

Cybersecurity Challenges and Solutions in ICT Management at the Federal Polytechnic, Ado-Ekiti: A Quantitative Study

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Abstract : This study investigates cybersecurity challenges and solutions in managing Information and Communication Technology (ICT) at the Federal Polytechnic, Ado-Ekiti, South-West Nigeria. The rapid evolution of ICT has revolutionized organizational operations and impacted various sectors, including education, healthcare, and finance. While ICT advancements facilitate seamless communication, complex data analytics, and strategic decision-making, they also introduce significant cybersecurity risks such as data breaches, ransomware, and other malicious attacks. These threats jeopardize the confidentiality, integrity, and availability of information systems, necessitating robust cybersecurity measures. The primary aim of this research is to identify prevalent cybersecurity challenges in ICT management, evaluate their impact on the institution's operations, and assess the effectiveness of current cybersecurity solutions. Adopting a quantitative research approach, data was collected through surveys and structured questionnaires from students, staff, and IT professionals at the Federal Polytechnic, Ado-Ekiti. The findings underscore the critical need for continuous investment in cybersecurity technologies, employee and student training, and regulatory compliance to mitigate evolving cyber threats. This research contributes to bridging the knowledge gap in cybersecurity management and provides valuable insights into effective strategies and technologies for safeguarding ICT systems in educational institutions. The study's objectives are to enhance the security posture of the Federal Polytechnic, Ado-Ekiti, in an increasingly digital world by identifying and addressing the cybersecurity challenges faced by its ICT management.

Keywords : cybersecurity challenges, cyber threat mitigation, federal polytechnic Ado-Ekiti, ICT management

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