技術及職業教育學報

第八卷·第三期

中華民國一百一零年七月

中華民國八十七年六月創刊

發行人兼主編:宋修德

出版者:國立臺灣師範大學 工業教育學系(所)

編輯委員:(109年4月至111年3月,依姓氏筆劃順序排列)

田振榮 前中華科技大學校長

朱耀明 國立高雄師範大學工業科技教育學系教授

吳雅玲 國立屏東科技大學技術及職業教育研究所教授

李懿芳 國立臺灣師範大學科技與工程學院副院長

周春美 國立雲林科技大學技術及職業教育研究所教授

周麗端 國立臺灣師範大學人類發展與家庭學系主任

洪榮昭 國立臺灣師範大學工業教育學系退休教授

胡茹萍 國立臺灣師範大學工業教育學系副教授

徐昊杲 龍華科技大學企業管理系特聘教授

張嘉育 國立臺北科技大學技術及職業教育研究所教授

郭金國 國立臺灣師範大學工業教育學系教授

程金保 國立臺灣師範大學機電工程學系教授

楊心怡 國立臺北科技大學技術及職業教育研究所所長

楊朝祥 佛光大學校長

詹勳育 國立臺灣師範大學工業教育學系助理教授

廖年淼 國立雲林科技大學技職教育研究所特聘教授

廖錦文 國立彰化師範大學工業教育與技術學系教授

羅希哲 國立屏東科技大學教育副校長

饒達欽 台北城市科技大學商管學院院長

執行編輯:胡茹萍、詹勳育

助理編輯:唐巍芬、鄧朝元

發 行 所 : 臺北市和平東路一段 162 號

電 話 : (02)7749-3362 傳 真 : (02)2392-9449

網 址 : http://www.ie.ntnu.edu.tw/new/publication/main.htm

Journal of Technological and Vocational Education

Volume 8, Number 3

July, 2021

Since June, 1998

Publisher and chief editor: Sung, Hsiu-Te

Published by: Department of Industrial Education, National Taiwan Normal University

Board of Editors: (April, 2020~March, 2022) (Listed by the Last Name)

Chan, Hsun-Yu Assistant Professor of Department of Industrial Education, National

Taiwan Normal University

Chang, Chia-Yu Professor of Graduate Institute of Technological and Vocational

Education, National Taipei University of Technology

Cheng, Chin-Pao Professor of Department of Mechatronic Engineering, National Taiwan

Normal University

Chou, Chun-Mei Professor of Graduate Institute of Technological and Vocational

Education, National Yunlin University of Science and Technology

Chou, Li-Tuan Head of Department of Human Development and Family Studies,

National Taiwan Normal University

Chu, Yao-Ming Professor of Industry Technology Education, National Kaohsiung

Normal University

Hong, Jon-Chao Retired Professor of Department of Industrial Education, National

Taiwan Normal University

Hsu, How-Gao Distinguished Chair Professor, Lunghwa University of Science and

Technology

Hu, Ru-Ping Associate Professor of Department of Industrial Education, National

Taiwan Normal University

Kuo, Chin-Guo Professor of Department of Industrial Education, National Taiwan

Normal University

Lee, Yi-Fang Associate Dean of Colleage of Technology and Engineering, National

Taiwan Normal University

Liao, Chin-Wen Professor of Department of Industrial Education and Technology,

National Changhua University of Education

Lou, Shi-Jer Vice President for Educational Affairs, National Pingtung University of

Science and Technology

Lyau, Nyan-Myau Distinguished Chair Professor of Graduate School of Technological and

Vocational Education, National Yunlin University of Science and

Technology

Rau, Dar-Chin Dean of College of Business and Management, Taipei City University

of Science and Technology

Tian, Zhen-Rong Former President, China University of Science and Technology

Wu, Ya-Ling Professor of Graduate Institute of Technological and Vocational

Education, National Pingtung University of Science and Technology

Yung, Chaur-Shin President, Fo Guang University

Yung, Hsin-Yi Director of Graduate Institute of Technological and Vocational

Education, National Taipei University of Technology

Executive Editor: Hu, Ru-Ping; Chan, Hsun-Yu

Editorial Assistants: Tang, Wei-Fen; Teng, Chao-Yuan

Publication Office: No. 162, Sec. 1, Heping E. Rd., Da'an Dist., Taipei City 106, Taiwan

(R.O.C.)

TEL: +886-2-7749-3362 **FAX:** +886-2-2392-9449

Website: http://www.ie.ntnu.edu.tw/new/publication/main.htm