



PROGRAMME OUTLINE

SINO / NZ TVET

EDUCATIONAL RESEARCH

FORUM – TIANJIN, P.R.

CHINA 2014

New Zealand Presentations

Overview

The New Zealand and Chinese Ministries of Education have signed a strategic educational partnership to strengthen the links between the two countries. They have agreed to host an annual symposium, showcasing best practice in the delivery of vocational teaching.

This publication provides an overview of the presenters and presentations of New Zealand contributors to the second Sino / NZ TVET Educational Forum held in Tianjin, P.R. China in November 2014

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Edited by Dr John Clayton & Stewart Brougham

Introduction and Welcome

Marks Picture

On behalf of the New Zealand – Sino Vocational and Professional Education and Training Programme I am pleased to welcome you to the second TVET symposium to be held at Tianjin, P.R. China in November 2014.

In 2013, the New Zealand and Chinese Ministries of Education signed a strategic educational partnership to strengthen the links between the two countries. Both countries agreed to host an annual symposium, showcasing best practice in the delivery of vocational teaching. This symposium demonstrates that shared a commitment to ensuring TVET practices in both countries are informed by applied research and evaluation.

Vocational education and training focuses on the application and transfer of knowledge. The depth, breadth and scope of these New Zealand presentations demonstrate how evaluation, reflection and research has been used to inform teaching and learning. They illustrate how the vocational sector of our educational provision provides a fertile area for in-depth evaluation and how that acquired knowledge is used to improve practice.

We encourage participants to reflect on their own practises and think of contributing a presentation to next year's conference to be held in New Zealand.

Mark Flowers

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Deploying student / peer feed-back
to improve the learning of skills and
dispositions with video

部署学生/反馈等，以提高技能和
性格与视频学习

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The work demonstrated and presented in this paper is based on a range of mobile learning projects using tablets in classrooms, workshops /workrooms and in authentic learning environments to video skills and dispositional learning. Videos are then used as a basis for peer, group and teacher-led feedback sessions to improve students' self-efficacy of their learning progress.

Peer feedback, through the application of feed-up, feedback and feed-forward strategies, was established to be crucial towards improving the learning of skills and dispositions. To be effective, learning through the videoing of skills or dispositional learning as they occur, requires planned learning activities. The deployment of peer learning also requires learners to be attuned to nuanced expression of skills or dispositions. Novices may not have the requisite skills to judge levels of competence. Learners who provide peer feedback require a scaffolded process to learn evaluative skills and the language of feedback as required in their discipline or profession.

Keywords: technology enhanced learning; vocational education; learning dispositions.

本文介绍及示范一系列移动教学的项目，包括在课室及其它教学环境中使用平板电脑以及视频技能和学习习惯，然后使用视频讨论反馈给学生，从而提高学生对自己的学习进展的了解。

同学之间的反馈对提高学生的学习技能及良好学习习惯是至关重要的。使用视频录像使之更为有效，因为学生必须预先计划好各种学习行为的表达。新手可能没有这种技能。提供反馈的学生需要学习一些在他们专业领域里的评估技能与术语。

关键词。 关键字: 技术增强学习; 职业教育; 学习倾向。

CPIT Overview

CPIT is the largest polytechnic in New Zealand's South Island. CPIT is a Member of the New Zealand International Association of Universities with long-term international teaching and research partnerships. CPIT has an over hundred year history of providing practical vocational learning and training in over 200 programmes to over 2500 students each year including over 1,600 international students from over 50 countries. Programmes include applied sciences, architecture, art and design, broadcasting, business, computing, food and hospitality, humanities, languages, nursing, performing arts, outdoor education, sustainability and trades.

基督城理工学院纽西兰南岛最大的理工学院。国际大学协会的成员同时也是新西兰英语协会成员-和五十几所国际著名院校有着合作关系。学院成立于1906年，实用职业学习培训超过100年的历史。200多项教育课程学历。在校学生：25,000名/年。国际留学生-1,600（来自于50多个国家）。专业包括：应用科学，建筑，艺术与设计，广播，商业，计算机，食品与酒店，人文，语言，护理学，表演艺术，户外教育，可持续发展和行业。

Debby Taylor

Debby had an international career as a hotel front office receptionist and corporate trainer before she began teaching at Christchurch Polytechnic Institute of Technology (CPIT) 20 years ago. Her expert area is with front office software systems, an area she maintains currency in, most recently, with 2 weeks academic study leave at the JW Marriott Marquis Hotel in Dubai. Debby has always worked with integrating technology-enhanced learning (TEL) into her teaching and continues to push the boundaries of TEL to assist students learning.

供应有一个国际职业作为一个酒店的前台接待员和企业培训师开始了教学之前,她在克赖斯特彻奇综合技术学院技术(cpit)20年前。她是专家区与前端办公软件系统,她坚持一个地区货币,最近,2周内离开学术研究在上海 JW 万豪酒店在迪拜侯爵。一直在供应与集成技术增强型学习(TEL)到她教学和继续开拓的电话,帮助提高学生的学习成效。

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Inducting students into the engineering community using project based learning as the core methodology of an engineering foundation programme.

以项目式教学法作为工程学预科课程的核心方法引导学生进入工程学领域

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This paper outlines the implementation of a project based foundation module in Engineering. The purpose of the module was to increase access to and improve retention in the National Engineering diploma being offered by the Wellington Institute of Technology. Central to the curriculum was the construction of a model steam engine that was used to imbed key concepts in mechanics, thermal physics and electricity. In addition to this, mathematical knowledge, engineering language as well as scientific and engineering process skills were developed. The effect of this project based integrated curriculum was intended to induct students into engineering as a profession and make them want to be engineers, by providing them with an authentic context in which to learn physics. Once the students had left the course, their performance as a group was measured against mainstream students. The data gathered reveals that the foundation programme was successful in preparing the students for the academic rigor of the courses that followed as well as preparing them to be part of the engineering community.

Keywords: Curriculum development, Engineering, Project Based, Force Concept Inventory, Case Study, community of practice.

为了增加惠灵顿理工学院开设的全国工程文凭课程的入学率以及提升其学生保留率而专门设计的一个工程学预科课程。本文章对该预科课程的开发和实施进行了评估。该课程围绕一个项目展开，用易拉罐制作一个蒸汽发动机模型，该模型将用于驱动模型车，然后再用于发电。在模型车的制作和测试任务中将会融入关于力学、热学和电学的重要概念。此外，在一系列结合主要物理知识的任务过程中还会涉及数学知识和工程语言的使用。本课程通过结合这些元素，旨在引导学生

进入工程学领域，以及在实践环境中让学生掌握物理学知识。我们通过诊断概念测试(即：力的概念测试和力学基准测试)的方式，测量能体现项目实施方法成果的概念学习的水平。一旦工程学预科班的学生结束课程后，我们以班级为单位测量学生的表现，而且和那些在就读文凭课程之前未参加预科班的学生们的表现进行对比。整理后的数据显示，工程学预科课程能有效地让学生在往后的课程学习中更加严谨治学，而且能帮助学生为投身工程领域做好准备。

关键词：课程开发、工程、项目式、力的概念测试、案例研究、实践型团体

Weltec Overview

The Wellington Institute of Technology (WelTec) is a government funded tertiary educational institution offering education and training in the vocational sector. Situated in the capital city of New Zealand, we deliver practical, relevant qualifications designed to enhance career and employment options for the students who come to us. Our teaching staff members are specialists and researchers in their fields, and we have invested in exciting new technology to ensure that we remain at the leading edge of training and learning in New Zealand. WelTec has had an important place within the wider Wellington region for over 100 years. We offer a comprehensive range of education to almost 11,000 students each year. Our teaching has been enhanced by the positive industry relationships that we have developed. We work closely with employers so that we, and they, are confident that our graduates have the skills they need to succeed in the workplace. Through our business, industry and professional partnerships, students get to work on real projects and employers often recruit our graduates directly from WelTec. WelTec offers degree and diploma courses that are accredited by the NZQA as well as certificate courses and short courses that are in demand from industry. One of our main specialist areas is engineering and through our partnership in Guangxi, we have worked with Chinese lecturers and students both in China as well as in New Zealand

学校简介

惠灵顿理工学院(WelTec)成立于 1904 年，是一所由新西兰政府出资建立，拥有 100 多年教育历史的公立学院。

WelTec 秉承其一个多世纪的优秀教学科研传统，致力于从基础英语到专科文凭及本科学位等不同层次的全面教育。

学校结合日新月异的社会与工作职能需求，依据其富有创新的教学与研发力量，不断提高专业教育体系。WelTec 不仅在专业教学领域占据领先地位，而且与新西兰的工商业界保持着紧密的战略合作关系。

WelTec 设有一个基础教学部和六个专业教学学院：信息技术和商业管理学院、酒店管理學院、工程学院、建筑设计学院、创新技术学院和健康保健学院。学校现有 12000 名在校学生，其中包括来自 30 多个国家的近 600 名国际留学生。

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Clifton McKenna

Clifton McKenna is a senior academic staff member at the Wellington Institute of Technology. He has worked for over 20 years in the field of automotive engineering and has been teaching for 9 years. He has used project based learning in his teaching with great effect with trades students.

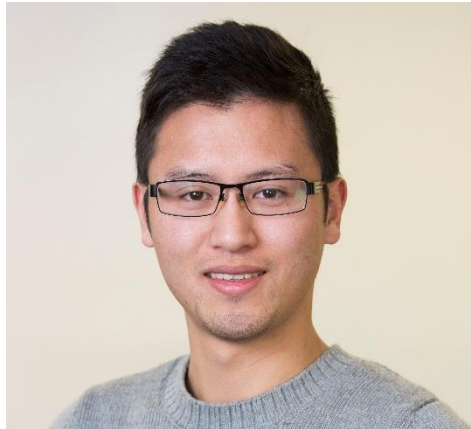
克里弗顿 麦肯纳 (Clifton McKenna)

先生是惠灵顿理工学院的一名高级学术人员。他在汽车工程领域有 20 多年的工作经验，并且拥有 9 年的教学经验。他使用的利用项目进行学习的教学方法在技工学生中取得了很好的效果。

William Wang (王偉霖)

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eLearning, also known as online learning, aims to deliver training in a digital environment where learners are able to access courses anytime, anywhere at their convenience. This paper described a Competenz developed eLearning system that addressed existing issues with paper based learning, and provides benefits to our increasingly computer savvy learner group. To better serve our internal and external stakeholders who are also new to eLearning, we adopted an agile development approach to ensure we meet their ever changing requirements. Our organic team comprises of specialists in design, instructional design, assessment writing and software development, who are able to take ownership of individual projects and work directly with stakeholders. Each team function has its underpinning principles and operational theories behind their processes, which the paper will cover in detail, along with data and recommendations for future training organizations seeking to pursue eLearning as a tailored solution to their learners.

Keywords: eLearning, apprentices, innovation, curriculum development, digital literacy, assessment writing

網絡教學的目的是提供學生一個方便又可以隨時隨地的數字學習環境. 此論文描述了Competenz的獨創網絡教學系統, 專門針對於目前傳統教育的缺陷, 以及提供一個選擇給我們越來越科技化的現代學生. 因此, 我們採取了一個敏捷開發方法來滿足不斷變化的客戶要求, 並且也建立了一個有機的團隊, 團隊裡包括設計, 教學, 考題和軟體方面等專家, 並且專家們能夠互相合作, 不斷創新與接觸客戶. 此論文不僅講解了整個團隊各自的流程與哲學, 也提供一些建設性的建議給未來想要建立網絡教學的機構.

關鍵字: 網絡教學, 技術學徒, 創新, 教材發展, 數位讀寫知識, 考題設計

Competenz Overview

Competenz is one of New Zealand's largest industry training organisations. Each year we help over 20,000 learners and more than 3,500 companies in 37 industries across New Zealand build skills in the workplace. Our industry sectors include engineering, manufacturing, forestry, transport, food and beverage, communications and media.

We are accredited by the New Zealand Qualifications Authority to develop national qualifications (certificates and diplomas). We work with learners, companies, and training providers to help learners build their skills, largely on-the-job. We also produce training materials, assess whether learners have gained the skills they need, and moderate assessments across the country to ensure they are fair and consistent.

We are funded by the New Zealand government and the companies we support.

Competenz是新西蘭最大的技術培訓公司之一, 每年幫助新西蘭三十七個產業裡, 超過三千五百家公司與兩萬名以上的學生培養職場專業技術和知識, 我們培訓的產業包括工程, 生產, 森林, 交通, 食品飲料, 通訊和媒體.

我們為新西蘭政府教育部開發了國家認可的技術證書與學位, 同時也聯合學生, 產業裡的各個公司和其他培訓機構一起執行職場上的培訓. 我們也專注於開發學習教材, 評估學習品質以及確保全國的考官都是公平與一致.

我們的資金來至於新西蘭政府和受我們培訓的公司.

William Wang

William Wang was born in Taiwan in 1988. He received an Honours degree in Mechanical Engineering from the University of Auckland in 2009. His main areas of research interest are in product design and user experience, which motivated him to publish his first journal on emotional engineering (ASME 2010, International Mechanical Engineering Congress & Exposition, Vancouver, Canada). William joined Competenz in 2010 to rebrand the organisation and develop its online presence. He is currently in the eLearning team as a strategist to develop business processes, learner experience and software roadmap.

王偉霖, 1988年出身於臺灣, 持有新西蘭奧克蘭大學機械工程(榮譽)學士. 他擅長的研究範圍為產品設計與用戶體驗, 並且在2010年於加拿大發表關於感性工程的論文(美國機械工程協會, 2010國際機械工程發表會, 溫哥華, 加拿大). 同年, 他加入了Competenz, 從事於重新建立公司品牌與網絡營銷, 目前當任網絡教學部門的策略家, 職責為發展團隊程序, 用戶體驗和軟體開發路線圖.

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We know the benefits of early childhood education, but these benefits are conditional on quality (OECD, 2012). Wylie (1996), a prominent New Zealand researcher, goes further by stating that inadequate quality is deferential to children's wellbeing. So, what does quality look like? How can we measure quality? How can quality be improved? To answer these questions, there is a need to consider what is meant by quality. Moss and Dahlberg (2008) suggest quality is about values and assumptions. We would add beliefs, as beliefs strongly influence behaviour, at both a conscious and unconscious level. From our perspective, quality sits within a social, political and cultural framework. It is never neutral, it cannot be universal and it is often controversial, particularly in an educational context when the outcomes (or lack of them) can have life-long consequences for children, families, communities and nations.

Keywords: quality, self-review, reflection

我们知道早期儿童教育的益处，但是这些益处是以质量为前提条件的（OECD, 2012）。一位知名的新西兰研究人员Wylie（1996）更进一步指出，质量的不足对儿童的发展不利。那么，质量是什么样子的？我们如何能衡量质量？如何改进质量？要想回答这些问题，就需要考虑一下质量的含义是什么。Moss和Dahlberg（2008）提出，质量是指价值和假设。我们还要加上信念，因为信念强烈地影响行为，包括有意识和无意识两个层面的影响。从我们这个角度来看，质量是处于社会、政治和文化的框架之内的。质量从来都不是中性的，它不可能是通用的，而且常常是存有争议的，特别是在教育这个背景之下，此时质量的结果（或者无结果）对于孩子、家庭、社区和国家会有一生的影响。

关键词：质量，自我审评，思考

Whitireia Overview

Whitireia Community Polytechnic (Whitireia) is a government owned and funded tertiary institute of technology, known for its high student success rates and culturally diverse student body. Established in 1986, on the shores of the Porirua harbour, Whitireia has grown to become a tertiary institution of choice for over 8,500 students (over 4,740 equivalent full-time students), who study at one of our contemporary campuses in Auckland, Wellington, Porirua and Kapiti.

In 2015, over 100 programmes of study are being offered to students, covering certificate, diploma, degree, postgraduate and master's levels. All programmes have been developed in conjunction with industry to offer excellent applied qualifications.

学院概况

新西兰维特利亚理工学院（Whitireia New Zealand）（简称维特利亚）是国立的、由政府提供经费的高等技术学院，以学生成功率高、学生群体的文化多样性而著称。维特利亚学院建于1986年，坐落在Porirua港的海岸上，现已成为8500多名学生（超过4,740名等同全日制的学生）所选定的高等教育学府，他们分别在我们位于奥克兰、惠灵顿、Porirua和Kapiti的现代化校园里学习。

2015年，我们向学生提供100多个课程，包括的等级有结业证书、专科文凭、本科学位、研究生和硕士。所有课程都是与产业界结合设计的，提供卓越的实用性学历。

Isabella Tanielu-Dick

Isabella is of Samoan descent, married with three grown up children, two granddaughters and has settled in New Zealand for forty one years. She is currently the Programme Manager for early childhood education at Whitireia New Zealand with sixteen years of teaching in the tertiary sector. In the past she has delivered professional development on teaching and learning pedagogies for teachers from Indonesia, China, Samoa and many times presented workshops on a range of topics relevant to early childhood services in New Zealand and particularly to the Pacific communities.

Isabella 是萨摩亚裔人，已婚，有三个成年孩子，两个（外）孙女，她已经在新西兰定居了四十一年。目前她是新西兰维特利亚学院幼儿教育项目主任，在高等教育部门已有十六年的教龄。过去她曾经向来自印度尼西亚、中国、萨摩亚的教师提供教学和学习的教学法方面的专业发展培训，并且多次举办与新西兰幼教服务相关的系列话题的讲座，特别针对太平洋岛社区的人们。

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Pedagogical case study of Chinese students in transition to Visual Arts and Design degree study at WhitireiaNZ.

在新西兰维特利亚学院
为就读视觉艺术与设计学位的
中国留学生过渡期学习的
教育学案例研究

Brenda Saris

Design Lecturer: 设计课程讲师

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International students from China enrolling to study visual arts and design in New Zealand come with a range of backgrounds and contexts. This cross-cultural ethnographic case study compares, observes and reflects on the learning experience of Chinese students, to enhance understanding of their learning contexts and support transition from study in China and its implications to studying in NZ. The conceptual framework is developed through the literature review and empirical observations gathered in 2013 from Xiamen University of Technology in China. Mixed methods are used to compare differing social and cultural contexts, educational expectations, attitudes and behaviours between the domestic profile of visual arts and design students and Chinese students. This research seeks to provide the basis for discussions on pedagogy to offer analysis, support and recommendations as part of specialist teacher professional development for international students in transition to tertiary studies in NZ.

来新西兰就读视觉艺术与设计中国留学生具有不同的背景和境况。本项跨文化族群志案例研究对于中国学生的学习体验作了比较、观察和思考，以增强对他们的学习情境的理解，从而协助这种以中国的学习情境为起点的过渡，进一步理解其对于在新西兰学习的影响。概念框架是通过2013年在中国厦门理工学院所做的文献审阅以及观察所得而设计出来的。针对对于新西兰的视觉艺术与设计学生和中国学生的描述，使用了多种方法来比较他们之间不同的社会和文化环境、教育方面的期望、态度以及行为。这个研究旨在为教学法的讨论提供基础，提出分析、支持和建议，作为国际学生进入新西兰大学学习的过渡期专业教师的职业发展的一部分。

Keywords: Pedagogy, Visual Arts, Design, Textiles, Cross-cultural

关键词：教学法，视觉艺术，设计，纺织，跨文化

Whitireia Overview

Whitireia Community Polytechnic (Whitireia) is a government owned and funded tertiary institute of technology, known for its high student success rates and culturally diverse student body. Established in 1986, on the shores of the Porirua harbour, Whitireia has grown to become a tertiary institution of choice for over 8,500 students (over 4,740 equivalent full-time students), who study at one of our contemporary campuses in Auckland, Wellington, Porirua and Kapiti.

In 2015, over 100 programmes of study are being offered to students, covering certificate, diploma, degree, postgraduate and master's levels. All programmes have been developed in conjunction with industry to offer excellent applied qualifications.

学院概况

新西兰维特利亚理工学院（Whitireia New Zealand）（简称维特利亚）是国立的、由政府提供经费的高等技术学院，以学生成功率高、学生群体的文化多样性而著称。维特利亚学院建于1986年，坐落在Porirua港的海岸上，现已成为8500多名学生（超过4,740名等同全日制的学生）所选定的高等教育学府，他们分别在我们位于奥克兰、惠灵顿、Porirua 和 Kapiti 的现代化校园里学习。

2015年，我们向学生提供100多个课程，包括的等级有结业证书、专科文凭、本科学、研究生和硕士。所有课程都是与产业界结合设计的，提供卓越的实用性学历。

Brenda Saris MPhil, MDes (distinction), Dip VCD

For more than 25 years, Brenda has been employed as an art director and graphic designer in the advertising and design industry. She has worked in NZ, UK and Holland, honing valuable strategy, communication and Adobe CS skills, which are now directed towards design education. Her MPhil research examined the benefits of a devised human-centered branding strategy for NZ SME's within the new technological environment and current focus is on developing advanced design pedagogy within globalization for the NZ context.

Brenda Saris 哲学硕士，设计硕士（优等成绩），视觉沟通设计文凭
在过去25年多的时间里，Brenda一直在广告与设计产业里从事艺术指导和平面造型艺术设计师工作。她曾在新西兰、英国与荷兰工作，磨练出了战略、沟通以及AdobeCS的宝贵技能，她现在将这些应用在设计教学方面。她在其哲学硕士的研究中分析了在新的技术环境中，一个精心策划、以人为中心的品牌战略对新西兰中小企业的益处。目前她的工作核心是开发在全球化中以新西兰为背景的先进设计教育方法。

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“Better than the Real Thing?” –
Actor role-plays as part of
Vocational Training

“比真的还好？”——演员角色扮演
作为职业培训的一部分

Richard Finn

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“I hear and I forget. I see and I remember. I do and I understand.”

Confucius

Chinese philosopher & reformer (551 BC - 479 BC)*

When we are young, we learn by mimicking, playing, and experimentation. As our language skills develop, and formal schooling begins, these strategies are replaced by language-based learning, which can dampen our curiosity and motivation to learn. It has been argued that vocational education can re-ignite learning enthusiasm through teaching procedural knowledge.

Role-play simulation is a learning method whereby learners take on the role of specific characters or organisations in a contrived setting, aided by ‘performers’. Role-play is designed primarily to build first person experience in a safe and supportive environment, and is widely acknowledged as a powerful teaching technique.

However, more often than not, the ‘performers’ used within the simulation are untrained. This paper explores the use of actors (or senior acting students) in vocational training. Essentially an Appreciative Inquiry, it draws upon examples of actors working with vocational trainees in three settings: The Royal New Zealand Police College; WhitireiaNZ’s Bachelor of Health Science (Paramedic) course, and the WhitireiaNZ Bachelor of Nursing Year 3 simulation labs.

This paper concludes by highlighting the potential benefit of using actor role-play for cross-cultural teaching including working across the language barrier.

Keywords: Actor, role-play, procedural knowledge, simulation

“比真的还好？”——演员角色扮演作为职业培训的一部分

摘要：

《儒效篇》荀子曰：

“不闻不若闻之，闻之不若见之，见之不若知之，知之不若行之；学至于行之而止矣”

我们年轻时，通过模仿、玩游戏和作试验来学习。随着我们语言技能的发展，正式的学校教育开始了，这些学习手段被语言导向学习法所取代，而后者会浇灭我们的好奇心和学习的积极性。有一种意见认为，职业教育能够通过教授程序知识来重新点燃学习的热情。

在角色扮演模拟这种学习方法中，学生在人为设计出来的场景里，借助‘表演者’的帮助，扮演特定人物或组织的角色。角色扮演的设计目的主要是为了在一个安全和充满支持的环境中，取得第一手体验，这被广泛认为是一个非常有效的教学手段。

然而，通常情况下，模拟中所使用的“表演者”没有受到过训练。本论文探讨了使用演员（或者高年级表演专业的学生）于职业培训中。这实质上是一种“肯定式探寻”（Appreciative Inquiry），取材于在三个场景中演员与职业培训受训者合作的例子：皇家新西兰警察学院；维特利亚学院健康科学学士（医疗辅助人员）课程，以及维特利亚学院护理学士三年级模拟实验室。

本论文在结束部分强调了在跨文化教学（包括跨越语言障碍）中使用演员角色扮演的潜在益处。

关键词：演员，角色扮演，程序知识，模拟。

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Richard Finn

Richard Finn is the Programme Director of WhitireiaNZ's Stage and Screen Arts course. He has worked for many years as a professional theatre director, and more recently as a script-writer, gaining his M.A. in Creative Writing in 2010. He is a passionate believer in the power of performing arts as a training medium, and collaboration as an educational process.

报告人简介：Richard Finn是维特利亚学院的舞台和屏幕艺术课程的项目主任。他多年从事专业戏剧导演工作，近期从事剧本作家工作，他与2010年获得创意写作硕士学位。他坚信表演艺术是有力的培训手段，合作是教育过程的一部分。

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Building capabilities for the technological world of tomorrow is the primary aim of vocational education. That includes developing the skills and technical knowledge to problem-solve unseen needs by being able to design for a sustainable future. Education for sustainability is now a widely accepted concept which promotes sustainability skills and awareness throughout a learner's educational pathway. Using the results from three case studies this paper argues the necessity to integrate education for sustainability with traditional VET skills by involving students in practical applications. It contends that the inclusion of the quadruple bottom line (economics, environment, governance and society) into VET allows students to transform their attitudes to their trades and view productivity through the lens of maintaining a 'liveable' world. It concludes with the need to further research synergies between sustainability in the VET sector and aligning curricula to the needs of industry.

Keywords: Sustainable Technology; Integrated curriculum; Vocational education

职业教育的首要目标是为明日的科技世界积蓄能力。这包括发展技能和技术知识，通过能够设计一个可持续发展的未来为未见之需寻找出路。可持续发展教育如今已经成为一个广为接受的概念，它促使可持续性发展的技能和意识贯穿于学生的整个教育过程中。本文根据三个案例研究的结果，提出了通过学生参与实际应用，将可持续发展教育与传统的职业教育和培训进行整合的必要性。本文主张在职业教育和培训中纳入四大基本要素（经济，环境，治理和社会），可以促使学生改变其对所属行业的看法和态度，并且以打造“宜居”世界的透镜来检视各行各业的生产能力。文章最后提出了科研合作的协同效应，认为有必要加强职业教育与培训机构之间对可持续发展教育的研究合作，并且调整课程设置以顺应各行各业的需求。

关键词：可持续发展的技术; 整合课程纲要; 职业教育

Unitec Overview

Unitec Institute of Technology is a government owned, industry led, tertiary vocational institution with over 10,000 equivalent full time students. Areas of specialism in technology include: Civil Engineering, Electrical and Electronic engineering; Automotive Engineering; Marine Technology; Plumbing and Gasfitting; Quantity Surveying; Property Development; Construction Management; Building; Computing and Architecture. In these areas Unitec is accredited by the NZQA to offer 14 Certificates, 8 Diplomas, 4 Bachelor Degrees, 4 Masters programmes and a professional doctorate. Unitec has international relationships in P.R. China, India, Malaysia and Saudi Arabia.

Unitec takes pride in ensuring its campus is environmentally sustainable and continues to make a big impact through its dedicated Environmental Strategy, regularly winning Sustainability awards. With over 200 eco-reps, staff and students support Unitec and its wider community becoming more sustainable.

学院简介：

UNITEC理工大学是一所政府所有，行业领先，并拥有超过 10,000 名相当于全日制学生的高等职业院校。其技术领域的专长包括：土木工程，电气与电子工程，汽车工程，海洋技术，水管和燃气配件，工料测量，物业发展，工程管理，建设，计算和建筑设计。在这些领域中，经新西兰学历资格认证委员会（NZQA）认可，UNITEC可提供14种专业证书，8种大专毕业证书，4种学士学位证书，4种硕士学位课程和一个专业的博士学位。在国际上，UNITEC与中国大陆，印度，马来西亚和沙特阿拉伯均建有学术交流关系。令UNITEC引以为豪的是确保其校园环境可持续性，并继续通过其独特的环保策略对社区产生积极的影响。UNITEC经常赢得可持续性发展奖项。它拥有超过200名生态环保代表，并有众多工作人员和广大学生的支持，使得UNITEC及其更广泛的社区变得更具有可持续性。

Mary Panko

Mary Panko was born and educated in the United Kingdom where she graduated from Aberdeen University with an honours degree in Zoology. After moving to New Zealand she gained a Graduate Diploma in Higher Education, followed by a PhD in Education in 2004 from the University of New England in New South Wales, Australia. Mary became programme director for the Graduate Diploma of Education at Unitec Institute of Technology in 1995 and then, having been appointed as a senior lecturer, became programme director for the Master of Education. In 2011, she transferred to the Department of Building Technology at Unitec, to lecture in sustainability and research methodologies. In addition, in 2012 she was appointed as the Research Development Director for the New Zealand Curriculum Design Institute. In February 2014 she published an edited text: "Developing a research culture: A guidebook for everyone".

玛丽·潘库博士出生于英国，并于英国完成高等教育。她毕业于英国阿伯丁大学动物学系，获得荣誉学位。移居新西兰后，又在澳大利亚新南威尔士州新英格兰大学先后获得高等教育硕士文凭，并于2004年获得教育博士学位。玛丽于1995年成为UNITEC理工学院教育专业研究生文凭课程的项目主管，之后被任命为高级讲师，并成为教育硕士专业课程的项目主管。2011年，她被调入学院的建筑技术系，讲授可持续性发展及其研究方法。此外，2012年，她被任

命为新西兰课程设计研究院的科研发展部总监。2014年2月，她出版了论文《建立一种科研文化：给大家的指南》。

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Abstract

This paper outlines a recent research project that investigates the impact of The Living Consensus conceptual framework on learning environments and the development of transferrable learning skills for youth (vocational learners under the age of 25). Literature that considers each of the five key teaching and learning strategies that sit within the framework is discussed. The potential impact of the five strategies working together to help develop transferrable working and learning skills for youth is examined through the use of case studies. As a result of this investigation, it is recommended that teachers employ facilitative and collaborative teaching and learning strategies (such as the five discussed in this study) to support the development of positive learning environments and transferrable learning skills for youth. This presentation will provide examples of the five key teaching and learning strategies in practice and ask participants to select and adapt at least one of these strategies to their own teaching context.

Keywords: Transferrable learning skills, ethics agreement, shared leadership, reflective practice, project teams, cultural inquiry

中文摘要

本文概述了最近一个研究项目关于调查现存共识概念框架下对学习环境和培养青年（25岁以下职业学习者）可转换学习技能的影响。文章考虑了框架内的五个关键教学和学习策略，并且每一个都被讨论到了。通过使用案例研究来检查五个策略对共同努力帮助培养青年可转换工作和学习技能的潜在影响。作为本次调查的结果，建议教师采用便捷及协作性的教学和学习策略（如

本研究讨论的五个策略) 来支持发展积极的学习环境和青年可转换学习技能的培养。本演讲将提供五个关键教学和学习策略在实践中的例子, 让参与者选择和采用至少一种策略来适应他们自己的教学环境。

关键词 道德规范协议, 分享型领导模式, 反思性实践 团队项目, 文化咨询

Wintec Overview

Wintec, one of New Zealand's leading institutes of technology, helps drive the development of a skilled workforce not only in New Zealand, but around the world. We are a modern, government owned institute of technology with a reputation for providing quality education. Our graduates are work-ready and in demand by employers.

Around the world, particularly in the large developing economies like China, there is an increasing demand to train work ready graduates. Many countries are experiencing a shortage of skilled workers in vocational and professional fields across a number of industries including health, education, agriculture, and engineering.

Wintec recognises the importance of delivering programmes in other countries and is working with institutions, corporate organisations and government agencies around the world to find innovative solutions to meet their training, education and business needs.

Our delivery projects include exporting curriculum, providing tailored courses, assisting with skills development, managing institutions, providing skilled teaching resources and managing academic programmes.

Examples of recent activity in other countries include:

- An off-shore Wintec campus is being established at Chengdu University in China. It is planned that English language courses, taught by Wintec staff, will begin in 2015 (approvals pending). Future courses will include early childhood, construction management and innovation.
- A partnership with Tianjin and Qingdao technical colleges in China will see the development of vocational training programmes using New Zealand-style teaching and curriculum practices, adapted to a Chinese context.

This is a Chinese and New Zealand government initiative, with Wintec leading the development along with other New Zealand institutes of technology. Many of our projects are supported by Education New Zealand, which is New Zealand's government agency dedicated to business development in international education.

Wintec is leading the way in developing New Zealand's export education economy through these activities.

新西兰怀卡托理工学院是新西兰领先的理工学院之一，不仅是在新西兰，也是在世界范围内帮助推动培养职业技能型的劳动力。

我们是一个在提供高质量教育上负有盛誉的现代化国立理工学院，我们的毕业生在离校时就为就业做好了准备，同时也广受雇主们的欢迎。

在世界各地,特别是在像中国这样的大型发展中经济体,对毕业就能工作的毕业生培训需求在不断增加。许多国家在不同的职业和专业领域都面临着技术类短缺工种的人才贫乏，包括健康，教育，农业和工程领域。怀卡托理工学院认识到在海外传授课程的重要性，与海外不同的政府机关，学校，相关组织开展了合作关系，以培训，教育和商业合作为目标来寻找创新之路。

我们传授的项目包括课程出口，根据不同的需求来提供量身打造的专业课程，帮助提高员工的技能，管理学院和提供有经验的教学资源以及管理学术类项目的安排。

近期学校与其他国家合作案列：

- 一所怀卡托理工学院海外校园正在中国的成都大学筹建中。计划中英文课程将由怀卡托理工学院的老师授课，这一计划将在 2015 年开始执行 (等待批复中)。未来传授的课程将包括早教，建筑管理和创新产业等。
- 与天津轻工职业技术学院和青岛职业技术学院的合作关系将会很好的展示新西兰教学方法和课程实践来适应中国特色的发展。此合作关系是中国与新西兰政府的倡议，由怀卡托理工学院带领新西兰其它理工学院来共同开展。

我们许多项目都得到了新西兰教育国际推广局的大力支持，新西兰教育国际推广局是新西兰的政府机构,致力于开发国际教育业务。通过这些合作项目，怀卡托理工学院也在新西兰的教育出口上一直处于领先地位。

Profile

Julia Bruce-Mayne started her tertiary teaching career twenty years ago as a hairdressing tutor. Since that time she has worked in three private training enterprises and has been at Wintec for almost 12 years. Over this time she has completed undergraduate and Masters degrees in tertiary teaching and has received a national teaching excellence award.

Julia now teaches and researches tertiary education for Wintec's School of Education and works as a consultant for Ako Aotearoa (New Zealand's centre for tertiary teaching excellence) facilitating workshops across the country for tertiary teachers.

个人简历

朱莉娅·布鲁斯-

恩从二十年前作为一名美发教师开始从事高等教育事业。从那时起，她曾经在三个私人培训企业工作过，并已经在怀卡托理工学院工作了近12年。在这段时间里，她完成了本科和硕士学位等层次的高等教学并荣获过国家教学卓越奖。Julia现在在怀卡托理工学院的教育学院从事高等教育的教学和科研工作，而且也是新西兰高等教学卓越中心(Ako Aotearoa)的顾问之一，帮助在全国推进高等教育教师的研讨会。

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The New Zealand government has determined strategies to encourage research-driven innovation which include close collaboration between industry and the academic communities. In response to such direction, the Waikato Institute of Technology (Wintec) has developed a set of research-based, transdisciplinary qualifications grounded in real-world industry contexts. To assist learners in undertaking successful research inquiry, the transdisciplinary curriculum development team has developed an online training needs analysis instrument that enables learners to identify their readiness to undertake transdisciplinary research. The training needs analysis tool is supported by a reflective framework which assists the learner to self-reflect upon their levels of skills and knowledge against internationally-accepted standards. The intention of such tools is to enable the learner to commence the process of self-empowerment within the learning environment.

摘要

新西兰政府已经确定了一个战略来鼓励包括产业之间和学术界的密切合作来进行研究创新。为应对这一战略发展方向，怀卡托理工学院已经开发了一套基于研究，植根于现实世界产业环境的跨学科文凭。协助学习者从事成功的研究调查，跨学科的课程开发团队也开发了一个在线培训需求分析工具，使学习者能够确定他们准备进行的跨学科研究。也有一个帮助学习者自我反思他们针对国际公认标准技能和知识水平的反思框架来支持这个培训需求分析工具。使用这样一个工具的目的是为了使学生能够在学习环境开始他们自我启力的过程

Key Words: self-regulated learning, training needs analysis, reflective frameworks

关键词：自我调节学习，培训需求分析，反思框架

John Clayton

Dr John Clayton is a New Zealand educator with extensive knowledge of deploying, using and evaluating learning technologies in both educational and workplace environments. He is currently the Director of the Emerging Technologies Centre at the Waikato Institute of Technology. He is an active researcher and current research interests include situated cognition and workplace learning, reflective frameworks and the personalisation of learning, the impact e-learning technologies on learner achievement and the evaluation of workplace and educational environments using perceptual measures

约翰·克莱顿博士是新西兰关于在教育和工作环境中部署,使用和评估学习技术的拥有广泛知识的一名教育工作者。他目前是怀卡托理工学院新兴技术中心的主任。他是一个非常活跃的研究人员,目前的研究兴趣包括情境认知和职场学习,反思框架和个性化学习,在线学习技术对学习成就的影响和使用感性措施对工作和教育环境的评估。

Wintec Overview

Wintec, one of New Zealand's leading institutes of technology, helps drive the development of a skilled workforce not only in New Zealand, but around the world. We are a modern, government owned institute of technology with a reputation for providing quality education. Our graduates are work-ready and in demand by employers.

Around the world, particularly in the large developing economies like China, there is an increasing demand to train work ready graduates. Many countries are experiencing a shortage of skilled workers in vocational and professional fields across a number of industries including health, education, agriculture, and engineering.

Wintec recognises the importance of delivering programmes in other countries and is working with institutions, corporate organisations and government agencies around the world to find innovative solutions to meet their training, education and business needs.

Our delivery projects include exporting curriculum, providing tailored courses, assisting with skills development, managing institutions, providing skilled teaching resources and managing academic programmes.

Examples of recent activity in other countries include:

- An off-shore Wintec campus is being established at Chengdu University in China. It is planned that English language courses, taught by Wintec staff, will begin in 2015 (approvals pending). Future courses will include early childhood, construction management and innovation.
- A partnership with Tianjin and Qingdao technical colleges in China will see the development of vocational training programmes using New Zealand-style teaching and curriculum practices, adapted to a Chinese context.

This is a Chinese and New Zealand government initiative, with Wintec leading the development along with other New Zealand institutes of technology. Many of our projects are supported by Education New Zealand, which is New Zealand's government agency dedicated to business development in international education.

Wintec is leading the way in developing New Zealand's export education economy through these activities.

新西兰怀卡托理工学院是新西兰领先的理工学院之一，不仅是在新西兰，也是在世界范围内帮助推动培养职业技能型的劳动力。

我们是一个在提供高质量教育上负有盛誉的现代化国立理工学院，我们的毕业生在离校时就为就业做好了准备，同时也广受雇主们的欢迎。

在世界各地,特别是在像中国这样的大型发展中经济体,对毕业就能工作的毕业生培训需求在不断增加。许多国家在不同的职业和专业领域都面临着技术类短缺工种的人才贫乏,包括健康,教育,农业和工程领域。怀卡托理工学院认识到在海外传授课程的重要性,与海外不同的政府机关,学校,相关组织开展了合作关系,以培训,教育和商业合作为目标来寻找创新之路。

我们传授的项目包括课程出口,根据不同的需求来提供量身打造的专业课程,帮助提高员工的技能,管理学院和提供有经验的教学资源以及管理学术类项目的安排。

近期学校与其他国家合作案列:

- 一所怀卡托理工学院海外校园正在中国的成都大学筹建中。计划中英文课程将由怀卡托理工学院的老师授课,这一计划将在 2015 年开始执行(等待批复中)。未来传授的课程将包括早教,建筑管理和创新产业等。
- 与天津轻工职业技术学院和青岛职业技术学院的合作关系将会很好的展示新西兰教学方法和课程实践来适应中国特色的发展。此合作关系是中国与新西兰政府的倡议,由怀卡托理工学院带领新西兰其它理工学院来共同开展。

我们许多项目都得到了新西兰教育国际推广局的大力支持,新西兰教育国际推广局是新西兰的政府机构,致力于开发国际教育业务。通过这些合作项目,怀卡托理工学院也在新西兰的教育出口上一直处于领先地位。

Contact Details

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