後疫情時代技職教育之發展與挑戰
國際研討會

論文集

國立臺灣師範大學工業教育學系

目錄

後疫情時代技職教育政策規劃─淺論政策綱領修訂方向

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摘要

　　本文以 WHO 宣布解除疫情之緊急狀態為疫情前後的分水嶺，探討疫情後的技職教育面臨的多元挑戰，從學習樣態，產業發展與經濟環境的轉變，使相關技職教育政策規劃也需順應社會及產業脈動做調整。依據技術及職業教育法，至少每二年需通盤檢討技術及職業教育政策綱領並公告之。透過研究政策綱領修定的緣由，瞭解相關法令的立法沿革，並透過數據資料整理後發現：106 年政策綱領所指出技術及職業教育面臨的問題反應當時技職教育所面臨的挑戰；透過 108 年、110 年公告之政策綱領對應當代技職教育政策的實施，以教學實作場域的設備提升以及跨領域專業人才與縱向銜接為主軸；最後以第四版 112 年政策綱領探討後疫情時代技職教育的政策演變，以增加數位能力在教與學面向的應用發展，培養學生多元能力且能適應未來職涯發展與國際接軌為推進方向。

關鍵詞：技職教育、後疫情時代、政策綱領

Policy Formulation of Industrial Education in the Post-Pandemic era- A Brief Discussion on the Revisions of the Policy Guidelines

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Abstract

The study aims to explore the diverse challenges including the learning patterns, industrial development and the economic environment that technical and vocational education faces after the COVID-19 pandemic as a means to adjust relevant technical education policies to correspond to the social and industrial development. According to the Technical and Vocational Education Act, the Guidelines for Technical and Vocational Education Policies shall be comprehensively reviewed and announced at least once every two years. By studying the origin of the policy guidelines, understanding the legislative history and compiling relevant data and information, this research has concluded the following findings: the 2017 revision of the guidelines well reflected the challenges that had faced by technical education.; The implementation of the technical education policy adhere to the guidelines publicized in 2019 and 2021, centering around the improvement of practical teaching, the cultivation of cross-disciplinary professional and promoting vertical articulation. Finally, this study discusses the policy change of technical education in the post-pandemic era based on the fourth version of the guidelines, with the aim of enhancing the application of digital ability in teaching and learning, and developing students' diverse abilities to pursue their future career developments and adapt to the international technical education environment.

Keywords: Technical Education, Post-pandemic Era, Policy Guidelines

【技職教育政策綱領】之實施例—龍華科技大學技職教育推展之探究

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摘要

　　【技職教育政策綱領】是國家人力資源發展的重要政策規劃，引領技職教育培育優質人力及促進經濟發展，在前瞻的願景及明確的目標下推動，期以造就具實作力、創新力及就業力之專業技術人才。本文檢視龍華科技大學依循行政院 110 年版政策綱領，運用國家現有人力資源發展政策下的各類系統網絡，如 UCAN(教育部)，IPAS(經濟部)，ICAP(勞動部)，及新南向政策資訊平台(外交部)，以 ADDIE 建構之教學設計模式，回應求學者之需求，其以加強實務連結及產學合作，拓展跨域人才培育，對技職教育之定位及成效值得探討。研究方法係以文獻分析法(Document Analysis)，就該校疫情期間進行的教學策略，對照【技職教育政策綱領】七項推動方向內涵。研究發現，針對技職教育 CTE(career and technical education)的生涯發展議題，其教學設計的建構頗能開展學生本能的、文化的、自覺的不同生命關聯與境界，同時驗證技職教育:1.個體的生計需求（生存的層次）、2.個體的生活發展（生活的層次）及 3.生命開展（生命的層次）。

關鍵詞：技職教育、IPAS、UCAN、ICAP、新南向、ADDIE

Implementation of Technical and Vocational Education Policy Framework: Research on the Promotion of Industrial Education at Lunghwa University of Science and Technology

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Abstract

[Technical and Vocational Education Policy Framework] is an important policy plan for the development of national human resources. It leads technical and vocational education to cultivate high-quality manpower and promote economic development. It is promoted with a forward-looking vision and clear goals, with a view to creating practical and innovative students. and employable professional and technical personnel. This article examines Lunghwa University of Science and Technology's compliance with the 110th version of the Executive Yuan's policy guidelines and the use of various system networks under the country's existing human resources development policies, such as UCAN (Ministry of Education), IPAS (Ministry of Economic Affairs), ICAP (Ministry of Labor), and New South Bound Policy information platform (Ministry of Foreign Affairs), the teaching design model constructed by ADDIE is used to respond to the needs of students. It strengthens practical connections and industry-university cooperation and expands cross-disciplinary talent cultivation. The positioning and effectiveness of technical and vocational education are worth exploring. The research method is document analysis, which compares the school's teaching strategies during the epidemic with the connotations of the seven promotion directions of the [Technical and Vocational Education Policy Framework]. The study found that in view of the career development issues of CTE (career and technical education), the construction of its teaching design can quite effectively develop students' instinctive, cultural and conscious life relationships and realms, and at the same time verify that technical and vocational education: 1 .Individual livelihood needs (level of survival), 2. Individual life development (level of life) and 3. Development of life (level of life).

Keywords: Technical and Vocational Education, IPAS, UCAN, ICAP, NSBP, ADDIE

從防疫政策探討我國技職教育之發展趨勢影響

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摘要

　　國內於 2020 年 1 月成立「嚴重特殊傳染性肺炎中央流行疫情指揮中心」，從三級開設至 2 月提升至最高等級一級開設。因不斷攀升的致死率而造成嚴重的恐慌，群聚及人際互動被迫強勢停止；日常生活驟變，時間彷彿也因此被凍結。工作、課業皆被居家辦公及線上教學所取代；運動與休閒娛樂也幾乎停擺。兩年多來讓這場疫情顛覆了全球百餘年來各級教育的樣貌，大幅翻轉了傳統在教室中求知的學習模式。而依據聯合國教科文組織UNESCO（2023）發佈了 2023 年的《全球教育監測報告》（Global Education Monitoring）中提到：「當全球處在新冠肺炎 (COVID-19)迅速擴散之傳染力的最盛期，因授課方式被線上學習快速取代後，造成全球至少有大約 5 億多的學生失學。本研究依據衛福部於疫情期間所公布之防疫政策及教育部所發布的各級學校之相關因應措施，經過整理分析並繪製圖表以歸納出，在後疫情時代，探討技職教育在面對疫情翻轉教育後所產生的新教育趨勢，就技職體系而言，技術課程仍須仰賴實作教學，而在面對數位學習的浪頭上，要如何克服不利實作課程的困難與挑戰。這場因疫情所造成原有的學習模式得變革後，突顯了因貧富差距所造成學習資源不均的現實層面，經本研究結論提出有關開放教育資源(OER)策略及舉出臺灣在數位競爭力的優勢，可提供當前技職教育因應數位教學所需之趨勢參考。

關鍵詞：技職教育、技職教育趨勢、防疫政策

Explore the Impact of Epidemic Prevention Policies on the Development of Vocational Education and Training

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Abstract

Taiwan established the "Central Epidemic Command Center for Severe Special Infectious Pneumonia" in January 2020, which was upgraded from Level 3 to Level 1, the highest level, in February. The rising fatality rate has caused serious panic, and people's interactions with each other have been forced to stop. This study is based on the epidemic prevention policies announced by the Ministry of Health and Welfare of the Taiwanese government during the epidemic. Includes education response measures issued by the Ministry of Education. Through organization and chart analysis, the impact of development trends brought by vocational education and training can be obtained. Digital learning has many difficulties to be solved for vocational education and training. The conclusion of this study mainly proposes strategies for Open Educational Resources (OER) and provides reference for trends in digital teaching in vocational education and training.

Keywords: Vocational Education and Training, The Epidemic Prevention Measure

The Impact of Engagement with Feedback on Learning Outcomes in Online Learning Environments

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Abstract

Student engagement with feedback plays a crucial role in enhancing the learning experience, particularly in the context of online courses where face-to-face interaction with instructors or peers is limited. Feedback engagement is a multifaceted process. Disengagement with feedback might lead to poor performance, but research on the factors that might foster the relationship was limited. This study delved into three types of feedback engagement (behavioral, cognitive, and affective) and explored its relationship with learning outcomes with self-regulated learning and satisfaction as mediators. Data were collected through surveys and analyzed by partial least squares structural equation modeling (PLS-SEM). The participants were 185 students enrolled in online master's degree programs provided by nine universities. A multifaceted model of various influences of engagement with feedback on the online learning journey was found. The results confirmed all the relationships in the proposed model except the impact of affective engagement with feedback and self-regulated learning. The findings highlighted the importance of students actively engaging in online feedback rather than simply viewing it as a message. The results should be valuable for online learners and teachers seeking to enhance the effectiveness of online courses.

Keywords: Engagement with Feedback, Self-regulated Learning, Course Satisfaction, Learning Outcomes, Online Master's Degree Program

應用雲端即時互動系統翻轉設計領域教學：以大學「數位特效後製」課程為例

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摘要

　　本研究基於傳統教學現場單向教學，學生的學習意願不高，教師無法了解學生的吸收情況，以及設計領域的評量方式過於主觀等教學問題已久，因此應用一套以翻轉教室之多元活動、多元評量、多元價值為核心概念的「雲端即時互動系統」來創新教學。透過有趣的教學活動設計，再輔以按按按系統的即時、便利、高互動的優點來支援課堂教學，以提高學生的參與度，使教學成效達到學習共同體的三動(生動、互動、主動) 精神的目標。本研究採用實驗法、問卷調查法、深度訪談法及專家評量，探究「雲端即時互動系統」的創新教學應用於設計課堂教學之影響。研究結果顯示.學生對於「雲端即時互動系統」創新教學應用於設計教學具有高度的評價，認為透過悅趣化的學習活動設計能驅動學習，提高學習動機、學習的互動性，提高學生的參與度，增進學習成效。藉由科技輔助讓學生體驗到資訊科技融入教學活動之即時、方便、有效率的優點，能提高同儕合作學習的意願。對於 Zuvio App 系統的問題與缺點，學生的意見包括上傳作業後，無法查看已經上傳的檔案，平台常會自動跳出很多不雅的廣告等，教師的意見則包括點名系統常有錯誤，下載後的學生作業檔名會改變，不利於檔案管理等。科技輔具應用於設計教學不但可支援教學亦有助於將傳統教室單向的教學方式進行翻轉而提升學習效能，具有實用價值。

關鍵詞：設計領域、雲端即時互動系統、數位特效後製、翻轉教學

An Application of Cloud-Based Real-time Interactive System in Flipped Design Field Teaching: A Case Study of University Course "Digital Effects Post-Production"

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Abstract

This research is based on teaching problems of the traditional one-way teaching, students' willingness to learn is not high, teachers cannot understand the absorption of students, and the evaluation methods in the design field are too subjective. The innovative teaching method of "cloud-based real-time interactive system" with multiple activities, multiple evaluations, and multiple values as the core concepts. Through the design of interesting teaching activities, supplemented by the real-time, convenient, and highly interactive advantages of the press-and-press system, classroom teaching is supported to increase student participation and make teaching effectiveness reach the vivid, interactive and active learning goals. This study uses experimental methods, questionnaire survey methods, in-depth interview methods and expert evaluations to explore the impact of the innovative teaching method of "cloud-based real-time interactive system" applied to design classroom teaching. The results of the research show that students have a high evaluation of the innovative teaching method of "cloud-based real-time interactive system" applied to design teaching. They believe that fun-oriented learning activity design can drive learning, improve learning motivation, learning interaction, and improve students' participation and enhance learning effectiveness. With the aid of technology, students can experience the instant, convenient and efficient advantages of integrating information technology into teaching activities, which can increase the willingness of peers to cooperate in learning. Students' opinions about the problems and shortcomings of the Zuvio App system include they cannot view the uploaded files after uploading the homework, and the platform often automatically pops up many indecent advertisements, and so on. The teacher's opinions include the frequent errors in the roll call system and the downloaded file names of the students' homework will be changed, which is not conducive to for management, etc. The application of technology aids to design teaching can not only support teaching, but also help to integrate traditional classrooms. It is of practical value to flip the traditional teaching method and the learning effect is improved.

Keywords: Cloud-based Real-time Interactive System, Design Field, Digital Effects Post-Production, Flipped Teaching

應用 OMO「三動一合」模式在大學設計領域教學及其成效之研究

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摘要

　　在後疫情時代下教師融合線上和線下(online and offline merge, OMO)教學、結合融合資訊科技、重塑教師與學生角色關係和責任、強調從單向教學轉為雙向互動之教學，能有助於提高大學設計領域學生學習興趣和專注力，也能提高學生參與度與學習成效。本研究目的有四：探討線上教學實施現況與 OMO 教學模式之內涵；建構設計領域之OMO「三動一合」教學模式；檢視設計領域之 OMO「三動一合」教學模式之成效；瞭解設計科系學生對 OMO「三動一合」教學模式之意見。本研究採用實驗法、問卷調查法、對比評估法及深度訪談法，探究設計領域之 OMO「三動一合」教學模式之成效。本研究發現設計領域之 OMO「三動一合」教學模式能夠實現主動式學習、互動參與、生動情境和合作學習的效果。教師透過智慧教學系統了解學生學習情況，進行教學活動，學生合作創作作品並進行發表和同儕評鑑。學生對於設計領域應用 OMO「三動一合」教學模式表現出積極的態度，在生動性、主動性、互動性和合作性方面獲得了學生的高度滿意度和肯定，也提高了學生的學習成效和參與度。這些結果證明了 OMO「三動一合」教學模式的可行性和有效性。設計科系學生對 OMO「三動一合」教學模式持有正面的意見，透過科技輔助和精心設計的教學活動，OMO「三動一合」教學模式提升了教學效能，讓學生重新發現學習的樂趣並在學習成效方面表現出色。

關鍵詞：大學、三動一合、設計領域教學、線上與線下融合

A Study on the Application of the OMO "Three-Actions-One Collaboration" Model in University Design Field Teaching and Its Effects

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Abstract

In the post-pandemic era, the integration of online and offline (OMO) teaching by educators, combined with the use of information technology, reshaping the roles and responsibilities of teachers and students, and emphasizing the shift from one-way instruction to interactive teaching, can contribute to enhancing students' interest and focus in the field of university design education. It can also increase student engagement and learning outcomes. This study has four main objectives: to explore the current implementation of online teaching and the essence of the OMO teaching model, to construct the OMO "Three-Actions-One Collaboration" teaching model in the field of design, to evaluate the effectiveness of the OMO "Three-Actions-One Collaboration" teaching model in the field of design, and to understand the opinions of design department students on the OMO "Three-Actions-One Collaboration" Teaching Model. This research employs experimental methods, questionnaire surveys, comparative assessments, and in-depth interviews to explore the effectiveness of the OMO (Three-Actions-One- Collaboration) teaching model in the field of design education. The study findings indicate that this OMO teaching model in the design field can achieve active learning, interactive participation, dynamic scenarios, and collaborative learning. Teachers use smart teaching systems to understand students' learning progress, conduct teaching activities, and students collaborate to create and present their work while engaging in peer evaluations. Students display a positive attitude towards the application of the OMO (Three-Actions-One-Collaboration) teaching model in design education. They express high levels of satisfaction and appreciation in terms of dynamism, proactivity, interactivity, and collaboration, leading to improved learning outcomes and participation. These results demonstrate the feasibility and effectiveness of the OMO (Three-Actions-One-Collaboration) teaching model. Students in design departments hold favorable views of this teaching approach. Through technology-assisted and carefully designed instructional activities, the OMO (Three-Actions-One-Collaboration) teaching model enhances teaching efficiency, enabling students to rediscover the joy of learning and excel in terms of learning outcomes.

後疫情時代技職教育混合式實作課程教學設計：以機械群科機械加工課程為例

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摘要

自後疫情時代開始，教育模式有了全新的面貌，實體課程搭配遠距教學形成的混合式教學模式已成為教育趨勢。伴隨著科技的日新月異，使得許多線上教學平台也順勢在疫情期間因應而生，使教師能夠及時應變而無須進行繁鎖的課前準備，並可善用線上學習平台進行實作教學模擬，且無須考慮到學生設備及軟體授權費等因素，讓課程得以透過新穎教學模式進行實作教學。

本文以技高端機械群科二年級的機械加工課程為例，將疫情期間所設計的教學方式應用於後疫情時代進行混合式教學，並根據在疫情期間教學所遇到的困難，結合 onshape 數位學習平台，提供混合式教學的評量方式與建議。

關鍵詞：技職教育、混合式教學、數位學習。

Teaching and Learning Design of Mixed-Use Practical Courses in the Post-Epidemic Era: A Case Study of the Mechanical Machining Course of the Mechanical Engineering Group of Departments

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Abstract

Since the onset of the post-pandemic era, the education model has undergone a significant transformation, with the hybrid teaching model combining physical classes and distance learning emerging as an educational trend. With the rapid advancement of technology, many online teaching platforms also came into existence during the pandemic, allowing educators to adapt promptly without the need for extensive pre-class preparations. They can effectively utilize online learning platforms for practical teaching simulations, without having to consider factors such as student equipment and software licensing fees, thereby enabling courses to be delivered through innovative teaching methods.

This article takes the example of the second-year mechanical processing course within the high-end mechanical group subject. It applies the teaching approach developed during the pandemic to the post-pandemic era for hybrid teaching. Drawing from the challenges faced during the pandemic, it combines Onshape digital learning platform to provide assessment methods and recommendations for blended teaching.

Keywords: Technical Vocational Education, Blended Education, Digital Learning

以美國心理學會資優學生教與學原則討論技職體系學生學習需求

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摘要

　　本研究以美國心理學會 (American Psychological Association) 與教育心理學小組 (Coalition for Psychology in Schools and Education) 提出之 20 項教與學最重要的心理學原則 (Top 20 Principles from Psychology for PreK-12 Creative, Talented, and Gifted Students' Teaching and Learning) 進行技職體系學生學習需求討論。透過五大向度為教育現場教師提出得以應對學生學習需求的明確指引，分別為「學生如何思考和學習？」、「什麼能激勵學生？」、「為什麼社會背景、人際關係和情緒健康對學生的學習很重要？」、「怎樣才能更好地管理課堂？」及「如何評估學生的進步？」。

　　不同於過去討論學習需求的研究，本研究以心理科學角度討論並期許教師在教學設計與教學目標上找到一個適切的方向，為學生提供適合的學習方法，讓學生在專業科目或實習科目都能有良好的學習環境，提升務實致用的就業力。

關鍵詞： 技職教育、教與學、學習需求

Discussing the Learning Needs of Vocational Students through Top 20 Principles from Psychology for Prek-12 Creative, Talented, and Gifted Students' Teaching and Learning by The American Psychological Association

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Abstract

This study engages in a discussion of the learning needs of vocational students through the framework of the "Top 20 Principles from Psychology for PreK-12 Creative, Talented, and Gifted Students' Teaching and Learning," proposed by the American Psychological Association and the Coalition for Psychology in Schools and Education.

Through five dimensions, this research provides clear guidelines for educators in addressing students' learning needs. These dimensions include "How do students think and learn?," "What motivates students?," "Why are social context, interpersonal relationships, and emotional well-being important to student learning?," "How can the classroom best be managed?," and "How to assess student progress?"

Diverging from past research on learning needs, this study adopts a psychological perspective, aiming to guide educators in appropriate directions for instructional design and objectives. The goal is to offer students suitable learning methods, fostering a conducive learning environment in both professional subjects and internship settings. Ultimately, the aim is to enhance practical employability skills.

Keywords: Technical and Vocational Education, Teaching and Learning, Learning Needs

COVID-19疫情下線上學習的教師教學技能、學習態度與感知學習成效之探討—以新竹市技術型高中資訊科技課程為例

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摘要

　　因嚴重特殊傳染性肺炎（COVID-19）疫情影響，教育部自 110 年 5 月宣布的停課不停學政策，對於教學方式與學習者學習型態，帶來了不同的轉變，教師可採用同步、非同步或混成教學進行。線上學習的教學方式，成為在疫情之下，教師授課的重要教學型態。本研究針對新竹市公私立技術型高中學生，採叢集抽樣方式，透過問卷調查法，並運用 AMOS 結構方程式進行資料分析，主旨在探討學生在資訊科技課程進行線上學習時，對於教師教學技能、學習態度及感知學習成效之影響，並提出對於後疫情時期的資訊科技課程與教學之建議。本研究有四項研究發現：一、教師教學技能對於學習態度有顯著且為正向影響；二、學習態度對於感知學習成效有顯著且正向影響；三、教師教學技能對於感知學習成效方面未有顯著之影響；四、學習態度對於教師教學技能及感知學習成效有中介效果存在。

關鍵詞：線上學習、教師教學技能、學習態度、感知學習成效

An Investigation into Teacher Instructional Skills, Learning Attitudes, and Perceived Learning Effectiveness in Online Learning During the COVID-19 Pandemic-A Case Study of the Information Technology Curriculum in Hsinchu City Technical High School

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Abstract

Due to the impact of the COVID-19 pandemic, the Ministry of Education announced the policy of suspending in-person classes while promoting continuous learning starting from May 2021. This policy has brought about various changes in teaching methods and learner patterns, allowing teachers to adopt synchronous, asynchronous, or blended teaching approaches. Online learning has become a significant instructional mode for teachers during the pandemic. This study focuses on students from public and private technical high schools in Hsinchu City, using cluster sampling and questionnaire surveys. Data analysis was conducted using AMOS Structural Equation Modeling(SEM). The primary aim was to explore the impact of students' perceptions of teacher instructional skills, learning attitudes, and perceived learning effectiveness when participating in online learning in information technology courses. Additionally, recommendations for information technology curriculum and teaching in the post-pandemic period are provided. Four key findings emerged from this study: 1.Teacher instructional skills significantly and positively influence learning attitudes；2.Learning attitudes have a significant and positive impact on perceived learning effectiveness；3.Teacher instructional skills do not have a significant impact on perceived learning effectiveness；4.Learning attitudes mediate the effects of teacher instructional skills on perceived learning effectiveness.

Keywords: Online Learning, Teacher Instructional Skills, Learning Attitudes, Perceived Learning Efectiveness

Developing a Teaching Competency Framework to Enhance High School Students' Key Competencies in Vietnamese

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Abstract

Since 2020, Vietnam has implemented a new education curriculum for high schools with a focus on cultivating students' key competencies for future life. According to the curriculum reform, teachers need to have sufficient teaching capabilities to help students develop key competencies. However, the specific content of teaching competencies has not been fully discussed at this stage. To fill the gap, this study aimed to identify the essential teaching competencies and to construct a framework based on the new curriculum for Vietnamese high schools. A mixed method approach including interview, Fuzzy Delphi, and the Analytic Hierarchy Process were conducted. The researchers reviewed literature and generated a preliminary teaching competency framework; then revised it based on interview results from experts and teachers in teacher education. According, a framework with three levels (competency, indicator and sub-indicator) and corresponding items was constructed. A Fuzzy Delphi technique was followed in which 22 panelists individually ranked the importance of each competency. The results were adopted in the next stage where the relative importance ranking for each item from was collected from the expert panel using the AHP. Finally, a three-level teaching competency framework for Vietnamese high school teachers was established, which consisted of four main competencies in the 1st level, 23 indicators and 78 sub-indicators in the 2nd and 3rd levels. Among them, "Assess students' competencies" was identified as the most important competency and "Establish a learning environment to foster students' problem-solving and creativity competency" was the most important indicator based on the weighted values. Based on the findings, recommendations were proposed.

私立技術型高級中等學校教師工作滿意度與轉職傾向之個案研究

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摘要

　　本研究旨在探討私立技術型高級中等學校教師工作滿意度與轉職傾向之個案研究。研究採用質性研究法，以立意取樣方式選擇新竹縣某一所私立技高學校教師為研究對象進行深入探討，研究對象以六位教師為代表，探討私立技術型高級中等學校教師在工作上所面臨問題，研究者透過在私立技術型高中任職經驗看到私立教育工作者面臨問題，透過深度訪談了解教師所遇到的問題及真實感受，期望透過研究了解教師工作問題對工作滿意度與轉職傾向的影響，據此提供具體建議供教育單位參考，以減少教師流動率。

　　根據訪談結果得知，教師對工作滿意度受到教學本身、職務分配、人際關係影響工作滿意度，教師對本身專業與同事間互動關係與單位主管給予支援影響工作滿意度；在教學薪資與福利因素感受雖然感到不滿意，但對工作不滿意未有明顯影響構成轉職行為。

　　根據研究結果，對私立技術型教師工作滿意度與轉職傾向提出建議事項，以供參考：建議學校對教學設備提升、增加教學人力減少超鐘點節數、減少非專業領域研習參與時數使教師回歸專業領域討論與增加備課時間。

關鍵詞：工作滿意度、技術型高級中等學校教師、轉職傾向

A Case Study on Teachers' Job Satisfaction and Career Change Tendency in a Private Vocational Senior High School

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Abstract

This case study aims to explore private vocational senior high school teachers'impact of difficulties faced by teachers on their job satisfaction and turnover intention. By the method of the purposive sampling of the qualitative research, six teachers are selected as the participants from a private vocational senior high school in Hsinchu County. Through in-depth interviews with these six teachers, this study tries to dig out the problems encountered by teachers and their true feelings when they deal with problems. Besides, based on the results, this study also attempts to provide specific suggestions for educational institutions to lower teachers' turnover rate.

After the in-depth interviews with these six teachers, it is known that teachers' job satisfaction is affected by teaching itself, job assignments, interpersonal relationships and the support given by supervisors. On the other hand, the salary and welfare which teachers are not satisfied with don't obviously influence their turnover intention.

Based on the study results, about the private vocational senior high school teachers' job satisfaction and turnover intention, it is recommended that schools improve teaching equipment, hire more teachers to decrease overtime loadings, and reduce teachers' participation hours in non-professional fields to make teachers return to professional areas and have more time to prepare for teaching.

Keywords: Job Satisfaction, Vocational Senior High School Teachers', Turnover Intention.

新二代私立高職學生人際互動、學校適應、自我認同之相關研究

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摘要

　　本研究旨在探討新二代高職學生的人際互動、學校適應、自我認同之間的關聯性。採立意取樣法，於 2023 年 6 月，以南投縣某高職新二代學生為對象，共抽取學生 60 名填答問卷。所獲研究資料以 t-考驗、單因子變異數分析、因素分析、及線性迴歸分析方法進行資料處理，獲得下述重要結論：1.新二代高職學生「人際互動」能有效預測其「學校適應」；2.新二代高職學生「學校適應」能有效預測其「自我認同」；3.新二代高職學生之「人際互動」與「學校適應」能有效預測其「自我認同」；4.不同「性別」新二代高職學生在「人際互動」上具有顯著差異，男生的表現優於女生；5.父親或母親來自「不同國籍」的新二代高職學生，在「自我認同」上有顯著差異，父親或母親為中國大陸籍或越南籍者，其「自我認同」表現優於印尼籍者。

關鍵詞：人際互動、學校適應、自我認同、移民、高職

A Study on the Relationship between Interpersonal Interaction, School Adaptation, and Self-identity of Second-generation Immigrants in a Private High School

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Abstract

This study explores the correlation among interpersonal interaction, school adaptation, and self-identity of the new second generation of private senior high school students. The purposive sampling method is employed to gather the research data. In June 2023, sixty students were selected to fill in the questionnaire, taking the new second-generation private senior high school students in Nantou County as the object. The t-test, ANOVA, Factor Analysis, and Linear Regression Analysis methods are employed to analyze the collected data. Based on this survey, the following important conclusions were obtained: 1.The new second-generation private senior high school student's "Interpersonal Interaction" can effectively predict their "School Adaptation"; The "School Adaptation" of the new second-generation of private senior high school students can effectively predict their "Self-Identity"; 3.The "Interpersonal Interaction" and "School Adaptation" of the new second-generation of private senior high school students can effectively predict their "Self-Identity" ;4.New second-generation private senior high school students of different "Genders" have significant differences in "Interpersonal Interaction," and the interpersonal interaction performance of male students are better than that of femal students; 5.The new second-generation private senior high school students have significant differences in "Self-Identity." Those whose father or mother is Chinese or Vietnamese have better "Self-Identity" performance than those of Indonesian nationality.

Keywords: Interpersonal interaction, School adaptation, Self-identity, Immigrant, Private high school

Differences in Students' Metacognition by Gender and School Locations in Vietnam

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Abstract

The study examines whether there is any difference in the metacognitive strategies among students from a variety of school locations in Vietnam. Moreover, this study aims to explore whether schoolboys and schoolgirls differ in using metacognitive strategies in Vietnam. The secondary data, namely "Programme for International Student Assessment (PISA) 2018", is used in this research; therefore, the sample of this study includes 5377 learners who came from 151 schools in Vietnam and took part in PISA 2018. Multivariate analysis of variance (MANOVA) statistic technique is employed for data analysis in this study. The findings showed significant differences in metacognition by gender and school locations in Vietnam. The findings mainly contribute to affirming the differences in metacognitive strategies by gender and school location. Moreover, these findings provide implications for the educators, teachers, and parents who take consideration in designing the programs regarding reducing the inequality in the educational process at school and home.

Keyword: Metacognition, Gender, Locations, PISA, Vietnam

疫後職場組織創新領導經營模式探討

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摘要

　　疫後「創新領導」已受各界倡導，惟組織領導者，其所應具備之創新思維與作爲，如何評估檢視團隊與其業務模型，及有效經營策略，皆面臨諸多挑戰。本文旨在探討疫後職場組織之「創新領導」經營模式，綜合學理及相關文獻，並透過內容分析，釐清組織結構。本文提出將「智慧數位」科技管理工具及「ESG 永續發展」精神與元素，納入模型考量，並歸納出疫後職場組織「創新領導」之內涵架構，應包括三個面向：其一，文化理念及使命價值；其二，各級領導之精實管理；其三，專業技術及業務能力。

關鍵詞：疫後職場組織、創新領導、智慧數位、ESG 永續發展

Exploring Innovative Leadership and Management Models in the Post-Pandemic Workplace Organization

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Abstract

Post-pandemic, the concept of "innovative leadership" has gained advocacy from various sectors. However, organizational leaders face numerous challenges in assessing and examining their teams and business models for the requisite innovative thinking and actions, as well as effective operational strategies. This article aims to explore the operational framework of "innovative leadership" in the post-pandemic workplace, drawing upon theoretical knowledge and relevant literature, and clarifying organizational structures through content analysis. This article proposes the inclusion of "smart digital" technology management tools and the spirit and elements of "ESG sustainability" in the model considerations. It summarizes the core framework of post-pandemic workplace "innovative leadership," which should encompass three dimensions: firstly, cultural values and mission; secondly, lean management by leaders at all levels; and thirdly, professional skills and business capabilities.

後疫情時代各國 AI人工智慧產業及人才培育政策對於我國高級中等以下 AI人工智慧教育之啟示：以新加坡、日本及中國大陸為例

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摘要

近年世界各國積極推動 AI人工智慧，並導入自動化技術等新興科技蓬勃發展，逐漸成為帶動國家生產力的重要驅動力，亦廣泛影響整體產業發展，其中透過教育培養是國家產業人才培育的重要核心。現行推動 AI人工智慧的大國主要為歐美國家，惟考量民情及經濟體制差異，本研究特別針對與我國相近的亞太地區中，挑選經國際機構評選 AI人工智慧發展前段班國家，因此挑選新加坡、日本及中國大陸等三國推動 AI人工智慧產業及人才培育政策進行文獻探討，以及我國 AI人工智慧產業及人才培育政策進行分析比較。同時，因應產業趨勢快速發展，透過教育體制讓新興科技超前部屬提早向下扎根，藉由新加坡、日本及中國大陸等國經驗，提出對於我國高中職及國中小推動 AI人工智慧教育發展之方向，本研究的兩大目的，一、新加坡、日本、中國大陸及臺灣 AI人工智慧產業及人才培育政策之分析；二、新加坡、日本及中國大陸 AI人工智慧產業及人才培育政策對於我國推動 AI人工智慧教育政策之建議。未來具體政策建議則為一、擬定AI教育政策完整政策藍圖；二、結合產業規劃AI應用體驗場域；三、運用 AI大數據進行未來教育決策。

關鍵詞：AI人工智慧、人工智慧素養

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The Enlightenment of AI Artificial Intelligence Industry and Education Personnel Training Policies in Various Countries to AI Artificial Intelligence Education in My Country's Senior Middle School and Below in Post-Pandemic Era: Taking Singapore, Japan and China as Examples

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Abstract

In recent years, countries around the world have actively promoted AI artificial intelligence, and introduced new technologies such as automation technology to flourish, gradually becoming an important driving force for driving national productivity, and also widely affecting the development of the overall industry. Among them, education and training is an important core of national industrial talent cultivation. The major countries currently promoting AI artificial intelligence are mainly European and American countries, but considering the differences in public sentiment and economic systems, this study is especially aimed at the Asia-Pacific region similar to my country. And China and other three countries to promote the AI artificial intelligence industry and talent cultivation policies for literature discussion, as well as my country's AI artificial intelligence industry and talent cultivation policies for analysis and comparison. At the same time, in response to the rapid development of industrial trends, through the education system, the advanced subordinates of emerging technologies can take root early. With the experience of Singapore, Japan, and mainland China, the direction of promoting the development of AI artificial intelligence education for my country's senior secondary vocational schools and primary and secondary schools is proposed. Two main purposes of this study: First, Analysis of AI industry and talent cultivation policies in Singapore, Japan, Mainland China and Taiwan; Second, Suggestions on AI industry and talent cultivation policies in Singapore, Japan and Mainland China for promoting AI education policies in my country. The specific policy recommendations in the future are: First, to formulate a complete policy blueprint for AI education policy; Second, to combine industrial planning for AI application experience fields; third, to use AI big data to make future education decisions.

A Study on Student Perception of Formative Assessment Affecting Student Performance

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Abstract

The study aimed to analyze the influence of perceptions of students' formative assessment on learning outcomes. The study surveyed students at five universities in Hanoi city in Vietnam with two groups of Natural Sciences – Engineering and Social Sciences and Humanities. Ordinal Logistic Regression is used to analyze data to indicate the influence of students' perceptions of formative assessment on learning outcomes and the interaction effect between students' perceptions of formative assessment and their majors. In particular, students' perceptions of feedback significantly impact student performance more than supervision and academic support. Therefore, some recommendations are proposed to promote the frequency of using formative assessment in teaching and support learners' progress.

Entrepreneurship Learning Preparing Vocational High School Students for Prospective Young Entrepreneurs in Indonesia

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Abstract

The increase in the number of vocational high school graduates every year is not comparable to the number of industries in Indonesia. This is what caused the government to issue a policy to provide entrepreneurship education to vocational high school students. The purpose of this study is to describe the implementation of entrepreneurship education to prepare vocational high school students in Indonesia. This type of research is descriptive with a qualitative approach. The subjects are three public vocational high schools that get the center of excellent program from the ministry of education. Data was collected by interviews, observation and documentation. His findings stated that vocational education is part of the implementation of the Merdeka curriculum in Indonesia. This learning must be project-based and product-producing. This learning is also carried out in collaboration with local and national entrepreneurs. Learning activities begin with making proposals in groups, implementing, and evaluating. Implementation is carried out by involving entrepreneurs or related industries. As a result, every department in every vocational school has entrepreneurial products as outputs and retail businesses carried out by its students. The learning patterns that make the mainstay of the school will then be competed at the regional and national levels. Finally, entrepreneurial activities in VHS not only have a positive impact on schools to prepare their graduates to become young entrepreneurs, but also provide an additional workload of teachers in schools.

Keywords: Entrepreneurship Education, Vocational High School, Young Entrepreneur, Student Business

Assessment and Evaluation in Online Learning in the Context of Covid 19: New Approaches and Best Practices

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Abstract

In the past two years, the COVID-19 virus-caused crisis has far-reaching and long-lasting consequences in the realm of education. It has made online learning an important and unique solution in the context of social distancing while schools still need to ensure that the learning of all students at all levels is not interrupted (Zhu et al., 2020; Montenegro-Rueda, 2021). This sudden change has sparked a debate about the educational quality. After nearly two years of the pandemic with the officially accepted implementation of online teaching in many countries, it is necessary to evaluate the effectiveness and give solutions to assure the quality of this learning mode. This necessarity is resulted from the accountibility of the schools and their need to save their invests because according to Dorn et al. (2020), the pandemic will not only cause poor academic performance in students but also increase the dropout rate in many online courses. Therefore, this paper aims to provide a thorough literature review on concepts related to assessment and evaluation in online learning; how assessment and evaluation were affected by Covid 19; the most commonly adopted techniques, and the best practices in the field under the context of the pandamic. Theoretically, this chapter will contribute to the current literature review about assessment and evaluation in online learning while practically, it give hands-on techniques and best practices for policy-makers, quality assurance staff as well as educational managers and teachers to implement at their schools.

Keywords: Assessment, Evaluation, Online Learning, Best Practices, Online Assessment

Universities' Communication Efforts with Students Influence University Choice Decisions of Grade 12 Students

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Abstract

The study aims to find out how universities' communication efforts with students influence their university's choice decisions of 12th-grade students through using a correlational approach. A survey was sent to grade 12 students at four high schools of Vietnam National University (VNU) in Hanoi. There were 303 valid answers to the analysis. Logistic regression was employed to analyze data. There are four dimensions of the university's communication efforts with students in this study, including (1) Campus activities and university visits, (2) University publications and information, (3) Information sources from the Internet, and (4) Advertising activities from radio and television media. The results show that students' decision to choose a university because of three main factors related to the university's communication efforts are (1) Information sources from the Internet, (2) Campus activities and university visits, and (3) University publications and information. Based on the results, the recommendations were provided to universities.

Keywords: University's Communication Efforts, University Choice decision, Vietnamese Students, High School Students.

Augmented Reality in the Implementation of Information and Communication Technology in Engineering and Vocational Teaching in the Post-Pandemic Era

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Abstract

Along with the dramatic changes in education due to the COVID-19 pandemic, technical and vocational education requires innovative and adaptive approaches to meet students' needs. The integration of Augmented Reality (AR)-based learning technologies in the context of engineering and vocational education in the post-pandemic period is emerging as one of the promising solutions in enhancing the engineering and vocational learning experience. ICT, especially through e-learning, has strengthened learning by increasing student engagement and providing flexibility in the learning process. The post-pandemic era has also witnessed developments in online teaching that combines information technology and AR. The integration of AR in technical and vocational education provides great benefits, including higher student engagement through interactive learning experiences. Students can visualize technical concepts in three dimensions, participate in practical projects, and learn according to their interests and ability levels. However, the application of AR has challenges such as limited access to devices and resources, teacher training, security issues, privacy, and the development of high-quality content, so in the face of continuing technological developments, technical and vocational education must continue to adapt to achieve optimal results.

Keywords: Augmented Reality (AR), Technical and Vocational Education, Post-Pandemic, ICT

Longitudinal Changes in Self-Efficacy of Math, Professional, and Workshop Courses for Vocational High School Students in Applied Engineering Programs

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Abstract

Self-efficacy is an important precursor of academic and career achievement. It is thus important to track the tides and ebbs of self-efficacy in different types of courses over time, as well as the predictors, to further unpack the salient factors of self-efficacy. We explored the longitudinal changes of self-efficacy in math, professional, and workshop courses among vocational high school students in applied engineering programs. Following the social cognitive and expectancy-value theory, we surveyed 131 public vocational high school students majoring in applied engineering programs in Taiwan about their self-efficacy belief in math, professional, and workshop courses during the first three semesters. Results from growth curve modeling analysis indicates that the growth of self-efficacy in math slows down but speeds up in professional and workshop courses in the third semester. Prior math performance is positively related to the intercept of the self-efficacy in math and workshop courses, whereas academic engagement is positively related to the intercept of professional and workshop courses. We did not find gender or socioeconomic status difference in the intercept and slope of the development of self-efficacy across the three types of courses, nor were the identified predictors related to the slope of self-efficacy. The findings highlight the importance of academic preparation and continuing academic effort in cultivating self-efficacy for vocational high school students.

Keywords: Self-efficacy, Vocational High School, Math, Professional Course, Workshop Course, Growth Curve Modeling

Financial Autonomy in Universities: Current Situation and Recommendations

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Abstract

This research illustrated the real situation and levels of financial autonomy in universities in Vietnam, analyzed foreign universities' experience in financial autonomy, and made recommendations to promote the transfer from state-control to state-monitor model in financial autonomy implementation. With greater autonomy and accountability in finance, public higher education institutions have more opportunities to improve their proactiveness and creativity in financial and asset management, and make more proper and effective use of the state budget. Generally, only by being given actual financial autonomy can universities develop in a dynamic and appropriate way in line with today's global integration.

Keywords: University Autonomy, Financial Autonomy, Public Higher Education Institutions