

Institutional Interventions and Language Challenges Encountered by the First-Year Undergraduates of the Faculty of Computing and Technology of the University of Kelaniya

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Despite English being an official language in Sri Lanka, most of the undergraduates from non-English-speaking backgrounds struggle to develop the requisite language skills for academic success in the globalized world. This is a key concern among computing undergraduates who are in need of proficiency in English to engage in technical communication, academic writing, and international collaborations according to their selected industries, all of which demand specialized language abilities. Hence, this study examined the challenges faced by first-year undergraduates in the Faculty of Computing and Technology (FCT) at the University of Kelaniya when adapting to global English standards, focusing on academic writing, technical language proficiency, and international collaboration. It focused on three key areas including academic writing, technical language proficiency, and international collaboration. Additionally, the study aimed to identify curriculum gaps in about each degree program, particularly the absence of English for Specific Purposes (ESP) courses tailored to computing undergraduates. Moreover, the availability and effectiveness of Target Language (TL) support programs designed to address these linguistic and academic challenges were also evaluated in this study. The primary aim of the research was to investigate these challenges in detail and evaluate the effectiveness of existing language support systems within the FCT. The study sought to answer two key research questions on the primary challenges faced by first-year undergraduates at the FCT in adapting to global English standards within their field of study and the perspectives of ESL lecturers on the challenges encountered by the first-year FCT undergraduates. A mixed-method research design was employed, combining both qualitative and quantitative approaches to provide a comprehensive understanding of the issue. The sample consisted of 100 first-year undergraduates, selected through random sampling, and 5 ESL lecturers from the FCT. Data collection involved semi-structured interviews with ESL lecturers, a student questionnaire, and secondary data sources. Qualitative data were analyzed through thematic analysis, while quantitative data were processed using SPSS to identify patterns and trends. The findings revealed that undergraduates faced substantial difficulties in academic writing, including struggles with mastering formal writing styles,

technical vocabulary, and adhering to global citation and referencing standards. In technical communication, undergraduates found it challenging to express complex ideas and technical concepts clearly in English, which hindered their ability to engage effectively in international collaborations. Furthermore, the study highlighted the inadequate exposure to global resources and international communication practices, which intensified the challenges faced by these undergraduates. Based on these findings, the study recommends offering ESP courses that are tailored to the needs of computing undergraduates to enhance their technical writing and communication skills, expanding language support programs such as academic writing workshops and technical communication training, and promoting international exposure through virtual collaborations and exchange programs. This research filled an important gap in understanding the specific language challenges faced by Sri Lankan technological undergraduates and provided valuable insights into how language support and curriculum design could be improved to better prepare undergraduates for success in the global academic and professional arenas.

Keywords: ESP, Computing Undergraduates, Global English Standards, Academic Proficiency, International Collaboration