

Accreditation and evaluation of veterinary medical institutes – a Pakistani perspective

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Summary

The Higher Education Commission of Pakistan (HEC) is an independent, autonomous and constitutionally established institution that provides primary funding for higher education in Pakistan, which it also oversees, regulates and accredits. According to the HEC Charter: ‘the HEC of Pakistan may set up national or regional evaluation councils or authorise any existing council/or similar body to carry out accreditation of institutions including their departments, facilities and disciplines by giving them appropriate ratings’. At present, 14 accreditation bodies operate under the umbrella of the HEC. Five were established under the HEC’s Quality Assurance Agency, while nine councils associated with the accreditation and evaluation of medical institutes are independent bodies that were extant before the HEC was created, and are recognised by the HEC. The authors will discuss the role of the Pakistan Veterinary Medical Council (PVMC), the accreditation of veterinary institutes and associated issues of concern. They suggest that the PVMC should adopt an unbiased approach to new and established veterinary institutes to attain uniform accreditation of all veterinary institutes

throughout the country. In addition, the government should consult the accreditation councils and professional bodies before setting up new institutes. The authors also suggest that, instead of placing new veterinary institutes under the aegis of non-veterinary universities, they should be made sub-campus of established veterinary universities. In time, they will emerge as established institutes in their own right.

Keywords

Accreditation – Assessment – Higher Education Commission – Pakistan – Pakistan Veterinary Medical Council – Veterinary education.

Introduction

According to the Economic Survey of Pakistan (1), the livestock sector made up 58.92% of the agricultural sector (value added) and contributed 11.11% to the national gross domestic product (GDP) during 2017 to 2018. An increase of 3.76% was observed in the number of livestock in comparison to the number in 2017. Similarly, there has been a gradual increase in the livestock population (Table I). To meet the country's soaring demand for animal protein (milk, meat, eggs) from its rapidly increasing population, and to improve the socio-economic profile of the rural community, the government of Pakistan is placing a high priority on this sector.

Two separate, four-year, post-secondary degrees of Bachelor of Science in Animal Husbandry (BSc AH) and Doctor of Veterinary Medicine (DVM) were awarded in Pakistan until 2002. However, in view of the problems encountered in hiring skilled staff in this area, as well as recommendations forwarded by the Pakistan Veterinary Medical Council (PVMC) (2), these degrees were subsequently merged as a composite, five-year DVM degree programme. The course curriculum (3) for this degree is approved by the Higher Education Commission (HEC), in Islamabad, Pakistan (4), in accordance with PVMC guidelines. The DVM programme includes veterinary subjects and animal science, with a ratio of 70:30. Thus,

graduates attaining this degree are capable of managing both production and veterinary medical issues in the public and private sector (5).

At the time of its independence in 1947, Pakistan inherited the Punjab Veterinary College, Lahore, as its sole veterinary institute. This was later upgraded to the College of Veterinary Sciences, ultimately becoming the University of Veterinary and Animal Sciences (UVAS), in Lahore in 2002. Meanwhile, a Faculty of Veterinary Sciences was inaugurated as an integral department of the University of Agriculture Faisalabad (UAF), in Faisalabad in 1962. Hence, these two institutes have been providing academic degrees in veterinary/animal sciences, both at graduate and postgraduate levels, for many years.

However, the government and private sector realised that there was a lack of skilled staff and qualified personnel in the fields of veterinary science and animal sciences, so 12 other institutes were established to provide veterinary medical education in Pakistan (Table II). An historic perspective on the evolution of veterinary medical education in Pakistan has been described in detail in an earlier study (6). Similarly, aspects of the accreditation and evaluation of medical education in Pakistan have also been examined (7, 8, 9). However, the processes of accreditation and evaluation of veterinary medical education have not yet been reported upon. In this paper, the authors give an overview of the process, outcomes and related perspectives involved in the accreditation and evaluation of veterinary medical institutes in Pakistan.

Higher Education Commission and accreditation councils

The HEC (formerly the University Grants Commission) is an independent, autonomous and constitutionally established institution charged with the primary funding, oversight, regulation and accreditation of higher education in Pakistan (10). The powers and functions of the Commission, as stated in Ordinance No. LIII of 2002, Para 10, Clause E, are as follows:

‘The Higher Education Commission may set up national or regional evaluation councils or authorise any existing council or similar body to carry out accreditation of Institutions including their departments, facilities and disciplines by giving them appropriate ratings. The Commission shall help build capacity of existing councils or bodies in order to enhance the reliability of the evaluation carried out by them.’

At present, 14 accreditation bodies operate under the umbrella of the HEC (11), five of which were established under its Quality Assurance Agency. The nine councils associated with the accreditation/evaluation of medical (and veterinary medical) institutes (including the PVMC) are independent bodies which were extant before the HEC was established, although they are recognised by the HEC (Table III).

Pakistan Veterinary Medical Council

The PVMC is a statutory regulatory authority for veterinary medical education and practitioners in Pakistan, with its headquarters in Islamabad. It was constituted as an Act in 1996 (Acts, Ordinances, President’s Orders and Regulations), Pakistan (12), after parliamentary approval with the following aims:

- to regulate the registration, practice and conduct of veterinarians
- to establish uniform standards of basic and higher qualifications in veterinary medicine and surgery.

Persons/veterinarians cannot be nominated as members of the PVMC unless they are registered with the Council and have held a recognised veterinary qualification for at least five years. The PVMC is headed by a president and a vice-president, who are selected for a term of four years by the members of the Council from among themselves. The Executive Committee of the Council consists of the president, vice-president and five others, also elected by the Council from amongst its members. The Council consists of:

- one member from each province to be nominated by the provincial government

- one member nominated by the Vice-Chancellor of each university, from among the members of the veterinary/animal sciences faculty
- four members elected by the Central Executive Committee of the Pakistan Veterinary Medical Association (PVMA) (a society registered under the Societies Registration Act, 1860) (13)
- four members nominated by the federal government, of whom at least one is a member of Remount Veterinary and Farms Corps (the military Veterinary Service of Pakistan)
- one member nominated by the head of each veterinary institution in Pakistan.

Accreditation and evaluation process

The ‘Accreditation, Equivalence Policy and Procedure Regulations’ 2001 of the PVMC (2) have been approved by the federal government of Pakistan and are applied in the accreditation of all institutes in the country that provide a veterinary medical education. During the initial process, the PVMC forms an Accreditation and Evaluation Committee (A&EC) of no more than eight members from amongst its senior members. Of these, at least half must be past academics with significant experience of working in a veterinary institute.

The A&EC, in turn, evaluates the institute under consideration for accreditation by examining the institute’s self-evaluation report (SER) on various laid-down ‘Essentials’ that are to be assessed for accreditation. This report also provides the ‘Minimal Essential Criteria’ to be fulfilled for a specific academic programme. These essentials include information on the institution’s:

- organisation
- finances
- physical facilities and equipment
- clinical resources
- library and learning resources
- enrolled students

- admission criteria
- faculty
- curriculum
- research and continued veterinary education facilities.

In addition, five departments, i.e. Basic Sciences, Pathobiology, Livestock Production and Management, Clinical Sciences and Allied Sciences, must be operating in the institute under consideration; fulfilling the credit hours for each discipline associated with that department (Table IV). Upon receipt of the SER, the convenor of the A&EC appoints a team from amongst its members for on-site validation of the information presented in the report. The on-site visit includes not only the physical evaluation of facilities but also meetings with student representatives, faculty staff and university officials.

At the end of the visit, the members of the on-site evaluation team hold an informal meeting with the head of the institute, along with selected senior faculty members and the Vice-Chancellor of the university. The preliminary report of the visit, covering the status of the institute, any deficiencies, and recommendations for the future, is communicated orally. However, no final announcement on accreditation is made at this stage. Later, the final draft of the on-site evaluation, containing comments, the actual status of the institute and the extent to which it accords with the SER, and any further recommendations (if any), is conveyed both to the college/university authorities and the PVMC in written form.

Bearing in mind the final report of the on-site evaluation team, the PVMC may determine the accreditation status of the institute as one of the following:

- provisional accreditation with a period of time (six months to one year) given to correct the remaining deficiencies, provided that the institute complies with most of the ‘Essentials’;
- accreditation of the institute for the first two years to provide the subjects covered in Basic Sciences while time is given to complete the essentials for Clinical Sciences. A further on-site

evaluation is conducted after two years to monitor the status of the Clinical Sciences Department and complete accreditation;

- accreditation may be refused if the status of the institution is considered to be incompatible with the accreditation and Minimal Essential Criteria of the PVMC.

Future challenges

The accreditation and evaluation process implemented by the PVMC has undoubtedly revolutionised veterinary education in Pakistan but, as a result of its somewhat conventional and traditional approach, this process still provides many challenges.

It has been noted that the Minimal Essential Criteria stipulated by the PVMC are often changed without advising the veterinary institutes, which creates confusion and delay. Furthermore, the PVMC takes a long time to process the accreditation requests of new institutes. Such confusion, an unduly strict approach to all the various stages of accreditation and the prolonged ‘red tape’ of the PVMC’s accreditation procedure for newly established veterinary institutes are all issues that require immediate attention.

The newer veterinary institutes in Pakistan are being established either as constituent colleges or as faculties within a non-veterinary/general university. There is a wide communication gap between these veterinary institutes and the university authorities, as the latter are not veterinarians and hence unfamiliar with the specific demands that must be met to provide a fully accreditable DVM degree.

As a consequence, funding to these veterinary institutes can be delayed. Moreover, it takes years to fulfil the minimum accreditation criteria of the PVMC for faculty members, laboratories and equipment. Again, this results in delayed accreditation by the PVMC.

It is recommended that the government resolve such issues of accreditation before opening any new veterinary institutes in Pakistan. Eight veterinary institutes in Pakistan, out of a total of 14 (Table II), have not yet attained permanent accreditation, although they have

been provisionally accredited. As a consequence, the graduating DVM students of these schools have not been given registration by the PVMC and have been denied the opportunity to apply for government posts as veterinarians.

A makeshift solution was organised by the PVMC in the form of a ‘crash programme’ for these graduates at UVAS, Lahore, and UAF, Faisalabad. At the end of this programme, the students sat a comprehensive examination and those who passed were awarded PVMC registration. Each student needed to have attended a specific percentage of classes to be eligible to take the exam. The exam was set by Senior Faculty Members of UVAS and UAF and aimed primarily at assessing the student’s clinical approach as a veterinary practitioner.

However, since the DVM students of new institutes tend to have limited access to clinical cases, they faced a certain amount of difficulty in passing this exam. Furthermore, enrolment in this crash programme carried a fee and the expense had to be borne by the students themselves. This financial burden, allied with the delay in their PVMC registration, resulted in a considerable time lag before they could begin their professional careers. The ultimate outcome was significant distress, financial and otherwise, for the students and their families. The government and PVMC must find a means of assisting DVM graduates from newly established veterinary institutes to gain registration while their veterinary programmes are still undergoing the accreditation process.

In recent years, the PVMC has devoted all of its attention to scrutinising the newer veterinary institutes, while failing to maintain a focus upon well-established institutions, such as UVAS, Lahore, and UAF, Faisalabad. Though these early ‘pioneer’ institutes are ‘state of the art’ and provide high-quality veterinary education, nonetheless, regular assessment is vital to bring standardisation and organisation to the accreditation process.

Consequently, in 2017, the PVMC began to undertake assessments in the pioneer institutes as well, making various recommendations for

improvement. It is hoped that this initiative will help to remove the risk of bias towards the older institutes in the process of accreditation throughout the country.

The conventional approach to accreditation being used by the PVMC, comprising a detailed self-assessment report followed by an on-site inspection, is consistent yet lengthy and time-consuming.

The main challenges confronting veterinary education in Pakistan are more or less the same as those faced in other developing countries. They include a lack of directional research, inadequate research and training facilities for young researchers/graduates, and, above all, a communication gap between the livestock industry and veterinary educational institutes. Organisations such as the HEC and PVMC should become very proactive in developing effective avenues of communication so that private and government stakeholders may derive maximum benefit from Pakistan's investment in training veterinary graduates.

Some suggestions to improve veterinary education and accreditation in Pakistan are given below.

- Pakistan should strategically set national goals for future research in veterinary education. These should include a focus on issues related to indigenous livestock.
- Educational institutes should provide infrastructure and opportunities for upgrading the professional skills of their faculty members.
- Differences in the quality of education among the various veterinary institutes should be minimised by upgrading the curriculum and improving training and research facilities for veterinary programmes.
- Collaboration between the educational institutes and the livestock industry must be strengthened.
- Veterinary institutes must be upgraded to international levels. This means improving their research facilities, promoting international collaboration, and providing opportunities for

researchers to gain international exposure, as well as to keep in touch with the work of their international peers and colleagues.

- Postgraduate and doctoral research programmes should be strengthened in all veterinary institutes by facilitating the necessary infrastructure and research facilities. Furthermore, relevant research directions should be developed, based on national demands.
- Outreach stations/ambulatory services should be developed by veterinary institutes so that students can gain maximum exposure to a wide variety of clinical cases.
- Before opening new veterinary institutes, their feasibility should be evaluated. The scope of the programme, the local livestock population, the local human population and the proposed institute's distance from already established institutions should be considered ahead of political considerations.
- When new veterinary institutes are opened, this should be done in consensus with the PVMC, to assist in a quicker accreditation process.
- Strengthening existing veterinary institutes in terms of research, academic excellence and clinical aspects should be considered before deciding to establish new institutes.

Conclusion

In this article, the authors reviewed the accreditation procedure for veterinary educational institutes in Pakistan. The current conventional approach is consistent, yet time-consuming. Moreover, the PVMC needs to implement an unbiased approach to both new and established veterinary institutes if Pakistan is to attain uniform accreditation of all veterinary institutes throughout the country. The government must liaise with accreditation councils and professional bodies before setting up new institutes. It is also suggested that, rather than placing new veterinary institutes under the umbrella of non-veterinary universities, they should be made sub-campus of established

veterinary universities. Over time, and as they gain experience and improve their facilities, these sub-campuses will themselves emerge as established institutions in their own right.

References

1. Finance Division, Government of Pakistan (2018). – Pakistan economic survey 2017–2018. Pakistan Press, Islamabad, Pakistan, 432 pp. Available at: www.finance.gov.pk/survey_1718.html (accessed on 11 July 2018).
2. Pakistan Veterinary Medical Council (PVMC) (1996). – Accreditation and equivalence regulations 2001. PVMC, Islamabad, Pakistan. Available at: www.pvmc.org.pk/ (accessed on 11 November 2017).
3. Higher Education Commission (HEC) of Pakistan (2002). – HEC revised curriculum. HEC, Islamabad, Pakistan. Available at: <http://hec.gov.pk/english/services/universities/RevisedCurricula/Pages/default.aspx> (accessed on 5 January 2018).
4. Higher Education Commission (HEC) of Pakistan (2002). – About us. HEC, Islamabad, Pakistan. Available at: www.hec.gov.pk/english/Pages/Home.aspx (accessed on 4 April 2017).
5. Farooq U., Samad H.A. & Qamar M.F. (2011). – Teaching of physiology to the veterinary students in Pakistan: present, past and future scenarios. *J. Educ. Res.*, **14** (1), 146–153. Available at: http://jer.iub.edu.pk/er/publication_paper.php?publicationid=10 (accessed on 11 July 2018).
6. Iqbal Z., Muhammad G., Jabbar A. & Sindhu Z.-U.-D. (2004). – Veterinary education in Pakistan: past scenario and future requirements. *Int. J. Agric. Biol.*, **6** (4), 753–757. Available at: www.fspublishers.org/published_papers/5560_.pdf (accessed on 9 July 2018).
7. Chauhan C.P.S. (2008). – Higher education: current status

and future possibilities in Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. *Anal. Rep. Int. Educ.*, **2** (1), 29–48. doi:10.3890/arie.2.1.29.

8. Ahmad M., Khan F.A. & Ahmad S.A. (2009). – Standardization of pathology laboratories in Pakistan: problems and prospects. *Clin. Biochem.*, **42** (4–5), 259–262. doi:10.1016/j.clinbiochem.2008.09.010.

9. Sax S. & Marx M. (2014). – Local perceptions on factors influencing the introduction of international healthcare accreditation in Pakistan. *Hlth Pol. Plan.*, **29** (8), 1021–1030. doi:10.1093/heapol/czt084.

10. Higher Education Commission (HEC) of Pakistan (2002). – Federal universities ordinance 2002. HEC, Islamabad, Pakistan. Available at: www.hec.gov.pk/.../HECPublication/Documents/455_HECOrdinance.pdf (accessed on 20 January 2017).

11. Higher Education Commission (HEC) of Pakistan (2002). – Program level accreditation: by accreditation councils. HEC, Islamabad, Pakistan. Available at: <http://hec.gov.pk/english/services/universities/QAA/externalQA/PLA/Pages/By-Accreditation-Councils.aspx> (accessed on 9 January 2017).

12. Gazette of Pakistan (1996). – Acts, ordinances, President's orders and regulations. Extraordinary, published by authorities, Part I. Government of Pakistan, Islamabad, Pakistan, 157–168. Available at: www.na.gov.pk/uploads/documents/1329726293_165.pdf (accessed on 11 October 2017).

13. Pakistan Veterinary Medical Association (PVMA) (1986). – Historical background and achievements. PVMA, Islamabad, Pakistan. Available at: www.pvma.webs.com (accessed on 11 October 2017).

Table I
Livestock population in Pakistan (in millions) (1)

Species	2011– 2012*	2012– 2013*	2013– 2014*	2014– 2015*	2015– 2016*	2016– 2017*	2017– 2018*
Cattle	36.9	38.3	39.7	41.2	42.8	44.4	46.1
Buffaloes	32.7	33.7	34.6	35.6	36.6	37.7	38.8
Sheep	28.4	28.8	29.1	29.4	29.8	30.1	30.5
Goats	63.1	64.9	66.6	68.4	70.3	72.2	74.1
Camels	1.0	1.0	1.0	1.0	1.0	1.1	1.1
Horses	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Asses	4.8	4.9	4.9	5.0	5.1	5.2	5.3
Mules	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Source: Pakistan Economic Survey 2017–2018 (1)

*Estimated figure based on inter-census growth rate of Livestock Census in 1996 and 2006

Table II
Institutes providing veterinary medical education in Pakistan

Serial no.	Institute	University (accreditation status)	Year of establishment
1	University of Veterinary and Animal Sciences, Lahore (formerly the College of Veterinary Science)	University of Veterinary and Animal Sciences, Lahore (accredited)	1882
2	Faculty of Veterinary Sciences	University of Agriculture, Faisalabad (accredited)	1962
3	Faculty of Animal Husbandry and Veterinary Sciences	Sindh Agriculture University, Tandojam (accredited)	1971
4	Gomal College of Veterinary Sciences	Gomal University, Dera Ismail Khan (provisionally accredited)	2000
5	Faculty of Animal Husbandry and Veterinary Sciences	University of Agriculture, Peshawar (provisionally accredited)	2004
6	College of Veterinary and Animal Sciences, Jhang	University of Veterinary and Animal Sciences, Lahore (provisionally accredited)	2006
7	Faculty of Veterinary and Animal Sciences	Lasbela University of Agriculture, Water and Marine Sciences, Lasbela (provisionally accredited)	2006
8	University College of Veterinary and Animal Sciences	Islamia University of Bahawalpur (provisionally accredited)	2006
9	Faculty of Veterinary Sciences	Bahauddin Zakarya University, Multan (provisionally accredited)	2006
10	Faculty of Veterinary and Animal Sciences	Pir Meher Ali Shah Arid Agriculture University, Rawalpindi (provisionally accredited)	2006
11	Faculty of Veterinary and Animal Sciences	University of Poonch, Rawlakot (provisionally accredited)	2006
12	Baqai Veterinary College	Baqai Medical University, Karachi (not accredited)	2006
13	Riphah College of Veterinary Sciences	Riphah International University, Lahore (accredited)	2012
14	Shaheed Benazir Bhutto University of Veterinary and Animal Sciences, Sakrand	Shaheed Benazir Bhutto University of Veterinary and Animal Sciences (not accredited)	2013

Table III
Accreditation councils of the Higher Education Commission of Pakistan (11)

Serial no.	Accreditation councils and professional bodies established by the Higher Education Commission
1	National Accreditation Council for Teacher Education (NACTE)
2	National Agricultural Education Accreditation Council (NAEAC)
3	National Computing Education Accreditation Council (NCEAC)
4	National Business Education Accreditation Council (NBEAC)
5	National Technology Council (NTC)
Already existing councils recognised by the Higher Education Commission	
1	Pakistan Bar Council (PBC)
2	Pakistan Council for Architects and Town Planners (PCATP)
3	Pakistan Engineering Council (PEC)
4	Pakistan Dental and Medical Council (PDMC)
5	Pakistan Nursing Council (PNC)
6	Pakistan Pharmacy Council (PPC)
7	Pakistan Veterinary Medical Council (PVMC)
8	National Council of Homeopathy (NCH)
9	National Council for Tibb*/Eastern Medicine (NCT)

*Tibb: an Islamic medical tradition, based on ancient Greek principles, which focuses on balance in the body

Table IV
Required operational departments in a veterinary institute,
according to Pakistan Veterinary Medical Council guidelines

Department	Section	Credit hours
Basic Sciences	Veterinary physiology and biochemistry	11
	Veterinary anatomy and histology	11
	Veterinary pharmacology and toxicology	8
Pathobiology	Veterinary pathology	13
	Veterinary parasitology	10
	Veterinary microbiology	13
Livestock Production and Management	Animal breeding and genetics	5
	Animal nutrition	8
	Poultry production	6
	Livestock management	11
Clinical Sciences	Preventive veterinary medicine and public health	12
	Veterinary medicine	9
	Veterinary reproduction	14
	Veterinary surgery and radiology	16
	Statistics/mathematics	5
Allied Sciences	Islamic study/ethics	1
	English	6
	Livestock economics/extension	4
	Zoology/fisheries	2
	Pakistan study	1
	Anthropology	1
Total		167