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Comparison of Plagiarism Rates between oncampus and offcampus Engineering Hydrology Students

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Plagiarism is a significant problem within Universities and common across all disciplines including engineering. This paper focuses on a specific type of plagiarism in the form of student copying of technical analysis amongst undergraduate engineering students. Our research question is “Do rates of plagiarism vary between oncampus and offcampus (online distance) student cohorts?” Research in this area is limited but suggests that academic dishonesty is less common in online courses compared to courses delivered oncampus.

A third-year engineering hydrology course offered by a regional Australian university is delivered to on-campus and offcampus students and thus presents a research opportunity to evaluate plagiarism differences between the two cohorts. Both student cohorts have submitted their assignments electronically in the form of Excel spreadsheets over two consecutive years (2010 and 2011). During the assignment grading process, a number of plagiarism incidents were detected by the course markers from both student cohorts.

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Plagiarism rates were also examined retrospectively using the detection software Excel-Smash developed by Hellyer and Beadle. Excel Smash detected more plagiarised spreadsheets than the human markers, and this was considered to be partly due to each human marker seeing only a proportion of the submitted assignments.

Both human markers and Excel-Smash found that oncampus rates of plagiarism were significantly higher than offcampus rates. Overall, Excel-Smash found 10.7% of assignments submitted by oncampus students were subject to plagiarism, compared to only 1.4% of the offcampus students. Copying of assignment work was generally contained to small groups of two, occasionally three, students. Many of the detected oncampus students were international students indicating more needs to be done discouraging this student group from engaging in plagiarism.

Overall, Excel-Smash was found to be a rapid and useful tool to detect plagiarism cases using electronically submitted spreadsheets. Given that there is a substantial difference between student cohorts, a more targeted approach with the management of human markers could be introduced. Instead of grouping students alphabetically for marking as is current practice, increased plagiarism detection may result if a single marker is assigned to the oncampus submissions. Repeat offences of assignment copying despite the threat of academic penalty and the high proportion of oncampus plagiarism cases involving international students are two focus areas that should be addressed by careful implementation of intervention strategies. ■