

FACULTY OF VETERINARY SCIENCE

**ACADEMIC BOARD VISIT TO REVIEW
TEACHING, LEARNING AND
RESEARCH TRAINING**

THURSDAY NOVEMBER 29 2001

**FINAL REPORT AND
RECOMMENDATIONS**

Contents

1	Introduction	3
2	Membership of the Review Team	3
3	Findings of the Review Team	3
a	Change in the Faculty of Veterinary Science	4
b	Graduate attributes, aims and outcomes	5
c	Research-led teaching	5
d	Research supervision and training	6
e	Assessment	7
f	Teaching and learning quality	8
g	Student progression	9
h	Messages to the Dean from students and staff	9
i	Concluding comments	10
4	Areas of good practice	10
5	Areas for consideration for improvement	12
<u>Appendices</u>		
A	Faculty Self Evaluation Report	15
B	Faculty Teaching and Learning Plan	28
C	List of additional documentary evidence	35
D	Summary report of the findings of the Review Team	36

1. INTRODUCTION

An Academic Board Review Team visited the Faculty of Veterinary Science on Thursday 29 November 2001 as part of the review and evaluation of teaching, learning and research training within the Faculty.

During the visit interviews were held with the following groups:

- The Dean, Professor Reuben Rose and Senior Academic Staff
 - the Associate Dean, Teaching and Learning;
 - the Chair, Teaching and Learning Committee;
 - the Associate Dean, Staff and Students;
 - the Educational Consultant;
 - the Partner Practices Coordinator; and
 - the Faculty Manager
- Undergraduate students (7)
- Postgraduate students (6)
- Faculty academic and general staff

Note: The timing of the visit, at the end of Semester and exams, limited the range of undergraduate and postgraduate students that were available for interview.

2. MEMBERSHIP OF THE REVIEW TEAM

Professor Judyth Sachs	<i>Chair, Academic Board (Chair)</i>
Professor Paul Ramsden	<i>Pro-Vice-Chancellor (Teaching and Learning)</i>
Associate Professor Anne Reynolds	<i>Nominee of Pro-Vice-Chancellor (Research)</i>
Professor Ann Brewer	<i>Chair, Teaching and Learning Committee, Faculty of Economics and Business</i>
Dr Tania Gerzina	<i>Senior Lecturer, Faculty of Dentistry</i>
Rachel Symons	<i>Quality Assurance Officer (Secretary)</i>

3. FINDINGS OF THE REVIEW TEAM

The Review Team interviews centred around six main areas

- Graduate attributes, aims and outcomes;
- Research-led teaching;
- Research supervision and training;
- Assessment;
- Teaching and Learning Quality; and
- Student progression.

Since the Faculty had stated in its Self Evaluation Report that it had recently made changes in both the curriculum and the faculty structure, the Review Team opened its interviews of all groups with a question about change in the Faculty.

The following report indicates the findings of the Review Team in these areas.

The final concluding section of the report shows those areas of good practice, and areas of consideration for improvement, that were conveyed to the Faculty in the *Summary Report of the Findings of the Review Team*.

a. Change in the Faculty of Veterinary Science

The Faculty has undergone considerable restructuring in the last year. During 2001 a new curriculum was also implemented that had a significant impact on staff and students. The old and new curriculums are currently running simultaneously for the final years of the degree course. Not surprisingly, there were varied responses to the Review Team's questions on these changes.

The Team found that, in general, students and staff alike embraced the changes. Furthermore, they were appreciative of the leadership role of the Dean during the process.

It was clear that there was a new culture emerging within the Faculty. The change process was collegial, collaborative, inclusive and transparent. Everyone had been given the opportunity to participate.

On the whole, the Faculty staff were positive about the changes. They felt that the process had been managed well, and that it had led to benefits, for example in terms of widening the number of contacts around the Faculty, and in communication across previously existing barriers. However, they also felt there was confusion in some areas, in particular in the area of changes in the administrative structure where they now reported to three different people – one for teaching, one for demonstration work, and one for research. The Team were also concerned about the reporting structure in terms of the Performance, Management and Development Process. During this process each staff member and their supervisor meet to discuss job achievements and activities, agree on the evaluation of performance, clarify the role, responsibilities and expectations of the job, and set development goals for the year ahead¹. If staff report to more than one supervisor, the Faculty will need to decide which of these supervisors undertakes the Performance Management and Development Process for each staff member. Staff also thought that the rapid change was not sustainable, and that the rate of innovation would have to slow down eventually.

The undergraduate students interviewed were pleased with the changes, and felt that staff were more than willing to listen to their views. The Review Team found that the students, especially those returning after a year away from studying, could see improvements in the way the curriculum was now organised. They commented that it was now easier to see where you were heading earlier on in the curriculum, and that there was a better correlation between units. However, the students also felt that it would have been better to fix the later years of the curriculum first, as the two curricula did not currently match up, making it difficult to cross over from the old to the new. Students who had begun their course under the previous Dean commented that the most significant change they had experienced was in the change of Deans. The Dean was moving the Faculty forward and they felt that there had been a new

¹ University of Sydney, Staff Support and Development Unit, Performance Management and Development Process <http://www.ssdu.usyd.edu.au/pm&d/index.html#how>

injection of vigour into the Faculty as a whole. The postgraduate students appreciated being invited to participate in the faculty retreat, and discover how the Faculty was working to bring about change.

b. Graduate attributes, aims and outcomes

In their Self-Evaluation Report, the Faculty of Veterinary Science mentioned that a set of *Graduate Attributes for Veterinarians* had been developed in consultation with the Faculty and veterinary profession, and that a review process was in place to align the learning aims and outcomes of each Unit of study with the Graduate Attributes for Veterinarians.

The Review Team was interested in finding out how the *Attributes* had been developed, and in ascertaining to what extent both staff and students knew about them and their alignment with learning aims and outcomes.

All staff had had the opportunity to comment on the *Attributes*, which had been developed by senior staff in consultation with the profession. They were seen as an evolving document, and would be compared with attributes from other veterinary schools across Australasia during 2002. The *Attributes* were fully supported by the Australian Veterinary Association and closely linked with those used in the United Kingdom. They incorporated all the University Generic Attributes, but also included those relevant and appropriate to a graduate veterinarian.

The Team found that although staff thought that they were communicating the *Attributes* to the students, directly or indirectly, not all students were aware of their existence. Some undergraduate students mentioned that they knew that courses were producing graduates with a certain set of attributes. The postgraduate students only knew of their existence through participation in undergraduate courses at which the attributes were mentioned. This perception may well be due to the type of graduate students who were interviewed. There was a predominance of overseas students who were available to attend the interviews. A number of staff felt that it was more powerful for the students to gain a gradual understanding of the attributes than to give them a list.

The work of the Curriculum Alignment Sub Committee in ensuring the alignment of the attributes to learning outcomes was known across the Faculty and appreciated. There was more interaction between staff, coming through in discussions and conversation about teaching and in particular alignment of attributes and learning outcomes.

The Faculty is to be congratulated that the alignment of course content with the attributes is working well with both staff and students.

c. Research-led teaching

The Faculty had stated in its Self Evaluation Report that it made every effort to match the research interests of staff with their teaching responsibilities, and that this would inspire student curiosity and interest in research.

The Review Team were told that the new curriculum had an emphasis on problem based learning (PBL) and research, with PBL commencing in the 3rd year. All years undertake research for assignments, tutorials and workshops. There is close liaison with the library. The Veterinary Education and Information Network (VEIN) was developed as a learning resource and is closely aligned with the curriculum. Both staff and students mentioned that they used this resource, and that they contributed to its content. However, the Review Team found that some staff were not aware of VEIN and other electronic resources, such as digitisation of course material. Some students were aware of VEIN but had not used it.

The Review Team recommends that the Faculty develop a strategy to ensure that all staff and students make use of the opportunities afforded by VEIN in teaching, learning and research training.

Anecdotal evidence of research activities, and use of articles as examinable items and notes, were some of the ways that the undergraduate students interviewed indicated their awareness of the research interests of staff. They said that the research influences what was taught at the University compared to other universities in Australia.

The academic staff who were interviewed told the Review Team that there was a dropping off in the amount of research that could be undertaken, due to the increased teaching workload. However, due to the increased take-up of staff undertaking the Graduate Certificate in Higher Education, people were now undertaking research into teaching. This includes scholarly research into the student experience of learning, and the use of effective strategies in curriculum design teaching and assessment to support high quality approaches to learning. Senior Academic staff felt that this had been instrumental in driving changes in attitude within teaching groups across the Faculty, as more staff were willing to learn about the results of the research from their peers. As a result there had been increased attendance at teaching and learning days.

The Faculty will need to look at the balance between teaching development and research development, as it was clear that there were tensions in this area amongst staff. It realised that this was a resource-based problem, which was beyond the control of the Faculty.

d. Research Supervision and Training

In the Self Evaluation Report, the Faculty identified a major reform being undertaken in relation to the conditions of candidature for postgraduate students in the teaching hospitals, as a result of concerns raised by supervisors and students in last year's annual reports. Unfortunately, the Review Team did not have an opportunity to discuss this issue, or any other postgraduate issue, with the Sub Dean for Postgraduate Education and Research Training, nor with the Associate Dean for Research, to whom the Sub Dean reports. Furthermore, due to time constraints, the issue of Research Supervision and Training was not discussed during the session with Faculty academic and general staff. The Review Team did, however, have an opportunity to discuss general postgraduate issues with a sample of postgraduate students.

Both staff and the postgraduate students interviewed felt that the postgraduate conference held at the end of 2001, at which students presented seminars on their work, was successful. Staff felt that it should become part of the assessment process.

Staff mentioned that they are improving the quality of postgraduate supervision, and are working towards the implementation of the College of Science and Technology 10-point research training strategy.

The postgraduate students who were interviewed expressed some dissatisfaction with their supervision, saying that they had more contact with the postdoctoral fellows than with their supervisors. However they did feel that the academic staff were making an effort to support them more, and encouraged them to present their research at conferences.

One of the main concerns expressed by the postgraduate students was the lack of resources which they felt impinged on their ability to undertake additional tasks such as teaching, as well as reducing the amount of time they could spend on actual research.

The Review Team are concerned that the postdoctoral fellows provide a sense of community to the postgraduate students, rather than the academic staff/ supervisors. This issue needs to be addressed as it limits the students' access to people and the development of networks.

e. Assessment

In the Faculty Self Evaluation Report one of the priorities identified for action during 2001 was addressing the problem of poor student evaluations of assessment and workload. The Review Team was interested to see how the Faculty had risen to this challenge, and what they were doing to remedy the situation.

They found that the Faculty were facing two main challenges in terms of assessment policies and procedures. The first was the effective adoption of the *Blueprint of Student Assessment* across the Faculty, and the second was the integration of different students learning across different Units of Study. The eventual outcome would be students receiving sufficient, timely, and useful qualitative feedback on their assessment. The Faculty is also holding assessment development workshops.

The Team were told that the a 3rd year formative assessment had been trialed which gave the assessment in the middle of a 2hour lecture block. Afterwards a comparative analysis of students' reaction and performance was undertaken. The results showed that some students were resistant to this change, preferring not to be assessed until the traditional time i.e. the end of year or semester.

The undergraduate students who were interviewed said that they just wanted to get grades in the early years of the course, but this view of assessment changed in later clinical years where there was more emphasis on learning for oneself. They thought that they needed to spend more time in the clinics throughout the course in order to prepare them more for working as a veterinarian after graduation.

The Review Team recommends that the Faculty should think about re-socialising the students so that they change their views about assessment and move easily from being just exam passers straight from HSC, to being learners and future veterinarians. Thought should be given to introducing PBL earlier than at present.

f. Teaching and Learning Quality

In this area the Review Team were interested in learning about the strategies and processes used to maintain excellence in teaching, the evaluation of Units of Study, the involvement in and knowledge of the Self Evaluation Report and Teaching and Learning Plan by staff and students, and the professional development of staff.

They found that management actively encouraged staff to attend teaching development days, and recipients of teaching excellence awards to present at these days. A Pfizer fund had been established for further teaching awards. The Faculty hoped that this would encourage staff in the belief that good teaching is recognised.

On the whole staff were supportive of the mandating of the Graduate Certificate in Higher Education, and indicated that the presentations from staff undertaking this certificate were impressive and innovative. One staff member said that the experience had been extremely powerful and helped her feel she was being taken seriously. It had opened her to mind to different areas of research, and she was now hearing the same feelings being expressed by those she was mentoring. On the other hand, one staff member felt that the students undervalued her teaching because she did not hold teaching qualifications. Other staff were worried that they might lose the individual diversity of how they taught.

Staff and students were both aware of the Faculty Teaching and Learning Plan. The Review Team were told that staff looked upon the Plan as something else they had to read. They knew that content was discussed at Teaching and Learning Committee meetings, that someone went away and wrote the Plan after these discussions, and things in the Plan happened as necessary. Staff had also seen, and had the opportunity to comment on, the Faculty Self Evaluation Report.

The Review Team found that Units of Study were constantly being evaluated, commencing with those showing poor results. Help is available for units that are showing poor results through a collegial approach. Year coordinators look at the evaluations and pass on their findings to the Unit of Study coordinators and the Teaching and Learning Committee, offering support and suggestions for change. Other sources of evaluation come from teaching staff and student comments. The senior staff felt that there should be more external comments together with peer review of teaching.

The staff told the Review Team that student evaluation had been in existence in the Faculty for over 30 years.

They also said that feedback was received from student evaluations. These were read with interest and shared with other members of staff. Evaluations were discussed at Teaching and Learning Committee meetings. The staff also said that they did not receive feedback on how these comments had contributed to improvements.

The undergraduate students interviewed liked the changes in the curriculum, and thought that the new one was more relevant to educating future veterinarians.

g. Student progression

The Faculty Self Evaluation Report identified problems in the area of student progression relating to the previous policy of requiring students to pass each unit before progressing to units in the next semester or year. With the change to the new curriculum, particular problems were being faced by students who were unable to find units in the new curriculum comparable to those they had failed in the old curriculum. Another cause for concern identified in the Self Evaluation Report was the unacceptably high failure rate in some units. The Review Team were interested in ascertaining what strategies the Faculty had developed to deal with these problems.

The Review Team were told that in general there was a high progression rate and that where students were failing it was in one component of a two-component Unit of Study. There is a process in place where Unit of Study coordinators are required to look at assessment processes in these units, and change them. It may take a number of years to reach the desired outcomes in this area. The Review Team were told that the Academic Board guidelines about assessment were extremely helpful, and that the Faculty felt that they had support from the Academic Board in what they are doing.

The Review Team found that there were variations in the amount of information given to students about their progress, depending on the Unit of Study coordinators. There is no formal process to inform them of their progress. However, the staff felt that the situation will change with the implementation of the new curriculum, and the new procedures. Staff thought that the main issue for students was that they had passed. This may relate to the fact that they have come straight from the HSC system, with the mindset that if a subject is not examinable it is not important. The staff felt that the new curriculum and the new graduate attributes would address this problem.

h. Messages to the Dean from students and staff

At the end of each interview, the undergraduate and postgraduate students and the staff were asked what message they would like to give to the Dean. The following responses were received:

Undergraduate students

- They are doing their best.
- It is an open Faculty.
- Everyone is working hard.
- Only concern is that there is less and less money, fewer demonstrators and more students. This leads to differences in skill level. In the past, first years had a lot more hands on practice.
- Doing very well in changing the course.
- Compromised by lack of resources.

- There should be an element of professional practice introduced in all years – unsupervised, experience based learning.
- Are we meant to be people who can diversify or be veterinarians? Can't learn everything in a day – if want to go into private practice, got to do something by oneself.

Postgraduate students

- Need to be made more aware of available resources. Should be easier to get access to resources – procedures should be simplified.
- Should try to develop a greater sense of community and belonging
- Would like to network with other faculties within the University to harness resources eg Science and statistics
- Like more responsibility between supervisors, a bit more structure in monitoring progress. Concern expressed about not being able to write about serious problems with supervisors themselves if they are the ones reading the comments on the forms.

Staff (other than senior staff)

- The Dean is working very hard
- Despite all the hassles, problems, challenges, there is still enormous enthusiasm. There has been a surprisingly large dollop of innovation – eg research in teaching methods. There is enthusiasm and innovation.
- They are proud of what is happening and what is happening to the Faculty.

i. Concluding comments

The Review Team considered the results of the interviews, the Self-Evaluation Report and the Teaching and Learning Plan and concluded that the Faculty of Veterinary Science was following good practices in the areas of change management, leadership, course alignment and attributes, resources, and teaching quality. The Review Team recommends that the Faculty should give consideration to improving practices in the areas of research, communication, student re-socialising, and PhD supervision. These were conveyed to the Dean of the Faculty at the end of the visit, as well as in the *Summary report of the findings of the Review Team*, sent to the Dean on 4 February 2002.

4. AREAS OF GOOD PRACTICE

Based on the Faculty Self Evaluation Report, the Faculty Teaching and Learning Plan and the findings of the Review Visit, the following areas of good practice in teaching, learning and research training have been identified within the Faculty of Veterinary Science.

a. Change management process

The Faculty is to be congratulated on the way in which it has managed the changes which took place simultaneously during 2001 in both structure and curriculum. Staff

and students alike have embraced the changes. They are appreciative of the way in which they have been involved in the changes through participation in workshops, discussions, and retreats. The result is the creation of a new culture with a sense of community.

The strategy used in the successful management of change should be communicated to other faculties as a case study in how to manage change successfully.

The following aspects of the process are to be commended:

- Collaboration and collegiality amongst the Faculty
- Transparency and openness in the process
- Good level of participation amongst the Faculty

b. Leadership style of the Dean

It is obvious from talking to the staff and students that the leadership style of the Dean has been at the core of the transformation of the Faculty. They appreciate, and are encouraged by, the interest he takes in what they are doing and the way he listens to their concerns. The Dean has support from both staff and students alike. The students felt that with the change of Deans there had been a new injection of vigour into the Faculty as a whole. The staff are proud of what is happening in the Faculty and of belonging to the Faculty.

The Dean is to be congratulated on what he has achieved through his leadership - a Faculty that has been radically and fundamentally turned around, with an open and shared culture where participation is spoken and practiced.

c. Alignment of course content and assessment with the *Graduate Attributes of Veterinarians*

The Faculty is to be congratulated that the alignment of course content with the *Graduate Attributes of Veterinarians* is working well with both staff and students.

Students are aware of the link between what they are required to know as veterinarians and what they are learning in the course. Staff are actively matching course objectives with the attributes and discussing them with their peers. The work of the Curriculum Alignment Subcommittee in ensuring the alignment of the attributes to learning outcomes was known and appreciated across the Faculty.

d. VEIN (Veterinary Education and Information Network) (<http://www.library.usyd.edu.au/VEIN/>)

VEIN (Veterinary Education and Information Network) has been developed as a learning resource by the Faculty in cooperation with the University of Sydney Library and the Post Graduate Foundation in Veterinary Science. Its value lies not only in it being a valuable resource for students and staff of the Faculty but also for veterinarians in the community. VEIN is closely aligned with the curriculum, with both staff and students being given the opportunity to learn about, contribute to and

utilise it. Whilst most people interviewed were aware of VEIN, not everyone had taken up the opportunity to use it and contribute to it.

The Review Team recommends that the Faculty develop a strategy to ensure that all staff and students make use of the opportunities afforded by VEIN in teaching, learning and research training. Everyone in the Faculty and the Library is to be commended on the development of this valuable resource which should be exploited.

Another service provided by the Library is the digitisation of course material, which is then accessible through the Library catalogue. As not everyone is aware of this service, it is recommended that the Faculty give consideration to alerting staff to this and similar services as they become available.

e Peer review and support for teaching

The Faculty committee structure is working well, especially the Teaching and Learning Committee and the Curriculum Alignment Sub Committee. The student representatives on these committees were commended by their peers and the staff for their excellent input and feedback.

Evidence based teaching is working well. Staff who have taken the Graduate Certificate in Higher Education, which is mandated by the Faculty for all new staff, say that they have found it to be an incredibly powerful experience. Presentations given by these staff are considered by others to be innovative and impressive. Research into teaching methods is now being seen as an alternative to other research streams. The high value and quality of teaching is evidenced by the nomination of Dr Michelle Hyde as one of three finalists in national teaching awards for 2001, and on the fact that both Michelle and Dr Henry Collins received Vice Chancellor Outstanding Teaching Awards in the same year.

Research is embedded into teaching. Students are aware of the research interests of the academic staff by the subjects that are taught, and by the use of research materials in assignments and lecture notes. There is a research base to a lot of teaching, with the recent developments in research being integrated by staff into their teaching.

Faculty needs to try and develop a broader group of staff to work in this area, rather than leaving it all to one or two staff members.

5. AREAS FOR CONSIDERATION

The Review Team identified the following areas for consideration for improvement. It is evident from the Self-Evaluation Report and the interviews during the visit that some of these already being addressed by the Faculty.

a. Balancing tension between teaching development and research development

The Faculty will need to look at the balance between teaching development and research development as it was clear that there are tensions in this area amongst the staff. Staff are keen to undertake research, but the demands of their increased

teaching loads after restructure, and the lack of resources makes this impossible. The cost of this is a drop off in research being undertaken by teaching staff in the Faculty. The Review Team is aware that this is a resource-based problem and beyond the control of the Faculty.

b. Communication

It was apparent to the Review Team that both formal and informal communication across the Faculty had improved enormously since the restructure. However there were several areas that raised concerns.

The main one concerned the development of early career staff. There is no clear sense of who has the responsibility for the mentoring, support and development of these staff. Staff found it awkward having more than one person to report to – one for teaching, one for demonstration work and one for research. They felt that the University's Performance Management and Development (PMD) process might help this situation. During the PMD process each staff member and their supervisor meet to discuss job achievements and activities, agree on the evaluation of performance, clarify the role, responsibilities and expectations of the job, and set development goals for the year ahead. With staff reporting to more than one person, and with no clear lines of responsibility for early career staff, the Faculty will need to think about developing a seamless process for dealing with this issue, to eliminate duplication of effort and time by the various supervisors and staff.

There were different experiences of communication within the postgraduate group of students. They appreciated the opportunity to attend the staff retreat and learn about the changes within the Faculty. The postgraduate presentation day was also well received as a chance to showcase their research. But they also felt that communication with some of the supervisors could be improved.

Re-socialising of students at both ends of the program

i. From HSC to University

Students who begin their course straight from the exam oriented atmosphere of the HSC come in with the mindset that only things that are examinable are important. Thought should be given of ways in which this view of assessment can be altered so that they move easily from being exam passers to being learners and future veterinarians. Students say that in the early years they just want to pass the subjects, and that when they start the clinical years they realise that there is more to being a veterinarian than just passing exams. Faculty might like to consider the introduction of Problem-Based Learning earlier than the 3rd year of the course, and to make the most of their on-campus experience.

ii. From University to practice

At the other end of the course, students need to develop the skills of being lifelong learners and professionals as they move from the university into practice as veterinarians. VEIN is a valuable resource in this area as it is available not only to students and staff within the university but also provides a service to veterinarians in

the community. Students felt that when they graduated they were on a 100% learning curve as they went into practice, and that nothing could prepare them for this. They appreciated the clinical years and the time spent in practices as this gave them a basis for when they graduated, though they were still learning for a couple of years afterwards. The introduction of the lecture-free final year which will involve the students working in external partner veterinary practices as well as the University Teaching Hospitals will help in this re-socialisation.

c. Postgraduate supervision and programs

Both staff and students mentioned that there were problems in the supervision of postgraduate students. The Review Team understands that the Faculty has implemented the 10 point research training strategy developed by the College of Science and Technology. This will improve supervision and the postgraduate research experience. The postdoctoral fellows, rather than the academic staff and supervisors, provide a sense of community to the postgraduate students. This issue needs to be addressed by the Faculty as it limits the students' access to people and the development of networks. Students would appreciate more information on the resources which are available to them as postgraduates. The postgraduate orientation program provides a good opportunity for the roles and responsibilities of the students, supervisors and the postdoctoral fellows, to be explained

Prof. Judyth Sachs
Chair, Academic Board
Chair, Review Team

APPENDIX A

FACULTY SELF EVALUATION REPORT

Academic Planning and Quality Assurance 2001

Self Evaluation of the Quality of Teaching and Learning in the Faculty of Veterinary Science

Introduction

The Faculty of Veterinary Science offers undergraduate education in veterinary science (BVSc, BScVet) and animal science (service teaching for BScAgr) and postgraduate training through course work and research. The total EFTSU load in 2001 is 587.1, made up of approx 537 undergraduate EFTSU and 50 Postgraduate EFTSU. This is about 130 more than in 1998 (457.4), when we commenced accepting large numbers of international students and during this period the FTE staff numbers have remained the same (about 55 FTE). The resulting staff:student ratio has increased from about 8.3 in 1998 to 10.7 in 2001. The Faculty annual HECS intake has remained at 70 plus 25 local fee paying students and 25 international fee paying students to make a total annual intake of 120. Local and international full fee paying students have increased our student numbers in the last 3 years and now provide 33% of our GPOF revenue, up from around 5% in 1998. The Faculty has responded in a positive "self help" fashion to drastic reductions in core funding from the University by increasing fee-paying student numbers and improving the financial performance of the Veterinary Teaching Hospitals, that are central to the core educational mission of the Faculty. These changes have imposed significant additional loads on staff and the Faculty is currently looking at a workload model to ensure equity in teaching, research and administrative responsibilities.

There are 52.3 FTE members of academic staff and additional clinical teaching is provided by 17.2 Veterinary Registrars, who are employed from income associated with the clinics. A total of 61 Units of study are offered. The Faculty was restructured in January, 2001 and the 3 Departments were replaced with a single school. The goal was to create a more direct, flexible and responsive structure to enable us to cope with the rapid changes in the University environment. Responsibility for management of undergraduate teaching and learning in this new structure lies with the Associate Dean for Teaching and Learning (AD,T&L), Dr Paul Hopwood. The Faculty's Teaching and Learning Committee (TLC) provides policy advice on issues of teaching quality and this committee is chaired by Dr Rosanne Taylor. The SubDean for Postgraduate Students is Associate Professor Frank Nicholas and SubDean for Student Welfare is Dr Rhondda Canfield (Attachment A).

The provision of a quality learning experience for students is central to the Faculty's mission statement

"To be one of the world's leading faculties of veterinary science, placing the provision of excellence in education as our highest priority."

Our 3 year strategic plan is developing staff and resources to enable the Faculty to achieve this mission (Attachment B). We recognise the crucial importance of providing our students with an excellent experience in veterinary or animal science education. All aspects of teaching and learning are under intense scrutiny, as we strive to improve the student learning experience. During 2000 a revised curriculum for the BVSc course was introduced and it will

be fully implemented across all 5 years of the course by 2004. The curriculum is innovative and has been designed to meet the changing needs of the veterinary profession for graduates who are competent, flexible problem solvers with a commitment to ongoing education. It introduces students to aspects of professional veterinary practice in 1st year and continues professional development throughout the course. Preclinical material is presented in an integrated manner and contemporary Units such as Cell Biology and the Principles of Disease have been developed. The new course will use problem-based learning in Year 3 to develop these skills prior to clinical exposure. It will have a lecture-free final year, that involves the students working in external partner veterinary practices as well as the University Teaching Hospitals. This will enable students to develop and refine their clinical and communication skills prior to graduation and the selected partner veterinary practices will be linked to the University with online access to a newly developed electronic resource, the Veterinary Education and Information Network (VEIN). This has been recently set up in conjunction with the Library and the Post Graduate Foundation in Veterinary Science. Change has been achieved without additional financial support or a teaching free period so it is not surprising that implementation has increased the staff workload for those who are concurrently teaching old and new curricula and their students. A staff survey has indicated that staff are feeling under pressure and this issue is currently being addressed in our planning for 2002. Development of a new curriculum for the Animal Science course is in progress.

The Faculty is energetically implementing an ambitious Teaching and Learning Action Plan for 2001 (Attachment C), with a major focus on curriculum development and implementation. The Teaching and Learning Committee is currently focussed on improving teaching quality through curriculum alignment, external accreditation benchmarking and development and implementation of policies on assessment and evaluation of teaching. Major changes are occurring in teaching philosophy and practice across the Faculty. Many staff have undertaken the Graduate Certificate in Higher Education or short ITL courses. There are a number of innovative teaching projects in progress, two with 2001 TIF funding (Attachment D). The Faculty runs teaching development days twice a year (Attachment E) and will have industry-sponsored awards for teaching excellence this year (Attachment F). Two Faculty members won prestigious University awards for outstanding teaching in 2001 (Dr Henry Collins and Dr Michelle Hyde).

1. Graduate attributes, Aims and Outcomes

How does the Faculty ensure that each course and Unit has an appropriate set of aims and outcomes, clearly communicated to and understood by students, and including generic as well as disciplinary skills?

The Faculty began the process of curriculum alignment this year, using the Biggs model (*Teaching for Quality Learning at University, 1999*), with guidance from Associate Professor Michael Prosser (member of our TLC).

a. Systems for informing students about expectations

The learning aims and outcomes are available to staff and students on the Faculty web page (<http://www.usyd.edu.au/vetfac/faculty/index>), Unit of study WebCT sites and in Unit of Study Handbooks. During 2001 a Faculty Publications Unit was established to assist staff in producing learning materials of high quality in content and presentation. A template has been developed for handbooks that incorporates all of the features of the on line learning template (for Units placed on WebCT) and more (Attachment G). Staff are encouraged to refer to the Graduate Attributes document and learning outcomes frequently in their teaching to help students appreciate the relationships between different components of the course and their relevance to the degree program.

b. Monitoring of relations between generic and disciplinary skills in the curriculum

A comprehensive set of Graduate Attributes of Veterinarians was developed in 2000 in consultation with the Faculty and veterinary profession (Attachment H). These attributes integrate knowledge skills, competencies and (the University's) generic attributes into a context appropriate for veterinary science. Currently the TLC is benchmarking our attributes document against one developed by University of California, Davis Veterinary School. Graduate attributes for Animal Scientists have been developed and distributed widely for comment (Attachment I). They will be used to drive curriculum alignment in existing and new Units that are under development for the Animal Science course.

c. Methods to ensure Units enable students to achieve learning outcomes

At present Unit coordinators and teaching staff have primary responsibility for ensuring that Units of study enable students to achieve learning outcomes. Learning activities are described in the Unit handbooks. However we recognise that this aspect of teaching also needs to be subject to rigorous peer review from staff not directly involved, to ensure that learning tasks are appropriate in content and design so they will support a student centred, constructive approach to learning. The next step in the curriculum alignment process (planned for 2002) will be for the TLC to review the key learning activities and assessment tools that are used to achieve the educational outcomes in each Unit.

d. Methods to provide coherence between Units

The Curriculum Alignment Subcommittee of the TLC is currently reviewing the learning aims and outcomes of all Units in the Veterinary Science course starting with Years 1 and 2. This process will ensure that there is excellent alignment of the learning aims and outcomes of each Unit of study with the Graduate Attributes for Veterinarians. The TLC has begun this process of peer review to ensure that the aims and outcomes are appropriate in content and clear and explicit to students. This process will help to restore balance in the amount and type of material delivered in disciplines and to encourage integration between Units. This is a real advantage of our new Faculty structure as in the past this process has not been monitored outside Departments, enabling maintenance of discipline barriers and disparities in volume of content between Units to persist. Students have long recognised these disparities. During 2002 we will continue to push for greater integration and coherence between Units (as there have been some real problems created by fusion of prior subjects into new combined Units, such as anatomy and physiology). Year and Unit coordinators will work together to develop learning and assessment activities that require integration within and between Units of study.

2. Research led teaching

How does the Faculty ensure integration of research, including both disciplinary research and evidence about effective learning and teaching, into its undergraduate and postgraduate courses?

a. Discipline based research- application to teaching

The Faculty is fortunate to have a number of discipline experts who are recognised leaders in research in fields including applied reproduction, veterinary genetics, immunology, equine exercise physiology, parasitology, feline medicine and small animal surgery. Unfortunately the reduction in staff numbers has meant loss of expertise in some discipline areas over the last 5 years, however only restoration of funding to previous levels will reverse this trend. Every effort is made to match teaching responsibilities to the research interests of staff. This enables staff to integrate recent developments in research into student teaching, not only to inform, but also to inspire curiosity and interest in research. Example 1; 3rd year Animal Science students reviewed case studies in behavioural training of horses for an assignment during 2000. Their work was incorporated into a textbook on Equine Behaviour that their lecturer was writing. Example 2; Recent developments in emerging fields of genomics and biotechnology are incorporated into Cell Biology, Genetics and Animal Biotechnology Units. Students in these Units learn through critical review of the most recent literature and through direct contact with researchers active in these fields. Exposure to teaching informed by current research helps to position our graduates at the leading edge, so they are well placed for employment or postgraduate research.

However, we have also recognised that the new curriculum requires flexible, integrated teaching with a strong focus on relevance and application to veterinary practice and animal production. This presents a challenge as it requires a more “generalist” approach to manage the diversity of material that confronts a veterinary or animal scientist after graduation, in addition to an appreciation of recent developments in specialties and research disciplines.

b. Management of links between scholarship of University teaching and curriculum

The Faculty is currently experiencing a time of rapid change as we endeavour to implement both a new curriculum and new structure. These changes have created great opportunities to reshape our teaching and curriculum in ways that better support constructive learning so that we can produce graduates with appropriate skills for the new millenium. Inevitably the changes have also created some confusion and added greatly to staff workloads. However one of the most exciting developments has been a tremendous increase in Faculty interest in the scholarship of University teaching. Some of the specific ways that the developments in theory and practice of teaching and learning have been put into practice include: (details in Attachment D)

- Development of research projects to investigate student learning in veterinary and animal science (research into teaching)
- Curriculum development project for year 3 to create resources for problem based learning
- Staff are now actively encouraged to undertake educational research (research led staff development in teaching)
- Establishment of teaching awards that will fund conference presentations in teaching
- New Faculty policy that requires all new teaching appointees to complete the Graduate Certificate in Higher Education
- Teaching development days and workshops are held throughout the year (Attachment E)
- Employment of a Faculty educational consultant, Professor Grahame Feletti, appointed as a Visiting Professor in the Faculty
- Detailed analysis of SCEQ and GCEQ results and evidence-based response plan
- The development of Faculty teaching and learning policies and practices is informed by reference to the key texts in the higher education literature (particularly texts by Ramsden, 1992, Biggs, 1999 and Prosser and Trigwell, 1999)

3. Assessment

Assessment is recognised to be a key driver of student learning. When students perceive their workloads are heavy (e.g. in the B.V.Sc degree, 4-6 Units of study done concurrently and students have high numbers of face to face teaching hours) and assessment supports

recall of information, then many students adopt *surface approaches* and have poor learning outcomes. Not surprisingly, evaluation by veterinary students in all years shows marked dissatisfaction with assessment and workload in 1999 and 2000 (<http://www.itl.usyd.edu.au.sceq/>).

To minimise such distortion of learning the Academic Board policy recommends that Faculties ensure the goals and purposes of assessment reflect and reinforce those of the curriculum. Our Teaching and Learning Committee strongly endorses this *constructive alignment* approach to learning and assessment and, as a first step, has defined a comprehensive set of *Attributes of Veterinary Graduates*, (Attachment H) enabling our graduates to meet the standards required for registration within Australia.

As a second step in the curriculum alignment process a *Blueprint on Student Assessment 2001* has been developed and distributed to staff (Attachment J). It is the foundation for an improved approach to student assessment that will more effectively encourage and reward quality learning outcomes. The Blueprint incorporates principles and recommended practices from the UAB's recent policies on *Assessment and Examination of Coursework* (January 2001). It uses key questions to guide changes in the design, implementation and evaluation of assessment. Some specific recommendations and examples of new instruments more suitable for 'best practice' in veterinary science coursework are included (Attachment J).

a. Methods to ensure assessments enable students to achieve intended learning outcomes

The Faculty's new approach emphasises the importance of a student-centred approach to learning. We are striving to develop assessments that simultaneously support *deep learning* in each Unit and develop competence in the Graduate Attributes. This would be easier to achieve in a problem based curriculum, however we are trying to achieve similar outcomes by designing assessments that will stimulate integration and application across Units. Our Assessment Blueprint requires that all Units must:

- Adhere to the key principle that assessment must have a constructive influence on learning;
- Develop a clear rationale for all summative assessments (aligned with Graduate Attributes; this must include a balanced choice of appropriate instruments; transparent decisions and effective remedial advice);
- Provide good quality formative assessment, offering timely and appropriate feedback;
- Introduce a standards-based approach (using explicit criteria and grade descriptors) for all summative assessment over the next 2 years;
- Begin development of an integrated annual summative assessment (across Units of study) to reduce the amount and duplication of assessment and promote integration of all topics;
- Annually review assessment practices and outcomes in each Unit – effectiveness, efficiency & acceptability (instruments, balance, amount, timing & quality of feedback, etc.)
- Respond to peer review by changing assessment practices that do not comply with the Blueprint (e.g. assessment of a large Unit by exam only with no individual feedback is unacceptable)
- Report to Faculty on changes made to assessment as a result of the annual Unit of study review
- Respond to external reviews of graduate competence (benchmarking with other universities and professional registration bodies in Australia, UK and USA)

One of the biggest challenges to applying our principles of good assessment is the limiting framework imposed by the University's administrative requirements for Units of study (e.g. that Units are one semester long and assessment is completed within 1 week of exams). These effectively compartmentalise student learning into isolated disciplines, making it difficult to get students to integrate and apply their understanding in a more holistic way across the curriculum, especially in junior years. During the coming year we hope to conduct a trial of an integrated assessment task (e.g. modified essay question that covers content from all Units presented within the year of study) to determine whether this will encourage integrated approaches to learning.

In order to clarify expectations and standards we have developed a guide for assignments that incorporates a criterion-referenced marking guide and clear guidelines on language, style, referencing, organisation and assessment of all written tasks. This will be applied and modified for use in all Units.

b. Methods for ensuring assessment practices and standards are fair and equitable

The Unit of study handbook, online Unit outline and timetable for each Unit include details of the nature and timing of assessment tasks in each Unit. An explicit statement on assessments (type, task, topics, value, due date, contact staff, grade descriptors, guidelines etc.) should be included in each Unit handbook (part of the new template developed for handbooks) (Attachment G) and there is a summary in the annual Faculty handbook. Publication Unit staff ensure compliance with these requirements when preparing these materials. Following student concerns over timing of assessments during semester 1 the TLC has agreed that Year coordinators will produce and distribute a timetable of all assessment tasks for each semester to prevent this problem recurring.

Assessment is one of our major priorities for improvement in 2001 and there will be a series of workshops on 'best-practice' with support from ITL staff and Prof. Grahame Feletti. The Assessment Blueprint addresses fairness and equity with the following points:

- Unit coordinators are required to improve the quality and relevance of both formative and summative assessment (guided by UAB and Faculty principles). This means that all summative assessment must relate to defined Graduate Attributes and Unit outcomes and any instruments used must meet 'quality criteria'.
- High-level formative assessment must be of the same quality as any summative assessment, so that good quality, diagnostic remedial advice can follow, giving students an accurate indication of their progress towards achieving the Unit outcomes.
- Students must have adequate opportunity to attempt this 'high-level' formative assessment, and get appropriate, diagnostic feedback in time to make a difference.
- Alternative patterns of summative assessment (eg. progress tests or assignments) may also be individually negotiated for students who prefer or require this option instead of final exams (e.g. students with learning disabilities).
- Standards-based summative assessment will be required of each Unit of study. Coordinators must ensure that students understand the criteria for assessment of specific items and the overall descriptors for graded results.

As indicated above, the TLC will soon begin to monitor the quality of summative assessment in each Unit of study as part of the annual reviews of Units. In order to ensure a "fair go for all" we need to collect *psychometric* data on the validity and reliability of assessment instruments used, and to monitor the decision-making process adopted in each Unit. Our Blueprint requires staff to;

- avoid using instruments (e.g. single essays) that do not sample widely (low validity), nor have explicit marking criteria, nor demonstrated (inter-marker) reliability;
- include instruments that are psychometrically sound, and develop an 'in-house' expertise in constructing, using and evaluating an approved set of instruments (e.g. through peer checking of questions and model answers used in exams).

Our current policy is that the identity of full fee paying (local and international) students will not be revealed to teaching staff, to minimise the risk of preferential treatment. We will also consider the feasibility of using SID only to identify student work in summative assessment, however there is considerable concern about the greater risk of mistakes using only numbers. If students are at risk of failure their work must be examined by a second marker before a final decision is reached.

c. Methods for ensuring students receive prompt, effective feedback on assessments

Our Assessment Blueprint (Attachment J) requires that feedback should be provided within 2 teaching weeks and no later than 4 teaching weeks after submission. Feedback must be

constructive and should address performance by the student group and individual (see 3b above). Marking guides to facilitate feedback are included in some Unit handbooks.

d. Use of information from assessments to improve teaching and learning

One of the most valuable aspects of any assessment is the feedback it provides to teachers on the student learning. The Assessment Blueprint encourages teaching staff to carefully evaluate and reflect on the quality of the learning demonstrated in assessments and to identify any defects in student understanding. This task is now part of the annual Unit of study evaluation and report. If a number of students have poor assessment outcomes (particularly in the BVSc degree where most of the students are highly motivated and capable) this will act as a flag to the Examinations Committee and TLC that this Unit requires very careful peer review and redesign of the assessments. At present few opportunities exist for formative feedback to students on their performance in examinations, which represents an opportunity missed for effective remediation. Clearly, this whole situation needs re-evaluation and this will continue over the next 12 months.

e. Methods to ensure students understand assessment processes

The Unit handbooks and online sites should contain complete details of all assessments, submission dates, examination locations, structure of unseen papers, criteria for grading, penalties for late submission etc. These should also be explained the teaching staff during timetabled class time to avoid any confusion. Detailed information on assessment processes and the contribution of marks to WAMs and honour grades is included in the Faculty handbook.

4. Teaching and Learning Quality

How does the Faculty ensure the quality of its teaching and recognise good teaching?

a. Methods for monitoring the breadth, depth, pace, variety and challenge in teaching

As outlined in (3) we adopted the Graduate Attributes of Veterinarians (Attachment H) in 2001 and we are using it to guide Faculty-wide decisions on what is taught and the depth, breadth and context for presenting the material. We believe this approach of constructive curriculum alignment is the best way to ensure that students are learning material that is appropriate to achieving their career goals and that they can see the relevance of the content throughout the course. This process is well under way, starting with reviews (by the TLC) of the Unit aims and outcomes in the new curriculum. We are paying particular attention to those Units that have attracted adverse comment for excessive content and unsatisfactory teaching in the past. However it is important to recognise that change from the previous discipline-focus that was entrenched within our old Departmental structures towards a focus on graduate outcomes will take some time to achieve.

The Faculty adopted a new policy on student evaluation of teaching in 2001 (Attachment M). It is based on the UAB policy, however we have required that ALL Units be evaluated by a standard instrument during 2001 (the general student survey from the ITL for Semester 1 and the new short survey for Semester 2). Unit coordinators are required to provide a summary of the results and the open comments to the TLC. The report will also summarise student performance and developments in teaching with a reflective statement on the significance of the findings and action that will be taken to remedy any deficiencies.

The goal of the blanket review of all Units in 2001 is to develop an accurate profile of those Units where students experienced problems that impeded their learning, so these can be targeted for immediate remediation. The key change is that reports on student evaluations will be open to public scrutiny and the TLC will provide peer support to help Unit coordinators remedy deficiencies. The summary reports will also be returned to students to provide feedback on their comments and to describe the changes that are made as a consequence. We will compare the Unit evaluation reports within years of the degree and compare these with the SCEQ results (where available by years of the degree). The 1999 and 2000 SCEQ and GCEQ surveys clearly identified several major areas of student concern about their

learning experiences, particularly in assessment and workload. These were analysed for just first year (new curriculum) and for all years of the veterinary science course and an action plan developed (Attachment L). A staged plan for review of Units (less than annually) will be developed targeting those Units requiring further attention for 2002.

The Faculty is engaged in a series of external reviews of the veterinary science course in 2001 and 2002. These provide a rigorous independent assessment of the quality of all aspects of the teaching program and of the Faculty's graduates (Attachment N). The Faculty is preparing for visits from two separate national accreditation agencies in the next 12 months. The first, in September 2001 is by the (Australian-based) Veterinary Schools Accreditation Advisory Committee (VSAAC) which allows reciprocal recognition for graduates in New Zealand and United Kingdom. The second (April 2002) is by the American Veterinary Medical Association (AVMA), which will allow our graduates to be registered to practice in the USA. The latter is both prestigious and challenging, since this privilege is not currently granted to any other Veterinary Science Faculty in Australia. Both accreditation committees require extensive pre-visit documentation from the Faculty, especially in regard to the new curriculum. They also involve detailed peer review of the content, depth, breadth, balance, context, type of learning experiences and quality of material presented and the quality of the learning outcomes that students achieve. We will receive detailed feedback on all aspects of the course as a result of these visits.

External examiners assess the quality of student learning outcomes in several Units by and they also play a major role in the final year viva voce examinations. The Faculty receives very valuable independent feedback on strengths and deficiencies of understanding in the student body from these examinations.

b. How decisions about the selection of particular teaching strategies in relation to student learning outcomes are monitored

Until 2001 this was a Departmental responsibility, however it is now part of the brief of the TLC and AD,T&L. The external accreditation processes outlined above provide an excellent mechanism for peer review of the teaching strategies used. Ongoing monitoring of teaching strategies will become part of our new Unit of study evaluation process, as the reports canvass the views of students, teaching staff in each Unit and peers. We should have some preliminary results on the effectiveness of this approach by September. Once the review of the Unit of study aims and outcomes is complete (curriculum alignment process) the TLC will review the learning activities and assessment tasks to ensure that they are appropriate. The TLC will provide advice where needed to improve the range and type of teaching methods used in those Units that rely on a very narrow range of learning activities (for example lectures only) and ensure appropriate changes are made.

c. Methods used to enhance the quality of teaching, including staff development, mentoring and peer review

Currently there is a high level of interest in teaching and learning and a realisation that all sorts of innovations and improvements are possible as we shed the constraints of the old Departmental structure and old curriculum. It is a time of rapid change as most staff move to embrace approaches to learning that focus on the students' experience and achievements rather than "what the teacher does". Staff development has been a crucial part of this change, as many staff have attended internal and external workshops run by the incredibly supportive staff of the ITL. The Faculty runs teaching and learning days (for staff development) twice yearly, with a focus on innovation and teaching quality (Attachment E). For example, in 2000, two Deans from the UK (Professor Lance Lanyon from the Royal Veterinary College London and Professor Chris Gaskell from University of Liverpool) were invited to come to the University of Sydney for 1 week to discuss our teaching and research program. In 2001 our first T&L development day addressed our key teaching issues; curriculum alignment, assessment and professional training within the University clinics and in external practices. More than 95% of our teachers attended, an astounding rate of interest. We will soon run a workshop on assessment practice to help teaching staff develop grade descriptors for

assessment tasks. The process of peer review of Unit curricula and teaching commenced in 2001 and is outlined above (4a).

All staff are encouraged to undertake the Graduate Certificate in Higher Education (2 did in 2000, 4 in 2001). This development has helped to stimulate scholarly research into teaching in the Faculty. This year the major focus of the investigations has been on the student experience of learning and the use of effective strategies in curriculum design, teaching and assessment to support high quality (deep, holistic) approaches to learning. The insights generated from these reflective activities have proved particularly powerful in driving “grass roots” changes in attitude within teaching groups across the Faculty. In order to increase the momentum of change within the Faculty all new appointments to the teaching staff are now required to undertake the Graduate Certificate. New staff are appointed a mentor to support them through the early stages of teaching.

The Faculty has appointed a noted tertiary education consultant, Professor Grahame Feletti, who has a strong background in problem based learning and development of medical curricula in Australia and the USA. Professor Feletti has been working closely with Faculty members in the design of the new curriculum for years 3 to 5.

The Faculty strongly supported two successful applications for Teaching Improvement Fund grants for 2001 (Attachment D). Staff are encouraged to attend appropriate T&L conferences and the Faculty is investigating establishment of a fund to support staff members presenting conference papers.

d. How the Faculty supports, recognises and rewards good teaching

Recognition of good teaching is now a major component of the promotion process and the detailed portfolios and evidence required to support claims of good teaching have substantially raised expectations for teaching achievement at all levels of the promotion ladder. From this year the Faculty of Veterinary Science will offer awards for outstanding teaching (Attachment F). Generous sponsorship from Pfizer has allowed two awards of \$5,000 to be made each year to individual members of staff who can demonstrate that their teaching is outstanding. One award will be in the clinical area (years 4&5) and one in the pre-clinical area (years 1-3). The financial reward is to be used by the winner to further their careers in teaching or help them with the development of support materials for their teaching activities. The selection criteria and application process for the Teaching Award have been designed to closely articulate with those of the Vice-Chancellor’s Special Awards for Outstanding Teaching. We also hope to have awards to recognise outstanding teaching of animal science students and the contribution that general staff make to teaching, but we are still looking for a sponsor. Two Faculty members were successful in gaining University awards for Outstanding teaching this year and have been put forward for the National Australian University Teaching Awards.

5. Student Progression

What arrangements does the Faculty have in place to monitor and support student progress?

Until recently Faculty policy has been extremely restrictive as students were required to ‘pass’ each Unit of study in a semester before being allowed to progress to Units in the next semester or Year. This was due to a rigid system of prerequisites, so in the past students have been required to repeat the whole year if they did not pass all Units on their first attempt. These policies have been reviewed by the Teaching and Learning Committee and replaced with a new policy of no corequisites and no prerequisites (except where a very strong argument for the need to retain them can be supported). This should provide greater flexibility, particularly for students who struggle to earn money and manage family responsibilities.

For a variety of reasons there are unacceptably high failure rates in some Units, delaying student progression and causing considerable personal and financial hardship. The

consequences are particularly severe for our large group of fee paying students (local and international). In addition there are particular problems faced by students who fail Units in the last year of the old curriculum, who are unable to repeat a comparable Unit. The Examinations and T&L committees will closely scrutinise both the nature of assessment tasks and decisions on student outcomes and will recommend on improvements needed to ensure students are properly prepared to achieve the learning outcomes for all Units.

a. Arrangements for identifying students at risk of non-completion or failure and the processes used to intervene in these cases

First year students undertake an extensive Faculty based orientation and participate in a variety of exercises to encourage them to rapidly make friendships and settle to learning at University. International students meet together with the Subdean for Student Welfare to further assist them in adjusting to life in Sydney and are encouraged to establish a variety of support networks. Students who enter the Faculty with deficiencies in prerequisite knowledge (chemistry, maths, physics) or English skills undertake bridging courses before admission. Those with English deficiencies receive ongoing assistance from the University support service until they reach the required standard. Early in year 1 students undertake a series of written assignments to identify those who need to improve their English expression and these students receive individual or group tuition from the support service.

A system for collecting data and tracking students' performance has been established in the Faculty office to identify students at risk of non-completion and failure. This will also provide extremely valuable information for evaluating teaching and assessment practices in those Units that pose particular problems for students. The Faculty's new blueprint policy aims to address the impact of both formative and summative assessment on student progression, and also to give students more responsibility for evaluating their own progress and identifying the need for remediation in a timely fashion (Attachment J). Unit coordinators have prime responsibility for early detection of students experiencing difficulty during the Semester. They are expected to notify students early that they are at risk and to offer support through interview, remedial work or referral to support services, depending on the students' needs.

b. The use of learning resources and academic support to assist student learning outcomes

The Faculty has three computer laboratories that are open for (free) student use during working hours (2 on the main campus and 1 at Camden). A Veterinary Education and Information Network (VEIN) web portal has been established in partnership with the Badham Librarians and the Postgraduate Foundation for Veterinary Science (PGF) (Attachment O) that provides access to a large variety of web based learning resources. An image and learning resources database (OLIVER) is under development to provide students with web access to an extensive array of veterinary case material for independent study. We have an excellent veterinary anatomy museum that is extensively used for independent learning. The Faculty runs a small animal teaching hospital, large animal teaching hospital and ambulatory clinic, providing essential resources for professional experience in 4th and 5th year. Unfortunately these clinics receive insufficient support and have experienced major financial losses in the last 3 years, so the future of this vital part of our teaching is under threat, unless the University reviews the funding formula for the Faculty. Access to large animal teaching resources at the University farms (Camden) is an essential part of Veterinary Science and Animal Science teaching. Unfortunately these facilities have suffered from years of financial neglect so they have become run down and are inadequately staffed, some have been closed as they do not meet Animal Care and Ethics Committee standards for animal housing. The very real possibility of loss of these facilities represent s a major threat to the high quality practical, hands-on animal teaching that has always distinguished our degree programs from those offered elsewhere.

The major source of academic support for student learning begins with teaching staff involved in each Unit, particularly the Unit coordinator (outlined in 5a). Where students experience problems in several Units they are referred to the Subdean for Student Welfare (Dr Rhondda Canfield) or the Associate Dean for Staff and Students (Associate Professor Chis Maxwell) depending on the problem encountered.

6. Research Supervision and Training

How does the Faculty ensure the quality of research supervision and training?

a. Arrangements for ensuring high standards of supervision

A research-training strategic-planning day was held in April 2001, concentrating on how best the Faculty can implement the 10-point research-training strategy recently developed by the College of Sciences and Technology. The result of that day was an enthusiasm to adopt all 10 points in the strategy and the Faculty Research Committee has begun this task. Since the planning day, an action plan has been developed for an ordered adoption of the strategy in the context of the new single-Department structure of the Faculty (Attachment P). At the top of the list is an orientation day for new postgraduate students in February each year where students will receive clear outlines on the expectations for student and supervisor during their degree. There will also be a two-day postgraduate seminar program during the study vacation week at the end of second semester, during which every postgraduate research student will present a public seminar. The Faculty supports the postgraduate students in running their own seminar and support program.

All postgraduate students have a supervisor and at least one associate supervisor. Supervisors must already hold the relevant degree before commencing supervision of a student. All staff, particularly those who are new supervisors, are encouraged to attend the training sessions conducted by the Institute for Teaching and Learning. The Faculty's performance management reviews (commenced 2001) will monitor the performance of supervisors as part of their overall workload and will develop strategies to assist those supervisors who have difficulty with postgraduate supervision.

b. Mechanisms for ensuring effective completion and retention

A major form of quality assurance continues to be the annual reporting system by which (a) the progress made by every postgraduate student is assessed every year by their major supervisor, and (b) the student has an opportunity to raise any problems that have arisen in their candidature. Students and supervisors are required to develop a clear plan for progress on the project and to agree to targets for completion of major aspects of the work (e.g. literature review, data collection, statistical analysis, chapter drafts). They are encouraged to use this as a basis for regular meetings (usually at least weekly) to monitor progress. This year, a major reform of the conditions of candidature for postgraduate students in the teaching hospitals is being undertaken, as a result of concerns raised by supervisors and students in last year's annual reports.

c. How the research climate for students and provision of resources to support research are monitored

As part of the Faculty restructure the Associate Dean for Research, Professor Herman Raadsma, is developing a financial support system to provide a minimum standard of infrastructure support for each new postgraduate student, and to encourage supervisors to take on new students. Before supervisors agree to take on a student they are required to identify office facilities (desk, filing cabinet and computer access) and to ensure that adequate resources are available to enable the project to be completed.

d. The use of student and or/graduate views to improve the experience of research students

Postgraduate student representatives are invited to sit on the key Faculty committees that deal with research and training issues, and are also members of the Faculty. Being a small Faculty we encourage students to participate fully in planning and management, for example at our recent postgraduate planning day more than 1/3 of the participants were postgraduate

students. Postgraduate CEQ results have been provided for the first time this year and these will be used to drive changes in policy and practice.

7. Evaluation and Quality Improvement

What are the Faculty's arrangements for evaluation and quality improvement, including the use of student and graduate feedback and other performance indicator data to monitor and enhance performance?

a. Mechanisms in place for collecting and acting on the results of student and graduate feedback on teaching, Units of study and courses

As described above (4) the Faculty's new policy on evaluation of teaching requires student evaluation of all Units in 2001. Evaluations have been incorporated into the timetables and handbooks of all Units and are administered by staff of the Publications Unit. The results of individual Unit evaluations will be compared within years of the course and considered in parallel with the SCEQ and GCEQ results. An example of the analysis conducted on SCEQ 2000 results and the resulting plan of action is attached (Attachment L). Careful analysis of units where students report high levels of dissatisfaction with workload and assessment or poor levels of satisfaction with the good teaching, goals and standards and generic skills scales will allow the TLC to accurately pinpoint the areas needing most immediate attention. In the past this was not possible, however the change in responsibilities with our new structure will facilitate this sort of careful analysis. Unit coordinators will be assisted to achieve the necessary change through peer support, organised by the TLC. The effects of the changes made will be monitored through student surveys conducted in 2002 for those Units where problems were identified.

b. Arrangements for applying University performance indicator data to improving educational quality

At this stage the Faculty has had little experience with the University's new Teaching Performance Indicators, however once the TPIs for 2000 are announced the Teaching and Learning Committee will review our performance against those of other veterinary faculties and determine which areas need most immediate attention. Any additional action required will be incorporated in our 2002 Teaching and Learning Plan.

c. Consistency between University requirements and Faculty QA and improvement mechanisms

We believe there is a very high level of agreement between our recently developed QA processes and those described in the University's Guidelines for Academic Quality Assurance Systems. We have been active participants on the Quality Assurance Working group and our processes have been adapted to meet the particular needs of our small, cohesive, unified Faculty.

d. Methods used to monitor progress towards goals specified in the Faculty's teaching and learning plan

The TLC and AD,T&L have met quarterly during 2001 and we are energetically pursuing the ambitious goals outlined in the Faculty teaching and learning plan. The TLC members who are not teaching staff in the Faculty (Dr Feletti, Ass. Prof. Prosser, Dr Cotton and the 4 student members) provide a different perspective on our progress. Progress against the teaching and learning action plan is also subject to frequent review by the Faculty Executive. All policies, documents and reports produced by the TLC are distributed electronically to the Faculty and the TLC reports at the twice yearly Faculty meetings. So far we have made excellent progress, however some tasks are taking longer than expected, particularly the curriculum alignment audit, which has produced a lot of correspondence about the learning aims and outcomes for Units. Progress against the action plan will be critically reviewed by the external accreditation committee during their September visit.

Conclusions/ Future Directions

The Faculty has embarked on an ambitious path to achieve its mission. We want to be one of the leading providers of education in veterinary and animal science. Over the last few years the student experience of learning has become a central concern that has driven substantial change in all aspects of Faculty teaching. This process of change has created new, more effective structures, such as the unified management of teaching across the Faculty and the introduction of the new curriculum. We are in the process of developing and implementing key policies, supported by quality assurance processes to ensure on going improvement of teaching, assessment and research training. Other changes have been more fundamental, driven by a grass roots attitude shift, so that more staff are putting the principles of good teaching (as described by *Ramsden, Learning to Teach in Higher Education, 1992*) into practice. We are committed to developing an innovative and outstanding educational program and to developing the skills of our staff to meet this challenge. The current tasks of implementing the new curriculum and effectively aligning the learning goals, teaching methods and assessment to support high quality learning outcomes will occupy all teaching staff for the next 2-3 years. The major threat to succeeding in these tasks is further reductions to already critically low levels of staff and funding for teaching resources (particularly access to animals). At present the Faculty is suffering because recognition of the unique nature of the professional education that we provide is difficult within the confined context of the University funding model. It is also difficult to make comparisons with medical and paramedical training, which benefits from access to taxpayer supported teaching hospitals. It is important that the Federal Government recognises the real and high costs of providing a practical, internationally competitive professional course in veterinary science and provides appropriate financial support.

Rosanne Taylor

Chair, Faculty of Veterinary Science Teaching and Learning Committee

APPENDIX B

FACULTY TEACHING AND LEARNING PLAN

Action Plan – Teaching and Learning- 2002

Action Plan					Key Milestones		
Outcome area	What	Who	When	Resources	What	When	To Whom
Veterinary Science 1	(1) Hardcopy handbooks all units of study	Dr Glenn Shea (yr 1 coordinator)	Semester 1- mid February 2002 Semester 2- July 2002	Veterinary Publications Unit Unit of study coordinators	9 handbooks	February and July 2002	Veterinary Publications Unit
	(2) Teaching & Learning Committee approved aims, objective, grade descriptors + assessment procedures, all units of study.	Dr Glenn Shea	Semester 1- mid February 2002 Semester 2- July 2002	Prof Grahame Feletti/ Teaching Development days/ Teaching Workshops	Written inclusions in all unit of study handbooks	February and July 2002	Teaching and Learning Committee
	(3) 50% of handbooks configured into an interactive WebCT –based teaching resource	Dr Paul Sheehy	Semester 1- mid February 2002 Semester 2- July 2002	University WebCT establishment/ Ms Tess La Lande- Admin assistant 2 days per week/ Federico Costa- Web Page Coordinator 2 days per week.	5 Unit of study based WebCT teaching programs	Semester 1- mid February 2002 Semester 2- July 2002	Teaching and Learning Committee
Veterinary Science 2	(1) Hardcopy handbooks all units of study	Assoc Prof David Evans (yr 2 coordinator)	Semester 1- mid February 2002 Semester 2- July 2002	Veterinary Publications Unit Unit of study coordinators	8 handbooks	February + July 2002	Veterinary Publications Unit
	(2) Teaching & Learning Committee approved aims, objective, grade descriptors + assessment procedures, all units of study.	Assoc Prof David Evans	Semester 1- mid February 2002 Semester 2- July 2002	Prof Grahame Feletti/ Teaching Development days/ Teaching Workshops	Written inclusions in all unit of study handbooks	February + July 2002	Teaching and Learning Committee

Action Plan					Key Milestones		
Outcome Area	What	Who	When	Resources	What	When	To Whom
Veterinary Science 2 (continued)	(3) 50% of handbooks configured into an interactive WebCT –based teaching resource	Dr Paul Sheehy	Semester 1- mid February 2002 Semester 2- July 2002	University WebCT establishment/ Ms Tess La Lande- Admin assistant 2 days per week/ Mr Federico Costa- Web Page Coordinator 2 days per week.	4 unit of study based WebCT teaching programs	Semester 1- mid February 2002 Semester 2- July 2002	Teaching and Learning Committee
Veterinary Science 3	(1) Hardcopy handbooks all units of study	Assoc Prof Nick Sangster (Yr 3 coordinator)	Semester 1- mid February 2002 Semester 2- July 2002	Veterinary Publications Unit Unit of study coordinators	12 handbooks	Feb + July 2002	Veterinary Publications Unit
	(2) Teaching & Learning Committee approved aims, objective, grade descriptors + assessment procedures, all units of study	Assoc Prof Nick Sangster	Semester 1- mid February 2002 Semester 2- July 2002	Prof Grahame Feletti/ Teaching Development days/ Teaching Workshops	Written inclusions in all unit of study handbooks	February + July 2002	Teaching and Learning Committee
	(3) 25% of handbooks configured into an interactive WebCT –based teaching resource	Dr Paul Sheehy	Semester 1- mid February 2002 Semester 2- July 2002	University WebCT establishment/ Ms Tess La Lande- Admin assistant 2 days per week/ Mr Federico Costa- Web Page Coordinator 2 days per week.	Three unit of study based WebCT teaching programs	Semester 1- mid February 2002 Semester 2- July 2002	Teaching and Learning Committee
	(4) Development of student centred problem solving/ new curriculum, units of study	Assoc Prof Nick Sangster	February and July 2002	TIF Grant/ Prof Grahame Feletti/ recurrent establishment funds	12 unit of study teaching programs presented in student-centred problem solving teaching formats	February and July 2002	Teaching and Learning Committee

Action Plan					Key Milestones		
Outcome Area	What	Who	When	Resources	What	When	To Whom
Veterinary Science 4	(1) Hardcopy handbooks for 50% of new curriculum units of study	Prof Brian Farrow	February 2003	Prof Grahame Feletti/ TIF funds/ Veterinary Publications Unit	5 units of study	February 2003	Teaching and Learning Committee
	(2) Teaching & Learning Committee approved aims, objective, grade descriptors + assessment procedures, for 50% of new units of study.	Prof Brian Farrow	February 2003	Prof Grahame Feletti/ Teaching Workshops/ TIF funds	5 units of study	February 2003	Teaching and Learning Committee
	(3) 25% of handbooks configured into an interactive WebCT –based teaching resource	Dr Paul Sheehy	February 2003	University WebCT establishment/ Ms Tess La Lande/ Admin assistant 2 days per week/ Mr Federico Costa- Web Page Coordinator 2 days per week.	2 units of study	February 2003	Teaching and Learning Committee
Veterinary Science 5	(1) Sign on greater than 40 extra mural Partner Practice teaching hospitals	Assoc Prof Bob Ratcliffe	December 2003	TIF funds	Greater than 20 Partner Practice teaching hospitals	January 2003	Teaching and Learning Committee
	(2) Sign on greater than 10 Rural Lands Protection Boards	Assoc Prof Bob Ratcliffe	December 2003	TIF funds	Greater than 5 Partner Practices	January 2003	Teaching and Learning Committee

Action Plan					Key Milestones		
Outcome Area	What	Who	When	Resources	What	When	To Whom
Veterinary Science 5 (continued)	(3) Partner Practice Workshop	Assoc Prof Bob Ratcliffe	March 2002	TIF funds/ Veterinary Science Conference Centre	Representatives 10 potential Partner Practices present. Draft Partner Practice Contract Developed	March 2002	Teaching and Learning Committee
	(4) Partner Practice Forum	Assoc Prof Bob Ratcliffe	November 2002	TIF funds/ Veterinary Science Conference Centre	Official launch of the Partner Practice Program	November 2002	Teaching and Learning Committee
	(5) Development of small animal, bovine, equine and flock herd health extramural teaching rotation program	Prof Grahame Feletti	December 2003	Assoc Prof Bob Ratcliffe/ Academic clinical staff/ TIF funds.	Two extramural rotational teaching protocols	December 2002	Teaching and Learning Committee
General Teaching	(1) SCEQ	Dr Rosanne Taylor	May and October 2002	Faculty Admin staff	All units of study surveyed. Score trends compared for 2001. Effectiveness of 2001 feedback evaluated. 2002 feedback evaluated with recommended implementations	November 2002	Teaching and Learning Committee
	(2) GCEQ	Dr Rosanne Taylor	December 2002	Faculty Admin staff	Compare 2001/ 2002 trends/ recommendations.	February 2003	Teaching and Learning Committee

Action Plan					Key Milestones		
Outcome Area	What	Who	When	Resources	What	When	To Whom
General Teaching (continued)	(3) Graduate attributes and Learning outcomes	Mr Donal Walsh/ Dr Henry Collins/ Dr Rosanne Taylor/ Prof Grahame Feletti	January 2002	Veterinary Science Conference Centre	List and define basic Veterinary attributes. Integrate attributes into learning outcomes via curriculum development and alignment. Initial recommendations.	February 2002	Teaching and Learning Committee
	(4) Assessment Practices	Prof Grahame Feletti	December 2002	TIF funds	Review, evaluate, report on new assessment practices as developed in 2001.	February 2003	Teaching and Learning Committee
	(5) VSAAC accreditation report.	Dr Paul Hopwood	March 2002	Faculty Admin staff	Implement appropriate VSAAC recommendations.	December 2002	Teaching and Learning Committee
	(6) Extramural Animal Husbandry	Assoc Prof Gareth Evans	December 2002	Ms Melanie Robson	Creation of a database listing 100 placement farms 300 farms	February 2002 December 2002	Teaching and Learning Committee
	(7) Student Observer Veterinary practices	Assoc Prof Gareth Evans	December 2002	Ms Melanie Robson	500 practices 600 practices	February 2002 December 2002	Teaching and Learning Committee

	(8) VEIN database	Ms Su Hanfling	December 2002	Uni of Sydney Library	First Partner Practice users on line.	Reports February 2003	Teaching and Learning Committee
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Action Plan					Key Milestones		
Outcome Area	What	Who	When	Resources	What	When	To Whom
General Teaching (continued)	(9) Educational Research Programs	Dr Rosanne Taylor/ Dr Michelle Hyde/ Dr Paul Sheehy	December 2002	TIF funds/ recurrent funds	Published findings	February 2003	Teaching and Learning Committee
	(10) Staff development	All new appointees	December 2002	Recurrent funds	Certificate or Diploma	February 2003 or 2004	Teaching and Learning Committee
Animal Science degree	Development Units of study	Dr Michelle Hyde	December 2002	Recurrent funds	Animal Science Year 2, 8 units of study developed	February 2003	Teaching and Learning Committee

APPENDIX C

LIST OF ADDITIONAL DOCUMENTATION SUPPLIED TO REVIEW TEAM

1. Veterinary Schools Accreditation Advisory Committee (VSAAC) review document- final
2. The Basic Attributes of Veterinary Graduates
3. Response to AVSAC report
4. Capital development plan - short version for VSAAC
5. Faculty structure - document for Dec 12 - final
6. Faculty Structure Discussion Paper - final modified version September 2nd
7. Faculty Workshop Report- Hussey
8. Investing in veterinary science - second century initiative1
9. Pfizer Veterinary Leadership Program
10. Report on Achievements in Major Action Areas of 1999 Strategic Plan, as at July 2001
11. Strategic Plan - Mar 1999
12. Veterinary Graduates for NSW Livestock Industries 21April 99
13. Veterinary Science Foundation strategy & business plan April 2001

APPENDIX D

SUMMARY REPORT OF THE FINDINGS OF THE REVIEW TEAM

The following report was sent to the Dean of the Faculty of Veterinary Science on
4 February 2002.

**FACULTY OF VETERINARY SCIENCE
ACADEMIC BOARD FACULTY REVIEW VISIT**

THURSDAY 29 NOVEMBER 2001

SUMMARY REPORT OF THE FINDINGS OF THE REVIEW TEAM

The Academic Board Review Team visited the Faculty of Veterinary Science on Thursday 29 November 2001 to review and evaluate academic planning and quality assurance systems within the Faculty. Interviews were held with the following groups:

- Dean Reuben Rose and senior academic staff
- Undergraduate students
- Postgraduate students
- Faculty staff.

This report is a short summary of the main findings of the Review Team as reported to the Dean of the Faculty, Professor Reuben Rose, at the end of the visit.

AREAS OF GOOD PRACTICE

The Review Team identified the following areas of good practices in the Faculty of Veterinary Science:

- Change management process: process managed well and the strategy used by the Faculty should be communicated to other faculties as a case study in how to manage change successfully. The following aspects of the process are to be commended:
 - Collaboration and collegiality amongst Faculty.
 - Transparency and openness in process.
 - Good level of participation amongst Faculty.
- Dean's leadership style at core of transformation of Faculty:
 - Support from both students and staff.
 - Staff proud of what is happening in the Faculty and of belonging to the Faculty.
- Alignment of course content and assessment with Graduate Attributes of Veterinarians:
 - Positive feedback from both staff and students.
- VEIN (Veterinary Education and Information Network):
 - Good resource and should be exploited.
 - More staff need to know about it and other resources such as scanning reserve material.
- Peer review and support for teaching:
 - Committee structure working well especially the Teaching and Learning Committee and Course Alignment Sub Committee.
 - Evidence based teaching is working well.
 - Research is embedded into teaching.
 - Need to try and develop a broader group of staff to work in this area.
 - Good work being undertaken in research into teaching methods.
 - Innovations in this area commended by staff.

AREAS FOR CONSIDERATION

The Review Team identified the following areas that might be considered for improvement:

- Balancing tension between teaching development and research development:
 - Staff feel have less time for research due to increased teaching workload.
- Communication:
 - Under restructure no clear sense of who has responsibility for mentoring, support, and development of early career staff, who are unsure who to report to. Faculty needs to think about developing seamless process.
 - With all staff – especially re the change process and who is orchestrating it. Some academic staff unclear on this aspect.
- Re-socialising of students at both ends of program:
 - From HSC to University – from exam passers to learners. Faculty should think about introducing PBL earlier than 3rd year.
 - From University to Practice so that become lifelong learners and professionals. VEIN helps here as available to veterinarians in the community.
- PhD supervision and programs:
 - Need to provide a greater sense of community for students.
 - Make aware of resources available, and provide easier access to them.
 - Need to look at developing supervision skills.

Professor Judyth Sachs
Chair, Academic Board
Chair, Review Team