

SUBJECT REVIEW REPORT

**DEPARTMENT OF
ZOOLOGY**



**FACULTY OF NATURAL SCIENCES
THE OPEN UNIVERSITY OF SRI LANKA**

15th to 17th January 2006

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1. PURPOSES AND AIMS OF THE SUBJECT REVIEW PROCESS

A subject review process evaluates the quality of the student learning experience and education at the subject level, as well as the entire programs offered by an academic department. It is aimed at examining and reviewing the appropriateness of academic standards set for the programs and the effectiveness of curriculum in delivering the intended learning outcomes described in the self evaluation report submitted by the Department. It is also aimed at examining the suitability and effectiveness of the assessment methods used to measure the achievement by learning outcomes relevant to the program, which are identified by the Department. It is in this context, that the review team evaluated the quality of both undergraduate and postgraduate programs offered by the Department of Zoology of the Faculty of Natural Sciences of the Open University of Sri Lanka (OUSL).

The review team consisted of Professor Morley P. de Silva (Senior Professor, Department of Botany, University of Ruhuna), Professor (Mrs.) Asoka Pathiratne (Professor, Department of Zoology, University of Kelaniya) and Professor (Mrs.) Swarna Piyasiri (Professor, Department of Zoology, University of Sri Jayawardenapura). The review team perused the subject review report prepared by the Department before the scheduled review visit.

The review team visited the Department of Zoology of the Open University, during the period commencing from 15th to 17th January 2006, and initiated the peer review process (Annex 1 gives the agenda of the visit). There was good evidence to see that the department has made all arrangements and provisions for the subject review in an efficient manner. The reviewers followed the guidelines set by the Quality Assurance and Accreditation Council of the University Grants Commission for subject evaluation. The following aspects of education/provision were considered under the review process:

- Curriculum design, content and review
- Teaching, learning and assessment methods
- Quality of students, including student progress and achievements
- Extent and use of student feedback
- Postgraduate studies
- Peer observation
- Skills development
- Academic guidance and counseling,

The review team had discussions with Dean of the Faculty of Natural Sciences, Head of the Department of Zoology, members of the academic staff as well as non-academic staff, undergraduate students and the postgraduate students. Peer observation of the teaching and learning process in three “day schools” and two practical classes was also carried out during the review process. The review team inspected the facilities provided by the department to the students (teaching

laboratory, Museum, lecture rooms for day schools), and other general facilities available for all OUSL students (library, audio visual resource centre, media house, computer center and press). The review team also observed relevant documents including Faculty prospectus, prospectus of postgraduate diploma in Environmental Science, course material – print and AV material, practical guides and samples of students' practical reports, answer scripts, marking schemes and question papers of several course modules, postgraduate theses, questionnaires used for obtaining students' feedback, records of departmental meetings and research publications of some of the academic staff (Annex 2 gives a list of documents observed). In between these activities, the review team constantly met together and discussed the outcomes of these observations and meetings. All reviewers collectively contributed to the writing of the report and making judgments in the eight aspects.

2. BACKGROUND OF THE UNIVERSITY AND THE DEPARTMENT

The Open University of Sri Lanka has been established in 1980 under the Universities Act No.16 of 1978 and the Open University of Sri Lanka (OUSL) Ordinance no.3 of 1980 and is one of the 14 national universities under the University Grants Commission. However it is the only State University in Sri Lanka where students are able to pursue further education through distance education techniques in keeping with the philosophy of '**open learning**' and the '**distance education**'. It has the same legal and academic status as any other National University in Sri Lanka. OUSL offers programs of study leading to certificate, diploma, degree, post-graduate diploma and post-graduate degree through the **Distance Mode**. The Mission of the University is to enhance opportunities for adult life long learning of people by facilitating open and distance learning and supporting excellence in research and scholarships.

The central campus, which includes the academic and administrative divisions and the Colombo Regional Centre, are located at Nawala in the suburbs of Colombo. The OUSL students are spread all over Sri Lanka and are served through the Regional Educational Service Network of 28 centers dispersed throughout the island.

All academic programs and courses are developed by the four Faculties viz. Education, Engineering Technology, Humanities and Social Sciences and Natural Sciences. The Faculty of Natural Sciences consists of Academic Departments of Botany, Chemistry, Zoology, Physics, Mathematics and Computer Sciences, and Health Sciences. The Faculty Board of Natural Sciences regulates all the academic activities in the Faculty, under the direction of the Senate. The present Department of Zoology first came into existence as an academic division within the Faculty in 1983 but was elevated to the Department status in 1985.

In accordance with the other departments in the Faculty of Natural Sciences, the Department of Zoology offers Foundation Courses, a Certificate program in Wildlife Conservation and Management, an Advanced Certificate course in Laboratory Technology, the subject Zoology for the Bachelor of Science degree program and a Post-graduate Diploma in Environmental Sciences (4 credits and two years duration). All programmes follow a credit system of evaluation and the workload is specified. There are two Foundation Courses in Zoology each of six months duration (PSF 1306 and PSF 2306) at study levels 1 and 2 each of which has a ½ credit value, in the first two years offered to students who do not have the basic requirement of three passes at G. C. E. A/L to register directly for the B. Sc. Program. The subject Zoology is offered as a major to the Bachelor of Science Degree program. The assigned number of credits to the B. Sc. Program consists of 6 credits.

The Self Evaluation Report provided by the department presents the number of registered students and the students eligible to sit the final exam of different courses/programmes offered during the period 1999-2003. According to the latest information provided by the Head of the Department, the total number of students registered (January 2006) for the foundation courses, certificate course in wild life conservation and management and advanced certificate in laboratory technology are 100 -112 , 51-55, and 17 respectively. Total number of students registered for the course units offered by the department at the levels 3 and 4 of the B. Sc. Degree programme is 536 and 554 -709 respectively. The number of students who have registered for the Level 5 course units varies from 1 to 310 depending on the course unit.

The department has 13 academic staff members (10 Senior Lecturers and 3 Lecturers), 3 academic support staff members, 10 temporary demonstrators, 1 technical officer, 2 lab attendants, 1 computer application assistant and a laborer. The cadre position for the Professor of Zoology is vacant at present. A Senior Lecturer and a probationary Lecturer and a member of the academic support staff are on leave. The department has one main teaching laboratory, a small research laboratory, a museum and another laboratory, which is shared with the Department of Botany and Chemistry. The main laboratory can accommodate about 50 students. The Central library stores a fair collection of books in Zoology and Zoology related fields. The scheduled open hours of the library are from 9.00 a.m. to 7.00 p.m. Nearly 50% of OUSL students are employed and work according to set targets. However due consideration has not been given to this fact in scheduling library lending hours.

There are nine personal computers in the Department for the use of staff. Students have access to computers in the computer centre of the University. Some of the computers in the computer centre have Internet access.

3. AIMS AND LEARNING OUTCOMES

3.1 Aims

Zoology is the study of animals in all its aspects and it encompasses a fascinating and important body of knowledge from molecules to populations and from neurones to behaviour and to their interactions with the environment. In this context, the Department of Zoology at the OUSL plays the role of enriching the programmes offered by the University through contributing courses to a variety of programmes at different levels of study to enable the better understanding of animals, wildlife, and our environment. Thereby the department seeks to deliver the highest level of education in this discipline and its related areas. For instance, the department offers a large number of Zoological course units to students reading for the B.Sc. degree programme at the OUSL. The department of Zoology also offers a certificate programme in wildlife conservation and management. In addition, the department contributes to the Foundation courses in science and to two inter-faculty programmes, the advanced certificate programme in laboratory technology offered by the Faculty of Science and the Postgraduate Diploma in Environmental Studies, offered by the Environmental studies unit of the OUSL. In keeping with the mission of the OUSL, these zoology course units are all designed to enhance opportunities for life-long learning for adults **through open and distance learning**.

The specific aims of the Department of Zoology at the OUSL are given below:

- 3.1.1. Provide a range of learning opportunities to a wide clientele of students to acquire knowledge, understanding and skills in Zoology and related areas of study through distance education methodology .
- 3.1.2. To provide opportunities to students to study at their own time and pace to suit their interest or job requirements through a wide range of courses within a structured and flexible academic programme.
- 3.1.3. Promote self study and independent learning using instructional course material in multiple media (printed course material supplemented with some face-to-face contact and audio-visual aids) suitable for distance learners.
- 3.1.4. Provide Foundation courses in Zoology to give opportunities for adults without any formal educational qualifications to obtain tertiary educational qualifications in Zoology and enter the academic mainstream.
- 3.1.5 Provide undergraduate and postgraduate courses and programmes of study with an integrated multidisciplinary approach to enable adults (especially the employed) to obtain academic qualifications.
- 3.1.6 To provide programmes and courses emphasising laboratory, field and research skills relevant to the study of zoology.
- 3.1.7. Provide counselling, guidance, facilities and a departmental environment conducive for progressive learning and especially provide the motivation and support necessary for independent learning

- 3.1.8 Encourage both discipline based and distance education research among staff.
- 3.1.9 Provide training opportunities for career development, distance education teaching methodologies and in assessment strategies, for staff through encouraging staff to attend staff development programmes.

In addition to the above, the broad aims of each of the programmes to which the Dept. of Zoology contributes are given in Annexure1 of the Self Evaluation Report.

3.2 Learning Outcomes

On successful completion of programmes/courses, the students should have:

- 3.2.1 Gained broad knowledge and understanding in areas of zoology from the cellular to the organism and community level.
- 3.2.2 Developed specific knowledge and understanding in the core areas of zoology as well as more applied aspects of zoology, on successful completion of the specific courses listed in Annexure 2.
- 3.2.3 Acquired practical skills, field based methods and techniques to complement and support subject-based theoretical knowledge.
- 3.2.4 Acquired the ability to conduct scientific investigations and undertake supervised research studies (where a research component is part of the course).
- 3.2.5 Acquired a range of critical, analytical, transferable and personal skills including the collection, recording and critically evaluating scientific data, critical evaluation of published literature, statistical analysis of data, efficient use of libraries and a range of other sources to locate and retrieve information, computer literacy, effective written and oral communication, self-discipline through meeting deadlines and time management and the ability to work within groups.
- 3.2.6 Changed from a dependent to an independent learner (through studying at a distance) with the flexibility and confidence to move into new and multidisciplinary areas of study, research or employment.
- 3.2.7 Developed a respect and an appreciation for animals and nature so as to be able to live in harmony with nature.
- 3.2.8 Developed an interest in life-long learning.

4. JUDGMENT ON THE EIGHT ASPECTS REVIEWED

The findings of the review team and discussion of good practices, strengths and weaknesses of each of the eight aspects of provision and recommendations of the reviewers are documented below. The overall judgment was arrived after summarizing judgments of all aspects of provision.

4. 1 Curriculum Design, Content and Review

4.1.1 Curriculum Design and Content

OUSL offer a modularized credit valued course unit systems for its study programs. The OUSL credit rating differs significantly from that of the other conventional universities. For example, a workload of 75 hours earns 1/6th of a credit. The workload includes time spent for reading and understanding of course materials, assessment times and time spent at practical work. Within a year, the maximum allowed credits are 2, which means a study time of 900 hours.

Course units offered by the Department of Zoology contribute to the Foundation courses, B.Sc. Degree program, Postgraduate program in Environmental Science and two Certificate courses (Advanced certificate in Laboratory Technology, Certificate in Wild Life Conservation and Management). Reviewers noted that curriculum/course contents of the department are designed to fulfill the general aims of the study programs. The Foundation Courses in Zoology, the Zoology component in the B.Sc. Degree program and the Certificate program in Wild Life Conservation and Management are totally conducted by the Department. The department gets inputs from other departments from the faculty to conduct the other study programs.

Course units are offered at different levels of the program enabling the student to build up their knowledge and understanding. Two foundation course units (Levels 1 and 2) courses are designed for those who do not possess G.C.E. A/L knowledge in Zoology. The curriculum of these two courses indicates that it is well designed to provide adequate knowledge to students in the fundamentals of Zoology to proceed to the next levels. This is evident by the performance of students who enroll for the foundation courses and subsequently successfully complete the degree program. (The reviewers had the opportunity to meet a young member in the present academic staff of the department who had followed the path to graduation through the foundation course and had been successful in graduating with a good class and is now in the academic staff).

Provision of flexible entry & exit points to the B. Sc. degree program offered by OUSL is commendable. Because of this provision, the students not having G.C.E. A/L three passes could enter the degree program whereas the students in the level 4 of the degree program are allowed to transfer into level 5 of the Bachelor in Education.

The curriculum offered by the department of Zoology for the B. Sc. program reflects adequate academic standard and enable students to achieve intended learning outcomes identified in the self-evaluation report. The syllabi help to provide required knowledge and develop relevant practical and analytical skills to a certain extent. In the B Sc degree program. The level 3 and 4 course units cover core areas in Zoology and course units on applied field related Zoology are introduced at levels 5. The optional course units, at levels 5 in the B. Sc program

provide some flexibility in the choice of course units. However additional optional courses in applied areas of Zoology including Aquaculture are desirable in order to increase the flexibility. The discussions made with the students also supported the same. Certain level 5 courses offered by the Department of Zoology such as Aquatic Biology, Entomology, Parasitology etc. are the “stand alone courses” introduced in order to enhance employability. Reviewers noted that the course materials of the recently revised courses are satisfactory. According to the views of the students of the level 3 & 4, their revised course materials are user friendly compared to the study materials of level 5.

Well designed time tables (Department and Faculty Activity Schedules) are prepared for each semester before the commencement of the semester and are distributed among the students at registration and subsequently per post. These timetables give the schedules of practicals, day schools, assignments and examinations.

Reviewers noted that students in the B.Sc. degree program are also exposed to interdisciplinary courses (offered by other Faculties) such as Management studies, Laws of Sri Lanka, Environmental studies and Computer studies, which are compulsory for all students at the first year itself. Unless exempted, all students have to offer and pass English in most programs. In addition students can offer regular ongoing education courses (up to ½ credit) such as Mathematics and IT courses, outside the basic program for further enhancement of employability. Introduction of these course units to the B. Sc. curriculum is commendable. These course units could help to develop some important interpersonal/transferable skills of the students.

Postgraduate Diploma Program in Environmental Sciences is an inter-Faculty, 2-year, (levels 6 & 7) program. The Department of Zoology contributes by offering a ½ credit course in the first year and 3 core courses and two optional courses in the second year. This program is offered to officers serving under the Ministry of Forestry and Environment and the Central Environment Authority. Only graduates are eligible to register. The design of this postgraduate program and that of the two certificate courses (Advanced certificate in Laboratory Technology, Certificate in Wild Life Conservation and Management) could be considered as satisfactory. However, the course materials of these programs need to be revised and updated. The department may consider inclusion of appropriate study questions, improvement of printing quality, and clarity in the presentation of study materials in par with modern developments at other Open Universities.

Reviewers were informed that the Department is planning to introduce a new M. Sc programme in Medical Entomology and Applied Parasitology to be offered through distance education mode. The curriculum and course contents have been already discussed and agreed upon at a workshop (sponsored by WHO) where academics from Science and Medical faculties, of other universities,

officials from the ministry of Health and research institutions and industry had participated. It is expected to launch this program in 2006.

4.1.2 Curriculum Review

The reviewers were informed that the Course Development Committee of the Faculty, which has a representative from each Department reports to the Faculty on the progress achieved in curriculum development. Apart from that the progress in curriculum revisions seems to be monitored at departmental levels. Samples of records of departmental meetings indicate that curriculum contents have been discussed at departmental meetings regularly and appropriate steps have been proposed to incur revisions and expedite them.

In some instances, the Department has organized curriculum development workshops to get views from senior academics, researchers in research institutions, middle level managers from state and private institutions, to decide on the curricula / course contents at the postgraduate levels. Documents of such workshops were available for observation by the reviewers with respect to the proposed M.Sc. programme in Medical Entomology and Applied Parasitology.

The review team strongly feels that feed back from all stakeholders including parents, students, alumni, potential employers and experts in the field be considered in developing and reviewing all the curricula. It is recommended to regularize the curriculum review process in the Department and the Faculty.

Judgment: Considering all aspects above, the curriculum design, content and review are judged to be **SATISFACTORY**.

4. 2 Teaching, Learning and Assessment Methods

4.2.1 Teaching and Learning Methods

Teaching and learning strategies in the Department of Zoology are aimed at equipping the students with the progressive acquisition of the subject knowledge and skills. The review team noted that the department uses variety of approaches to provide appropriate learning experiences for the students following Zoology course units of the B. Sc. degree program. The provision of printed material on the subject areas, audio-visual aids, and face to face discussions at day schools, tutor clinics, practical classes, oral presentations and field visits, encompass the teaching methodologies at the department. The most prominent audio-visuals are the videos. The videos are generally shown to the students during the practical sessions in different course units. The videos observed by the reviewers (introduction to microscope, skeletal system, mammals) were very informative and provided the student with necessary supplementary knowledge on the subject and good guidance for practicals. The course coordinator and course chair coordinate the process of a production of a video. The central library has a separate audio-visual division where videos relevant to different subjects are available and the students have the facility to

view the videos whenever they are free. The reviewers observed that the usage of the library was low during the review period but according to the library staff the extent of usage is variable and the numbers go up during examination periods.

Most students interviewed by the reviewers appreciated the availability of teaching aids in the form of printed materials and commented favorably on their quality. The reviewers having gone through the printed materials made available to students (especially for foundation courses, level 3 and level 4 course units) are satisfied on their quality with reference to presentation, contents and print. However the Reviewers are of the view that the printed course materials for the level 5 course units, and other courses offered by the department (certificate courses and postgraduate diploma) need to be revised.

Course materials are, according to students, distributed in time. Reviewers got the impression from the students that schedules are strictly followed by the department of Zoology and no postponement of the courses/examinations had occurred except during the strike action of the non-academics in 2005. However in that instance, the rescheduling of the activities' had occurred fast, which is commendable.

The students expressed dissatisfaction of the arrangement when day schools are sometimes been held in the mornings when the examinations of the same courses were held in the same afternoon. According to the staff, such arrangements are unavoidable due to their tight program schedules. The review team had the opportunity to observe 3 day schools. The conduction of day school observed by the reviewers indicated lack of preparedness among students, inadequate opportunities for students to discuss problems with the lecturer etc. While day schools should be more student centered, the reviewers observed that they differ little or none at all from a conventional form of a lecture. Thus the real purpose of day schools is not being achieved. The staff attributed this to lack of preparedness on the part of the students. The review team strongly recommends the department to consider a new strategy to improve this condition.

Review team observed two practical classes at Level 3 (Animal life and Diversity) and found that practical classes are designed to provide a variety of subject specific skills even with limited resources available. It became evident that the general training given to laboratory staff is inadequate. This may be a major reason for the observed poor status of laboratory maintenance. Lack of time for laboratory cleaning during sessions, limitations in space were highlighted by the laboratory staff. Aspects such as maintenance of microscopes and optical equipment, preparation of permanent microscopic specimens, specimen collection in the museum and organizing the specimens in the museum were poor and therefore need more attention.

Review team observed two seminars presented by groups of Level 5 students for the Animal Behavior course unit. The students following the level 5 course units in the B. Sc. degree program had the opportunity to improve their oral communication skills through this seminar based on selected group projects. The standard of the presentations was satisfactory.

4.2.2 Assessment methods

The assessment strategies of the department of Zoology are both formative and summative and have been designed in accordance with the objectives of their different courses. The Department adopts the Continuous Assessment Methods (CAM) for each course and a final examination. The CAMs used to assess the subject based knowledge are the Home Assignments (at foundation level), Open Book Tests (OBTs), No Book Tests (NBTs) and practical assessments. Two or more assessments are held for each course to give them flexibility. The OBTs which are normally of one-hour duration can take the form of MCQs, structured and/or short essay questions or a combination of them. For restructured courses at levels 3 and 4, the department has introduced the NBTs to assess the students. The students in order to become eligible to sit the final examination have to obtain at least 35% in continuous assessments to be able to sit the final examination. Certain percentage of continuous assessment marks contributes (30%) to the final mark. The final examination accounts for the other (70%).. Practical assessment tests are held for all practical components at the end of the practical class, which are in the form of spot tests. However, it was noted that for some course units, much less weightage is given to the marks obtained in the practical component in comparison to the marks obtained in the theory component when computing the overall mark for the respective course unit (e.g. Only 9% (of the overall mark) for the practical component in the Level 3 Animal life and diversity course unit). The Department may consider giving more weightage to the practical component, which evaluates the practical skills of the students in relation to the specific subject areas.

The assessment method of the final examination is through a question paper consisting of questions in the form of essays, structured essays, short notes and MCQs. The research report which also forms a component of the assessment strategy in a Level 5 course is evaluated by a progress report in the form of a dissertation and an oral presentation. Senior academics in the Department are responsible for the evaluation processes. Marking of the assessment is done by the chief examiner of the course and the course coordinator with the assistance of other staff members whenever it is necessary.

There is evidence that level 3, 4 and 5 examination papers are set and moderated by senior academic staff in the department. Reviewers were informed that second marking of question papers of postgraduate programs are carried out by external examiners. Second marking of answer scripts by external examiners is a good practice for transparency and quality assurance of the programmes. The department may consider adopting this practice even for the

B. Sc. Program. Examination of samples of student work, which included marked answer scripts, reports of some assignments and research projects revealed that the student achievement in relation to intended learning outcomes is satisfactory.

Guidance on the overall learning and assessment procedures was reported adequate according to the students whom the reviewers interviewed.

Judgment: Having evaluated the teaching, learning and assessment methods, the reviewers are of the opinion that this component could be rated as **GOOD**.

4. 3 Quality of Students including Student Progress and Achievements

Being located in a suburb of Colombo, OUSL has extended the opportunity to many employed young people and also to those who had not been able to gain admission to other national universities due to low Z scores, to upgrade their qualifications. The review team had a very brain storming session with a group of students that included a representative cross section of undergraduate students from levels 3 upwards. The heterogeneity of the OUSL students was quite evident from this gathering. The students with whom the review team came into contact during their visit were found to be very ambitious. Many students possessed good English speaking ability. There were also many students who came from outstations due to the non-availability of sufficient regional centers and lack of facilities to carry out their practicals at those regional centers. Those students expressed their happiness over the provision of hostel facilities at the Colombo Centre during their practical programs, which helped them immensely. However the review team felt the need to provide more facilities, especially with reference to practicals, to the regional centers at Kandy and Matara to help outstation students.

The reviewers observed inherent difficulties within the system since student eligibility can be carried over many years and postponements of academic semesters as well as examinations were common phenomena. However the review team recommends that reasons for the large numbers in the student drop outs, need to be investigated and solutions devised. The Statistics (Figures 2 to 7) given in the Self Evaluation Report for Foundation courses, B. Sc program, Wild life program indicate that nearly or less than 50% of the registered students sit the relevant examinations. However pass rates of the students who sat for the respective examinations seem to be fairly high. It was brought to the notice that the performance of the students at level four was less compared to the level three and level five. The drop out rate of the level four students however is lower compared to level three and four and they generally showed better performance than in the first two years. Those students who perform well at examinations have the possibility to win the very limited number of special awards available within the Faculty (a prize and a gold medal).

The Standard of English of students seems to be satisfactory. Though the majority of students appear to have a good level of English knowledge, reviewers

strongly recommend that English knowledge enhancement programmes be strengthened, specially for the sake of those students who come from outstation schools with less English competency than those coming from Colombo or Colombo suburb schools.

It was brought to the notice of the review team that many of the B. Sc. Graduates who have followed Zoology course units as a subject are teaching Biology at schools and a few have joined the administrative service, hold research positions and employed in the private sector. However, the department has not conducted a tracer study on the graduates' to-date. In the opinion of the review team, such a tracer study would have helped the Department to monitor the achievements/performance of their graduates.

Judgment: Having considered carefully the quality of students including students' progress and achievements, the reviewers are of the opinion that this aspect of the subject review can be rated as **SATISFACTORY**.

4. 4 Extent and Use of Student Feedback

Being a Department that practices distant teaching / learning, the feed back procedures from the students on the academic programs should be extensive than at traditional Universities. Reviewers noted that the Department makes a genuine effort to take student feed backs into due consideration to incur suitable improvements accordingly. The day schools, practical classes and other academic sessions such as tutor clinics provide a forum for discussion of student responses to the academic courses. The reviewers had the opportunity to watch three such Day Schools. The Day School lacked organization and therefore need to be definitely better organized so that the time spent at day school with the students is utilized properly. According to the academic staff, only a very few students correspond in advance and therefore the Day School facility is not properly utilized now.

When new course materials are prepared, the Department follows the system of "Developmental Testing" whereby the course team obtains the views of students on the course contents through a very critical questionnaire. The responses of students are taken into consideration when the final version of the course material is printed. The reviewers examined samples of such "Developmental Testing". This is a good practice adopted by the department. Continuation of this process is essential for the improvement of the quality of course materials.

The student representatives at the Faculty Board also give some feedback to the faculty on student problems including academic matters. The review team was also informed that the students provide feedback to some individual lecturers through informal discussions. It was evident that there is no formal mechanism to obtain the students' feedback at the end of the each course unit on teaching-learning process and the course contents relevant to each course.

Since face-to-face student / teacher interactions are considerably low in the OU system, we recommend the expansion of the student feed back mechanisms. Further, a formal mechanism to convey the action taken on student feedback may also be established.

Judgment: Having considered carefully the extent and use of feedback systems, the reviewers are of the opinion that this component needs improvements, but yet can be rated as **SATISFACTORY**.

4. 5 Postgraduate Studies

Reviewers noted that facilities available for postgraduate degrees by research are minimal in the Department. Except for the research room there are no AC facilities for laboratories. No equipment for research is available other than those obtained through research grants, which are used for specific research projects. Two Post-graduate degree programmes by research (Ph. D. and M. Phil) are been offered in Zoology. According to the academic staff of the department of Zoology, the first postgraduate degrees (two M Phil degrees and the 1st Ph. D degree) awarded by the Faculty of Natural Science were from the Department of Zoology. The review team observed the research theses of these postgraduate students and found them to be of good quality.

The reviewers were able to meet two Postgraduate students (by research) - one M.Phil. student and one Ph.D. Student. Both depended on outside resources more than on resources of the Department for research facilities. They were satisfied with the research guidance given by the supervisors in the department.

The students following the taught postgraduate Diploma in Environmental Sciences were not available during the site visit period. However, the reviewers were able to meet only a past student from this postgraduate program. The student however expressed his dissatisfaction over the course contents within this program and emphasized the importance of updating the course structure and syllabi. Reviewers also feel that the course structure and syllabi of the taught postgraduate course need to be revised considering the urgent national needs.

Research becomes one of the most important activities in any university. Lack of research facilities at the Department is a serious deficiency. The review team recommends that fields in which research is presently possible, for example field based research, be identified and developed until equipment and other research facilities can be further expanded.

All members of senior staff have acquired postgraduate qualifications, the majority of them acquiring foreign university qualifications. The senior academic staff members of the department have expertise in various core areas and applied areas of Zoology. Research publications of some staff members indicate the potential and capability for further development. The review team was of the

view that the postgraduate studies in the department could be further enhanced with the collaboration of researchers in other institutions.

Judgment: When considering the limited resources available, the aspect of postgraduate studies can be ranked as **SATISFACTORY**.

4. 6 Peer Observations

According to the views of the academic staff members of the department, peer review cannot be practiced in the conventional manner in the Open University system as they do not conduct the lectures as in other national universities. Instead, peer observation focuses on how effectively the staff writes their course material. However reviewers feel that there are ample opportunities available to conduct peer review process especially during the conduction of practical classes and day schools.

According to the Head of the Department, open discussions on all academic matters occur at the departmental meetings and corrective measures are taken accordingly if shortcomings have been brought to the notice of the Department. The discussions with the staff and the observation of practical classes indicated that peer observation of the junior staff (probationary lecturers and educational assistants) is carried out to some extent by the senior staff. Peer observation of one permanent academic staff member has been carried out on a voluntary basis. However, a formal peer observation system is not in operation in the Department or in the Faculty.

The Department may consider exploring the possibility of implementing a formal mechanism for peer observation of both the junior and senior staff members for the improvement of the teaching and learning process. Senior academic staff members within or outside the department could be invited for this process. The Head of the department reiterated her interest to introduce peer observation as early as possible.

Judgment: Having considered carefully the extent and use of peer observations, the reviewers are of the opinion that this component can be rated as **SATISFACTORY**.

4. 7 Skills Development

The reviewers noted that the curricula of the Department of Zoology are designed to facilitate the development of subject specific and interpersonal skills to a considerable extent. Being a Department that practices distant teaching / learning, the department promotes development of independent and self learning skills in all students from level I onwards. This is achieved by the use of special instructions in the course materials.

The students get the opportunity to develop their subject specific practical skills during practical classes in the laboratory and field studies. In addition, students at level 5 are trained in report writing and oral presentation skills in certain optional course units such as Animal Behavior and Biodiversity Conservation. Reviewers noted that thus only limited number of students gets the opportunity to develop research skills and presentation skills and since this opportunity is given to a very low number of students at level 5 based on their overall performances.

To rectify this situation, the Department may consider inclusion of interpersonal / transferable skill development strategy into all the optional course units offered at level 5 so that all students following different optional courses get the opportunity to develop these skills.

Judgment: The reviewers are of the view that this aspect can be rated as **SATISFACTORY**.

4. 8 Academic Guidance and Counseling

Reviewers were informed that a fairly effective guidance and counseling system is available within the Faculty and the Department of Zoology. There is a general counseling mechanism for both academic and personal matters organized by the Faculty. During the pre-orientation and registration period, students are allocated to academic staff members for academic /personal counseling throughout their career at the University. A personal tutor/counselor spends around 2 hours during the pre-registration period with the students during which problems are discussed. The Dean of the Faculty has provided guidelines for this counseling activity through a printed document. There is apparently a very good orientation program for new entrants lasting around 3-4 hours. A video film on the University is shown and a copy of the prospectus is given at this instance..

Guidance on the overall learning procedure was reported adequate according to the students whom the reviewers interviewed. Guidance came to the students through the university hand book and other brochures sent by post before registration or during the registration periods and through discussions with the academic staff during face to face interactions. Most students interviewed held the view of easy accessibility of the academic staff of the department for such interactions. The reviewers consider this as a very positive factor in an Open University system. Additional announcements on academic matters are made in the Faculty and Departmental Notice Boards. Registration for practicals is done well in advance by students by entering their names on a book maintained at the department. The students made use of this facility and the practice was observed by the reviewers as efficient. The students felt that the time allocated for the orientation program during the registration period is insufficient. However, there is also a post-orientation program, which had been recently introduced.

Since answer scripts of OBTs and NBTs and home assignments are sent back to students with comments by the respective tutor, students get a valuable academic guidance on their performances additionally. They are required to respond to these comments. This process however ends here and there is no rechecking by the tutors.

ZooNet, recently established by the Zoology students' Society of OUSL has helped to develop a close interaction between the teachers and students. The logo of the ZooNet can be considered as very innovative. Reviewers found that there is a good rapport between the teachers and level 4 and 5 undergraduate students through the ZooNet.

Lack of a central student counseling unit for academic / personal counseling at OUSL is a serious shortcoming. The importance of counseling at an Open University needs to be more recognized as students need guidance for proper academic planning at distant education systems more than at other conventional universities. Deficiencies in the overall student academic guidance methodologies therefore need to be identified and appropriate solutions devised. We believe that through proper academic guidance, the present drop out rates could also be reduced.

Judgment: Having considered all aspects of academic guidance and counseling available in the Faculty/Department of Zoology, the reviewers are of the view that this section could be rated as **GOOD**.

5. CONCLUSIONS

The good practices, weaknesses and the judgment for eight aspects considered in the subject review are summarized as follows.

5.1 Curriculum Design, Content and Review

Good practices

1. All curricula are in line with set goals and objectives.
2. Modularized credit valued course unit system
3. Provision of an alternate pathway to any student to enter a Degree Program with Zoology through a Foundation Course
4. Contents of courses have adequate breadth and depth
5. Flexibility in the choice of course modules
6. Opportunities to develop subject related skills and interpersonal skills
7. Opportunities for employed persons to acquire knowledge in specific fields they aspire through the "Stand alone courses"
8. Course Development committees

Weaknesses

1. Students, alumni, potential employers and experts in the relevant fields are not consulted in revising the curricula.
2. Limited number of optional course units in the undergraduate program
3. Some courses need to be revised

Judgment: Satisfactory

5.2. Teaching, Learning and Assessment Methods**Good practices**

1. Provision of printed teaching materials to students.
2. Provision of descriptive practical schedules
3. User friendly Study guides for level 3 and 4 courses
4. Good quality audio-visuals that supplement learning activities.
5. In cooperation of field classes to strengthen practical classes.
6. Promote self learning skills
7. Providing opportunities to develop variety of subject specific skills
8. Comprehensive Assessment methods
9. Formulating of questions to achieve intended learning outcomes
10. Moderation of question papers at level 5 and moderation of question papers of the postgraduate course

Weaknesses

1. Insufficient laboratory equipment.
2. Teaching material in level 5 and certificate courses needs to be revised and updated.
3. Museum needs to be rehabilitated .
4. Real purpose of day schools is not being achieved.
5. Giving less weightage to practical marks

Judgment: Good

5.3 Quality of Students Including Student Progress and Achievements**Good practices:**

1. Continuous monitoring of the progress of students through in-course assessments and end of course examinations
2. Opportunity for the students to improve English knowledge
3. Pass rates of the students who sat for the respective examinations are fairly high.

4. Opportunity to win limited number of special awards (a prize and a gold medal) for good students.

Weaknesses:

1. High student dropouts.
2. Lack of facilities to carry out practicals at the regional centers

Judgment: Satisfactory

5.4. Extent and Use of Student Feedback, Qualitative and Quantitative

Good practices

1. Provision of a forum for discussion of student responses to the academic courses at Tutor clinics
2. “Developmental Testing” is a good practice adopted by the department whereby the course team obtains the views of students on the course contents before printing the course material
3. Provision of the student representatives, to discuss the issues, regarding academic matters at the Faculty board.

Weaknesses

1. No formal student-staff liaison committees to obtain students’ feedback.
2. No evidence of communication of action taken in response to the feedback provided by the students on the teaching learning process.
3. The day schools are not properly organized.
4. There is no formal mechanism to obtain the students’ feedback at the end of the each course unit on teaching-learning process and the course contents relevant to each course.
5. Unavailability of formal mechanism to convey the action taken on student feedback

Judgment: Satisfactory

5.5. Postgraduate Studies

Good practices:

1. Postgraduate students’ conducting research under the supervision of a senior staff members
2. Satisfactory number of research publications by the staff members considering the limited resources available in the Department
3. Contribution of the department to a taught postgraduate programme

Weaknesses:

1. Most of the infrastructure facilities are below accepted norms.
2. Lack of adequate research facilities
3. Overall research facilities for staff/student are inadequate.

Judgment: Satisfactory

5.6. Peer Observations**Good Practices:**

1. Informal peer observation for junior staff members
2. Conduct of practical classes under the supervision of senior staff members

Weaknesses:

Lack of regular mechanism for peer observation of senior teachers

Judgment: Satisfactory

5.7 Skills Development**Good practices**

1. Identification of development of skills as learning outcomes.
2. Designing the curriculum to ensure the development of subject specific skills and interpersonal skills
3. Employment of satisfactory mechanisms to develop subject specific skills and interpersonal skills
4. Designing assessment methods to evaluate subject specific skills and interpersonal skills.

Weaknesses

1. No consultation of the employers regarding the skills they expect from graduates.
2. Only few students get the opportunity to develop presentation skills and research skills since this opportunity is given to a very low number of students based on their overall performances

Judgment: Satisfactory

5.8 Academic Guidance and Counseling**Good practices**

1. Providing academic guidance during the orientation programme.

2. Most Senior Lecturers are available for students for both academic and personal counseling and guidance.
3. There are good student /staff relationships.
4. A schedule for the Department was available.
5. The Department of zoology has a very dedicated staff.
6. The students are motivated and ambitious.

Weakness

1. There is no professional counseling unit at the OUSL.
2. The fact, that nearly 50% of OUSL students are employed and work according to set targets This fact has not been taken into account especially in setting the library lending hours as well as setting the availability hours of staff for counseling .

Judgment : Good

Aspect	Judgment
Curriculum Design, Content and Review	Satisfactory
Teaching Learning and Assessment Methods	Good
Quality of Students Including Student Progress and Achievements	Satisfactory
Extent and Use of Student Feedback, Qualitative and Quantitative	Satisfactory
Postgraduate Studies	Satisfactory
Peer Observations	Satisfactory
Skills Development	Satisfactory
Academic Guidance and Counseling	Good

Overall Judgment – *Suspended*

6. ANNEXURES

ANNEX 1

Agenda for the Visit by the Review Team

DAY-1 – Sunday 15th January 2006

- 9.00 - 9.15 - Welcome Meeting with Head and staff
- 9.15 - 9.30 - Discuss the Agenda of the Review
- 9.30 - 10.30 - Department Presentation on the Self Evaluation Report (with tea)
- 10.30 - 11.00 - Discussion.
- 11.00 – 12.00 - Observe Department Facilities
- 12.00 - 12.30 - Observe a Day school – ZOU 2264 – Level 4
- 12.30 - 1.30 - Lunch**
- 1.30 – 2.00 - Observe Documents
- 2.00 – 3.00 - Observe Day schools 2, 3 and 4:
 - ZOU 1262 Sinhala - Level 3
 - ZOU 1262 English – Level 3
 - ZOU 3165 – Level 5
- 3.00 – 4.00 - Observe Documents (working tea)
- 4.00 – 5.30 - Meeting with Undergraduate/Certificate Students

DAY – 2 – Monday 16th January 2006

- 9.00 – 9.15 - Meeting with Dean
- 9.15 – 9.45 - Meeting with technical staff and other non-academic staff
- 9.45 – 10.30 - Observe Practical class – ZOU 1262
- 10.30 – 11.30 - Observe Documents (working tea)
- 11.30 – 12.30 - Observe Media house, Library, AV center, Press, RES Computer lab, etc
- 12.30 – 1.30 - Lunch**
- 1.30 – 2.00 - Student presentations (ZOU 3173)
- 2.00 – 3.30 - Academic Guidance and Counseling Core Aspect Meeting/meeting with academic staff (working tea)
- 3.30 – 4.00 - Meeting with postgraduate Students
- 4.00 - 5.00 - Meeting of Reviewers.

DAY – 3 – Tuesday 17th January

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|---------------------|---|
| 9.00 - 9.45 | - Observing supporting AV material |
| 9.45 - 10.30 | - Observe Practical class – ZOU 1262 |
| 10.30 – 11.30 | - Reviewers Private Discussion (Working Tea). |
| 11.30 - 12.30 | - Meeting with Head & Staff for Reporting. |
| 12.30 - 1.30 | - Lunch |
| 1.30 - 5.00 | - Report Writing |

ANNEX 2

List of Documents Observed

1. Staff and work schedule
2. Faculty prospectus – Natural Sciences
3. Prospectus - PG diploma in Environmental science
4. Prospectus – Master of arts in teacher education
5. **Case study 1:** Curriculum development process of on M. Sc in Medical Entomology and Applied Parasitology
6. Example of co-curricular activity – ZooNet Society
7. **Case study 2:** Course development process of Animal form and function course
8. **Case study 3:** Restructuring process of B.Sc. programme
9. Future plans: New programmes/courses being developed - Curricular and other information
10. Department and Faculty Activity schedules
11. Table showing the learning outcomes achieved in various courses
12. Course information sheets
13. Course material - print and AV material
14. Practical guides and samples of students' practical reports
15. Continuous assessment and final exam papers and marking schemes
16. Project reports

17. Literature survey reports
18. Mark sheets: Continuous assessment, Eligibility mark sheets, Final exam
19. Examples of transparencies and PowerPoint presentations used at day schools
20. Information and study questions used at tutorial sessions
21. **Case study 4:** How academic standards of assessment and evaluation are maintained
22. **Case study 5:** Path to registration - Admission and induction arrangements
23. Statistics on student progression and achievements (Summary of Final awards for all programmes, Summary of average % pass rates – for courses in each programme, Statistical report of final awards – B Sc degree, Detail information on performance – including students sat, pass, eligible, etc)
24. Copies of feedback questionnaires (Developmental testing questionnaire, Course evaluation questionnaires, Needs survey questionnaire, Student support, B Sc degree)
25. Minutes of meetings where student problems are discussed
26. Theses of M Phil/PhD – a sample
27. Research reports of PG Diploma students – a sample
28. Evaluation sheets for peer observations –a blank sheet
29. Handouts given to students on skills development
30. Questionnaire used specifically to find out about counseling, Roster for academic counseling during registration, Academic counseling meeting and guidance given for counselors, Personal counselor's information sheets that allow them to keep contact with the student, A typical tutor clinic schedule during which time all staff travel to Regional centers to provide support to students, A sample of tutor marked assignments with feedback