



ENHANCING RETENTION: EXPLORING STUDENT DROPOUTS IN THE B.SC. PROGRAMME OFFERED BY THE FACULTY OF NATURAL SCIENCES AT THE OPEN UNIVERSITY OF SRI LANKA, BATTICALOA REGIONAL CENTRE

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The Open University of Sri Lanka (OUSL), the country's leader in open and distance learning, is experiencing a decline in Bachelor of Science students from the Faculty of Natural Sciences at the Batticaloa Regional Centre. Student records indicate that dropout rates have increased from 2016/2017 to 2023/2024 academic years. This mixed-methods study aims to identify the academic, personal, economic, and technological stressors contributing to these withdrawals and to propose appropriate interventions. The research will focus on these factors to inform strategies such as curriculum modifications and enhanced learner support services, helping B.Sc. students of the Faculty of Natural Sciences at the Batticaloa Regional Centre—who reside on the university campus—succeed and strengthen OUSL's open and distance learning model. Studies investigated why 200+ B.Sc. students of Natural Sciences faculty dropped out over the past five years using a mixed-methods approach that included both qualitative and quantitative methods. Google Form questionnaires sent to past students were used to gather information. Focusing on the Batticaloa Regional Centre, the study gave a region-specific analysis that found similar trends, personal problems, and institutional flaws. This gives a full picture of the reasons why students drop out of university. The findings suggest that most students struggle with severe academic loads and stress, notably from Continuous Assessment tests (CAT). Online students lack peer contact and academic support, which increases isolation. Poor infrastructure and lack of dorms, study areas, and exam rooms delay growth. Lack of lab access and poor virtual tools are obstacles to practical's related syllabus components. Delayed or confusing course materials make exam preparation difficult. The results bring to light some of the biggest problems that full-time students who work and go to university experience, namely work stress tied to their employment and issues with their courses in terms of infrastructure and logistics, together with a greater need for emotional and cognitive learner support. To fix this problem, the study suggests adding more study rooms, hostels, and exam rooms to the infrastructure, switching from one CAT to an assignment, having multilingual discussion groups, and making sure that textbooks are delivered on time and are prepared in a way that is easy to understand.

Keywords: Open and Distance Learning (ODL), Student Dropout, Bachelor of Science (B.Sc.), Educational Interventions, Continuous Assessment Test (CAT)

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Introduction

The Open University of Sri Lanka (OUSL) plays a significant role in expanding access to higher education in Sri Lanka. The Open University of Sri Lanka (OUSL) B.Sc. programme offered by the faculty of Natural sciences aligns with national objectives of educational accessibility and lifelong learning by offering flexible learning opportunities to a diverse audience, including working adults, students in remote areas, and individuals unable to participate in traditional university systems. However, this adaptability also presents unique challenges that may hinder academic progress and student commitment.

At the Batticaloa Regional Centre, dropout rates have increased steadily over the last five years, from the 2016/2017 batch to the 2023/2024 batch among B.Sc. students of the Natural Sciences faculty. These dropouts not only disrupt the educational and professional pathways of individual students but also raise concerns about the overall effectiveness and sustainability of the programme. Although previous studies have highlighted common challenges in open and distance learning (ODL) systems—such as limited academic support, time management difficulties, excessive workload, financial barriers, inadequate infrastructure, and technological constraints—there remains a need to understand the specific local and contextual factors affecting student retention at the Batticaloa Regional Centre in the B.SC. programme which is offered by the Faculty of Natural Sciences.

This study addresses that gap by examining the first-hand experiences of students who have dropped out of the B.Sc. program offered by the faculty of Natural sciences within the past five years. It aims to identify the academic, institutional, and personal factors driving dropout rates and to explore the impact of support mechanisms—such as academic counselling, peer networks, digital resources, improved university infrastructure, and administrative support—on student satisfaction and commitment to completing their studies. Both qualitative and quantitative data are analyzed for this purpose.

Ultimately, the study seeks to offer evidence-based recommendations that can inform practical initiatives and policy reforms at both institutional and regional levels. These measures are intended not only to reduce dropout rates but also to



foster a more engaging and supportive learning environment for current and future OUSL students.

Objectives: -

1. To pinpoint the main institutional and academic-related causes that lead to student dropout in the B.Sc. programme of the faculty of Natural Sciences at the Batticaloa Regional Centre.
2. To investigate how overall student retention, including satisfaction and persistence, is influenced by the availability and effectiveness of support systems.
3. To recommend targeted interventions and feasible policy adjustments, based on insights from a questionnaire survey, aimed at improving program completion rates, encouraging re-engagement, and enhancing student retention.

Methodology

The basic causes of student attrition from the B.Sc. programme of the Faculty of Natural Sciences at the Open University of Sri Lanka (OUSL), Batticaloa Regional Centre, were investigated using a quantitative research approach. The study was systematically designed and implemented, involving a selected sample of former B.Sc. students of the Faculty of Natural Sciences who had discontinued their studies within the past five years, from the 2016/2017 batch to the 2023/2024 batch. The target population consisted of officially registered OUSL students who had ceased academic participation before completing the programme. A total of 158 responses were collected from among over 200+ dropout students ($n = 158$), yielding a substantial dataset for analysis.

The survey instrument consisted of a series of closed-ended and Likert-scale questions organized into three primary thematic areas: (1) academic experiences and challenges (e.g., course difficulty, time management, access to learning materials, excessive workload, exam-related stress, isolation, delays in course material delivery); (2) perceived quality and accessibility of institutional support services (e.g., academic advising, university infrastructure, technological resources, laboratory facilities); and (3) attitudes toward potential re-engagement with the program (e.g., willingness to rejoin, conditions for re-enrolment, interest in bridging or support programs).

Data was collected via an online Google survey distributed by the Batticaloa Regional Centre, in collaboration with the Faculty of Natural Sciences at the Batticaloa Regional Centre. Ethical protocols, including informed consent, confidentiality, and voluntary participation, were strictly observed throughout the data collection process.



For data analysis, a mixed-methods approach was employed. The qualitative responses were analyzed and summarized using frequencies, percentages, and graphical representations. Based on the analysis, the factors influencing students' decision to discontinue the course during their study period were identified. This combined approach enhanced the interpretation of the findings by providing a comprehensive understanding of the factors contributing to student dropout, thereby providing evidence-based strategies to improve program retention and enhance student engagement.

Results and discussion

The survey gathered responses from 158 former students who discontinued the B.Sc. ODL program of the Faculty of Natural Sciences. Analysis of the results highlights both the key reasons for dropout and the potential for re-enrollment if concerns are addressed.

Willingness to Re-Join the Program

Figure 2 indicates that most respondents (63.9%) expressed willingness to rejoin the program if their concerns were resolved. Additionally, 23.4% were uncertain but open to the idea, while only 12.7% declined. This demonstrates a strong potential for student retention and re-engagement through targeted interventions.

Primary Reasons for Discontinuation

As shown in Figure 1, the most critical factors influencing dropout were:

- Inadequate university infrastructure (58.9%) – The leading cause, pointing to the need for improved facilities, reliable systems, and better support structures for online learning.
- Excessive workload (55.1%) – Students found the academic load overwhelming, suggesting a need for curriculum review and better workload management strategies.
- Exam-related stress (39.9%) – High-pressure assessment methods contributed significantly to attrition, indicating a requirement for alternative assessment models such as continuous or assignment-based evaluations.
- Feeling of isolation (29.1%) – Lack of social and academic interaction created a sense of detachment, highlighting the importance of peer engagement, virtual discussion forums, and mentorship programs.
- Language barriers (17.1%) – This shows the need for language support or simplified course delivery for students from diverse backgrounds.
- Limited access to laboratories and complexity of course materials (12%) – These issues suggest that practical sessions and simplified resources should be prioritized for better comprehension and engagement.

Less frequently cited issues (below 10%) included personal or family responsibilities, financial difficulties, poor internet connectivity, time management



challenges, low motivation, inadequate academic support, and lack of timely delivery of textbooks. While these factors are less prevalent, they underscore the complexity of dropout decisions and indicate the need for personalized support.

Student-Suggested Interventions

Respondents proposed several solutions to improve program retention and re-engagement:

- Expansion of university infrastructure to support remote learning effectively.
- Reduction or restructuring of Continuous Assessment Tests (CATs) and provision of assignment-based alternatives to ease exam-related stress.
- Timely delivery of course materials and improved logistical processes.
- Enhanced academic interaction and orientation programs to reduce feelings of isolation.
- Provision of physical discussion groups or blended learning opportunities to strengthen social and academic engagement.

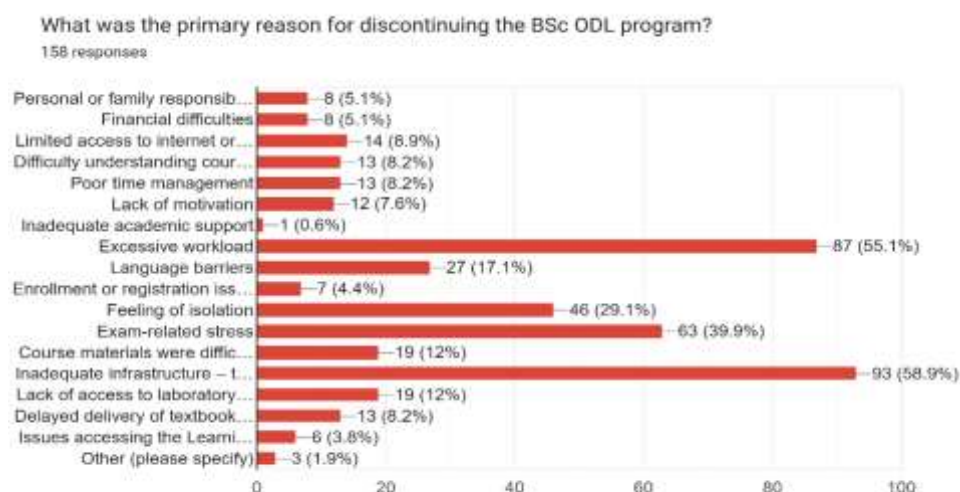


Figure 1: Survey responses indicating the primary reasons for discontinuing the B.Sc. ODL program



Would you consider Re-joining the program in the future if your concerns are addressed?
158 responses

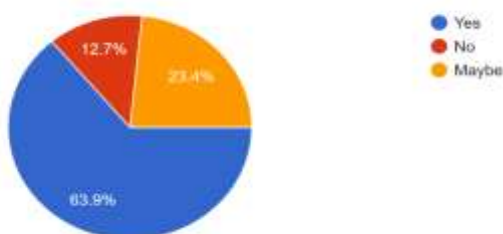


Figure 2: Willingness of former students to re-join the B.Sc. ODL program if their concerns are resolved.

Conclusions and Recommendations

The survey results indicate that student dropout is influenced by multiple interrelated factors, with the most significant being academic overload and institutional rigidity. To effectively address this challenge and improve student retention, the following recommendations are proposed:

1. Create university buildings featuring separate study and test rooms, canteen facilities, and hostels. Poor infrastructure and limited access to laboratory facilities are significant factors contributing to student dropouts in open and distance learning programs. For B.Sc. students in the Faculty of Natural Sciences, inadequate study spaces, unreliable internet, and restricted lab access hinder their ability to complete practical assignments and fully engage with the course material. These challenges increase frustration, reduce academic engagement, and ultimately lead some students to withdraw from their programs. Addressing these issues is essential to improve student retention and support effective learning in the ODL environment.
2. Change assessment strategies to incorporate performance based on assignments rather than relying solely on a single CAT test.
3. Enhance academic support through peer mentoring and consistent feedback.

Although only 0.6% of respondents explicitly indicated inadequate academic support, the data in Figure 1 highlights other related issues such as feelings of isolation (29.1%), language barriers (17.1%), and lack of access to laboratories (12%). These factors indirectly reflect the need for stronger academic engagement and support systems. Lack of access to laboratories refers to the challenges faced by students in participating in practical sessions, which are essential for certain courses. This limitation could be due to geographical constraints—such as the distance from the university or the need to travel to Colombo for lab facilities—as well as



inadequate availability of virtual or remote lab alternatives. Addressing this requires strategies like providing virtual lab simulations, scheduling regional lab sessions, or offering blended learning opportunities to reduce travel burdens.

4. Ensure timely and streamlined access to learning materials.
5. Establish a re-entry path with customized support for returning students.

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