
The Effectiveness of Continuous Quality Improvement Implementation on the Achievement of Learning Outcomes for the DCC30093 Geotechnical Engineering

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Abstract

Continuous Quality Improvement (CQI) is an approach that is gaining increasing attention in efforts to improve learning outcomes in higher education, particularly for Geotechnical Engineering courses. Geotechnical Engineering courses are one of the main courses in Civil Engineering that leads to an understanding and knowledge relates to the engineering properties of soils in civil engineering works. Based on the achievement of the Course Learning Outcome for the DCC30093 Geotechnical Engineering course, this study was conducted to evaluate the effectiveness of Continuous Quality Improvement implementation in achieving the desired learning outcomes for the Geotechnical Engineering course especially for CLO1: Apply fundamental of engineering properties of soils in civil engineering works. The objective of this study is to examine the difference in the achievement of CLO for the DCC30093 Geotechnical Engineering course for different sessions in terms of the achievement of CLO1 item. The research method used is a quantitative data analysis referred from Polytechnic Information Management System, SPMP (i-exam), Sultan Mizan Zainal Abidin Polytechnic. Data was obtained from the Course Outline Review Report issued at the end of each semester for the DCC30093 Geotechnical Engineering course. The findings of the study show that the percentage of CLO1 achievement is the lowest compared to the other three CLOs that were also assessed. The findings of CLO1 in Session I:2022/2023, showed the lowest percentage of 42.2% compared to other CLOs and recorded achievement below the target set by the department, which is to achieve at least 50.0%. The same thing happened in Session II:2022/2023 which also recorded the lowest percentage of CLO1 achievement and was still below the target of 49.0%. For Session I:2023/2024, Session II:2023/2024 and Session I:2024/2025, CLO1 achievement is increasing and has exceeded the outlined target of more than 50%. With the increase in the percentage of CLO1 achievement, this shows that Continuous Quality Improvement (CQI) must always be implemented to ensure that the percentage of achievement for CLO1 always increases or at least exceeds the percentage target set by the department, which is 50.0% and above.

Keywords : *Geotechnical Engineering, Continuous Quality Improvement, Course Learning Outcome (CLO)*
