

Abstract

This study presents a comprehensive bibliometric analysis of 663 doctoral theses in Botany submitted between 2000 and 2020 across six prominent universities in West Bengal: University of Calcutta, University of Kalyani, University of North Bengal, University of Burdwan, Vidyasagar University, and Visva Bharati University. Through a critical review of local, national, and international literature, key research gaps were identified, leading to objectives that encompass year-wise trends, supervisory contributions, gender representation, subject-wise focus areas, and citation patterns. Employing a hybrid content-analysis and bibliometric approach, data were sourced from the Shodhganga digital repository and university libraries, with OCR tools converting scanned theses into analysable text. Quantitative methods—descriptive statistics and bibliometric techniques—were applied using Microsoft Excel for visualizations like bar graphs and line charts, ensuring ethical compliance and researcher confidentiality. Findings reveal a gradual rise in doctoral outputs: modest submissions in 2000–2005, steadier growth in 2006–2011, and a pronounced surge from 2012 to 2019, peaking at 60 theses in 2016, followed by a sharp drop in 2020 due to the COVID-19 disruptions. Supervisory analysis shows a clear preference for single-supervisor mentorship—62–69% of theses—while joint supervision accounted for 31–38%. Notably, Anita Mukherjee (16 theses) at CU and Animesh Kumar Datta (19 theses) at KU emerged as leading mentors. Subject-wise distribution underscores Cytology as the dominant field (21.27%), followed by Genetics (12.82%), Plant Ecology (12.22%), Microbiology (10.11%), and Environmental Botany (9.95%). Citation analysis highlights robust engagement with scholarly literature: average references per thesis at CU ranged from 139.78 to 188.25, with journal articles comprising over 50% of all citations—reflecting strong reliance on peer-reviewed sources. Overall, this study illuminates the evolving contours of botanical doctoral research in West Bengal, spotlighting institutional strengths, mentorship models, disciplinary trends, and citation practices. The insights gained can guide policy-makers and academic leaders in enhancing doctoral training curricula, fostering interdisciplinary collaborations, and strengthening research infrastructure to support future botanical scholarship.

Keywords: West Bengal, Cytology, Botany, Genetics, Plant Science.