/(FTE/work)$.

Access: [http://www.tubitak.gov.tr/tubitak_content_files/BTYPD/kilavuzlar/canberra_tr.pdf]. Date Accessed: December 22, 2014. GA Budapest (2012).

^aVeteriner hekimliği öğretiminde toplam akademik FTE sayısı/Lisans öğrencileri sayısı

^bFakültedeki toplam FTE sayısı/Fakültedeki lisans öğrenci sayısı

^cVeteriner hekimliği öğretiminde öğretim yardımcısı elemanların FTE sayısı/Lisans öğrencileri sayısı

^dVeteriner hekimliği öğretiminde öğretim yardımcısı elemanların FTE sayısı/Yıllık mezun öğrenci sayısı

^eVeteriner hekimliği öğretiminde toplam FTE akademik personel sayısı/İdari (destek) personel sayısı

FTE (Full Time Equivalents) Tam Zamanlı Eşdeğer: Farklı yapılarıdaki verileri birbiri ile karşılaştırabilmek için geliştirilmiş bir kavramdır. Kısmi zamanlı ve tam zamanlı kişilerin çalıştığı bir işin kaç kişilik bir performans ile gerçekleştirildiğini hesaplanmasında kullanılır. Tam zamanlı çalışanların/ birden fazla faaliyette bulunan kişilerin çalışmalarına göre değerlendirilen FTE sayısının gerçek veya normal iş süresine bölünmesi ile o iş başına düşen çalışan kişi sayısı hesaplanmaktadır. Örneğin 10 tam zamanlı çalışana, 2 tane yarı zamanlı çalışana ve 1 tane %80 zamanlı çalışana sahip bir kurumun FTE değeri $[10 + (2 \times 5/100) + (1 \times 80/100)]$ şeklinde hesaplanır ve o kurumun tam zamanlı eşdeğer sayısı 11,8 dir. 1 FTE başına düşen iş oranının (R-Ratio) hesaplanması ise $R=1/(FTE/iş)$ şeklinde formüle edilmiştir.

Erişim: [http://www.tubitak.gov.tr/tubitak_content_files/BTYPD/kilavuzlar/canberra_tr.pdf], Erişim Tarihi: 22 Aralık 2014. GA Budapest (2012).

The indicators relating to the teaching capacities of the schools are given in Table 2. According to this Table, R1 values of eleven veterinary schools and R2 values of all veterinary schools are below the upper reference value of the ECOVE. However, R3 values of all veterinary schools and R4 values of twelve veterinary schools are above the upper reference value of the ECOVE. And only four veterinary schools' R5 values are within the range of reference values set by the ECOVE.

The ratios of theoretical training to practical training are shown in Table 3. As it is seen in this Table that R6 values of twelve veterinary schools are above the lower reference value of the ECOVE.

The ratios of food hygiene and public health courses to the whole curriculum in terms of hours are indicated in Table 4. Accordingly, R9 values of all veterinary schools are within the range of reference values set by the ECOVE.

Table 3. The ratio of theoretical training to the practical training. (2012-2013 Education Period).
Tablo 3. Teorik öğretimin-pratik öğretime oranı (2012-2013 Eğitim-Öğretim Yılı).

| School | R ₆ ^a | |
|---|----------------------------------|------|
| | ECOVE's reference value: (0,576) | |
| Ankara University Faculty of Veterinary Medicine | 1988/2272 | 1,14 |
| Fırat University Faculty of Veterinary Medicine | 1975/1852 | 0,94 |
| İstanbul University Faculty of Veterinary Medicine | 2254/1750 | 0,78 |
| Uludağ University Faculty of Veterinary Medicine | 2184/1816 | 0,83 |
| Selçuk University Faculty of Veterinary Medicine | 2586/2348 | 0,91 |
| Yüzüncü Yıl University Faculty of Veterinary Medicine | 2246/2226 | 0,99 |
| Kafkas University Faculty of Veterinary Medicine | 2254/2310 | 1,02 |
| Adnan Menderes University Faculty of Veterinary Medicine | 2324/2368 | 1,02 |
| Erciyes University Faculty of Veterinary Medicine | 2752/1536 | 0,56 |
| Harran University Faculty of Veterinary Medicine | 2520/1938 | 0,77 |
| Mehmet Akif Ersoy University Faculty of Veterinary Medicine | 2491/1788 | 0,72 |
| Afyon Kocatepe University Faculty of Veterinary Medicine | 1624/1748 | 1,08 |
| Atatürk University Faculty of Veterinary Medicine | 2184/1768 | 0,81 |

^aTheoretical training/Practical training.

^aTeorik öğretim/Pratik öğretim.

Table 4. The course times of Food Hygiene and Public Health (2012-2013 Education Period).
Tablo 4. Gıda hijyeni ve halk sağlığı ders saatleri (2012-2013 Eğitim-Öğretim Yılı).

| School | R ₉ ^a | |
|---|---|-------|
| | ECOVE's reference value: (0,725-98,437) | |
| Ankara University Faculty of Veterinary Medicine | 318/4260 | 13,40 |
| Fırat University Faculty of Veterinary Medicine | 180/3827 | 21,26 |
| İstanbul University Faculty of Veterinary Medicine | 466/4004 | 8,59 |
| Uludağ University Faculty of Veterinary Medicine | 740/5632 | 7,61 |
| Selçuk University Faculty of Veterinary Medicine | 210/4934 | 23,50 |
| Yüzüncü Yıl University Faculty of Veterinary Medicine | 438/4472 | 10,21 |
| Kafkas University Faculty of Veterinary Medicine | 310/4564 | 14,72 |
| Adnan Menderes University Faculty of Veterinary Medicine | 252/4692 | 18,62 |
| Erciyes University Faculty of Veterinary Medicine | 232/4288 | 18,48 |
| Harran University Faculty of Veterinary Medicine | 234/4458 | 19,05 |
| Mehmet Akif Ersoy University Faculty of Veterinary Medicine | 507/4279 | 8,44 |
| Afyon Kocatepe University Faculty of Veterinary Medicine | 240/3372 | 14,05 |
| Atatürk University Faculty of Veterinary Medicine | 630/3952 | 6,27 |

^aTotal course times of Food Hygiene and Public Health/course times of whole curriculum.

^aGıda Hijyeni ve halk sağlığı derslerinin toplam saati/veteriner hekimliği müfredatı toplam saati.

Table 5. The ratios concerning the number of available animals for clinical education (2012-2013 Education Period).
 Tablo 5. Klinik öğretimi için mevcut hayvanlarla ilgili oranlar (2012-2013 Eğitim-Öğretim Yılı).

| School | R ₁₁ ^a | | R ₁₄ ^b | | R ₁₅ ^c | | R ₁₆ ^d | |
|---|------------------------------|---------|------------------------------|---------|------------------------------|---------|------------------------------|---------|
| | reference value: (0,956) | ECOVE's | reference value: (2,590) | ECOVE's | reference value: (0,505) | ECOVE's | reference value: (43,462) | ECOVE's |
| Ankara University Faculty of Veterinary Medicine | 136/834 | 6,13 | 136/9 | 0,07 | 136/557 | 4,1 | 136/10869 | 79,92 |
| Firat University Faculty of Veterinary Medicine | 109/2304 | 21,14 | 109/18 | 0,17 | 109/53 | 0,49 | 109/1024 | 9,39 |
| İstanbul University Faculty of Veterinary Medicine | 112/1194 | 10,66 | 112/172 | 1,54 | 112/864 | 7,71 | 112/10399 | 92,85 |
| Uludağ University Faculty of Veterinary Medicine | 151/3910 | 25,89 | 151/90 | 0,60 | 151/339 | 2,25 | 151/3759 | 24,89 |
| Selçuk University Faculty of Veterinary Medicine | 176/1246 | 7,08 | 176/19 | 0,11 | 176/0 | 0 | 176/2484 | 14,11 |
| Yüzüncü Yıl University Faculty of Veterinary Medicine | 115/1180 | 10,26 | 115/17 | 0,15 | 115/73 | 0,63 | 115/224 | 1,95 |
| Kafkas University Faculty of Veterinary Medicine | 96/1167 | 12,16 | 96/34 | 0,35 | 96/25 | 0,26 | 96/198 | 2,06 |
| Adnan Menderes University Faculty of Veterinary Medicine | 67/1047 | 15,63 | 67/45 | 0,67 | 67/88 | 1,31 | 67/1934 | 28,87 |
| Erciyes University Faculty of Veterinary Medicine | 56/330 | 5,89 | 56/5 | 0,09 | 56/90 | 1,61 | 56/787 | 14,05 |
| Harran University Faculty of Veterinary Medicine | 43/813 | 18,91 | 43/21 | 0,49 | 43/5 | 0,12 | 43/175 | 4,07 |
| Mehmet Akif Ersoy University Faculty of Veterinary Medicine | 44/1071 | 24,34 | 44/2 | 0,05 | 44/13 | 0,30 | 44/1101 | 25,02 |
| Afyon Kocatepe University Faculty of Veterinary Medicine | - | - | - | - | - | - | - | - |
| Atatürk University Faculty of Veterinary Medicine | 55/1000 | 18,18 | 55/25 | 0,45 | 55/92 | 1,67 | 55/598 | 10,87 |

^aNumber of students graduating annually/number of food-producing animals seen at faculty.

^bNumber of students graduating annually/number of equine cases.

^cNumber of students graduating annually/number of poultry and rabbit cases.

^dNumber of students graduating annually/number of companion animals (cats, dogs, etc.) seen at faculty

^aYıllık mezun olan öğrenci sayısı/Fakülteye getirilen gıda amaçlı üretilen hayvan sayısı.

^bYıllık mezun öğrenci sayısı/Tek tırnaklı vaka sayısı.

^cYıllık mezun öğrenci sayısı/Kanath ve tavşan vakaları sayısı.

^dYıllık mezun öğrenci sayısı /Fakülteye getirilen arkadaş hayvanlarının(keci-köpek) sayısı.

Table 6. The number of necropsies performed in Veterinary Schools (2012-2013 Education Period).
Tablo 6. Veteriner fakültelelerinde yapılan nekropsi sayıları (2012-2013 Eğitim-Öğretim Yılı).

| School | R ₁₈ ^a | | R ₁₉ ^b | | R ₂₀ ^c | |
|---|--------------------------------------|---------------------------|--------------------------------------|---------------------------|--------------------------------------|---------------------------|
| | ECOVE's reference value: (0, 998) | reference value: (1, 498) | ECOVE's reference value: (0, 547) | reference value: (1, 498) | ECOVE's reference value: (0, 998) | reference value: (1, 498) |
| Ankara University Faculty of Veterinary Medicine | 136/68 | 0,50 | 136/30 | 0,22 | 136/159 | 1,17 |
| Firat University Faculty of Veterinary Medicine | 109/388 | 3,56 | 109/81 | 0,74 | 109/40 | 0,37 |
| İstanbul University Faculty of Veterinary Medicine | 112/73 | 0,65 | 112/17 | 0,15 | 112/77 | 0,69 |
| Uludağ University Faculty of Veterinary Medicine | 151/259 | 1,72 | 151/70 | 0,46 | 151/100 | 0,66 |
| Selçuk University Faculty of Veterinary Medicine | 176/308 | 1,75 | 176/63 | 0,36 | 176/21 | 0,12 |
| Yüzüncü Yıl University Faculty of Veterinary Medicine | 115/116 | 1,01 | 115/55 | 0,48 | 115/4 | 0,03 |
| Kafkas University Faculty of Veterinary Medicine | 96/166 | 1,73 | 96/25 | 0,26 | 96/10 | 0,10 |
| Adnan Menderes University Faculty of Veterinary Medicine | 67/249 | 3,72 | 67/144 | 2,15 | 67/0 | 0 |
| Erciyes University Faculty of Veterinary Medicine | 56/20 | 0,36 | 56/0 | 0 | 56/0 | 0 |
| Harran University Faculty of Veterinary Medicine | 43/92 | 2,14 | 43/3 | 0,07 | 43/3 | 0,07 |
| Mehmet Akif Ersoy University Faculty of Veterinary Medicine | 44/402 | 9,14 | 44/79 | 1,80 | 44/62 | 1,41 |
| Afyon Kocatepe University Faculty of Veterinary Medicine | 66/170 | 2,58 | 66/0 | 0 | 66/0 | 0 |
| Atatürk University Faculty of Veterinary Medicine | 55/140 | 2,55 | 55/80 | 1,45 | 55/8 | 0,15 |

^aNumber of students graduating annually/number of necropsies of food producing animals and equidae.

^bNumber of students graduating annually/number of necropsies of poultry and rabbit.

^cNumber of students graduating annually/number of necropsies of companion animals(cat-dog).

^aYıllık mezun olan öğrenci sayısı/gıda üreten hayvanlar ve tek tırmaklı hayvan nekropsi sayısı.

^bYıllık mezun olan öğrenci sayısı/ kanatlı ve tavşan nekropsi sayısı.

^cYıllık mezun olan öğrenci sayısı/Arkadaş hayvan (kedi-köpek) nekropsi sayısı.

The ratios concerning the number of available animals for clinical education are given in Table 5. When analyzed by terms of R11 value, all veterinary schools are above the lower reference value of the ECOVE; by terms of R14 value, all veterinary schools are below the lower reference value of the ECOVE, by terms of R15 value, five veterinary schools are below the lower reference value of the ECOVE and by terms of R16 value, only two veterinary schools are above the lower reference value set by the ECOVE.

Finally, the ratios of the number of students graduating annually to the number of necropsies performed are shown in Table 6. As it is seen in this Table, R18 values of four veterinary schools are below the lower reference value of the ECOVE, R19 values of four veterinary schools are above the lower reference value of the ECOVE and R20 values of all veterinary schools are above the lower reference value set by the ECOVE.

Discussion and Conclusion

The fact that the veterinary schools in Turkey applied for accreditation by becoming a member of the EAEVE (Table 1) shortly after its foundation in 1988 is a concrete evidence of the fact that Europe is regarded as a reference authority in relation to the internationalisation of Turkish veterinary medicine. This tendency, which basically started with the establishment and institutionalisation of scientific veterinary medicine in the Ottoman State, continued uninterruptedly within the framework of the modernisation efforts made after the proclamation of the Republic of Turkey and took on a different dimension within the ongoing bilateral relations with the EU (2, 4).

The pioneer status of AUFVM (the first veterinary school from Turkey to have been a member of the EAEVE and firstly earned *approval* status (Table 1) may be associated with the fact that this School rendered its conditions compliant with the required standards earlier than other schools in Turkey. However, this explanation would fall short if the international relations in the historical background since the establishment of AUFVM are ignored. Established by the Prussian Veterinarian Godlewsky in 1842, this School organised its curriculum based on the Western veterinary practices and started to send students to Europe in 1890 (5). In the first years of the Republic, it maintained its relations with Europe, particularly with Germany, as can be seen in the experience of the Veterinary School of Higher Agricultural Institute (3) and these relations have been maintained for more than a half-century simultaneously with the EU process. It should be accepted that all this background has played an important role in the earning of approval status by AUFVM earlier than other Turkish veterinary schools. On the other hand, the fact that the four out of nine schools visited by the EAEVE as of the time

of the completion of the research which succeeded in passing Stage 1 evaluation, are among the first five veterinary schools (Table 1) that started education in Turkey may be accounted for by the fact that they are more institutionalised than the others. Yet, there is still no accredited veterinary school in Turkey that fully complies with the EU standards, including these four schools.

The Education and Research Commission Report, prepared within the scope of the 3rd Turkish Veterinary Medicine Congress held in Turkey between April 23 and 25, 2010 (1) gave the numbers of students and academics in the veterinary schools as from 2002. Noting that the ratio of the number of academics to the number of students in the schools with students in all classes ranged from 1:5.7 to 1:11.5, the Report underlined the *inadequacy* of the veterinary schools in Turkey, based on the ratios required by the EAEVE from newly opened veterinary schools. Considering the R1 (Number of total academic FTE in veterinary training/number of undergraduate veterinary students) values calculated on the basis of the accreditation requirements, 11 out of 13 reviewed schools were found to meet the required values of the ECOVE (Table 2). It is unclear whether this was due to the changes in the calculation of the ratios or to the *improvement* of these ratios in the veterinary schools in accordance with the expectation of the ECOVE.

Regarding the ratios of theoretical training to practical training in the veterinary schools with the total education period of five years, twelve of thirteen veterinary schools are above the lower reference value set by the ECOVE and as for the ratio of food hygiene and public health courses to the whole curriculum in terms of hours, all veterinary schools are within the range of reference values of the ECOVE as shown and emphasized by the *Results*. The efforts to make the veterinary education in Turkey compliant with the EU Directive 2005/36 must have played an important role in achieving these desired values. This compliance was legally guaranteed by a Regulation (*the Regulation Concerning the Identification of the Minimum Training Requirements for Medicine, Nursery, Midwifery, Dentistry, Veterinary, Pharmacy and Architecture Training Programs*), prepared on the basis of the EU Directive 2005/36 and put into effect on February 2, 2008 (1).

The parameters R11, R14, R15 and R16 set by the ECOVE at Stage 1 evaluation enquires about the ratio of available animals for clinical education to the number of students graduating annually (6). Although five-year data were required for these parameters, only one-year data for numbers of available animals could be barely collected from veterinary schools, and this is one of the constraints of this study. Based on the calculations made using the one-year data obtained from all veterinary schools, excluding AKUFVM from which no data was obtained, it

was found that all veterinary schools were above the reference lower value set by the ECOVE for the parameter R11 [Number of students graduating annually/number of food-producing animals (poultry, winged, beef, sheep-goat) seen at faculty]. None of the veterinary schools could succeed in meeting the required value for the parameter R14 [Number of students graduating annually/number of equine cases], whereas seven veterinary schools could meet the required value for the parameter R15 [Number of students graduating annually/number of poultry and rabbit cases] and only AUFVM and IUFVM could meet the required value for the parameter R16 [Number of students graduating annually/number of companion animals (cats, dogs, etc.) seen at faculty] (Table 5). Assuming that the number of students graduating annually from 13 veterinary schools in Turkey will not change and the five-year averages of medical cases will be at the same level as the one-year averages, the numbers of food-producing animals among the species brought to the school clinics for examination, diagnosis and treatment are satisfactory in all of the schools, whereas the numbers of equine animals are unsatisfactory in all of the schools, the numbers of poultry and rabbits are satisfactory in only seven schools, and the numbers of companion animals such as cats and dogs are satisfactory only in two schools. However, as the number of students graduating annually from the schools may change and these ratios do not meet the required averages, it is not possible to comment on this issue without any speculation for now.

Three of the veterinary schools (AUFVM, IUFVM and EUFVM) dealt with in this study were found to be unsatisfactory in terms of the number of necropsies performed on by any of the schools, excluding the four schools with *approval* status. Since these parameters are not applicable in most of the veterinary schools, they were excluded from the study. Thus, it is best to confine our remarks to saying that this should be accepted as a serious deficiency for the veterinary schools in the accreditation process, and that these schools are obliged to make the necessary changes and corrections so that they can proceed on their way to accreditation.

In conclusion, this study shows that out of 24 veterinary schools providing veterinary training in Turkey as of December 2015, 13 EAEVE members initiated their accreditation processes, nine were visited, and only four succeeded in passing Stage 1 evaluation and earned *approval* status, but there is no accredited veterinary

school that fully complies with the EU standards. It was found that the education in the veterinary schools (duration of education, curriculum, and ratio of theoretical courses to practical courses in the curriculum) were generally in conformance with the EU Directive 2005/36. Despite all efforts made, the five-year averages of the numbers of animals examined, diagnosed and treated and numbers the necropsies performed could not be obtained from the veterinary schools. It was found that these records were unreliable or missing. Furthermore, the requirements concerning the *Main indicators* used by the ECOVE in the evaluation of veterinary schools were found to be not applicable in most of the veterinary schools. This is likely to constitute a serious obstacle to Turkish veterinary schools which are on their way to receiving accreditation in near future.

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