Abstract
Concerns regarding the integrity of non-proctored, online assessments arose when Universities were forced into compulsory online academic activity due to the Covid-19 pandemic. Universities have mandates to ensure that their graduates are duly competent in their certified fields. This study examined the effectiveness of methods used to preserve integrity of such assessments for a Chemistry course.
Assessments were time-restricted and contained items polled from a sizable question bank. Students were allowed one attempt at each assessment and this had to occur within a stipulated period. Marks awarded and correct answers were only revealed when the period for assessment had expired. Efforts were made to ensure that all students received equally difficult assessments. Student performance in 2019-2020 was then compared to student performance on the same course for the two preceding years.
Findings revealed that performance throughputs on assessments in 2019-2020 displayed almost normal distributions. Pass rate with grade ‘C’ or higher was greater in 2019-2020 than in the two previous years. Average performance on the final exam was 21% and 40% greater than average performances in 2018-19 and 2017-18 respectively (p=0.000).
Measures employed did not completely preserve the integrity of non-proctored assessments but they yielded mechanisms that differentiated among students’ capabilities.

Keywords: integrity, online, assessments, non-proctored, higher education