

# 日本高中實施永續發展教育 登山型課題與探究學習之啟示

丘愛鈴

國立高雄師範大學教育系教授兼師資培育與就業輔導處處長

## 摘要

面對全球化快速變遷造成的挑戰與危機，日本於 2018 年修訂《高等學校學習指導要領》，新課程將於 2022 年實施，以培養 21 世紀公民所需的資質和能力。本文主要分析日本「永續發展教育」課程政策的背景、「登山型」課程和探究學習，反思高中教師實施「能源教育」的課堂教學特色並評析其存在的問題。本文採文件分析法和個案研究，研究發現：(一) 在課程政策方面，日本受到聯合國「2030 永續發展目標」的影響，從全球思考、在地行動的觀點，積極推動各級學校實施八項「永續發展教育」的價值觀和行動。(二) 在課程設計方面，在經驗學習和社會建構學習理論下，日本高中「綜合學習時間」實施「登山型」課程，培養學生具備「知識與技能」、「思考力、判斷力、表達力」，以及「向學力與人格特質」的問題解決者和終身學習者。(三) 在教學實踐方面，個案教師在高一「能源教育」課題實施探究學習，探究的過程包含四個步驟：設定課題、蒐集資料、整理和分析、歸納和表達，培養學生具備後設認知和合作解決問題的能力。最後提出對臺灣高中教師實施專題學習或議題探究學習的啟示。

關鍵詞：永續發展教育、登山型課題、探究學習、綜合學習時間

# **Implications of Education for Sustainable Development through the “Mountain-Climbing Type” Project and Inquiry-based Learning in Japanese Senior High Schools**

Ai-Ling Chiu

Dean and Professor, Office of Teacher Education and Careers Service, National Kaohsiung Normal University.

## **Abstract**

Due to the challenges and crises from globalization, Japan revised its national curriculum guidelines of senior high school in 2018, which will be implemented in 2022, to cultivate the competencies of citizens in the 21st century. This paper analyzes Japan's background of “Education for Sustainable Development” (ESD) curriculum policy, the “mountain-climbing type” project and inquiry-based learning, and reflects the characteristics of “energy education” teaching and existing problems. This study adopted documentary analysis and case study. The conclusions are as follows: (1) Japan's curriculum policy to promote 8 items of ESD at schools is influenced by the United Nation's “Sustainable Development Goals (SDGs). (2) The curriculum design adopts “mountain-climbing type” project from experiential learning and social constructivism learning theory in “the period for integrated studies” in Japanese senior high schools. The goals are to enhance students to activate their prior knowledge and skills, develop students' abilities of thinking, judgement and expression through inquiry process, and cultivate students' learning attitudes and disposition that nurture them to be problem solvers and lifelong learners. (3) The teacher utilizes inquiry-based learning to cultivate students' meta-cognitive skills and

collaborative problem solving ability. Finally, researcher proposes to implement project-based learning and issue inquiry learning in high schools in Taiwan.

**Keywords:** education for sustainable development; the “mountain-climbing type” project; inquiry-based learning; “the period for integrated studies”