

計畫資料

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計畫基本資料

申請機構	遠東科技大學		
服務系所(中心)	冷凍空調與能源系		
計畫主持人姓名	蔡俊欽		
計畫主持人職稱	副教授		
申請學門/專案計畫	工程		
本計畫中文名稱	應用賦權理論於LED原理與應用教學提升學習成效之研究		
本計畫英文名稱	Research on the Applying Empowerment Theory in Principles and Application of LED course for Improving Learning Outcomes		
本計畫中文關鍵字	賦權教學策略、LED工程、卡牌桌遊、三創教育		
本計畫英文關鍵字	Empowerment strategy, LED Engineering, Card-board Games, Three-creation Education.		
本計畫中文摘要	遠東科技大學為培養學生具有創新、創意、創業的「三創」能力的燈塔大學，提出「想的到、做的出、賣的掉」的教學實務策略。冷凍空調能源系是本校新的科系，已成立四年，目標之一為培養節能應用之應用人才。LED原理與應用課程為冷凍空調能源系的能源技術選修重要科目，是畢業出路-LED工程師與自行創業必學習的課程。因此，本教育實踐計畫為探討應用賦權理論於LED原理與應用技術教學上的成效。採雙組前後測研究設計，以冷凍空調能源系兩組學生為對象，一班為對照組，一班為實驗組。對照組採傳統教學。實驗組以賦權理論為導引，教學策略採ABC賦權教案，依覺醒期、行動期，省思期的階段，藉由建立師生夥伴關係，以學生為中心，激發學生學習意願，透過LED創意實作競賽-「動手做」和LED卡牌桌遊挑戰賽-「同儕學習」的創新教學模式，讓學生實習與互相切磋，來提升學生找到自我興趣與LED工程專業技術能力，進而培養學生創新、創意、創業能力。希望藉此計畫結果能作為教育、研究與實務教學的參考範例。		
本計畫英文摘要	Far East University of Science and Technology focuses on cultivating students with innovation, creativity, and entrepreneurship as the "three innovations" ability. The teaching practice strategies are "want to think, do, and sell." The Department of Refrigeration and Air-conditioning Energy is a new department of the school. It has been established for four years. One of the goals is to cultivate people with energy-saving application talents. The LED Principles and Applications course is an important elective course for energy technology in the Energy Department of Refrigeration and Air Conditioning. The course is also required for the employment for LED engineers and self-employment. Therefore, the purpose of this educational practice program is to explore research on the application of empowerment theory in LED Engineering Teaching for improving learning outcomes. Using 2 groups pre-post design, the two classes of students are divided into the control group and the experimental group. The control group received usual teaching. The experimental group received empowerment program, which encouraged students to take courses in three phases: awareness raising, behavior building, and checking results. By establishing a teacher-student partnership, and student-centered, to stimulate students' learning intentions, and through the innovative teaching model of LED creative practice contest-"hands-on" and LED board game challenge competition- innovative teaching mode of "peer learning", students are allowed to practice each other to enhance students' self-interest and professional technical ability in LED engineering, and to cultivate students' innovation, creativity, and entrepreneurial abilities. The results of this study could provide a useful reference example for educators, researchers, and practitioners.		
全程執行期程	2021-08-01~2022-07-31		
倫理審查文件	實驗研究參與同意書.pdf		
課程資訊		課程名稱	授課對象
	一年期	LED原理與應用	大學部學生
			課程屬性
			必修

協同主持人

協同主持人姓名	陳美芳
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協同主持人職稱	副教授
現職機構	國立臺南護理專科學校
服務單位	護理科
協同主持人同意書	陳美芳.pdf

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