E- Exams System for Nigerian Universities with Emphasis on Security and Result Integrity

Olawale Adebayo M.Sc.
Department of Cyber and Security Science, Federal University of Technology Minna, Niger State, Nigeria.
E-Mail: waleadebayo@futminna.edu.ng

Shafi’i Muhammad Abdulhamid M.Sc.
Department of Cyber and Security Science, Federal University of Technology Minna, Niger State, Nigeria.
E-Mail: shafzon@yahoo.com, shafii.abdulhamid@futminna.edu.ng

Abstract- The recent employment and eventual widespread acceptance of electronic test in examining students and various classes in Nigeria has created a significant impact in the trends of educational history in the country. In this paper, we examined the impacts, associated challenges and security lapses of the existing electronic-examination system with the aim of ameliorating and developing a new acceptable e-Exam system that takes care of the existing system’s challenges and security lapses. Six Universities that are already conducting e-Examination were selected across the country for this research work. Twenty (20) students that participated in the e-exams and five (5) members of staff were selected for interview and questionnaire. Based on the analysis of the interviews and study of the existing electronic examination system, some anomalies were discovered and a new e-exams system was developed to eradicate these anomalies. The new system uses data encryption in order to protect the questions sent to the e-Examination center through the internet or intranet and a biometric fingerprint authentication to screen the stakeholders.

Keywords- Biometric Fingerprint, Cryptography, eLearning, Electronic Examination (e-exams), Result Integrity

Remarks: The full paper may be found in www.elearningap.com