ABSTRACT

The project acknowledges that Higher Education Institutions (HEIs) are crucial for achieving the Sustainable Development Goals (SDGs), yet there is a pressing need for context-specific approaches to SDG education, particularly in Thai HEIs. This study was conducted in the context of Thailand 4.0, an initiative that aligns with the SDGs by emphasizing human capital and innovation as drivers of sustainable development. The research aimed to examine students' cognitive engagement with SDGs using Bloom's Taxonomy, investigate students' preferred learning styles through the Felder-Silverman model, and redesign the course syllabus using insights from the Knowledge-Attitude-Practice (KAP) Design Model. These objectives were designed to create a robust framework for enhancing the teaching and learning of sustainability within higher education.

The study employed a dual-sampling strategy, selecting a primary sample of 50 students enrolled in the "Introduction to Sustainable Development" course and a secondary sample of 150 students across MFU. Qualitative data was gathered through classroom observations and interviews, while quantitative data was collected using the KAP questionnaire and class assessments, ensuring a comprehensive evaluation of the implemented pedagogical approaches. Key findings indicated that Bloom's Taxonomy was effective in enhancing students' cognitive engagement by fostering a progression from lower-order to higher-order thinking skills. The Felder-Silverman Learning Model contributed to creating an inclusive learning environment by addressing diverse learning preferences, while the KAP survey demonstrated statistically significant improvements in students' knowledge, attitudes, and practices related to sustainability. Additionally, the study developed the SOC-IN Model, which integrates learning styles, objectives, and contents; findings revealed that active and visual learning styles were most effective for student engagement, whereas reflective and verbal learning styles were most effective for knowledge production. The KAP survey also revealed field-specific strengths and weaknesses across MFU schools.

The research suggests that a holistic approach to SDG education is necessary, one that utilizes various pedagogical frameworks to meet diverse student needs. The SOC-

IN Model offers a practical framework for integrating different learning styles, clearly defined learning objectives (as outlined by Bloom's Taxonomy), and targeted content (informed by the KAP model). The study also emphasized the importance of experiential learning activities, such as case study discussions, photo hunts, and storytelling, to bridge the gap between theory and practice.

In conclusion, the study finds that integrating Bloom's Taxonomy, the Felder-Silverman Learning Model, and the KAP Design Model through the SOC-IN framework can significantly enhance SDG education. It underscores the need to tailor teaching methods to accommodate varied learning preferences and to incorporate experiential learning activities that connect theoretical knowledge with real-world applications. The study recommends ensuring a progression from lower-order to higher-order thinking skills, incorporating a variety of learning activities, aligning course content with students' knowledge, attitudes, and practices, and including community engagement components. It further advocates for facilitating interdisciplinary collaboration, using a mix of pedagogical tools, employing diverse assessment methods, incorporating reflective practices, and revising the syllabus of the "Introduction to Sustainable Development" course.

Keywords: Sustainable Development Goals (SDGs), Quality Education, Higher Education, Innovative Curriculum, Mae Fah Luang University