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SDG-based with ICT- driven in Engineering Education

by Associate Professor Dr. Marfiah
Ab. Wahid



Integrating the Sustainable Development Goals (SDGs) with Information and Communication Technology (ICT) into engineering education is an essential necessity within the current academic framework. An innovative educational approach is needed to equip future engineers with the skills they require to support global sustainability initiatives, given the increasing environmental issues, including water security and climate change.

By integrating an ICT-driven approach into the SDG-based engineering curriculum, my research aims to address this issue in a novel way. To enhance students' critical thinking and problem-solving abilities, this approach strongly emphasises real-time data analysis, smart decision-making tools, and simulation-based learning.

Based on the research findings, students participating in the integrated ICT SDG module significantly improved their understanding of sustainable practices and their ability to apply engineering principles to real-world problems. When it comes to providing solutions for global issues such as

resource management and renewable energy, this student is more skilled at combining technical knowledge with sustainability objectives.

Because it can potentially transform engineering education completely, this research is very important. Students are better prepared to tackle the complexities of contemporary engineering challenges when integrating SDG concepts. A broader impact can result from the global enhancement of this teaching approach, influencing engineering curricula everywhere. After graduation, individuals will possess the necessary skills to address important societal concerns such as resource conservation, climate resilience, and sustainable infrastructure development, thereby supporting long-term sustainability initiatives worldwide through ICT technology. Using this method, they can become more technically skilled while developing a sense of social responsibility.

Associate Professor Dr. Marfiah Ab. Wahid

School of Civil Engineering
marfi851@uitm.edu.my



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penyelidikankpk@uitm.edu.my

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