

Automation to Maintain Student Research Quality in a South African Private Higher Education Institution

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Abstract

The massification of the previously elitest tertiary educational system has improved equity of opportunity, unfortunately some systems cannot be readily expanded to accommodate the increase in enrolment. Students require bespoke support in more challenging modules. Research practice modules are student's introduction to academia as a contributing researcher. In South Africa only 6% of the population have degrees, and only 46% of academics have PhD's. This imposes a limitation on the number of academics available to lecture tertiary students in the country. Can system automation offer an opportunity to expand lecturer capabilities to provide bespoke support to research students despite the increasing student, lecturer ratios? Students are accepted into the tertiary educational system at great financial risk, as acceptance does not mean qualification is assured. However, the limited capacity of lecturers and increasing burden of administrative tasks impacts their ability to provide the same quality of feedback and support. This study examines the impact of an automated pilot research support system. Academic performance and module success rates are academia's measure of academic excellence and quality of research conducted by students. The system is designed to support over-extended lecturers provide asynchronized automated bespoke feedback. The system should ideally improve module success rate while improving lecturer capacity. An action research methodology was adopted to assess the effectiveness of the automated system to improving module success rate in the research modules. Phase 1 of the pilot study included 23 students in the control group and 42 in the 'placebo' group. The control group averaged 10% higher in final results of the module but only 3% difference in Module Success rate. Phase 2 involved 74 students and despite the increased ratio for the lecturer, the cohort exceeded all previous Module success rates recorded on the campus and scored higher than 9 other campuses nationally. Technology can extend lecturer capabilities by lessening the burden of redundant tasks and streamlining talents towards primary academic purposes. Simple systems

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can be implemented to create capacity for lecturers who are relied upon to advance research and innovation for the benefit of society.

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