

Technical and Vocational Education and Training (TVET) institutions play a pivotal role in equipping the Kenyan workforce with the knowledge, skills and competencies required in the digital era. The increasing digitalization of institutional procedures and the extensive adoption of technologies have exposed TVET institutions to cybersecurity threats. These threats compromise institutional integrity, protection of data and sensitive information, and disrupt teaching and learning processes. This study assessed cybersecurity preparedness in selected public TVET institutions in Kenya by investigating the internal cybersecurity policies, practices, technologies, incident response and recovery procedures of identifying existing vulnerabilities and areas of improvement. The study embraced mixed-methods research approach, integrating quantitative surveys with qualitative interviews involving the key stakeholders. Random sampling techniques was used to select fifty TVET institutions, questionnaires were used as data collection tools.

The findings revealed some TVET institutions had made significant progress in developing and implementing internal cybersecurity policies and controls. The study also found that many institutions were inadequately prepared to address advancing cyber threats. Key challenges identified by the researcher include the absence of comprehensive cybersecurity preparedness strategies, insufficient financial and technical resources, limited staff in-service training, and inadequate cybersecurity awareness programmes. The recommendations were; TVET institutions to develop comprehensive internal cybersecurity strategies and policies, management to ensure implementation of the policies, conduct regular cybersecurity risk assessments, strengthen incident retort and recovery competences, and ensure continuous cybersecurity preparedness and capacity-building programmes for staff and students. This measures will ensure safeguarding of institutional data and information, protect critical information technology resources, and enhance digital transformation.