

# Response Time Performance Testing of Greenstone and DSpace Digital Library Software in Handling Rich Text Data

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## ABSTRACT

*This study carried out performance testing on response time of Greenstone and DSpace software in handling rich text data in Federal University of Technology, Minna, Nigeria. Rich text data are data that contains a combination of texts, tables, symbols and many other text structures. The study sought to achieve two objectives and two corresponding research questions were formulated. A web-experimental design was adopted for the study while a Participant Observation Template (POT) served as the instrument for recording users' observations for response time of relevant data retrieved. Out of the 54 students targeted, only 35 attended the training hence 35 copies of the POT were distributed to an intact class of trained 500 level students in the Department of Library and Information Technology, Federal University of Technology Minna, Nigeria. 34 copies were returned and only 33 were found usable representing 97.14% response rate. The data collected were presented in tables and graphs and analysed using mean and standard deviation, while the hypothesis was tested using t-test statistic at 0.05 level of significance. Findings of the study revealed that the mean response time of Greenstone was faster than DSpace software by 0.01s in handling rich text data but the difference was not statistically significant.*

**Keywords:** Digital libraries, Performance Testing, Response time, Greenstone, DSpace, Web Experiment, Open source

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## 1. INTRODUCTION

Digital libraries and its associated technologies have greatly transformed the activities of traditional libraries. It is largely believed that the foundation of digital libraries was laid by such visionaries as Vannevar Bush in 1945

and J.C.R Licklider in 1965[1]. The birth of this concept has been attributed to the advent and rapid growth of computers and other related technologies such as the Internet, database management software and information retrieval systems thus making it increasingly easy for the