



**Programme Review Report**  
**Programme Reviews - 2018**  
**Bachelor of Education (Honours) in Natural Science**  
**Department of Secondary and Tertiary Education**  
**Faculty of Education**  
**The Open University of Sri Lanka**  
**17<sup>th</sup> to 20<sup>th</sup> September 2018**



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**Quality Assurance Council**  
**University Grant Commission**

## List of Abbreviations

|          |  |
|----------|--|
| ABA      | Activity-Based Assignments                         |
| AR       | Assistant Registrar                                |
| AV       | Audiovisual  |
| B.Ed.    | Bachelor of Education                              |
| CA       | Continuous Assessment                              |
| CAT      | Continuous Assessment Test                         |
| CETMe    | Centre for Education Technology<br>and Media       |
| CRC      | Colombo Regional Centre                            |
| DT       | Drama and Theatre                                  |
| FCDC     | Faculty Course Development<br>Committee            |
| HEI      | Higher Education Institution                       |
| ICT      | Information & Communication<br>Technology          |
| ILO      | Intended learning Outcomes                         |
| IQAC     | Internal Quality Assurance Cell                    |
| IQAU     | Internal Quality Assurance Unit                    |
| IRU      | International Relations Unit                       |
| IT       | Information Technology                             |
| LMS      | Learning Management System                         |
| MOU      | Memorandum of Understanding                        |
| NAC      | National Access Centers                            |
| Nat. Sc. | Natural Sciences                                   |
| NEREC    | National Education Research & Evaluation<br>Centre |
| NODES    | National Online Distance Education Service         |
| ODL      | Open and Distance Learning                         |
| OER      | Open Educational Resources                         |
| OMIS     | Online Management Information<br>System            |
| OUSL     | Open University of Sri Lanka                       |
| QA       | Quality Assurance                                  |
| QAAC     | Quality Assurance Accreditation<br>Council         |
| RES      | Regional Education Service                         |

|           |   |
|-----------|---|
| SAR/Exams | Senior Assistant Registrar /<br>Examination               |
| SDC       | Staff Development Centre                                  |
| SER       | Self-Evaluation Report                                    |
| SLADD     | Sri Lanka Association for the Advancement of<br>Education |
| SLQF      | Sri Lanka Quality Framework                               |
| STE       | Department of Secondary and Tertiary<br>Education         |
| THA       | Take Home Assignments                                     |
| THTE      | Tower Hall Theatre<br>Foundation                          |
| TP        | Teaching Practicum  |
| UCDC      | University Course Development<br>Committee                |
| UGC       | University Grants Commission                              |

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## **Section 1: Brief Introduction to the Programme**

The Open University of Sri Lanka (OUSL), established in 1980 under the Universities Act No. 16 of 1978 is the premier Open and Distance learning institution in Sri Lanka where students pursue their studies through Open and Distance Learning (ODL) methodologies. There are eight Regional Centers and eighteen Study Centers of the OUSL located island wide. The OUSL has five (5) Faculties, namely the Faculty of Humanities & Social Sciences, the Faculty of Natural Sciences, the Faculty of Engineering Technology, the Faculty of Education and the Faculty of Health Sciences. Total student population is around 35, 000.

The policy of the OUSL focuses on increasing access to learning and enhancing social equity while ensuring cost effectiveness, and giving priority to the quality of study programmes, research and scholarship. The OUSL is committed to remove barriers to higher education arising from physical, social, and cultural distances that weaken opportunities for higher education which is commendable.

### **1.1 History of the Faculty of Education**

The Faculty of Education, established in 2003 has three Departments, namely the Department of Secondary and Tertiary Education (STE), Department of Early Childhood and Primary Education and the Department of Special Needs Education. The Faculty awaits UGC approval to establish its fourth department - the Department of Educational Leadership and Management.

Bachelor of Education (Natural Sciences) degree programme is offered by the Department of Secondary and Tertiary Education. The Faculty caters to over 8,300 students enrolled in 09 different programmes ranging from Certificate to Ph.D. levels.

### **1.2. The Department of Secondary and Tertiary Education**

The Department of Secondary and Tertiary Education (STE) is the largest Department of the Faculty of Education. As of March 2018, STE consists of 27 academic staff (03 Professors, 17 Senior Lecturers, 07 Lecturers) and 05 non-academic staff members (one clerk, 1 computer application assistant, 1 staff assistant, 2 office assistants). The Department's pool of resource personnel includes the academic and non-academic staff of the other two departments of the Faculty and a large number of external academics.

### **1.3. The Department of Secondary and Tertiary Education**

The Bachelor of Education (Natural Sciences) (B.Ed. Nat. Sc.) Degree Programme, commenced in 1993 as an inter-Faculty programme. Faculty of Natural Sciences and Faculty of Education are responsible for

conducting the programme. Faculty of Natural sciences has five academic departments namely, Botany, Chemistry, Mathematics & Computer Science, Physics and Zoology. First two levels (level 3 and level 4) of the B.Ed.(Hons) Nat. Sc. are conducted by the Faculty of Natural Sciences. The students are expected to proceed to level 5 and 6 after completing the levels 3 and 4. Methods of course delivery consist of interactive day schools, workshops, tutorials, group activities, laboratory work and fieldwork. Evaluation methods include take-home assignments, continuous assessment tests, activity- based assignments, teaching practice, a project and the final written examination.

Direct registration for B.Ed. Nat. Sc. degree programme has been initiated in 2012/2013.

#### **1.4. Objectives of the Study Programme and graduate attributes**

The main objectives of the **B.Ed. (Hons) Nat. Sc.** Degree Programme are: to provide further education opportunities for non-graduate Science/Mathematics teachers in the education system and for those who are qualified to enter a university. This programme also aims at providing professional qualifications for science graduates who are willing to enter the teaching profession.

##### **Graduate attributes**

The B.Ed. Nat. Sc. Degree Programme shall produce graduates with the following attributes:

- Commitment to the teaching profession as a Science/Mathematics teacher
- Professional skills to perform the role of an effective Science/Mathematics teacher
- Comprehensive knowledge in the subjects- Science/Mathematics and psychological, philosophical, counseling, management and technological aspects of Education
- Ability to apply knowledge in the classroom setting in a meaningful and an appropriate manner.
- Analytical and critical insight into specific problems & issues of the education system
- Management and leadership skills to support the school administration
- Ability to accomplish various academic assignments and the ability to reflect upon the relationship between theory and practice
- Creative and imaginative skills to apply the knowledge of Science/Mathematics as a viable means for students' problem-solving skills
- Intellectual and professional skills to bring about desired changes in the teaching-learning process
- Skills to undertake and complete a school based project on a current problem in the school setting
- Positive attitude towards team work and a consciousness towards society

## 1.5. Student intake

Forty students have enrolled for the degree programme in 2017/2018 and only two students have completed the degree during 2017/2018. The B.Ed. Nat. Sc. programme can accommodate up to 100 students. Fourteen batches have graduated since the inception of this programme.

**Table 1.1. Student Enrolment and graduation in B.Ed. Nat. Sc. Degree Programme.**

| Academic Year | Number Enrolled | Number Graduated |
|---------------|-----------------|------------------|
| 2017/18       | 40              | 02               |
| 2016/17       | 30              | 04               |
| 2015/16       | 35              | 04               |
| 2014/15       | 09              | 03               |
| 2013/14       | 38              | 04               |

The main challenges to the sustainability of the B.Ed. Nat. Sc. (Hons) Degree Programme are the low number of student enrolment and the low passing out rate. Students registered for the B.Ed. Nat. Sc. Degree Programme before the year 2012/2013 had the option of continuing the B.Sc. degree offered by the Faculty of Natural Sciences if they wish. Although it is a good practice this affects the sustainability of the programme. The decision for direct registration for B.Ed. Nat. Sc. programme in 2012/2013 may increase the passing out rate.

## 1.6. Student Support Services and Learning Resources

The Faculties provide student support and learning resources to the students in a variety of ways.

### 1.6.1. Personal Tutors

Each student is assigned a personal tutor/counsellor during the pre-registration orientation sessions of some programmes. The Personal Tutor will guide the students and provide greater awareness about the University, the study system and other particulars regarding the programme of study.

### 1.6.2. Common Induction Programme

The common induction programme StART@ OUSL (Student Academic Readiness Training @ OUSL) consists of three compulsory courses; English for Academic Purposes (EGAP), Empowering for Independent Learning (EfIL), ICT skills and optional courses to be selected from Soft Skills & Social Harmony and second National Language are available for students.

### 1.6.3. Day Schools

Day schools are interactive sessions where the student will get the opportunity to meet the respective course teachers to clarify any difficulty they come across in their study material.

### 1.6.4. Online Support/ computer laboratories

In order to give the students additional help and also to familiarize them with modern learning trends and tools, some courses are supplemented with an online component. The online activities could be accessed from home or from the OUSL Computer Centers located at several centers. Computer facilities are available centrally and also at the faculty level.

The Big Blue Button facility facilitates the live coordination/ activities among main university and Regional Educational Centers.

### 1.6.5. MyOUSL

Through the MyOUSL web portal students may access online Moodle courses, personal details, timetables, payment details and submit final examination applications etc.

### 1.6.6. Library

The OUSL operates a network of libraries comprising the main library at Central Campus and Regional Centre libraries located at other Regional Centers. In addition, there are small libraries in each of the Study Centers. In addition Department also has a collection of books and student dissertations. The main library is well equipped with a substantial collection of books in a wide variety of subjects and many foreign and local journals. The main library also operates a fully equipped Audio Visual Resource Centre (AVRC) with a substantial collection of videos/audios/CDs to supplement print material. The AVRC provides internet facilities for study purposes of students.

### 1.6.7. Regional Educational Services

The University has a network of Regional Centers/Study Centers distributed throughout Sri Lanka. These centers provide facilities for distribution of course material, limited reference facilities at libraries, counselling, day schools and laboratory classes in the science disciplines.

### 1.6.8. University Enhancement Bursary

University Enhancement Bursaries are awarded by The Open University of Sri Lanka to motivate the degree level students to complete the courses they have selected in a particular year and complete their degrees at a reasonably shorter period of time.

### 1.6.9. Student Counselling

The OUSL Counselling Unit is administered by the Dept. of Psychology & Counselling. Counselling Team comprises of two professional counsellors. General counselling on nonacademic student matters is available to all students through the Chief Student Counsellor and six Faculty Student Counsellors.

### 1.6.10. Temporary Residential Facilities

The University provides temporary residential facilities for a limited number of students for a limited period for attending academic activities.

#### 1.6.11. Medical Centre

A medical Centre is available at the Colombo Regional Centre for the benefit of all staff and students. A doctor, nurse, Public Health inspector and a pharmacist is available. Emergencies are referred to the Kalubowila Teaching Hospital. Air conditioning for drug storage area, an observation room and recruitment of the vacant carder of attendant are the requirements to be addressed.

#### 1.6.12. Student Welfare Division

The Student Welfare Division is responsible for coordination and facilitation of activities coming under different units such as student counseling, career guidance, health care, maintenance division and security allowing better networking and efficiency. Some of the specific functions coming under the Student Welfare Division include disbursement of Mahapola and other bursaries, reviewing, monitoring and evaluation of progress of activities carried out by support service units, initiation of activities to enhance student welfare and cultural renaissance, initiation of activities to enhance students' social, ethnic cohesion and harmony and Facilitation of the management of temporary residential facility.

#### 1.6.13. Career Guidance Unit

The Career Guidance unit is dedicated to bridge the skill gap among OUSL students and to build well rounded individuals to meet the present day workforce requirements. This unit conducts activities to help OUSL students and graduates to enhance their career development skills and to optimize employment opportunities available to them.

#### 1.6.14. Centre for Educational Technology & Media (CETMe)

The Centre for Educational Technology and Media (CETMe) plays a pivotal role in the Open University of Sri Lanka (OUSL) in providing guidelines for designing self-instructional materials, designing and developing educational media and ensuring quality standards of the OUSL course materials. It is the service provider for all the four faculties to develop their courses including online courses. The CETMe consists of two main units; Academic and Research Unit and Production Unit (Media House).

#### 1.6.15. Press and Dispatch Unit

The Course Material Distribution Centre (Central Dispatch Unit) is the main distribution centre of all printed course materials which are printed and supplied by the OUSL printing press. All printed course materials are stored here and sent to all OUSL Regional, Study and Teaching centers situated Island wide according to the dispatch order sent by the respective Head of Department / Programme coordinator.

Upgrading of the facilities in the printing unit and regular maintenance, filling of vacancies are the major concerns with respect to printing press.

### 1.7. Constraints Faced by the Faculty

The Faculty of education together with the Department of Secondary and Tertiary Education caters to over 8,300 students enrolled in 09 different programmes ranging from Certificate to Ph.D. levels. There

are over 200 visiting staff. Coordination of these programmes with regional centers is the biggest challenge faced by the faculty.

Relatively low number of students registering for the B.Ed. Nat. Sc. programme and the preference of students to continue with the BSc Nat. Sc. degree after level 3 and 4 resulting in very few students completing the B.Ed. Nat. Sc. programme is a main threat to the sustainability of the degree programme at present.

## **Section 2: Review Team’s Observation on Self-evaluation Report (SER)**

### **2.1. General Observation on SER**

The SER has been prepared in accordance with guidelines provided in the Manual for Review of Undergraduate Study Programmes of the Open University of Sri Lanka. Self-Evaluation Committee comprised of five academics (Dr. A. Ariyaratne (Team Leader), Mr. L.R. Gonsalkorale, Mr. S.S. Zarookdeen, Dr. F.M. Nawastheen and Mr. M.N.C. Fernando.) with the chairmanship of Dean of the Faculty had prepared the SER. Prof. G.D. Lekange and Prof. S.P. Karunanayaka have guided the team.

The review team assessed the B.Ed. Nat. Sc. degree programme based on composite SER and the evidence collected during site visit conducted.

Section 1 of the SER, included brief history of the faculty and the department, vision and the mission of the faculty, student numbers, number of academic, academic support and non-academic staff, qualification profile of academic staff, graduate attributes, programme learning outcomes, information of the learning resource system and details of student support system and governance and management aspects of the faculty. Further, the details of SWOT analysis and SWOT profile were also given in this section. Previous internal review recommendations and actions taken by the faculty are also given in this section.

Section 2 explained the process of preparing the SER. The team members attended a workshop on SER writing organized by the Faculty of Humanities and Social Sciences with Prof. Uma Coomaraswamy as the resource person. This workshop helped the faculty staff to become conversant with quality assurance process, quality criteria, best practices and standards, and also about SER writing process.

Section 3, titled “Compliance with the Criteria and Standard”, the main section for the SER, has been prepared according to the format prescribed in the PR Manual. The columns are filled as instructed. However, it was noted that the evidences cited in some instances were not directly relevant to the referred standard, indicating lack of comprehension of the quality standards prescribed, and instructions given in the PR Manual. Further, there was duplication of documentary evidences presented as same evidences were cited for many standards. The presentation of the documentary evidences was clear and the code numbers of documents were given in proper manner. Each criterion was summarized at the end of each section as required by the PR manual.

The Section 4 of SER summarized how the faculty and the department responsible for the study programmes under review have taken efforts to internalize best practices recommended and to achieve the prescribed quality standards.

## 2.2. SWOT Analysis

The SWOT analysis has been done in a proper manner and is detailed in Section 1 of the SER. SWOT profile presented in SER is elaborated below.

### 2.2.1. Strengths

- Provision of a unique opportunity for teachers/prospective teachers of Science/Mathematics to obtain a professional degree constituting relevant subject matter-related competencies as well as pedagogical competencies within a single programme of study.
- Six-month placement in the school system for teaching practice in the final year of the programme, to gain work-place experience
- Availability of a rich set of course material developed in line with the OUSL House Style.
- Use of an appropriate blend of face-to-face and distance methods for conducting the programme.
- Qualified, experienced and committed staff.
- Close student-staff relationships maintained throughout the programme.
- Networking with schools, Colleges of Education, Ministry of Education and other relevant organizations.
- Facilities to incorporate multi-media and online material.
- Adequate library facilities at the OUSL main campus, Regional/Study Centres and within the Faculty, for staff and students.
- Availability of temporary residential facilities to provide a better learning environment for students.

### 2.2.2. Weaknesses

- Small numbers of students enrolled in Levels 5 and 6 and graduating.
- Limited access to the programme at Levels 5 and 6 (Only in the Colombo Regional Centers).
- Shortage of academic support staff with technical knowledge.

- Limited IT facilities for the students’ use in the department and faculty.

### 2.2.3. Opportunities

- Demand from the school system for Science/Mathematics graduates with a professional qualification for teaching.
- Teachers with a NCOE Diploma in teaching Science/Mathematics are able to obtain a professional degree within a shorter duration, getting full exemption from Level5.
- Promoting online delivery of courses using the technological facilities.
- Enhancing interest towards research through the Project to be conducted at Level 6.
- Regional and study center network to expand access to the programme.
- Ability for the prospective teachers following the degree programme to learn from professionally experienced peers who are already teaching in schools.

### 2.2.4. Threats

- Competition with other higher educational institutions to increase student numbers.
- The programme reflects the mission, goals and objectives set out in its corporate plan and evidence is present that student centered learning and outcome-based education approach has been adopted. However still the study programme does not comply fully with the national guidelines such as Sri Lanka Qualifications Framework (SLQF) and the Subject Benchmark Statements (SBS).

## 2.3. Recommendations made by the reviewers in previous reviews and action taken

There had been a Faculty of Education Subject Review in 2010 and an Institutional Review in 2013. Remedial measures taken to address the issues raised in those reviews are indicated in Table 2.1.

**Table. 2.1. Recommendations made by the reviewers during subject review in 2010 and institutional review in 2013 and action taken.**

|   | <b>Recommendations of Reviewers</b>                                   | <b>Action Taken by the Faculty/ University</b>                                    |
|---|---|---|
| 1 | Regional centers are extremely under resourced and under-facilitated. | Faculty appoints part time coordinators to support the conduct of the programmes. |

|   |  |  |
|---|--|--|
|   |  | University has taken steps to appoint staff to Centres.  |
| 2 | LMS Moodle induction programme to facilitate course delivery online has been slow  | Steps taken to provide more training to staff and students.  |
| 3 | IT support system is not adequate to meet the demands of staff and students.   | The ownership and control of NODES facilities were given to the OUSL so that those facilities can be used to provide an excellent service to the students.   |
| 4 | Translations of lesson modules into Sinhala and Tamil needs to be done by those who know the subject matter.   | Content editing and translations are done by specialists according to their specializations  |
| 5 | Need to appoint students and academic counselors for each Department.  | <p>Student counselors have been appointed representing each Department and they are working in the OUSL student counselors committee.</p> <p>Internal academics as well as visiting lecturers are appointed as centre coordinators to counsel the students in addition to programme and course coordinators.</p> |
| 6 | Establish a permanent Curriculum Revision Committee at the Faculty level enabling to consider necessary curricular revisions periodically in all the departments.                                    | <p>Faculty Curriculum Development Committee has been appointed representing each Department.</p> <p>The chairperson of the Faculty Curriculum Development Committee is the Faculty representative to the University Course Development Committee.</p>  |
| 7 | It is suggested that it would be appropriate if all the final year theory papers are moderated by outside experts and also if possible getting the 2 <sup>nd</sup> marking done by the same experts. | Wherever possible the Faculty identifies outside experts for moderation and 2 <sup>nd</sup> marking.   |

|    |   |   |
|----|---|---|
| 8  | Maintain an up to date database of Alumni of the Faculty.   | Faculty level Alumni is functioning.  |
| 9  | Improve the peer evaluation procedure by encouraging each staff member to select colleague for the observation of his/her teaching. | Peer observation procedure is adopted. Course team concept is in practice.  |
| 10 | Provide formal training for student counselors and academic counselors.   | University Staff Development Centre conducts workshops.<br><br>International Relation Unit conducted a workshop on student support services with the collaboration of international expert. |
| 11 | Use e-learning methods intensively for delivering learning materials to the students.   | The department incorporates several e-learning strategies such as online learning, LMS, ICT, Open Educational resources... etc.   |
| 12 | Provide high quality printed learning materials.  | The OUSL press is equipped with modern printing machinery to produce high quality material  |
| 13 | Establish a formal system to obtain student feedback through distance learning methods.   | Faculty level student feedback is developed. Currently OUSL common feedback form is used to get the feedback from the students. RES and CETMe are using this procedure.                     |

### **Section 3: A brief description of the review process**

The review team comprised of Prof J.M.P.K. Jayasinghe, Wayamba University (Chair), Dr Pushpa Vitharana, University of Peradeniya, and Dr. Erandathie Lokupitiya, University of Colombo. The initial pre- site visit review of the OUSL SER was conducted by the team at the UGC premises on July 31, 2018, where the reviewers pre-graded the B.Ed. (Nat.Sc.) Degree Programme based on the SER.

During the Day 1 of the site visit, the review process started with the meeting at IQAU, where the reviewers got the opportunity to discuss on the QA process at the university with the Director/IQAU. This meeting was followed by the meeting with the Vice Chancellor of the Open University. The team then met with the Dean/Faculty of Education and the academic staff of the Secondary and Tertiary Education. During the mid-morning of Day 1, the review team met with the Administrative and Operational team of the university (i.e. DVC, Registrar, Bursar, Director/Research, Director/IT, Director/Operations, Director/Welfare, SAR/Examinations, and SAR/ Student Affairs, etc, in one common meeting which helped receiving and getting clarified most of the information the team needed in relation to overall administrative structure and functioning of the university. Review team met with the Programme Coordinator and the members of the programme team as the final meeting for the day just before noon. During the afternoon, the review team was engaged in observing the documentation of evidence provided by the programme team. During the meetings with the relevant stakeholders, the quality assurance measures, adequacy of supporting system and staff in addressing the ODL mode of education, student centered learning and, facilities available, etc., were discussed in detail.

During Day 2, the review team met with the faculty IQAC team on the QA measures taken by the faculty and the departments, and then with the Assistant Registrar and the staff of the Deans office and other non-academic staff of the faculty. The facilities available within the departments and the faculty as a whole in conducting ODL mode of education and supporting services provided for the staff for their continued improvement, etc., were discussed. The review team visited the science laboratories to see the facilities available for the students of the programme, as they need to follow two years of courses at the Faculty of Science. OUSL Colombo Regional Center (CRC) was visited and observed the efficient student registration procedure available at the facility, classrooms, book store, and other facilities available with the CRC. The review team met with the Director/Regional Education Services (RES) and

Assistant Directors (ADs) of CRS, and got the opportunity to talk with the ADs of the regional centers distantly using the Big Blue Button facility and inquire on their functioning and facilities available and any weaknesses or drawbacks in the system, etc.

The review team also visited the computer lab, Counseling Unit of the CRC, Press, and Health Center, IT Division, and the Staff Development Center (SDC), etc., to make further observations, and discuss with the respective Officers-In-Charge including the Directors. The team continued with observing the documentation of the evidence provided in relation to the SER as well.

During Day 3, the observations of facilities towards ODL and student centered learning was continued by visiting the Center for Educational Technology and Media (CETMe) center and library; the team met with relevant officials, listened to their presentations and discussed on the facilities available and what needs further improvement, etc. The team also met with the Dean and the academic staff of Faculty of Science who are involved in teaching the first two years of the B Ed (Nat Sc.) programme and obtained their views on the existing mode of the conductance of the programme and success of the programme, and any recommendations on further improvement. The review team got the opportunity to visit a teaching session and the opportunity to interact with the current and past students and receive their views on the program and any recommendations for further improvement. The review team continued the observations on the evidence.

On the final day of the review process the review team revisited the ranks given under different criteria and finalized the grade for the programme, met with the Dean, Heads and other academics of the faculty and briefed on the findings with recommendations for further improvements. Overall, the arrangements made by the faculty and the university as a whole for the review team to conduct this review in an efficient and smooth way was very much appreciable.

## **Section 4: Overview of Faculty's approach to Quality and standards**

The University has established an Internal Quality Assurance Unit (IQAU) and it was provided with an office. Review team observed the proper maintaining of the files at IQAU. A senior academic member has been appointed as the Director of the IQAU to direct the internal quality assurance (IQA) programme within the university. The Faculty of Education has established an Internal Quality Assurance Cell (IQAC) and it has been provided an office space from the space allocated for research room. Senior academic member has been appointed for the post of Coordinator IQAC. As it was evident from the interviews the progress of the study programmes are discussed at the monthly meetings of the IQAC and reported to the Faculty Board. It was further noted that progress of the Degree programmes are discussed every three months at the IQAU meetings.

It was observed that Faculty and the Department of Secondary and Tertiary Education Department do not have a regular mechanism to obtain stakeholder views on the content of study programmes, programme delivery and quality of outputs. Therefore, it is necessary to implement curriculum revisions with all stakeholder participation including students, employers and external experts.

Before commencing any Degree programme at OUSL students are compelled to follow the StART@ OUSL three month training programme to facilitate students to develop their study skills in order to become independent learners in the Open and Distance Learning(ODL) system of the Open University. It comprises of three compulsory courses and three optional courses offered at Level 3, the first year of the degree programme. Empowering for Independent Learning (EfIL), English for General Academic Purposes (EGAP) and ICT Skills are the three compulsory courses while second national language Sinhala/Tamil, soft skills for personal development and social harmony are three optional courses.

Faculty organizes one day orientation program for all new students and students are provided prospectus with all details of the university as a whole and information about the university and the faculty. It was observed that B. Ed. (Natural Sciences) students get two handbooks one from the Faculty of Science for level 3 and 4 and the rest from Faculty of Education for Level 5 and 6.

The University has a Carrier Guidance Unit and it continuously provides training opportunities for undergraduates to enhance their soft skills and the knowledge of second language. It was evident that confidentiality of examination results are maintained and the results are released within the stipulated time period.

## **Section 5: Judgment on the six Criteria of the Programme Review**

The review team's assessments of six review criteria as strengths and deficiencies /weaknesses, based on SER, documentary evidences provided, direct observations of facilities, and impressions made through stakeholder discussions are given in this section.

### **5.1 Criterion 1 - Programme Management**

The Faculty of Education of the Open University adopts an appropriate governance and management mechanism to manage the administrative and academic activities of the faculty.

#### **5.1.1 Strengths**

Vision and mission of the Open University are reflected in action plans and programmes undertaken by the faculty. Comprehensive undergraduate Guide books for the Faculty of Natural Sciences and Faculty of Education which include information on study programme, courses, learning support systems, examination procedures, student support services, etc. are available. Student Academic Readiness Training (StART@OUSL) offered by the career guidance unit helps students to undertake their programme of study in the distance education mode and improves language skills, social harmony, ICT skills and soft skills. Comprehensive information management system is operational to manage student information, programme and course information, academic calendar, examination dates and results. Faculty has setup an Internal Quality Assurance Cell (IQAC) with defined functions and operational procedures. Faculty has entered into MOUs for collaborative partnership with foreign institutions and credit transfer programmes with local educational institutions. Department of Special Needs Education address the educational needs of the special needs population. The network of Regional Centers/Study Centers distributed throughout Sri Lanka decentralize some of the facilities.

Faculty website is up-to-date and provides links to student handbooks and other required information. The use of ICT facilities for programme administration and management and ODL mode of delivery (E.g. OMIS, MyOUSL) are commendable. Availability of different financial assistance schemes (University Enhancement Bursary) for needy students can be considered as a major service.

#### **5.1.2 Weaknesses**

No proper strategy for attraction and retention of students (graduation rate is much lower compared to the rate of enrolment) is available. There is no evidence for regular monitoring of the implementation of the curriculum and use of such findings for programme improvement. It was also noted that the lack of well experienced senior academics due to recent retirement of senior academics.

## **5.2 Criterion 2 - Programme Design and Development**

The Bachelor of Education (Honours) Degree programme in Natural Science is jointly offered by the Faculty of Education and the Faculty of Natural Sciences of the Open University. It is a four academic year programme, of which the first two years (Levels 3 and 4) are allocated to teaching science subjects and it is offered by the Faculty of Natural Sciences. The rest of the two years (Level 5 and 6) are devoted for teaching education subjects by the Faculty of Education. The curriculum of Levels 3 and 4 of the Bachelor of Education (Honours) Degree programme in Natural Science is identical to the curriculum of Level 3 and 4 in the Bachelor of Science Degree

The Bachelor of Education (Natural Sciences) was started in 1993 but complete curriculum revision has not been done yet. Students are required to complete 128 credits, with a minimum 32 credits per each year. In the final year there is a mandatory requirement of completing a research project with 08 credits. Internship/Teaching practice in a School worth of 8 credits is a major component in which students gain pedagogical skills required for effective teaching. The education courses at level 5 and 6 consists of compulsory and only two optional courses.

### **5.2.1 Strengths**

The Faculty has made available to its learners clearly stated transfer-of-credit/exemptions policies in order to facilitate the mobility of learners and recognize prior learning and experience. Access to programme is as open as possible with flexible entry credit exemption policies.

### **5.2.2 Weaknesses**

There are no proper evidence of planning and designing the curriculum of Bachelor of Education (Natural Sciences) programme considering the views of stakeholders. It is suggested to incorporate the views of all stakeholders when the curriculum be revised in future.

## **5.3 Criterion 3 – Course Design and Development**

### **5.3.1 Strengths**

Course structure has been made available to the students through the brochures providing by two Faculties. Appropriate and adequate resources are available and accessible for the faculty for effective

course design and development. Course materials have been prepared timely and distributed among students. However it was evident that sometimes quality soft copies are not available for producing learner friendly course materials.

It was noted that teaching practice is planned and conducted with the mentors appointed in each schools. It was noted that the staff is provided with required training in outcome-based education & student-centered learning approach (OBE-SCL) and the staff is provided with teaching & training facilities to implement OBE-SCL.

### 5.3.2 Weaknesses

Course modules have not been compiled into a detailed curriculum document with all the details including ILO's, detailed syllabus and assessment method of each course. There is no clear evidence of designing the courses complying with SLQF and guided by subject bench marks statements. As programme ILO's are not given, course ILO's are not aligned with programme ILO's. Faculty use approved standard formats/ templates for course/module design and development. However it was not clearly evident the participation of stakeholders at the level of designing and planning the courses

It was observed that only limited number of educational courses are available in the Level 5 and 6 of the degree programme. As a result of that credit weightage given to certain courses like Psychology for adolescent is too much because there is another courses educational psychology with five credits.

It is recommended to comply with SLQF guidelines and benchmarks on education in the process of course designing in future curriculum revisions.

## 5.4 Criterion 4 – Learning Infrastructure and Resources and Learner support

### 5.4.1 Strengths

The Open University of Sri Lanka as a whole has established facilities, resources and infrastructure, facilitating the ODL mode of education, which is remarkable and appreciable. The system consists of the CRC and eight regional centers and eighteen study centers, which are equipped with various facilities including IT and library facilities, course material, access to LMS and the OERs including educational videos (produced by CETMe), etc., to support ODL. The CRC and regional centers conduct day schools from time to time to allow for student-teacher interaction and learner support. The university and the departments of the faculty have sufficient computer facilities and library facilities providing the students the opportunity for independent and self-learning, in which case the students have to play a larger role compared to the students of a traditional university.

The availability of services such as English for General Academic Services (EGAP), academic and general counseling services, career guidance, financial assistance through scholarships and bursaries, health center, Temporary Residence Facilities (TRF) for students during practical/laboratory sessions and day schools, etc., provide the student-friendly environment facilitating student centered learning. Having its own press and course material, efficient system and facilities for registration, my OUSL student portal and online application process, online accessibility for assignments and results, and a common orientation for the entire system of the university (i.e. StART@OUSL) are pluses in smooth achievement of ODL. The availability of two feeding rooms for students, a day care center, and a pre-school within the university premises support proper functioning of the institute. The workshops for visiting lecturers, external examiners, master teachers, and mentors have helped in learner support through proper guidance. The programs and workshops conducted through SDC (and additional workshops by CETMe and library) have aided the strengthening the capacity of both academic and non-academic staff.

#### 5.4.2 Weaknesses

As weaknesses, the lack of proper monitoring mechanisms to ensure smooth functioning, continued improvement of the system, lack of sufficient cadre, lack of updating certain course material including textbooks, lack of evidence for having support or contribution of the student association/s in the learning process, inadequate mechanisms for ensuring learner retention in the particular program, and inadequate student attendance in extracurricular activities, etc., were observed.

### **5.5. Criterion 5- Learner Assessment and Evaluation.**

#### 5.5.1 Strengths

A combination of both formative and summative assessment strategies including the assignment, projects, and end of the semester examination could be observed. Fulfilling the formative assessment needs Continuous Assessment Tests (CATs) and tutorial classes are held before the final examination. Exam regulations and assessment criteria are clearly defined in the student handbook. Examination procedures, rules and regulations along with those in relation to any examination offenses are given in the Examination Manual. Clearly defined assessment criteria on the overall learner performance including pre-determined percentages for formative and summative assessment components and the requirements for awarding the degree are given in the regulations.

The evidence on formal appointment of internal and external examiners and the marking schemes relevant to assessment are available. The students are given feedback on their assignments and the students are given the opportunity to provide their feedback during day schools. The double-entry of

results by the Dean's Office of the Faculty ensures secure recording and delivery of results. The availability of online facilities promoting assessment through timely delivery of assignments and conducting examinations at distant regional centers, while providing online access to results, are appreciable. Awards including gold medals and the placement within Dean's List are available based on the evaluation of student performance.

### 5.5.2 Weaknesses

However, the following were observed as weaknesses: The evidence for periodical review of assessment criteria or regulations is lacking. Course revision/development and proper alignment of assessment against teaching and learning in line with SLQF is still pending.

## 5.6 Criterion 6: Innovative and good Practices

The review team identified several innovative and good practices in the system and those are mentioned below;

- Availability of StART@OUSL (Student Academic Readiness Training programme) where several compulsory and optional courses (English for general Academic Purposes, Empowering for Independent learning, Second National Language, soft skills for personal development, ICT skills, Social Harmony) are offered.
- The Faculty has established links with various international and national institutes and used such linkages to build the reputation of the institution.
- The Faculty appear to generate a considerable amount of income-to cover the expenses of the OUSL,
- Availability of reward system to encourage academics for achieving excellence in research and outreach activities. Grants are available to attend regional and international events.
- The study programme contains an undergraduate research project as a part of the teaching and learning strategy that encourages students to learn basic concepts of research and information dissemination.
- OUSL has established and operates an ICT platform to promote the use of ICT-based teaching and learning approach and tools (e.g. LMS).
- Dean's list encourages the academic performance of students.
- Availability of a center (Centre for Educational Technology and Media (CETMe)) for providing guidelines for designing self-instructional materials, designing and developing educational media and ensuring quality standards of the OUSL course material.
- University Enhancement Bursary available for needy students.
- Online registration.
- Availability of a credit transfer policy and availability of several lateral entry and exit points.

## Section 6: Grading of overall performance of the programme

The overall judgment on the Bachelor of Education (Honours) Degree programme in Natural Science under review was made as per the procedure prescribed in the Manual of Review of Undergraduate Study Programmes of the Open University of Sri Lanka.

The overall score achieved by the programme is 73.3%. Actual criterion wise score for all six criteria were more than that of the relevant weighted minimum scores (Table. 6.1.). The programme is awarded a Grade B which is considered as “Good” indicating a satisfactory level of accomplishment of quality expected of a programme of study which requires improvements in a few aspects as indicated in the report.

**Table 6.1: Weighted minimum score, actual criterion-wise score and total score and letter grade obtained for the study programme.**

|    | Criteria  | Weighted minimum score* | Actual criteria wise score |
|----|---|-------------------------|----------------------------|
| 01 | <b>Programme Management</b>                                   | <b>75</b>               | <b>119</b>                 |
| 02 | <b>Programme Design and Development</b>                       | <b>75</b>               | <b>88</b>                  |
| 03 | <b>Course Design and Development</b>                          | <b>100</b>              | <b>128</b>                 |
| 04 | <b>Learning infrastructure, resources and learner support</b> | <b>150</b>              | <b>230</b>                 |
| 05 | <b>Learner assessment and evaluation</b>                      | <b>75</b>               | <b>126</b>                 |
| 06 | <b>Innovative initiatives and good Practices</b>              | <b>25</b>               | <b>42</b>                  |
|    | <b>Total on a thousand scale</b>                              |                         | <b>733</b>                 |
|    | %   |                         | <b>73.3</b>                |

## Section 7: Commendations and Recommendations

**Detailed comments with regards to strengths and weaknesses of the faculty and study programmes are included in the relevant sections and most important recommendations which need urgent attention and actions are highlighted in this section.**

### 7.1. Commendations

The Faculty of Education with an annual student enrolment of over 4000 offers a wide range of programmes in line with its vision to be a leader in the advancement of knowledge and professional practice in education as a fundamental endeavor through Open and Distance Learning in Sri Lanka and in the Region.

The Faculty caters to over 8000 student population with multi ethnic, multi religious and multi-cultural backgrounds coming from all districts of the country, through a widely distributed network of regional and study centers in the Country. The efforts taken by the Faculty to function in a satisfactory manner with limited staff and infrastructure facilities, amidst many other limitations are commendable.

Besides offering undergraduates programmes, the FAC has taken commendable efforts to offer initial and continuous professional development programmes for teachers in the fields of pre-school, primary and secondary and special needs education, certificate and postgraduate programs which are of relevance to regional and national development. Ongoing postgraduate programmes include Master of Philosophy in Education and Doctor of Philosophy in Education.

Academic staff is experienced and with multidisciplinary knowledge in different areas. Availability of mentors for students as well as for junior staff, the Certificate in Teaching in Higher Education (CTHE) for probationary lectures and senior induction programme for senior lecturers is praiseworthy. Majority of the staff have postgraduate qualifications and have undergone training programmes on teaching and training methods. Junior academic staff are encouraged to pursue postgraduate studies.

### 7.2. Recommendations

- The title of the programme, ‘Bachelor of Education (Natural Sciences)’ (B.Ed. Nat. Sc.)" was the degree programme at the time of SER writing. Later, it has been changed in line with the SLQF guidelines as "Bachelor of Education (Honours) Degree programme in Natural Science". The title “Bachelor of Education (Honours) Degree programme in Natural Sciences” is more appropriate and may have more demand and recognition in future.

- Strengthen the conduct of the peer review process and student feedback assessment process and use information/results from such assessments to make further improvements of the study programmes.
- Preparation of a priority list of activities annually with a proactive planning approach and linking the activities closely with the funds available for that year is recommended to take maximum benefits from the available funds.
- Establish an institutional mechanism to monitor and review the effectiveness, relevance and quality study of programmes at regular intervals to ensure that the programmes remain current and valid in the light of advancing knowledge, trends and global changes.
- Direct registration for the Bachelor of Education (Honours) degree programme in Natural Science may help to increase the student numbers. Change the advertising policy to make more attractive and effective advertisements.
- Strengthen the links between Faculty and Alumni and seek their assistance to development processes in the faculty.
- University press need to be upgraded. Consider providing new machinery, more human resources and to improve the quality of the publications.
- Develop an emergency room and provide air conditioning facility for drug storage area of the medical center.

## Section 8: Summary

The Open University of Sri Lanka (OUSL), is the premier Open and Distance learning Institution in Sri Lanka where students pursue their studies through Open and Distance Learning (ODL) methodologies. There are eight Regional Centers and eighteen Study Centers of the OUSL located island wide.

This report presents the findings of the review panel on the quality of the Bachelor of Education (Honours) degree programme in Natural Science of the Open University of Sri Lanka. Faculties of Natural Sciences and Education are responsible for conducting the programme. First two levels (level 3 and level 4) of the B.Ed. Nat. Sc. are conducted by the Faculty of Natural Sciences. The students are expected to proceed to level 5 and 6 after completing the levels 3 and 4. The Faculty of Education has an annual student enrolment of over 4000 and offers a wide range of programmes in line with its vision to be a leader in the advancement of knowledge and professional practice in education as a fundamental endeavor through Open and Distance Learning in Sri Lanka and in the Region

Methods of course delivery consist of interactive day schools, workshops, tutorials, group activities, laboratory work and fieldwork. Evaluation methods include take-home assignments, continuous assessment tests, activity- based assignments, teaching practice, a project and the final written examination.

The programme review process was based on the Self Evaluation Report (SER), submitted by the Department of Secondary and Tertiary Education of the Faculty of Education and supported by the information gathered from the four-day site visit made by the review team to the university. During the review process attention was focused on six review criteria prescribed by the PR Manual, namely, Programme management, Programme design and development, Course design and development, Learning infrastructure, resources and learner support, Lerner assessment and evaluation, and Innovative initiatives and Good practices.

Efforts should be made to strengthen the existing curricula by adopting SLQF guidelines, relevant SBSs, if available. An institutional mechanism to monitor and review the effectiveness, relevance and quality of study of programme at regular intervals to ensure that the programmes remain current and valid in the light of advancing knowledge, trends and global changes is suggested. An appropriate strategy has to be develop for the attraction and retention of students for the sustainability of B.Ed. Nat. Sc. programme as present graduation rate is very low.

The review team has identified several innovative and good practices in the system, Those include; availability of StART@OUSL (Student Academic Readiness Training programme), generation of funds-to cover the expenses of the OUSL, availability of reward system to encourage academics for achieving excellence in research and outreach activities, availability of an ICT platform to promote the use of ICT-based teaching and learning approach and tool, availability of Centre for Educational Technology and Media (CETMe)) for providing guidelines for designing self-instructional materials,

designing and developing educational media, options for online registration, availability of a credit transfer policy and several lateral entry and exit points.

The Degree Programme has earned an overall score of 73.3%, and the grade 'B' which is interpreted as "Good" indicating a satisfactory level of accomplishment of quality expected of a programme of study, requiring improvements in a few aspects.

The review team wishes to thank the Deans of the Faculties of Education and Natural Sciences, Director/ IQAU, Coordinator of the IQAC, Heads of Departments, administrative staff, and other members of staff for their hospitality and support rendered in making the review process a success.

### Programme Review Panel

**Professor J.M.P.K. Jayasinghe**

**Dr. P.R.K.A. Vitharana**

**Dr. E.Y.K. Lokupitiya**

## **Annex. 1. Signatures of the review panel**