

培育終身的
創造力



創2008 造力教育

國際學術研討會

2008 International Conference
on Creativity Education

北部場次會議手冊

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2008創造力教育國際學術研討會 台北會場 (政治大學)

時間	10/20 (台北, 政治大學)									
0820~0850	報 到									
開 幕 典 禮										
0850 0910	貴賓：教育部代表、政治大學吳思華校長、學術交流基金會吳靜吉執行長、政治大學創新與創造力中心溫肇東主任 主持人：政治大學教育學院 詹志禹院長 地點：商學院國際會議廳									
主題演講：Varieties of Creativity										
0910 1040	主講人：Dean Keith Simonton 主持人：學術交流基金會 吳靜吉執行長 地點：商學院國際會議廳									
1040~1100	茶敘 (地點：商學院I樓及資訊大樓地下室)									
論 文 發 表										
場次	A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-8	多媒體發表	
主 題	Creative Education across Life-Span (英文發表)	幼教	戲劇及其他	大學教育	創意教師	團隊創新	WebQuest	數位科技與藝術創作 (英文發表)		
發 表 人	①Serge Dreyer ②Irene Karpiak ③Jung Ae Pa等 ④洪煌堯	①楊懿純等 ②葉怡伶等 ③吳毓雯等 ④倪鳴香等	①廖美瑩等 ②謝智玲等 ③張家琳 ④潘銘基等	①莊美玲 ②秦昱華等 ③劉惠園	①林潔如等 ②鄭柏言等 ③徐鵬翔 ④林偉文	①陳宜輔等 ②李昆鴻等 ③王光燦等	①梁雲霞 ②侯志欽 ③黃雲龍 ④于文正	John A. Labadie & Margie Labadie		
主 持	政治大學教育系 陳婉真教授	台師大教育心理系 張景媛教授	政治大學廣電系 蔡琰教授	政治大學教育系 周祝瑛教授	台師大特教系 潘裕豐教授	政治大學幼教所 徐聯恩教授	市北教大教育系 梁雲霞教授	政治大學新聞系 張寶芳教授		
地 點	資訊大樓140005	資訊大樓140006	資訊大樓140007	資訊大樓140106	資訊大樓140407	學思樓040208	學思樓040301	商學院6F科技廳		
1230~1330	午餐 (用餐地點：資訊大樓及學思樓)									

論壇		論壇		論壇		論壇		論壇	
1330 — 1500	場次 主題 發表人 主持 地點	B-1 興辦學 ①王宜貞 ②陳定銘等 ③李文忠等 政治大學企管系 黃秉德教授 資訊大樓140104	B-2 國小教育 ①羅雅莉 ②莊杏如等 ③蔡婉琪等 ④謝智玲等 明道大學教學所 郭秋勳教授 資訊大樓140006	B-3 多元文化 ①王雅茵 ②王菊櫻 ③范育成 ④關綺雲 政治大學科管所 溫肇東教授 資訊大樓140007	B-4 科技及其他 ①李嘉曾 ②林展立 ③張景媛等 台師大教育心理系 張景媛教授 資訊大樓140106	B-5 Foreign Language Teaching ①招靜琪 ②馬誼蓮Ruth Ma ③劉怡君 ④陳錦珊 ⑤蔡碧華 ⑥李路得 ⑦張靜芬 政治大學英語系 招靜琪教授 學思樓040208	B-6 年輕人的創意空間與生命脈絡的勾畫 ①林碧芳等 ②黃郁婷等 ③楊智先等 ④洪素蘋等 政治大學社會系 關秉寅教授 學思樓040301	B-7 成人創造力與面對行銷 ①林雅琪等 ②黃瓊慧等 台北大學師培中心 吳璧純教授 學思樓040306	B-8 主題： Cross-Cultural Research on Creativity 主講人： Todd Lubart & 劉誠 (兼主持人) 香港浸會大學教育系 劉誠教授 行政大樓會議室一
1500- 1530	茶敘 (地點：資訊大樓地下室及學思樓3樓)								
1530 — 1700	場次 主題 發表人 主持 地點	C-1 成人教育與創意概念 ①林貞均 ②秦秀蘭 ③胡雅茹 ④李明芬 台師大工教系 吳明雄教授 資訊大樓140104	C-2 國中教育 ①林佳慧等 ②吳秀連等 ③邱皓政等 實踐大學創發所 陳龍安教授 資訊大樓140006	C-3 視覺藝術 ①趙欣怡等 ②林育璋等 ③游惠君 ④廖敦如 政治大學廣告系 王其敏教授 資訊大樓140007	C-5 數位與遊戲 ①彭淑真 ②李貞穎等 ③高直敏等 ④陳惠齡 明道大學教學所 郭秋勳教授 資訊大樓140106	C-6 Multi-Disciplinary Application of Creativity ①Wendy Sun ②Rupanwita Gupta ③Trudi Miller Tony Wu 學思樓040208	C-7 創意教學 ①郭銘茜等 ②周志偉等 ③周志偉等 ④葉蓉瑗等 ⑤鄭政益等 中正大學成教所 陳玉樹教授 學思樓040301		
1700	第一天研討會結束								

時間	10/21 (台北, 政治大學)
0840~ 0910	報 到
0910 1040	<p>主題演講: Creativity across Time and Space</p> <p>主講人: Todd Lubart</p> <p>主持人: 香港浸會大學教育系 劉誠教授</p> <p>地點: 商學院國際會議廳</p>
1040~ 1100	<p>茶敘 (商學院1樓)</p>
1100 1230	<p>主題演講: International Center for Studies in Creativity: Celebrating 40 Years of Creativity Education</p> <p>主講人: Gerard J. Puccio</p> <p>主持人: 學術交流基金會 吳靜吉執行長</p> <p>地點: 商學院國際會議廳</p>
1230~ 1330	午餐 (發放地點: 商學院1樓 / 用餐地點: 資訊大樓及行政大樓7樓)

論壇發表表		論壇發表表		論壇發表表		論壇發表表		論壇發表表	
1330 1500	場次 D-1 (英文發表) ①洪煌堯等 ②高淑華 ③費聿明等 ④Richard Stuetz 政治大學教育系 洪煌堯教授 資訊大樓140005	論 文 D-2 高中職 ①許信德等 ②陳昭錦等 ③桑慧芬 政大師培中心 葉玉珠教授 資訊大樓140006	發 表 D-3 企業經營及其他 ①楊舜慧等 ②劉仲矩等 ③蔡勝安 ④蔡子祥等 政治大學科管所 溫肇東教授 資訊大樓140007	多 媒 體 發 表 D-5 創意教學 ①李文心 ②梁雅晴等 ③朱中梧等 台師大社教系 李明芬教授 行政大樓會議室三 行政大樓會議室二	論 壇 D-6 創意達人 創造歷程探析 ①陳錦香等 ②徐銘彥等 ③彭僑懿等 ④劉同貴等 ⑤徐柏蓉等 逢甲大學師培中心 陳鳳如教授 行政大樓會議室二 行政大樓會議室五	壇 D-7 創意學院 成果分享 ①台師大 ②淡江大學 ③中原大學 三校共同主持 行政大樓會議室五	工 作 坊 D-8 主題： Creativity Measurement: Big, Medium, and Small 主講人： Dean Keith Simonton & 丁興祥 (兼主持人) 輔仁大學心理系 丁興祥教授 行政大樓會議室一		
1500~ 1530	茶敘 (資訊大樓地下室及行政大樓7樓)								
1530 1700	場次 E-1 商學及傳播學 ①譚經緯 ②林良陽等 ③胡嘉智 ④臧國仁 政治大學經濟系 陳樹衡教授 資訊大樓140005	論 文 E-2 美術及語文 ①劉思量 ②徐凌志 ③蔣金靜 ④朱蘭慧等 北藝大美術系 劉思量教授 資訊大樓140006	發 表 E-3 繪本及其他 ①王苑玲等 ②蔡慧君等 ③林慧芬等 ④林子誠等 逢甲大學師培中心 陳鳳如教授 資訊大樓140007	論 壇 E-4 國小及國中 ①王昕馨等 ②嚴婉瑜等 ③黃雅卿等 ④張雨霖等 台師大心輔所 陳學志教授 資訊大樓140106	多 媒 體 發 表 E-5 企業數位學習與 專業發展創新模式 ①黃雲龍 ②陳晏萃等 ③黃雲龍 ④王思峰 台體大產經系 黃雲龍教授 行政大樓會議室二 行政大樓會議室五	論 壇 E-6 創意學院 成果分享 ①台北科技大學 ②環球技術學院 ③南亞技術學院 三校共同主持 行政大樓會議室五	壇 E-7 創意學院 成果分享 ①台北科技大學 ②環球技術學院 ③南亞技術學院 三校共同主持 行政大樓會議室五	工 作 坊 E-8 主題： Dean Keith Simonton & 丁興祥 (兼主持人) 輔仁大學心理系 丁興祥教授 行政大樓會議室一	
1700~ 1730	北 區 研 討 會 結 束								

特邀學者簡介

Introduction of the Keynote Speakers and Workshop Leaders

- **Knoop, Hans Henrik**
- **Lau Sing , 劉誠**
- **Lubart, Todd**
- **Plucker, Jonathan A.**
- **Puccio, Gerard J.**
- **Simonton, Dean Keith**

(in alphabetical order)



Hans Henrik Knoop

Associate Professor of Psychology,
University of Aarhus and Director of
the Universe Research Lab

Hans Henrik Knoop is Associate Professor of Psychology at the School of Education, University of Aarhus, Denmark & Director, and Principal Investigator at the Universe Research Lab – an international research centre focused on collecting, producing and conveying knowledge about learning, creativity, education and innovation. Among others, Universe Research Lab is supported by the Nordea Danmark Foundation, the Bitten & Mads Clausen Foundation and the Egmont Foundation with a budget of approx 5 Mio Euro for the period 2007-2012, and with professor Howard Gardner, Harvard University, and professor Svein Sjøberg, Oslo University, on the Board.

In the past 10 years Hans Henrik Knoop has been involved in research cooperation with colleagues at Harvard University, Stanford University and at Claremont Graduate University in the GoodWork® Project and as researcher he has participated in development projects for LEGO (1998-2004), Danfoss Universe (2005-), SIS Akademi (2004-) and Royal Greenland Academy (2006), among others. In 2006-2007 contributed to the Danish DR2's programs on talent development in schools, and he was the scholarly anchor of the Danish TV2's reality documentary series "Plan B" concerning efficient education – a program that received international attention in being nominated for the highly prestigious television Golden Rose of Montreux in 2007. Other recent media appearances are here.

As academic expert he has contributed to Danish ministerial committees on cross-curricular competencies (2000-2001), pedagogical appliance of IT (2002-2003), pedagogical planning (2004-2005), talent development (2005), the Government's

Committee on School Initiation (2005-2006) and the Danish Evaluation Institute's project concerning teaching environment in primary and secondary school (2006). Hans Henrik Knoop is a member of the Board of Directors of the International Positive Psychology Association (IPPA) (2007-).

He has carried out research based consultancy for a large number of institutions and municipalities in Denmark (1994-) and internationally he has been involved in major EU-financed development projects in Latvia (1993-) and Lithuania (1995-1998) as well as contributing to evaluation of development projects for EU (1997-1998).

Hans Henrik Knoop is a requested speaker, who has presented his work through more than 800 invited keynotes and lectures in Denmark and at conferences in many countries.

現任：丹麥奧胡斯大學教育心理學系副教授
University of Aarhus

簡介：Dr. Knoop 為丹麥著名學者，專擅研究工作心理學、心流經驗、創造力、玩興與自我組織等議題，尤其對於心流經驗的研究成果，受到創造力大師 Csikszentmihalyi, M. 的高度肯定，在丹麥的作品及工作坊課程都極受歡迎。



LAU Sing, 劉誠

Chair Professor, Department of
Education Studies, HKBU

Director, Center for Child
Development, HKBU

Professional Membership

- American Psychological Association
- Asia-Pacific Federation of the World Council for Gifted and Talented Children
- Hong Kong Educational Research Association
- International Association of Cross-Cultural Psychology
- International Council of Psychologists

Honors and Awards

- Recipient of the University Staff Research Fellowship of Hong Kong Baptist University to carry out research at the Office on Child Development of University of Pittsburgh in 1995.
- Recipient of the C.Y. Kwan Fellowships of Chinese University of Hong Kong to carry out research at State University of New York in 1984 and at Purdue University in 1987.
- Recipient of 54 research grants to carry out research on the psychological development of adolescents and children since 1980. (Please refer to the section on "Scholarly/Research-related Activities" for the listing of research grants.)

AREAS OF RESEARCH INTEREST

- Creativity, Gifted education
- Child and adolescent development: self-concept, gender role, value, parenting style, motivation, suicide

- Cross-cultural study of Chinese personality and behavior

Research in Progress

- Advanced Course on Educating the Gifted Students I – Teacher Training
Programme on Educating Gifted Students on Leadership, Creativity and Critical Thinking
- Formulation of policy and strategy in developing creativity education in Hong Kong schools: A practitioner's perspective
- Research and Development of Drama in Education Projects
- The incubation model of creative teaching and learning in languages for gifted, average, and special learners.
- Advanced Courses on Educating the Gifted Students
- The relationship of physical education training to psychosocial development of secondary school students
- An International Study of Creativity Assessment of Children in Hong Kong and Paris in Cross-Cultural Education Context
- Norming study of Multi-perspective Multi-domain Self-concept Inventory Scale
- Evaluation Services for the Effectiveness of Structured Whole Person Development Program

現任：香港浸會大學 教育系教授暨兒童發展中心主任

簡介：香港地區研究創造力的最具代表性人物之一，除了瞭解西方理論之外，也熟悉兩岸三地的創造力研究與實務，曾於 2001 年主辦以「Creativity: When east meets west」為主題的 international symposium，會後並出版專書。他對於創造力的研究特色在於社會心理、發展心理和文化比較等觀點。



Todd Lubart

Professor

University of Paris V

Laboratoire Cognition et

Développement - CNRS

(UMR-8605)

Institut de Psychologie -

Université René Descartes

(Paris 5)

EDUCATION

PhD, Psychology, Yale University, 1994

Habilitation à Diriger des Recherches, Psychology, University René Descartes Paris V, 2000

TEACHING EXPERIENCE

Undergraduate: Introduction to psychology, Differential psychology , Creativity, Cognitive psychology , Social psychology

Master: Intelligence and creativity, Personality and cognitive styles, Mental representation, Differential psychology in the social world

Doctoral level: Practical Intelligence

Direction of student's research since 1995:

Master (1st year project): 31 students, Master (2nd year project): 15 students

PhD: 3 dissertations completed (social creativity and it's development, emotion and creativity, cognitive flexibility) ; 4 students in progress (giftedness and high ability, creativity and technology)

RESEARCH

Responsible of the "cognition and differentiation" research group (8 faculty, 2 technicians, 7 doctoral students, 3 post-docs), in the Laboratory CNRS-Paris 5 , UMR 8605

PROFESSIONAL ACTIVITY

Colloquium on Cognition and Creativity in Organizational Settings (1995, Paris, France). Co-organizer.

International Summer School on “Creativity in the Workplace” (July 2003, University of Paris, France). Organizer.

Colloquium . Creativity in business, creativity in society.. Boulogne-Billancourt, September 2004 , Co-organizer

Consultant concerning creativity for Radio (Radio France), Press (professional magazines, e.g., Entreprise, business settings (e.g. Chanel, ETD--National agency for business development)

Member of the Editorial Board, Creativity and Innovation Management, Guest editor, special issue of. Creativity and Innovation Management ., 2004; Ad Hoc reviews for scientific journals such as: Creativity Research Journal, , European Review of Applied Psychology, Psychological Bulletin, Journal of Creative Behavior, Journal of Personality and Social Behavior, Personality and Social Psychology Bulletin; reviews for research organizations : National Science Foundation” (USA), Dutch Science Foundation , UNESCO.

STAFF MOBILITY

Research visits: University of Buffalo (USA, Center for Creative Studies), University of Yale (USA), University of Sofia (Bulgaria), University of Connecticut (USA), Blackwell Publishing (Oxford, England, Creativity and Innovation Management).

現任： 巴黎 第五大學心理系教授
University of Paris 5.

簡介：Dr. Lubart 曾在 2001 年獲得美國心理學會（APA）頒給傑出年輕學者的柏蘭獎（Berlyne Award），他與 Robert Sternberg 聯手打造「創造力的投資理論」，在心理學界廣為熟知，兩人的共同著作《不同凡想》（洪蘭譯，遠流出版）在台灣亦廣為流傳。Dr. Lubart 獨力完成的法文著作「創意心理學」，是法國一九七四年以來從心理學角度分析創造力的一本最重要的著作，最近也在台灣出版（遠流）。



Jonathan A. Plucker

Professor of Educational Psychology
and Cognitive Science, Indiana
University, Bloomington, IN

PROFESSIONAL EXPERIENCE

- 2007-2009, Board of Education, St. Charles School, Bloomington, Indiana
- 2007, Advisory Committee, Phi Delta Kappa/Gallup Poll of the Public's Attitudes Toward the Public Schools
- 2004-Present, Director, Center for Evaluation and Education Policy
- 2003, Director, Indiana Education Policy Center, and Interim Director, Indiana Center for Evaluation, Indiana University
- 1993-1995, Research Assistant, The National Research Center on the Gifted and Talented, University of Virginia, Charlottesville, VA
- 1992-1993, Teacher, West Point (NY) Elementary and Middle Schools
- 1991-1992, Research Assistant, The National Research Center on the Gifted and Talented, The University of Connecticut

AWARDS AND FELLOWSHIPS

- 2007, November, E. Paul Torrance Award, National Association for Gifted Children
- 2005, March, Teaching and Learning with Technology Grant, IU Teaching & Learning Technology Centers (Esping, A., & Plucker, J.) to expand intelligence web site
- 2004, July, Poynter Fellowship on the Ethics of Childhood
- 2003, March, OTRP Instructional Resource Award from The Society for the Teaching of Psychology (Esping, A., & Plucker, J.) to expand intelligence web site

2001, December, Indiana University SBC Fellowship to develop intelligence web site
2001, March, Robert C. Berlyne Award for outstanding research by a junior scholar,
American Psychological Association Division 10-Psychology & the Arts
2000, September, Scholarship of Learning and Teaching Presentation Award, IU Dean
of Faculties Office
2000, May, Mensa Education & Research Foundation Award for Excellence in
Research
2000, March, Teaching Excellence Recognition Award, Indiana University School of
Education
1998, October, National Association for Gifted Children Curriculum Award
1998, July, National Association for Gifted Children Early Scholar Award
1997, November, NAGC Honorable Mention for Gifted Child Quarterly Paper of the
Year
1997, May, Mensa International Award for Excellence in Research

現任：美國印地安納大學教育心理及諮商學系教授

簡介：Dr. Plucker 曾擔任美國國家天才兒童協會研究和評價部主席，在資優教育、教育政策、創造力等領域素有專長，門薩教育及研究基金獎及 E. Paul Torrance Award 的獲獎都證明了他在學術上的貢獻有目共睹。Dr. Plucker 現為印地安納大學評量及教育政策研究中心（Center for Evaluation and Education Policy）主任，及美國心理學會第十分會會長。短暫的中小學教學經驗，使他在教育政策上的見解更為務實，常常成為政府單位及媒體的諮詢對象。

Provided Training Services to:

3M
American Axle and Manufacturing
American Marketing Association
BANAS Mortgage
Bull Worldwide Industries
Dunlop
Exxon
General Motors
Grand Metropolitan Brewing Plc. (UK)
H&R Construction Incorporated
IBM
International Management Council
International Masters Publishers
Procter & Gamble (UK)
Procter & Gamble (US)
United Kingdom Atomic Energy Authority

Facilitated Meetings for:

AT Supply
AT&T
British International Cable Company
Bull Worldwide Industries
Corning
Derrick Equipment Company
Engineering Department
Research and Development Department
H&R Construction Incorporated
ICON Direct Marketing
International Masters Publishers
Procter & Gamble (UK)

Leadership & Service in the Field of Creativity

- Advisory Board, Creativity & Innovation Management Journal
- Editorial Board, Creativity & Innovation Management Journal
- Board of Trustees, Creative Education Foundation, 2002-2003

Gerard J. Puccio

Department Chair,
International Center for Studies in
Creativity, Buffalo State – State
University of New York (SUNY),
Buffalo, New York.

Professor,
International Center for Studies in
Creativity, Buffalo State – SUNY,
Buffalo, New York.

- External Evaluator, Northwood University, Alden B. Dow Creativity Center, Summer Fellowship Program
- Review manuscripts for the Journal of Creative Behavior (ad hoc reviewer)
- External Evaluator, Research Grants Council, University Grants Committee, SAR Government of Hong Kong

Awards

- The State University of New York Chancellor's Recognition Award for Exemplary Contributions in Research and Scholarship, 2005
- State University College at Buffalo, President's Medal for Excellence in Research, Scholarship, and Creativity, 2007
- Jamestown Community College Distinguished Alumnus Award, 2007

現任：美國紐約州立大學 Buffalo 學院 創造力研究國際中心主任
SUNY, Buffalo State College

簡介：Puccio 所領導的「創造力研究國際中心」，歷史非常悠久（since 1967），是國際上最具代表性的創造力研究與推廣機構之一，歷年來已經培育出許多著名學者，培育方式也廣為各界採用。Puccio 本身對於創造力的培育方式深具心得，對於文化差異也具有敏感度，曾於 2001 年應邀參加香港有關「Creativity: When east meets west」的 international symposium，發表創造力培育方式的東西方比較研究成果。



Dean Keith Simonton

Distinguished Professor and
Vice Chair

Department of Psychology

University of California,

Davis

Expertise

Genius, creativity, leadership, and aesthetics - the cognitive, personal, developmental, social, and cultural factors behind eminence, giftedness, and talent in science, philosophy, literature, music, art, cinema, politics, and war.

Archival data analysis - cross-cultural, transhistorical, biographical, and content analytical measures, with special stress on the historiometric analyses of eminent personalities, notable events, and creative products.

History of psychology - including analyses from the standpoint of the psychology of science, especially the psychology of distinguished scientists and eminent psychologists.

Awards and Achievements

Robert S. Daniel Award for Four Year College/University Teaching, Division 2 -

Society for the Teaching of Psychology, APA (2006) [photo/citation];

UC Davis Prize for Teaching and Scholarly Achievement (1994);

Distinguished Teaching Award of the Academic Senate of the University of California (Davis Division, 2000);

Magnar Ronning Award for Teaching Excellence, University of California, Davis (Associated Students of UC Davis, 1979);

Fellow, Division 2 - Society for the Teaching of Psychology, APA (1997);

Nominations, U.S. Professor of the Year, Carnegie Foundation for the Advancement of Teaching (1997-1998);

Forum on Exemplary Teaching, American Association for Higher Education (1994);

Endowed Simonton Prize for Excellence in Undergraduate Research bestowed annually at commencement (1995);
Certificate of Appreciation for Outstanding Service as Psi Chi Faculty Advisor, Davis Chapter (1994);
Honorary Member, Golden Key National Honorary Society (1991);
Finalist, Distinguished Teaching Award, Davis Division of the Academic Senate, University of California (1981);
Fellow, Danforth Foundation (1970-1974).

現任：美國加州大學戴維斯分校心理系特聘教授兼副主任
University of California , Davis

簡介：在創造力研究及心理學界， Dr. Simonton 以歷史測量學的研究方法著名，他從時代巨觀的角度分析創造力演化及傑出影響力人士，發表過數百篇作品，研究發現廣為各界所引用。

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台北場

場次 A

TAIPEI

SESSION A

創造力與大學課程

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摘要

考慮到這個台灣學生成長的环境難以發展創造力,我將會在這篇文章中探索如何在正規大學課程中培養出創造力。小丑與默劇的表演藝術、太極拳運動、以及談論自己與他人的動力對教師來說都是一種教學策略,使學生可以明白自身與他人連結的重要性並且獲得自信心,進而成功地開發出自我的想像力。

*由於本文作者為外國學者,逕由本辦公室特聘人員翻譯,以利中文讀者閱讀。

Creativity and university courses

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Abstract

While taking in account the difficult environment for the development of creativity in which grow Taiwanese students, I will explore in this article how this creativity can be cultivated in regular university courses. The art of clown and mime, exercises of tai ji quan, incentive to discourse about oneself and others are all part of a strategy for the teacher which recognizes the importance of the connection to oneself and others to acquire self confidence and therefore explore successfully one's imagination.

中年人生：跨過轉變、挑戰以及創造力的門檻

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摘要

在毫無心理準備的狀態下，人們往往就踏上了中年的旅程。我們常常在邁向人生高峰期時懷抱著錯誤的預期心理，認為我們所抱持的真理和理想會跟隨著我們一輩子；但事實上我們不可能在人生後半段還活在人生初期的計畫中。因為在人生初期感覺美好的事物將會在後期逐漸衰敗，而人生初期所相信的真裡也可能在後期變成謊言。(Carl Jung, 1933/1969)。

邁向中年時期的轉變期被定義為一個充滿混亂、壓力和掙扎的時期。但就 Carl Jung (1969) 所觀察到的，中年轉變期是一個重新測量、評估以及調整的時期。雖然許多關於“中年危機”的現實性爭議存在著，最近一個指標性的全球研究卻肯定中年時期為一個對男人女人都具有重大意義的轉變期。(Blanchflower & Oswald, 2007) 這個跨足全世界不同國家成年人所做的研究顯示，邁向中年會導致幸福感和康樂的減少，但同時也會為後半人生帶來開啓創造力以及生產力的契機。有鑑於教育中對於創造力研究的興趣提升以及對於成年人發展的洞察，這個適時舉辦的創造力教育研討會展現了探索中年人生的絕佳機會，同時也是對於促進創造力發展和進步的號召及挑戰。

許多理論的組織架構都談論到教育中的創造力主題。上述的全球研究指出中年時期所發生的轉變及發展其實在早期的學者研究中都有完善的文獻記載，像是 Jung (1933/1969)、Erikson (1968)、Levinson (1978)、還有 Gould (1978)；每一個研究都詳細指出中年時期以及轉變期的特徵。透過它的革命性觀點：從混沌(危機)中的演化(成長)，文學中的混沌理論更進一步地促進我們對這一時期的評價及欣賞。特別是 Prigogine 和 Stengers (1984) 的著作提供了令人注目且革命性的，對中年時期創造力的象徵比擬。最後，Dewey (1964)、Csikszentmihalyi (1993)、以及 Kegan (2001) 的著作則是將更新，甚至是變化的“持續不合拍韻律”特異觀點注入教育的領域。

在這個研討會論文中，我提議將探索中年階段視為一個“門檻”：從一個領域跨越到另一領域之中的空間，也是在兩個時期—早年和中年時期中的懸浮期。我會將我的研究帶入諮商專家、大學教職員、以及成年學習者的經驗，因為這些經驗橫跨了挑戰、對著機會招手；在中年人生中是那樣地獨特且廣泛地被全世界的成年人共同分享著。我的論文將會同時著重在中年時期的活力及混亂這兩者上，以及它所能創造及適用的“二次人生邀約”。最後，我將考慮這個時期的需求，不只針對個人而已，還有共同參與這個任務並一同促進創造力的維持與改革我們文化的所有相關單位機構。

*由於本文作者為外國學者，逕由本辦公室特聘人員翻譯，以利中文讀者閱讀。

At Midlife: Crossing a Threshold of Change, Challenge, and Creativity

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Abstract

Wholly unprepared, people embark on the second half of life. We take the step in to the noon of life with the false presupposition that our truths and ideals will serve us a hitherto. But we cannot live the afternoon of life according to the programme of life's morning--for what was great in the morning will be little at evening, and what in the morning was true will at evening have become a lie (Carl Jung, 1933/1969).

The transition of adults into middle adulthood has been characterized as a period of turmoil, stress, and struggle. As Carl Jung (1969) observed, the midlife transition is a period of reckoning, reappraisal, and restructuring. While some controversy has existed concerning the actuality of a 'midlife crisis,' a recent landmark global study has affirmed adult midlife as a time of significant change for both men and women (Blanchflower & Oswald, 2007). This study, which encompassed adults from countries throughout the world, noted that stepping into midlife can bring about a reduction in happiness and well-being, while correspondingly opening up opportunities for creativity and generativity into the second half of life. Given the growing interest in creativity in education and given the recent insights into lifespan adult development, this timely Conference on Creativity Education presents the opportunity to explore this significant period of our life as a call to creativity and a challenge for finding ways to promote its growth and advancement.

Several theoretical frameworks speak to the theme of creativity in education. The aforementioned global study echoes the changes that occur throughout adult and lifespan development, as have been well documented through the earlier works of Jung (1933/1969), Erikson (1968), Levinson (1978), and Gould (1978). Each has outlined the unique features of midlife and the midlife transition. The literature of chaos and complexity theory, through its evolutionary perspective of order (growth) arising out of chaos (crisis), further advances our appreciation of this period. Prigogine and Stengers' (1984) work, in particular, provides compelling evolutionary metaphors for midlife creativity. Finally, the works of Dewey (1964), Csikszentmihalyi (1993), and Kegan (2001) bring to education the perspective of the ongoing rhythms of 'falling out of step,' of renewal, even transformation.

For this Conference paper, I propose to explore midlife as a 'threshold'—that space between leaving one place and crossing into the other, that moment of suspension between two eras, early and middle adulthood. I will draw on my research into the experiences of counseling professionals, university faculty, as well as adult learners, as they traverse the challenges and acknowledge opportunities, so unique to midlife, yet so widely shared by adults throughout the world. My paper will focus on both the dynamism and turmoil of this moment in their lives, as well its invitation and 'second call' to serve and to create. Finally, I will consider the demands of this era not only on individuals but also on related institutions that share in the task of promoting such creativity that both sustains and transforms our culture.

建立在設計創造力認知元素上的創造力思考實行方案

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摘要

在這份研究當中，我們辨識出設計創造力中的認知元素並且為此提出一個新的實行方案。我們找出五項設計創造力的元素：流暢性、彈性、原創性、精巧度、以及發現問題的敏感度。這項為了設計創造力所提出的實行方案由五種不同活動組成，像是創造故事、反駁、充填黑盒子、敏化作用、以及不同的分類方法。我們將這些計畫分組成爲兩個活動：活動 A 是由創造故事、反駁以及充填黑盒子所組成；而活動 B 則是由敏化作用以及不同的分類方法組成。活動 A 的設計主要是期待能夠增進原創性、精巧度以及流暢性；而活動 B 則是期待能增進發現問題的敏感度以及彈性。

我們執行實驗以探討這個實行方案的有效程度。首先，我們對 50 名學生進行試前測驗以測量他們在這五種元素上的能力。接著，我們根據試前測驗將這 50 名學生分成三組；第一組學生進行活動 A，第二組學生進行活動 B，而第三組學生則爲對照組。再來，所有的組別都要進行一個概念性的設計任務以作爲試後測驗；這個測驗的內容是要學生們設計一個可攜帶的閱讀設備。我們以他們的五項創造力元素做爲評分標準。

結果顯示，這個方案對於提升學生的設計創造力認知元素產生部分效用，特別是進行活動 A 當中的流暢性及原創性。在考慮個體的需要及背景之下，這些研究成果將有助於設計創造力教育的發展。

關鍵字：創造力學習模式, 創造力的認知成分, 創造力思考活動方案, 設計創造力

*由於本文作者爲外國學者，逕由本辦公室特聘人員翻譯，以利中文讀者閱讀。

Creative Thinking Exercise Program Based on Design Creativity Cognitive Elements

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Abstract

This paper discusses the development of a set of brief exercises to address the cognitive elements of creativity; fluency, flexibility, originality, elaboration and problem sensitivity. To foster the design creativity, an exercise program for the cognitive elements of creativity has been devised and it is composed of five activities including making stories, negation, filling black box, sensitization and diverse classification. Each activity of the exercise program has been devised so that one or two cognitive elements are strongly addressed. In this way, this program could be used in helping students considering their individual needs and contexts. Preliminary experimental results indicate that the proposed creativity cognitive element exercise program could be useful in design creativity education.

Keywords: Creativity Learning Model, Cognitive Components of Creativity, Creativity Thinking Activity Program, Design Creativity

Section: A-1

洪煌堯 未提供

Using people knowledge to enhance students' understanding of science as a knowledge-building process

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Abstract

Scientific knowledge organizations in science curricula are person-neutral (or content-drive). Accordingly, there seems to be an imbalanced emphasis of scientific knowledge as an objective outcome, rather than as a continual knowledge-building process of human endeavor. To address this issue, a concept of “people knowledge”—i.e., knowledge organized around people—is introduced into science learning and its effects examined. Specifically, two types of people knowledge were investigated: (1) breadth-oriented people knowledge, which profiles scientists' scientific achievements across life, and (2) depth-oriented people knowledge, which portrays scientists' intellectual struggle in relation to their knowledge-building process. The findings indicate that the two types of people knowledge are fundamentally different in nature, and that the introduction of in-depth people knowledge into science learning is more useful in helping students deepen their understanding of the nature of scientific theories/laws and their relatedness, as well as remember better the science content they previous studied.

Keywords: people knowledge, knowledge-building, science learning

繪本曼陀羅創造思考教學方案對幼兒創造力之影響

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摘要

本研究旨在以陳龍安(1989)「問想做評(ATDE)」創造思考教學模式為架構編擬之適合幼兒發展的「繪本曼陀羅創造思考教學方案」，探討經過十二單元實驗教學後，此方案對提昇幼兒創造力的成效。

本研究採不等組前後測準實驗研究法，採立意取樣選取台北市某國小附設幼稚園五足歲幼兒為研究對象，選取實驗組和控制組各一班。實驗組三十名幼兒接受十二單元的活動教學，控制組廿七名幼兒則接受一般課程教學，未進行實驗處理。本研究之測驗工具為吳靜吉教授「新編創造思考測驗」，所得資料以單因子共變數分析進行假設考驗。

- 一、實驗組在「新編圖形創造思考測驗」之改變情形實驗組幼兒在「圖形流暢力」、「圖形變通力」、「圖形獨創力」、「圖形精進力」改變情形均顯著優於控制組。
- 二、「繪本曼陀羅創造思考教學方案」受到幼兒的接受與喜愛。

本研究最後根據研究結果，對幼教實務工作者、父母及未來的研究三方面提出建議，以供後續研究與教學的參考。

關鍵字：幼兒、繪本、曼陀羅、創造力、「愛的」創造思考教學

Section:: A-2

楊懿純、陳龍安 No Provided

幼稚園組織文化、教師創意人格與創意教學之研究

葉怡伶

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摘要

本文旨在探討幼稚園教師組織文化、創意人格對於其創意教學之影響及三者之關係。首先瞭解幼稚園組織文化、創意人格與創意教學之現況；其次分析不同園所屬性與教師個人變項在三者之差異情形；第三，分析幼稚園組織文化、創意人格與創意教學三者之相關性；最後，以多元迴歸及結構方程模式分析幼稚園組織文化與創意人格對其創意教學之預測力，以及三者結構方程模式之適配情形。

本研究透過文獻探討以及問卷調查法來瞭解上述研究目的，利用「診斷組織文化測驗」、改編之「創造性人格量表（Creative Personality Scale）」以及自編之「教師創意教學量表」為研究工具。以台北市公、私立幼稚園教師為研究母群體，並藉由兩階段抽樣方式抽取 107 所園所，321 位教師為主要研究對象。並使用 SPSS14.0 統計軟體及 AMOS5.0 進行描述性統計、信度分析、初探性與驗證性因素分析、獨立樣本 t 考驗、單因子變異數分析、Tukey 多重比較、皮爾森積差相關、多元迴歸以及結構方程模式來分析資料。本研究主要結論如下：

- 壹、台北市幼稚園組織文化類型為「階層型文化」，且教師整體而言具高度創意人格與創意教學，且以「積極靈巧」之特質最為明顯；並能省思自己的教學目標。
- 貳、教師年齡與年資差異存在於其創意人格及創意教學中，其中，教師年齡越長、越資深，越具有明確的教學目標，在教學方法與評量上也越具創意。學歷程度之差異則存在於其創意教學中，且顯示教育研究所畢業之教師創意教學程度高於一般大學畢業之幼稚園教師。
- 參、共識型組織文化與創意教學相關程度最高。然，共識型的組織文化雖有助於教師創意教學的產生，但不保證教師能有高度的教學創意。
- 肆、教師本身之創意人格與創意教學有高度相關，且比幼稚園組織文化更能預測其教學創意程度。
- 伍、「共識型文化」、「發展型文化」、「理性型文化」三種文化類型與教師創意人格及創意教學之結構方程模式適配度尚可接受。

最後，研究者根據上述研究結論針對幼稚園、幼稚園教師以及未來之研究提出建議，以期對未來學前階段之創造力教育有所助益。

關鍵字：幼稚園教師、創意教學、創意人格、幼稚園組織文化、結構方程模式。

A Study of the relationship between the Organizational Culture of Kindergartens, Teachers' Creative Personalities and Creative Teaching

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Abstract

The main purposes of this study was to: (a) understand the current situation of the organizational culture of kindergartens, creative personalities and creative teaching; (b) explore the data of the organizational culture of kindergartens, creative personalities and creative teaching between different backgrounds and influencing factors; (c) analyze the relationship between these three variables; (d) explore the predictive power of the organizational culture of kindergartens and creative personalities on the creative teaching; (e) use SEM (Structural Equation Modeling) to explore the goodness-of-fit of the model between the organizational culture of kindergartens, creative personalities and creative teaching.

To accomplish these purposes, the methods adopted were a comprehensive literature review and a questionnaire. Three scales were used to measure the following constructs: "Creative personality scale", "Diagnosing Corporate Culture", and "Creative Teaching Scale for Kindergarten Teachers". The major results were summarized as follows:

1. The organizational culture of kindergartens is an Internal Process Model. Teachers are smart with high scores on creative personality and high scores on creative teaching, especially in the aspect of teachers' teaching goals.
2. Teachers with over 21 years of teaching experience are more creative on teaching than the beginning teachers with only 1 year of teaching experience. Furthermore, the young teachers have less creative personalities than the older teachers. Besides, the teachers with a master degree in education are more creative on teaching than teachers with a bachelor degree in other fields than education.
3. A human relations model may contribute to teachers' creative teaching, but would not necessarily bring about teachers' high creative teaching.
4. Teachers' creative personality is more predictable than the organizational culture of kindergartens.
5. The goodness-of-fit of the models between the organizational culture of kindergartens, creative personalities and creative teaching are acceptable, especially in the human relation model, open system model and rational goal model.

Keywords: Kindergarten teachers, creative teaching, creative personality, the organizational culture of kindergartens, Structural Equation Modeling (SEM)

創造力素養量表之發展

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摘要

近幾年來，創造力教育在世界各國如火如荼地展開。教育部亦於 2002 年 1 月 2 日發表「創造力教育白皮書」，並正式推動「創造力教育中程發展計畫」，創造力教育在我國遂受到史無前例的重視。

顯然，創造力教育成功的關鍵，最終決定於教師本身的創造力知能與素養。然而，當本研究以「素養」為論文名稱的關鍵字，運用全國碩博士論文進行搜尋時，僅出現資訊素養、媒體素養、環境素養等 405 篇論文，卻未見任何與創造力素養有關的論文。教育領域有關創造力的研究，集中於創意思考、創意教學、創造力教學、影響教師創意的因素，以及教師發揮創造力所帶來的作用，而完全缺乏有關教師創造力素養的研究。因此，本研究之主要目的，在於發展國內適用的創造力素養量表，供教師、園所、師資培育機構，以及相關訓練機構，評量個人創造力素養之用，以作為教師專業成長和培訓機構進行訓練之工具。

所謂素養，指的是一個人對某領域知識的了解程度、技能的熟練程度及態度。因此，教師的創造力素養即是教師對創造力知識的了解程度、對創造力的態度，以及運用創造力技巧的熟練程度。

本研究首先運用知名創造力學者 Torrance、Sternberg、Csikszentmihalyi 的創造力理論與具體建議，來發展創造力素養量表中的知識與行為題項，並參考「觀念產生量表」（吳靜吉、林偉文、蘇錦榮，1998），來發展創造力素養量表中的態度題項。在自編量表完成後，延請數位國內知名創造力學者仔細提供建議，據此初步修訂完成本文的創造力素養量表。

關鍵詞：創造力素養、創造力理論、創意技巧、教師

The Development of the Creativity Literacy Scale

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Yu-Wen, Wu

Abstract

In recent years, creative education is launched like a raging fire all over the world. 'The White Paper on Creative Education' was announced on January 1 of 2002 and 'intermediate range development plan of creative education' was promoted formally by the Advisory Office of the Ministry of Education, creative education and then receives the unprecedented attention in our country.

Obviously, the key to success of creative education is decided by teachers' own creativity knowledge and literacy. However, using the key word ' literacy ' to the search of the national large thesis database, there were only 405 theses about literacy, media's literacy, and environmental literacy etc. There were no information related to creativity literacy.

The research about creativity of the educational field, concentrate on creative thinking, creative teaching, creativity teaching, factor influencing teacher's intention, and the effect of teachers manifest creativity, but totally lack the research about teacher's creativity literacy. Thus, the main purpose of this research lies in developing the Creativity Literacy Scale suitable for Taiwan, for teachers, kindergartens, teachers training institutions, and relevant training institutions, to access personal creativity literacy, and to be regarded as teacher speciality growing up and tool which the training organization trained.

The so-called literacy means the skilled and attitude degree of a person's knowledge to some domain knowledge. Thus, the teacher's creativity literacy is the degree of teacher's creativity knowledge, attitude toward creativity, and the use of skilled degree of the creativity.

This research uses creativity theory and concrete suggestions of the famous professors, such as Torrance, Sternberg, Csikszentmihalyi. For the purpose of developing knowledge and behavior question in the form of creativity literacy, the research use ' the form of producing amount of the idea'(Wu JingJi, Lin WeiWen, Su JinRong, 1998) to develop attitude question in the form of creativity literacy. Since the compiling amount form is finished, we invite several famous professors who are good at creativity field offer suggestions , then we according to these suggestions to revise the Creativity Literacy Scale, finally we finish the formal Creativity Literacy Scale.

Key words: creativity literacy, creativity theory, creativity skill, teacher

幼兒創造力發展及其相關因素之研究

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摘 要

本研究旨在探討三至八歲幼兒創造力發展趨勢及影響創造力發展之性別、居住地、出生序、家庭大小等相關因素。研究工具採用新編之「新活動與律動創造思考測驗」(NTCAM)來測量幼兒之創造力。研究樣本以台北市、台中市、高雄縣、台東縣及宜蘭縣 13 所幼稚園、托兒所及 6 所國小一、二年級三至八歲幼兒為對象，以班為一叢集單位進行抽樣，男女各半共計 522 位。研究結果發現：(1) 幼兒創造力的表現整體上在性別上無顯著差異；(2) 隨年齡的增長幼兒創造力表現皆呈現不連續性的發展趨勢；(3) 幼兒創造力的表現整體上在居住地上無顯著差異，然在都會區與非都會區變項比較上，幼兒創造力發展在流暢、獨創、想像分數上皆呈現出相互相反的 U 型發展趨勢；(4) 幼兒創造力的表現中想像與總分在家庭大小上達顯著差異，其中六人組成家庭之幼兒得分顯著低於其他人口數家庭之幼兒，而三人組成家庭之幼兒得分最高；(5) 幼兒創造力的表現在出生序上無達顯著差異。

關鍵字：幼兒、創造力發展、NTCAM、測驗

The Research on the development and related factors of the creativity of young children

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Abstract

This study attempts to research the creativity development tendency of children as young as three to eight years old and the related factors affecting such development, like gender, living location, birth order and family size. The revised New creativity test based on Torrance's Thinking Creatively in Action and Movement (NTCAM) is adapted to measure children's creativity. The subjects are clustered sampled from 13 nursery schools, kindergartens and 6 grade schools in five various geographical areas of Taiwan, which are Taipei city (northern part, the capital), Taichung city (west-central part), Kaohsiung county (southern part), Taitung county (eastern part) and Yilang county (northeastern part.) There are 522 boys and the same number of girls. The results show there is no significant difference in general performance between the two genders. Secondly, as the age goes up, there appears a non-linear trend of children's creativity development in every category. Thirdly, children's creativity performance is not affected by their living locations. However, when comparing the performance from metropolitan subjects and non-metropolitan ones, there are mutually contrary U-shaped trends of creativity development in all the categories of fluency, uniqueness and imagination. Fourth, family size significantly affects the sum and the imagination score in children's creativity performance. Subjects from a family of six or more members perform significantly lower than the other groups. On the contrary, children from the family of three perform best of all. Fifth, birth order doesn't affect children's creativity performance significantly.

Keywords: Young Children, Creativity Development, NTCAM, Test

創意音樂故事屋實務專題指導之協同行動研究

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摘要

本研究旨在探討二位技職體系大學教師帶領一群大四幼兒保育系準教保人員，進行創意音樂故事屋教學之活動設計與實施的教學歷程，規劃一系列以「音樂魔幻森林—器樂篇」為主題的兒童創造力課程方案，課程內容結合語文、音樂、肢體創作等領域，並融入兒童創造力教學於音樂與故事教學中。行動方案歷程帶領五位準教保人員實際設計教學活動、帶領兒童進行音樂故事屋教學，融入創造力教學歷程中，藉以增進準教保人員對創造力教學之省思和教學革新，並促進二位大學教師專題指導與大四準教保人員專業成長與培育其創造力教學能力。

本研究採取協同行動研究法，研究歷程透過研究小組成員，二位技職體系大學教師與一群大四準教保人員，一同設計活動進行兒童創造力教學，不斷地對話、執行、省思、修正行動方案與再執行、再修正的歷程。透過半結構晤談，輔以專題指導省思與觀察資料蒐集。所設計的課程「音樂魔幻森林—器樂篇」，採取系統取向的教學設計 ADDIE 模式(Analysis, Design, Develop, Implement and Evaluate)，進行分析、設計、發展、實施與評量五個階段，實務專題指導採取陳龍安教授 2006 年提出的「愛的(ATDE)」教學步驟以啟發學生創造力。本研究結果發現：大四學生肯定實務專題製作，以及參與技專院校專題競賽帶給他們很大的成長空間，且透過小組方式進行實務專題製作，能提供較多的創作能量，而行動歷程中透過專題競賽增進學生自信心及成就感，其次，專題指導教師於專題製作與專題競賽歷程中扮演重要的角色，須適時提供學習歷程的鷹架、予以適切的引導，以及給予輔導與鼓勵等。最後，本研究也根據研究結果提出對於技職體系學校專題課程、大專院校教師創意實務專題指導與未來研究等具體建議。

關鍵詞：兒童創造力教學、音樂故事屋、器樂、實務專題指導、協同行動研究

A Collaborative action research for practical project-based curriculum--take Musical Story House as an example

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Abstract

The main purpose of this study was to examine the process of practical project-based curriculum. The second purpose was to examine if the integrated teaching approaches could promote student's creativity and problem solving ability.

Researchers consisted with two college teachers and five senior college students. The teachers adopted Chen's ADTE model to foster student's creative thinking. The students adopted the systematic teaching model ADDIE to do the project. The theme of the project was "Musical Story House". In addition to compose of script and execution, they joined two competitions and gain the awards. Besides, their work had been presented in national conference and submitted to the journal. The main method was collaborative action research, involving the semi-structured interview. In addition, teacher's observation and reflections were part of the data analysis. The results were summarized below: First, students agree that they gain much from the project-based curriculum and competition. Second, small group learning enhanced their creativity. Third, competition enhanced students' confidence and achievement. Fourth, the role of teachers in project making was important, who were also a guider, scaffold builder and consultant.

The results have some implications to school's curriculum and teaching. It could be referred in implementing project-based course and teaching.

Keywords: activity teaching for children, musical story house, .instrument, practical project-based curriculum, collaborative action research

創作性戲劇對兒童創造力與問題解決能力之影響

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摘要

創造力及問題解決能力不僅是公民所需具備的能力及素養，亦是當前教育政策的重點(教育部，1998)。本研究旨在根據 Winifred Ward (1930)提出的創作性戲劇編擬一套適合國小兒童的戲劇課程，並經過 12 次實驗教學後，探討此課程對提升兒童創造力與問題解決能力之成效。研究目的如下：

- 一、探討創作性戲劇教學與傳統教學，兒童在創造力與問題解決能力上是否有差異。
- 二、發展適用於兒童的創作性戲劇教學。
- 三、創作性戲劇教學的適用性與可行性，並在實施過程中找出實際施行之瓶頸，以作為實務上之參考。

本研究採準實驗研究法，在研究對象上，以彰化縣百合國小(化名)四年級學生為實驗組，另一班四年級學生則為控制組。實驗組施予一學期的創作性戲劇教學，而控制組則否。主要研究工具分別為「新編創造思考測驗」與「新編問題解決測驗」，所得資料以單因子共變數分析進行假設考驗。

根據研究結果，本研究發現：

- 一、創作性戲劇與傳統教學的學生在「新編創造思考測驗」語文創造力之流暢力、變通力、獨創力有顯著差異。
- 二、創作性戲劇與傳統教學的學生在「新編創造思考測驗」圖形創造力之流暢力、獨創力有顯著差異；但在變通力與精進力則沒有顯著差異。
- 三、創作性戲劇與傳統教學的學生在問題解決能力有顯著差異。
- 四、學生對實施創作性戲劇皆持正面之回饋與喜愛。

關鍵詞：創作性戲劇、創造力、問題解決能力

The Effect of Creative Drama to Creativity and Problem Solving Ability

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Abstract

Creativity and problem solving ability were not only the necessary abilities and equipment of citizen, but also the present important education policy (Board of Education, 1998). The main purposes of this study were to design a creative drama for elementary school students bases on Winifred Ward(1930)"Creative Drama", and to investigate the impacts of creative drama course on creativity and problem solving ability. Sixty-three fourth grade students participated in the study. A nonequivalent pretest-posttest experimental design was employed. The finding showed a statistically significant interaction of creative drama for creativity and problem solving ability. For all outcome variables, the creative drama group showed significantly greater gains from pre-test to post-test than the control group. The findings have implications for both practice and research.

Keywords: creative drama, creativity, problem solving ability

電視卡通融入視覺藝術課程對學童繪圖表現的創造力影響研究

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摘要

本研究是探討融合電視卡通之視覺藝術教育課程對國小六年級學童的創造力影響，研究對象為來自臺北市國小之六年級學童。我們透過分析學童的回饋、想像與圖畫發現「電視卡通對他們在思考與創造力上的影響」，對於提供給未來研究者的應用與建議結論也有諸多探究。

關鍵字：電視卡通、視覺文化、視覺藝術教育

The study of the influence of TV cartoons integrated to visual art curricula on the creativity of sixth grade students.

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Abstract

The study is to investigate the effects of “TV cartoons into the visual art curricula” on the creativity of the sixth graders. Research objects are students from sixth-grade classes in Taipei City Elementary Schools. The findings indicate that how TV cartoons influence the children’s thought and creativity through analyzing their feedback, imagination and paintings. Conclusions, practical applications and suggestions for further research were discussed.

Keywords: TV cartoons, Visual culture, Visual art education

創意能力與中文寫作教學

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摘要

文學創作為中文教學的重點之一，香港中文大學中文系課程即有為主修生開設之「寫作訓練」、「文藝創作」，及為選修生開設之「創意中文寫作」。寫作教學的方法也日見重要，將創意思維概念用於中文寫作教學為可行之方。

創意思維在五十年代開始廣為討論，一般而言，心理學家均認為「創意能力」包括：敏覺力、流暢力、變通力、獨創力、精進力。張玉成（1986）把上述的五項「創意能力」歸為「創造性教學」的「認知性目標」，即學生通過教育的過程，而最終能培育出上述各項能力，並且能運用自如。這些能力也可以通過寫作訓練的方式加以培育。

以敏覺力(Sensitivity)為例，此實有賴於觀察能力，觀察是創造力的窗戶，也是思考想像力的基礎。增加敏覺力，即加強了對事物察覺能力及對環境的敏感度。要觀察得更全面，必須有明確的目的，做好準備工作，還要聚精會神、反覆琢磨，進而用多種感官參與觀察。在觀察步驟方面先觀察全貌，掌握總體印象和特徵，再觀察各個組成部分的特色，繼而觀察各個部分的關係以至觀察各個部分的重要細節。寫作時可用「感官並用法」，由導師引導學生用視覺、聽覺、觸覺、味覺、嗅覺去體驗生活，並以文字表述自己的感官。同時可以結合六何法：何時（when）、何地（where）、何人（who）、何事（what）、為何（why）、如何（how）

透過舉例說明，利用文章分析以見「六何法」於文章寫作上的運用。

人物描寫可說是文學作品的靈魂，假若作品對人物的描寫粗糙，作品的可觀性也將會登時大降。為使學生了解敏於察覺、細意描寫的重要性，教學時可選擇細意描寫，以及粗疏描寫的例子若干，透過活生生的用例以見描寫人物的好與壞。例如已故荷里活巨星柯德里夏萍向來被譽為世紀大美人，那麼文字媒體怎樣描寫她的美貌呢？又如《紅樓夢》描寫人物細膩，後世研究者無不讚嘆，究竟《紅樓夢》怎樣寫活人物呢？林黛玉的容貌形象究竟怎樣？倘若學生比較兩種寫法，便可知道細緻描寫的重要處。

廣義來說，任何寫作都是創作，但狹義而言，創意寫作指在寫作上訓練學生的創造力。上文所提到的五種特點，將之施於中文寫作教學，可以分成兩個層面，前三者敏覺力、流暢力、變通力可以視為訓練的基礎，也是訓練的重點。由此才可產生獨特的作品，從中體現「獨創力」；其上再要精益求精，更上一層樓，才能體現「精進力」。茲篇之撰，主要是提出創意思維於閱讀及寫作教學上的運作及探討其成效。

Section: A-3

潘銘基、陳寧 No Provided

創造思考課程與網路輔助教學成效之研究

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摘要

創造力的培養與開發愈早愈好，透過創意的教案設計能激發孩子的創造力及想像力，本文以研究者在幼保系開設「幼兒創造思考教學」的課程為主軸，探討教學課程的內容設計、實施方式與教學成效。此課程為期一學期，除了平常的上課外，也實施網路輔助教學，此外，為了加強同學的創意教案設計，也實施兩次的協同教學，聘請產業界的專家到班上做示範教學。在網路輔助教學方面，研究者將課程進度、講義、授課影音檔、線上練習題庫、作業，都建置在網路上，學生可隨時上網點閱講義或收聽老師的課程講授，此外並設有討論區，同學可以分享上課心得，或是將不錯的網路資訊和大家分享，增進師生和同學之間的互動。

研究者在學期末透過問卷調查及請修課學生寫課程心得兩種方式，研究學生修讀此課程後的反應，此研究兼具質與量資料之分析，研究發現如下：大部分的學生認為修讀本課程能增進他們對創造力理論的認識、會嘗試自己解決問題，並且能提升自己的創意，此外，大部分的學生也同意修讀本課程能幫助他們設計有益於幼兒創造思考的活動。在網路輔助教學的實施成效方面，雖然有四成的學生認為網路輔助教學對其學習本課程有幫助，不過也有半數左右的學生認為沒有幫助，但分析同學填寫的原因後發現，覺得網路輔助教學沒有幫助的同學，其填寫的原因大部分都是沒時間上網或是不方便上網，覺得有幫助的同學，則認為網路輔助教學內容豐富、沒有場地時空限制，方便且多元，此外也有同學認為網路教學能利用討論區與老師及同學有所互動，交流心得感想，對學習有助益。

關鍵字：創意、創造思考、創意教學

Research on creative thinking Curriculum and e-Learning

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Abstract

To improve children's creative ability is important and it is better to foster children's creative at early ages. The purpose of this study was to investigate teaching results of the creative thinking curriculum, including teaching content, curriculum design and the using of e-learning. The participants of the study were university students who had joined the curriculum.

The data for this research included questionnaire and reports of the subjects at the end of the semester. The results of this study showed that most subjects agreed that their creative thinking abilities were improved after they joined this class. Furthermore, most of them agreed that this curriculum was useful for their teaching with young children. But as to the results of e-learning, although more than 40% of the subjects agreed that e-learning were helpful for their learning, 51% of them had the opposite opinion. By taking a deep look at the reasons they gave, it is found out that the students who did not like e-learning was because they did not have time to study on-line or it was inconvenient for them to work on-line. On the contrary, the students who liked e-learning had the opinion that it was convenient and helpful for their study.

Keywords: Creativity, Creative thinking, Creative teaching

全民國防教育創新教學之研究-以中國文化大學軍事戰史與兵學理

論課為例

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摘要

本研究係以孫子兵法作為大學軍訓課程「軍事戰史與兵學理論課」授課教材、以即時戰略遊戲(Real-Time Strategy games, RTS)作為兵法策略實際操作之演練、模擬作戰與思考可能發生戰況與因應之道，並透過電腦遊戲據以分析，讓學生除了口述和筆記學習外，有機會實際體驗以增進學習效果。

本研究除了例行期中電腦考試與期末筆試外，學期中對上課同學實施量化研究的問卷調查、期末質性研究要求同學繳交上課心得、反思報告，並佐以訪談學習成果較佳之學生，綜整出如刻板印象、學習情形、融入課程、主動學習與收獲等核心概念，藉探究本教學法之學習成效，以達到全民國防通識課程之教育目的，並提出研究建議做為軍訓教學改進之參考。

研究發現大學軍訓課程配合即時戰略遊戲教學，除可改變學生對軍訓課之刻板印象外，學生的學習態度變得主動、有興趣，其學習效果佳，大部分學生均認同電玩能增進對軍事戰略之概念，並可改善軍訓教學之效果，且學生對軍事戰略之運用更加清晰，選課人數踴躍增多，可作為各校軍訓課改善與教學之參考。

關鍵詞：線上遊戲(Massive Multi-layer Online Role Playing Game, MMORPG)、即時戰略遊戲(real-time strategy, RTS)、全民國防(All-Out Defense Education)

The Exploratory Study of All-Out National Defense Education - Taking “War History and Military Science Theory” as an example

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Abstract

This study is intended to take “The Art of War by Sun Tzu” as training materials of military education course in the university, and then based on the “Real-time Strategy Games (RTS) to physically exercise the realistic operations on war strategy, simulate war combats, and think of battles’ situations as well as observe responsiveness to the aforesaid assumptions. In addition to oral and written learning practices, using computer games coaching is also an attempt to enhancing the learning effects to enable students learning more about military practical experience.

In addition to a routine mid-term computerized test and final written examination, during the learning and coaching processes students are requested to turn in their quantitative research reports in the mid-term and qualitative research reports at the end. To ascertain the consistency and accuracy of the reports, interviewing students who rank at better learning scores are accompanied at the same period to prove the effectiveness of this exploratory study, while resulting in achieving the goals setting for national core educational curriculum and making constructive proposals as references to improving military education courses in the university.

This study results in proving military educational courses coaching based on “Real-time Strategy Games (RTS) more effective, while changing students’ stereotyped impressions on learning military education courses, becoming more aggressively learning attitudes and interests, and finally getting better learning results. Most students not only agree to these conclusions, but also more clearly enhance and comprehend the conceptualizations and utilizations of “War History and Military Strategy”, resulting in more actively enrolling military education classes that can be as coaching witnesses to improve military education courses in university.

Key words : Massive Multi-layer Online Role Playing Game(MMORPG) 、 Real-time Strategy(RTS) 、 All-Out Defense Education

由創新教學策略對技職學生創意思維的影響－以物理課程為例

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摘要

現今教學策略與方法，應配合技職學生所要面臨的就業環境，故本文依據創造力投資理論（Sternberg and Lubart, 1995），參考發展創造力的方法（Sternberg and Williams, 1996），以五項標準（Maker, 1982）：1.環境適應性，2.綜合性，3.彈性，4.實用性，5.有效性，提出創新物理課程之教學策略。

於課堂上採之教學模式與策略為利用「愛的」(ATDE)四個要素：問(Asking)、想(Thinking)、做(Doing)及評(Evaluation)，配合教學的各類教材與技巧，營造一個適合創思的環境與氣氛，以競合的方法突破心智的障礙，建立學生團隊合作的精神，以培育其具有創意的學習心態。

本研究以中國科技大學資訊工程系日間部四技一年級學生為研究對象，總計 112 位學生參與研究。研究者讓研究對象根據設計之創新教學策略，刺激學生的各方面反應與能力，透過教師端紀錄與評量之課程發展，亦令學生於每堂課均加以紀錄其學習歷程，並以探討學生們在此教學策略與方法中，是否有創意思維進步？本創新教學研究結果顯示，以系統的方法教導創意思考，能訓練學生基本的認知能力，使個體能產生獨創的能力，增加個體內在潛意識的思考過程。

關鍵字：創新教學策略，創意思維

The influence of creativity thoughts of the technique duty students by the innovation teaching strategy - take the physical curriculum as the example

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Abstract

Nowadays the teaching strategy and the method, should coordinate the employment environment which the technique duty student must face, therefore this article According to the creativity investment theory (Sternberg and Lubart,1,995), reference development creativity method (Sternberg and Williams, 1,996), by five standards (Maker, 1,982):

1. Environment compatibility, 2. Comprehensive nature, 3. Elasticity, 4.Usability, 5. The validity, proposes teaching of strategy the innovation physics curriculum.

The educational model and the strategy in the classroom was used the "loves" (ATDE) four essential factors: Asked (Asking), thought (Thinking), makes (Doing) and comments (Evaluation), coordinate the teaching material and the skill, Construct the environment and the atmosphere which suitably creates thinks, competes the method breakthrough mental barrier which gathers, establishes the student team cooperation the spirit, cultivates it to have the creativity the study point of view.

This research take the China university of technology, the information engineering department during the day four techniques freshman physics class students as the research object, amounts to 112 students to participate in the research. The researcher lets the research object basis design the innovation teaching strategy, stimulates student's various aspects to respond with the ability, 'According to the teacher to carry the record with to comment curriculum of the quantity to develop, also the class is performed students to record their study courses, and discusses the students in this teaching strategy and the method, whether has the creativity thought to be progressive?

This innovation teaching showed that, by the system method to teach the creativity thought, can train the student basic cognition ability, causes Individual ability to have the creative ability, the increase individual intrinsic subconscious ponder process.

Keywords: Innovation teaching strategy, creativity thought

創意活動方案對未來教育工作者之學習成效研究

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摘要

社會變遷快速、人口結構改變、資訊知識爆炸的時代，廿一世紀是以「創意」決勝負的「知識經濟時代」，因此創造力與創新能力之發展與培育，不僅是提昇國民素質之關鍵，亦為發展知識經濟之前提。高等教育做為學校教育的最高殿堂，負有培育引領各領域發展的優秀人才之責，其轉化與革新往往直接影響國家發展方向。高等教育的創意活動方案係創新人才的活水源頭，而如何設計規劃創意活動方案足以培育具備創造能力的未來教育工作者，將是創造力教育最為關鍵的元素。

本研究主對未來教育工作者在創意活動方案之參與研習、工作坊等之學習檢視其學習成果。

創意活動方案包括有未來教師研習營、創意小書工作坊、校園攝影及命名創意大獎賽－用心看師大、創新領導暨組織運作研習活動等四項活動內容。

本研究方法以問卷調查、成果展示、研究觀察分析以呈現研究結果。

參與本研究之未來教育工作者對此活動滿意度有顯著差異。

提供未來教育工作者認識及學習創造力及創新的機會，成果展示獲得與會人員高度肯定。

研究者觀察比較本創意活動方案對提升教育工作者之創意能力、創意態度具有正面之積極意義。

關鍵詞：創意活動方案、未來教育工作者、創意能力、創意態度

Research on the Effectiveness of Creative Activity Projects on Future Educators

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Abstract

21st century, which is demonstrating fast-changing society, structure-shifting population, and information overload, is an “information economic” dynasty determined by “creativity”. Therefore, developing and fostering creativity and creative ability is not only a key factor of elevating citizen’s predisposition but a foundation of expanding information economic. Higher education, at the top of academic system, is responsible of creating elites in various fields and whose transition and evolution will affect where the country will go. Creative activities in higher education are also the source of creative persons, and how to design these activities to cultivate future educators with creative ability is the primary factor of creativity education.

This research addresses the learning results of future educators’ participations in creative activity projects through seminars and workshops. Creative activity projects include future teacher seminars, creative handbook workshops, campus photography & naming contest awards – observing NTCU with hearts. Future teacher seminars contain creative courses (the secret of creativity, exploring creativity, and experiencing/practicing creativity), experience-sharing of managing school creativity, creativity lecture series, and theme lectures to assist and motivate future educators’ abilities and incentives to apply creativity in their professions.

Methodologies used in this research include questionnaires, demonstration, observations/analyses, and generalization of data. Based on the feedback from Future Teacher Creativity Camp”, no matter in class-conducting approaches or teaching materials, future teachers responded very positively toward this camp, including its richness in contents, complexities, and flexibilities.

Planning and practice of “Creative Handbook Workshop” can be separated into “Fostering”, “Experience”, and “Product” of creators three stages, and which is highly recognized by future educators of this camp as well.

Campus photography & naming contest was to illustrate the beauty of NTCU through photography and arts, and to motivate participants to think creatively to exhibit NTCU as well. The theme of this contest includes nature, building, culture, festival and anything which might convey the beauty of all three NTCU campuses. There were 153 photos in this contests and it was well recognized.

Result demonstration, which provided future educators an opportunity to understand and learn about creativity, was well applauded as well. Researchers observed positive impacts of this creative activity project on promoting educators’ creative ability and creative attitude. At last, conclusion was drawn from results and discussions of this research, and which will provide guidance of future researches.

Key Words: Creative Action Projects, Future Educators, Creative Ability, Creative Attitude

班級經營之「心」策略

國小教師創新班級經營研究

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摘要

本研究的主要目的，在於建構創新班級經營的策略，並探究創新班級經營對學生的影響，以及創新班級經營的成效。

本研究歸納出以下結論：

壹、創新班級經營的建構方面：

- 一、創新產生於個人、組織內部。
- 二、創新是技術創新。
- 三、創新是改善現狀，提升績效。

貳、創新班級經營的影響方面：

- 一、相信學生，讓學生嘗試去做，因而培養了自信、助人、努力、主動與責任……等，許多正向的行為。
- 二、獎懲制度以行為主義為手段，達成學生行為內化的目的。
- 三、建立與學生溝通的管道。

參、創新班級經營的成效方面：

- 一、引導學生自治能力。
- 二、協助學生人格成長。
- 三、增進師生情感交流。

關鍵字：班級經營、創新、創新班級經營

The new strategy of classroom management — The research on innovative classroom management of an elementary teacher

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Abstract

The main purpose of this research, lie in building and constructing the tactics that the innovative classroom management , and probe into the innovative class and manage the impact on student , and the effect which the innovative classroom management.

Sum up the following conclusion in this research:

1. Innovative classroom management builds the respect of constructing :
 - (1) Evolve from individual , organize the inside in innovation .
 - (2) Innovation is a technological innovation.
 - (3) Innovation is to improve the current situation , improve the performance.
2. Influence which the innovative classroom management :
 - (1) Innovative class' autonomy cadre respect: Believe student, let student is it do to try, therefore train self-confident , help people, hard, take the initiative with responsibilityetc, a lot of behaviors of turning towards.
 - (2) Manage the respect in innovative class' routine: The system of rewards and penalties regards behaviorism as the means, reach the purpose to melt in student's behavior.
 - (3) Manage the respect in innovative teacher-student relationship: Set up the channel of communicating with students.
3. The effect which the innovative classroom management :
 - (1) Guide student's autonomy ability.
 - (2) Help student's personality to grow up.
 - (3) Promote the emotion communication of teachers and students.

Key word : classroom management, innovation, innovative classroom management

教師教學風格對學生心流經驗及創造力之影響

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摘要

研究教學風格的目的，是爲了讓每位教育者對其自我的信念能更加清楚地了解，並且理解這些信念如何與教學行爲產生一致性，最後，進而幫助學習者改善其學習的過程 (Heimlich & Norland, 2002)。而根據 Csikszentmihalyi (1997) 對心流經驗的研究，他認爲經常處於心流狀態的人有一種自得其樂的人格特質，因爲他們有自成目標 (autotelic) 的內在動機，不需倚賴外在的報酬，所以擁有較好的主觀經驗品質，也能體會真正的快樂與幸福。心流經驗有助於加速個人知識及技巧的發展，而創造力更是學習者在學習行爲後創新產出的燃劑。然而，並非所有教師都能在課堂上帶領學生進入心流狀態，也不是所有教師的教學風格都能刺激或引導學生的創造力發展。

本研究旨在探討：(1) 何種教學風格較能帶領學生進入心流狀態；(2) 何種教學風格較能刺激學生的創造力發展；以及 (3) 何種教學風格同時兼顧學生的心流經驗及創造力發展。對於上述問題的了解將有助於端正教育的本意，並提升教與學的品質。本研究經文獻分析，探討「教學風格理論」、「心流理論」、「創造力理論」後，對國立台灣師範大學國際人力教育與發展研究所六位學生進行深度訪談，最後提出研究結論。

本研究採用「學生中心型」、「教師中心型」及「折衷型」(Conti, 1983; 張苑珍, 1995; 吳秀梅, 2001; 許淑華, 2001; Schaefer & Zygmunt, 2003) 三類來做爲教師教學風格的基本型態。研究發現，「學習者中心型」教學風格的教師較能帶領學生進入心流狀態的學習層次，其次爲「折衷型」教學風格的教師，而「教師中心型」教學風格的教師最無法幫助學生進入心流狀態。此外，所有的受訪者皆認爲「學習者中心型」教學風格的教師最能夠幫助他們激發創造力，而「教師中心型」教師的教學風格最無法激發學生的創造力，甚至有害學生的創造力發展。最後顯示，不論是對於學生的心流經驗或是創造力，研究結果皆以「學習者中心型」的教師教學風格最有助益。教師與學生皆應適當調整自身教學與學習的角色，共同塑造有效溝通及對話的環境，並創造師生相互成長的學習殿堂。

關鍵字：教學風格、心流、創造力。

The Impact of Teacher's Teaching Styles on Student's Flow Experience and Creativity

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Abstract

The purpose of studying teaching style is to make every educators more clearly understand their self beliefs, realize how these beliefs correspond with teaching behavior, and finally help learners to improve their learning processes (Heimlich & Norland, 2002). Flow experience will benefit the development of personal knowledge and skills, and creativity is the fuel of innovative outcome after learner's learning behavior. These two elements should be heavily concerned in the education field.

This study is to discuss: (1) which teaching style can more lead students into the flow experience, (2) which teaching style can more stimulate students' creativity development, and (3) which teaching style can benefit students' flow experience and creativity development at the same time. The understanding to the above questions would help to correct to the original meaning of education and left up the quality of teaching and learning. After literature reviews of the related theories, this study conducted the in-depth interviews with six graduates in the Graduate Institute of International Workforce Education and Development, National Taiwan Normal University and proposed the research conclusions in the end.

This study adopts three categories – “teacher-centered style”, “learner-centered style” and “middle style” (Conti, 1983; Chang, 1995; Wu, 2001; Hsu, 2001; and Schaefer & Zygmunt, 2003) as the fundamental teaching styles. This study discovered that “learner-centered style” teachers can more lead students into flow status and “teacher-centered style” teachers almost cannot. Besides, all the interviewees consider that “learner-centered style” teachers can most stimulate their creativity and “teacher-centered style” teachers almost cannot. Finally, this study revealed that “learner-centered style” teachers are the most beneficial ones to student's flow experience or creativity.

Keywords: teaching style, flow, creativity.

創意教師的逆境、轉化與創造

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過去研究發現，當教師處於越有利於創造的環境，將會有越高之創意教學行為，然而，研究者發現，有些處於不利環境或逆境中的教師，仍然能夠發揮創意進行教學，因而亟欲進一步深入探究在逆境中的創意教師，如何轉化逆境，創意教學，於是從「復原力」(resilience)的研究觀點出發，採取深度訪談之質性研究方法，訪談六位獲得全國性創意教學獎或教育部教學卓越獎肯定之中小學教師，探究其遭遇之逆境、以及其如何轉化，並仍能創意教學，且獲得學門守門人之肯定的歷程與因素，研究結果發現，創意教師遭遇最大之逆境為「同儕教師之冷漠與排擠」、「資源不足或限制」、「工作與家庭衝突」等逆境，創意教師多因其「對學生學習的承諾」、「強烈的內在動機與熱情」、「尋求外部協助」、「發揮創意解決問題」等因素與策略，故仍能突破逆境、創意教學；其中，尤其教師在面臨同儕教師困境時，多會使用「分享榮耀」的策略，以降低同儕的排擠，甚至帶動同儕一起投入創意教學。在支持力量方面，「家人支持」、「學校行政主管的支持」、「教學師父(mentor)」扮演重要的角色；在創意教師的成長歷程中，「父母、祖父母的創意楷模」、「過去逆境經驗」對創意教師的教學創意與逆境復原有重要的影響。本研究結果對於描繪教師創意教學實相，與正努力於「創意教學」之教師以及學校創意守門人，具有重要的意涵。

場次：A-5

林偉文

No Provided

團隊及團隊創新研究在台灣：1998~2007 之回顧

A Review of Team and Team Innovation Research: The case of Taiwan 1998-2007

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摘要

本文蒐集國內八個主要管理學術期刊（人力資源管理學報、臺大管理論叢、交大管理學報、科技管理學刊、管理學報、中山管理評論、管理與系統、管理評論）中有關團隊及團隊創新之文獻，發現1998~2007年間共有29篇與團隊有關的文獻。本文就這29篇文獻進行內容分析，以掌握近十年間我國有關團隊研究的研究思維與研究成果。

分析發現：（一）團隊研究在近十年間呈現穩定成長的趨勢，團隊研究文獻佔期刊發表文獻總數的比例，自2002年起有大量增加的情形；其中，管理學報與臺大管理論叢收錄最多的團隊相關論文。（二）根據上述樣本論文的題旨，本文將我國團隊研究歸納為團隊績效、團隊互動、知識分享、團隊信任、團隊學習、團隊創新、團隊特質與團隊任務等八類。就發表數量來看，以團隊績效最多，團隊互動、團隊特質次之；就研究方法而言，90%的論文採行量化研究方法。（三）就研究議題的發展趨勢而言，2000年之前沒有任何團隊相關的研究發表在這八個期刊上，2000年~2001年間發表的研究沒有明顯的研究方向，2002年後才有比較聚焦的研究方向，團隊績效、團隊互動、知識分享陸續成為研究的主流；其中團隊績效是最多學者關注的議題；團隊互動則從開始的質性研究，轉變成量化研究為主；知識分享從學者開始關注中介效果之後頻繁的被提起，唯始終沒有成為研究主軸，僅是輔助的角色。此外，每年都有一至兩篇非主流的團隊研究，這些非主流團隊研究各自獨立，和其他的研究幾乎沒有關連，亦難以進行歸類。（四）若以團隊研究的I-P-O（投入、過程、結果）模型來分析，整體而言，2002年之前國內的團隊研究主要探討團隊的I與P（投入與過程），2002年之後則較多探討團隊的P與O（過程與結果）。譬如，在知識分享方面，早期研究主要探討影響知識分享的因素，2004年之後才開始探討知識分享對團隊創新之影響，同時也開始探究知識分享如何透過某些中介變項影響團隊創新。（五）有關團隊創新之影響因素，主要包括：團隊成員多樣性、團隊成員能力、團隊成員互補能力、團隊領導效能、組織支持創新程度、知識分享與團隊氣候等七個因素。

本研究除了將繼續勾勒我國團隊研究之梗概之外，後續進一步將聚焦於團隊創新的相關研究，以團隊研究的IPO架構來分析團隊創新的影響因素及其影響，就現有實證文獻進行評論，並提出後續研究之建議。

關鍵詞：團隊創新、知識分享、團隊信任、團隊領導、團隊互動

Section: A-6

徐聯恩、陳宣輔

No Provided

個人創新與團隊創新績效之比較 - 以資策會專利為例

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摘要

近幾年來關於創新研究的相關文獻，多半著墨於團隊創新之探討，包括團隊知識分享、團隊信任、團隊領導與團隊互動等議題；但「個人」所產生的創新力量，事實上也不容小覷。本研究根據資策會的專利數據，比較個人創新與團隊創新之績效，並進一步佐以實地訪談，以瞭解資策會的專利提案制度，並探討影響資策會個人與團隊創新專利績效的主要因素，期能作為研發機構進行創新管理、任務指派與團隊編組之參考。

根據資策會 1995-2005 間 426 件相關專利數據(專利從申請到取得時間經常需要 2 至 3 年，因此，本次研究僅統計至 2005 年)與訪談結果分析，本研究的主要發現有六：(一)由於創新歷程與專利範圍的關係，無論就質或量而言，個人創新仍然是資策會申請與獲得專利的重要形式。(二)由於資策會的組織與制度因素，近年來團隊已經成為資策會申請與獲得專利的主要形式。(三)專利涵蓋範圍是影響提案方式的主要因素；資策會的提案流程是影響提案方式的次要因素。(四)整體而言，個人提案效率高，團隊提案數量多、品質優。(五)以 2~4 人自由組成的團隊創新績效較佳；團隊中有資歷較深、提過專利經驗的成員，有助於提升專利品質。(六)專利構想的主要來源來自於研發人員技術討論的過程，而最初的專利創意多源自於少數的一或兩人。

整體而言，個人創新與團隊創新是研發創新的兩種重要途徑，不應偏廢。未來研究者應進一步探討個人創新與團隊創新的適用情境，以及影響團隊創新的團隊組成特徵與互動歷程特徵。

關鍵字：個人創新、團隊創新、專利、創新管理、研發管理

A Comparative Study of Individual and Team Innovation - An Empirical Study of Patents in III

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Abstract

In recent years, the majority of innovative research literature focuses on team innovation such as team knowledge sharing, team trust, team leadership, and team interaction. The contribution of individual innovation, however, should not be overlooked. This study will explore roles of individual and team efforts in innovative research, adequate applications of individual and team innovations, and characteristics and interactive features of individual and team innovations through an analysis of patent cases proposed by III (Institute for Information Industry) in past ten years and personal interview with patent inventors.

The evidence shows that individual innovation and team innovation are both important venues to research and development and they should not be disregarded. The advantages, disadvantages, and adequate applications of individual and team innovations, however, should be explored further in future innovation studies. In addition to the analysis of patents data acquired from III to compare the efficiency and quality between individual and team innovations, the current study also utilizes personal interview to understand the characteristics and interactive features of individual and team innovations during the process of research and development. This study also attempts to summarize ideal patent proposals and conceptions in III and provide exemplars of innovation management, task assignment, and team grouping to research and development institutions. Finally, this study will help promote the efficiency of innovative performance among research and development specialists, enhance research and creative ideas, and consequently increase the values of patents.

Keywords: individual innovation, team innovation, patent, innovation management, research and development management

創造力研究之回顧：管理學門(1996~2006)

A Review of Creativity Research:

The Management Domain (1996-2006)

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摘要

自從美國心理學會新任理事長 Guilford 於 1950 年年會大力呼籲重視創造力的研究之後，創造力研究日漸受到心理學者的重視。而知識經濟與全球競爭時代的來臨，更為創造力研究增添動能，創造力也逐漸成為組織與管理學者重視的研究領域，知名學者如 Csikszentmihalyi 與 Runco 並曾獲得國內管理學術單位邀請來台講學。

本研究運用國內大學圖書館常見資料庫—SSCI(WOS)與 ProQuest，以「creativity」與「creative」搜尋論文題目，找出 1996~2006 年間以創造力為名的期刊論文。經由反覆討論之篩選過程，將超過 10000 篇的期刊論文，逐步縮小至 1966 篇，論文出處涵蓋心理、管理、教育、經濟、社會、醫學等相關學門。其中，出自管理學門的期刊論文共有 475 篇。本研究即依這些論文的發表年度、研究議題、方法、類型與研究對象五個面向，進行分類與回顧。

初步分析顯示：（一）創造力研究的國外論文數量在 1996 至 2006 年之間明顯成長；這些研究以質的研究為主，但量化論文也逐漸增加；（二）早期的論文較偏重創造力意義、重要性及其成效的論述，後期論文逐漸出現探討創造力相關因果驗證或個案分析等類型。（三）學者們普遍認為，創造力的發生必須整合多元要素，因此，無論是創意過程、創意成果、創造力的影響因素（如人格特徵、動機、環境、組織氛圍），以及創造力之應用與評量等，都成為熱門的研究議題，但因缺乏有系統的整理，導致「創造力研究」的整體面貌仍顯得模糊。（四）就創造力研究的 4P 運用而言，由於創造的過程(process)頗不易掌握，而創造的產品(product)又直接連結於環境(place/press)與個人(people)特徵，因此，透過當事人的創作來判斷其創造力是較為合適的作法；（五）個體創造力除了受 sense making, motivation, personality, knowledge 和 ability 的影響之外，也受外在環境的影響（如組織創新氛圍與資源）；（六）組織創新氛圍不但影響個人創造力，也影響團隊創造力。

本研究最後將運用分析所得之結果，用來與當前國內創造力的研究思潮進行對話。本研究不但有助於吾人掌握國外管理學門近十年間的創造力研究梗概，更可為後續研究指出未來研究方向，並促進國內外創造力研究者的交流與對話。

A Review of Creativity Research: The Management Domain (1996-2006)

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Abstract

Creativity Research is thought highly of gradually by psychologists since Mr. Guilford J.P. , the new chief director of American Psychological Association, urged to value the researches on creativity in 1950. As the era of knowledge economy and global competition has been coming up, organization and management scholars is placing more importance on creativity research. Noted scholars, as Mihaly Csikszentmihalyi and Mark Runco, has been invited to national academic institute of management to give lectures.

This research made use of commonly used data base in national college libraries — SSCI(WOS), searching research topics by “creativity” and “creative”, and found out periodical essays named creativity from 1996 to 2006. One thousand nine hundred and sixty-six essays comprising related subjects as psychology, management, education, economy, sociology and medicine has been chosen from more than ten thousand through repeated discussion and sifting. Four hundred and seventy-five essays among them are from periodicals of management. Classification and review are done by this research according to five aspects of these essays: the year of publishing, research topic, method, category, and research target.

Preliminary analysis indicate: 1. The quantity of foreign essays on creativity had increased evidently from 1996 to 2006. These researches are mainly on quality and quantification essays increased gradually as well. 2. Early essays gave emphasis on the meaning, importance and effects of creativity; a probe into verification of cause and effect or case analysis related to creativity is found with time in latter essays. 3. Since scholars generally assume creativity comes form integration of many elements: process, result, influence factor (such as character, motive, environment, and atmosphere of organization etc.), application and evaluation of creativity has become popular research topics. The whole thing on creativity research is still ambiguous because of lacking of being organized systematically. 4. In point of the application of 4P of creativity research: owing to the difficulties in knowing the process of creativity well, and the product created is directly linked to the feature of the places and people, it is adequately to evaluate the creativity by the work of the person involved. 5. Individual creativity is influenced by sense making, motivation, personality, knowledge, ability, and also the influences of environment (such as innovation of organization and resources.) 6. The aura of innovation in an organization influences the creativity of both individual and the whole team.

Finally, this research would apply the result of the analysis to have a dialogue with current national research of creativity. This research is helpful to realize the main idea of foreign creativity research of management within these few decades, being an index for latter researches and promote communication and dialogue with foreign creativity researchers.

科技與教師知識的交會： 從科技教學內容知識探析網路探究學習設計

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摘要

本文認為教師使用資訊科技進行融入教學時，涉及科技、學科內容與教學方法三個層面。以資訊科技學習模式進行教學創新設計時，教師知識在設計歷程中扮演重要的角色。本文以網路探究學習（WebQuest）為焦點模式進行科技融入，因此提出一個「系列性 WebQuest」的創新做法為案例，並採用科技教學內容知識（TPCK）的架構，並進行初探性分析。

關鍵字：資訊融入，科技教學內容知識，網路探究學習

科技與教師知識的交會：
從科技教學內容知識探析網路探究學習設計

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ABSTRACT

This article proposes that technology integration in teaching involves the complex interplay of three bodies of knowledge—Technology, pedagogy and content. So the author introduces a framework of teacher knowledge---technological pedagogical content knowledge to capture the essential qualities of teacher knowledge required for technology in teaching. With a case of WebQuest design from a professional course in higher education institute, the article explained the three dimension of TPCK, and analyzed the innovative use of WebQuest design based on the framework.

Keywords: technology integration, technological pedagogical content knowledge, WebQuest

網路主題探究 (WebQuests) 在影音創作教學應用之初探

以 Web2.工具 Google Sites 為例

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摘要

本研究主旨在於探討如何運用 Google Sites 特性與功能，進行網路主題探究教學(WebQuests)，以及如何透過 Web 2.0 網路科技的輔助，建構有助於影音創新的學習與創作環境。本文也嘗試建立創造力指標(creativity index)作為影音作品創新的評鑑依據。

運用 Google Sites 建立的 WebQuests 教材，具有告知學習任務，呈現學習內容、規劃學習步驟與提供學習資源等功能，也有助於建構創作團隊、紀錄學習歷程與進行創造力評鑑。

關鍵字: 第二代網際網路(Web 2.0), 網頁主題探究教學模式(WebQuests), Google 網戰建置環境(Google Sites), 創造力指標(creativity index)

網路主題探究 (WebQuests) 在影音創作教學應用之初探 以 Web2.工具 Google Sites 為例

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摘要

The main purpose of this research was to explore the potential of Google Sites for creating a Web Quests courseware in digital content creation class. The results of the action study showed that Google Sites could not only be used as the teaching system but also create a social network for the student project team as well. The creativity index for digital content creation was tried to be setup and examined.

關鍵字： Web 2.0， Web Quests, Google Sites, creativity index

神秘百慕達—WebQuest 教學策略融入 高中英文教學之行動研究

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摘要

本研究之目的為探討 **WebQuest** 教學策略對英文學習成效與班級氣氛之影響，以百慕達三角洲為主題，實際融入教學運用且做為輔助學習之教材。最後，透過問卷與回饋單填寫，分析教師、學習者對此網路教學課程之態度與回饋，供研究上之參考。

本研究旨在探討運用 **WebQuest** 模式進行主題式探究教學的情形及成效，研究對象為研究者所教授的高一班級，學生人數 42 人。本研究採行動研究，經計劃、實施、回饋和反省、修正教學過程等程序，運用研究者設計的「**WebQuest** 教學模式」進行主題式探究教學。

WebQuest 教學模式包括學習內容介紹、任務分配、過程、評估和結論。研究中質化與量化資料並重，量化資料包括單元成就測驗、學習成效量表、與班級氣氛量表；質性資料包括教師手札、學生之學習單、小組報告作品與焦點群體座談等。

研究結果發現：(1)**WebQuest** 可提升高中生之學習意願；(2) **WebQuest** 可增進高中生之英文學習；(3)**WebQuest** 有助於其他能力的培養；(4)**WebQuest** 有助於團隊合作；(5)不同成績之學習者，在學習成效方面沒有顯著差異；(6)不同成績之學習者，在班級氣氛方面沒有顯著差異。

關鍵字：WebQuest、班級氣氛、學習成效

Section: A-7

黃雲龍

No Provided

開放式網頁主題探究學習在兩性教育上應用

于文正

醒吾技術學院通識教育中心

摘要

研究者在醒吾技術學院進修部兩性教育課程中，利用網頁主題探究學習作為期末報告的一種選項。研究者針對台灣社會所面對的外籍新娘問題，設計一系列課程內容，並提供七個開放性問題供選擇本項作業的同學研究，學生分成不同的小組，可選擇其中的五個問題作答，在解答這些問題的合作學習過程中，他們可以選擇扮演婚姻諮商輔導專家、國小校長、外籍配偶本人、外籍配偶子女、主管移民政策的內政部長與教育部長等不同角色，並嘗試達成共識。

受限於研究資源，研究者利用部落格作為與學生互動的教學平台，本次網頁主題探究學習僅提供 3 個參考網址，研究者並鼓勵同學利用關鍵字搜尋以獲得更多的網路資源，這種作法在本研究中被界定為開放式網頁主題探究學習（loose WebQuest），但研究者仍提供與外籍配偶相關的報導資料與文獻，也詳盡說明網頁主題探究學習的特點與作法。在學習單的寫作上，同學必須針對所選擇的問題提供個人扮演專業角色之意見，以及所參考的網站網址，同時小組內也必須化解不同角色的立場差異，針對任務本身進行意見整合，而研究者則以「專業角度」、「學習單寫作」、「小組整合」、「網站搜尋」、「意見具體與可行性」等角度評量各組完成的學習成果。在期末報告後研究者利用自編的 WebQuest 教學成效量表瞭解修課同學對這次網頁主題探究學習的態度、建議與心得。

參與本研究的學生來自進修部應用科技系，這份量表有 26 名同學填答，學生反應開放式網頁主題探究學習讓他們會想要盡力把作業寫好，願意以後使用這種學習方式，同時能更瞭解自己扮演的角色，並且他們認為這次開放式網頁主題探究學習能刺激思考與提高蒐集資訊解決問題的能力；但是在讓小組明確分工責任清楚上則較不認同，他們也較不認為這次開放式網頁主題探究學習能產生創意。經統計分析，WebQuest 教學成效量表有良好的內部一致性，主成分分析(principal components analysis (PCA))得到四個因素，分別被命名為：「創意與思考」、「促進共識」、「瞭解角色」與「小組合作」。

學生關於這次網頁主題探究學習的建議有幾項對於教師設計教案時有參考價值，包括提供合作學習時角色扮演的明確角色界定，考慮不同角色與網頁主題探究任務的適合性，以及區別個人與小組的貢獻分別評分等。而提供本次學習心得的四位學生則對這次作業持相當正面的態度，認為可以增加對外籍配偶的瞭解，學習將心比心，願意從對方立場進行溝通等，至於這次開放式網頁主題探究學習中的小組分工、溝通、互相幫助協調整合共識則被認為是很好的學習經驗。另外透對學生瀏覽網頁內容的分析，發現學生具備自主搜尋品質良好與多樣化網頁的能力，但是在引用內容回答教師指定問題時，仍需要教師的指導與建議以提高適切性，這個發現支持教師未來能夠在簡化研發過程的情形下，繼續設計各種開放式網頁主題探究學習的教案。

關鍵字：開放式網頁主題探究學習、建立共識任務

The Application of Loose WebQuest on Gender Education

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Abstract

The researcher chose WebQuest as one of the topic for the term paper in the course of Gender Education in Hsing Wu College. Focusing on the issue of “foreign brides” in Taiwan, the researcher has devised a series of curriculum and came up with seven open-ended questions for the students who chose this option. These students divided into different groups to answer 5 of the 7 questions. During the process of the collaborative learning, they got to choose to play the role of a marriage counselor, an elementary school principal, the foreign spouse, the child of the foreign spouse, the minister who is in charge of the immigration policy, or the minister of education and attempt to reach an agreement.

With the resource limitation, the researcher chose the blog as the platform for interacting with students. Only three reference websites are provided in this project, and the researcher encouraged the students to use key word searching in order to get more online resources. This kind of practice is defined as “loose WebQuest” in this study; however, the researcher still provided reports and literatures related to foreign spouses and explained the features and methods regarding WebQuest in details. When writing the learning sheet, the students had to provide their own opinions as the roles they played and the websites they made reference to. At the same time, the team members also had to reconcile with one another and focus on the task, while the researcher evaluated the teams’ performance from the aspects of “professionalism,” “learning sheet writing,” “team integration,” “website browsing,” and “clarity and feasibility of the opinion.” At the end of the term, the researcher used the *WebQuest Teaching Effectiveness Scale* to understand the attitudes, suggestions, and feelings of the students participating in this loose WebQuest project.

The students participating in this study were from the department of applied technology. The scale was filled by 26 students, who stated that the loose WebQuest motivated them to do their assignments well and that they were willing to continue using this method in the future as it helped them understand the roles they played. In addition, they also believed this project helped stimulate their thinking and the ability to gather information to solve problems. On the other hand, they had mixed opinions regarding team delegation and did not believe loose WebQuest stimulated creativity. The statistical analysis shows that the *WebQuest Teaching Effectiveness Scale* has good internal consistency, and the principal components analysis (PCA) has yielded four factors, which are “creativity and thinking,” “consensus facilitation,” “role understanding,” and “team work.”

Some of the suggestions they had are valuable to teachers who wish to design their own WebQuest teaching plans, providing clear role definition in collaborative learning, considering the appropriateness between different roles and WebQuest missions, and distinguishing individual and team performances. The four students who shared what they had learned on this project had positive opinions for this assignment and believed it helped them understand foreign spouses by seeing things and communicating from a different perspective. The team work, communication, and collaborations in this loose WebQuest project were regarded as very good learning experiences.

Keyword: loose WebQuest · Consensus Building Tasks

台北場

場次 B

TAIPEI

SESSION B

國民小學學校創新管理、組織文化與學校效能

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摘 要

隨著知識經濟時代的來臨及全球環境的快速變遷，知識及創新已成為企業組織追求致勝的關鍵。而學校組織與企業組織一樣，正面臨高度競爭的壓力，學校經營日趨困難。處在這種多變與挑戰的知識經濟潮流中，學校教育必須經歷學習與變革，才能克服知識經濟的教育挑戰(王如哲，2001)。因此，創新管理已成為當前學校教育面臨的重要課題。

再者，增進學校效能的提昇是教育改革的核心所在，亦是所有教育工作者共同努力的目標。但如何透過創新管理，建立學校創新的環境，營造創新活潑的學習氣氛，進而提升學校效能，達成教育目標，是本研究想探討的目標之一。

在組織創新與組織績效的相關研究中，大部分研究皆呈現有正向的關係，但在本研究中是否就是學校創新管理對學校效能的影響，亦或存在著其他的干擾變項？因此本研究加入組織文化作為干擾變項，加以探討組織文化對學校創新管理與學校效能之關係的調節效果。

本研究採問卷調查法，首先根據文獻編擬研究工具－「國民小學學校創新管理、組織文化與學校效能之調查問卷」，以台北縣公立國民小學之教育人員為母群體，採隨機抽樣方式，針對台北縣的教育人員進行抽樣調查，所得資料以描述統計、t檢定、單因子變異數分析、皮爾遜積差相關及層級迴歸等統計方法加以分析討論。

根據上述結論，闡述學校創新管理、組織文化及學校效能之現況；不同背景項之教育人員在學校創新管理、組織文化及學校效能知覺上之差異情形；學校創新管理與學校效能之關係以及組織文化對學校創新管理與學校效能之關係的調節果，最後則是針對教育行政機關、學校教育人員與未來相關研究，提出若干具體建議，以供參考。

關鍵字：學校創新管理、組織文化、學校效能

A Study of the Relationships among Innovation Management, Organizational Culture and Organizational Effectiveness in Elementary Schools

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Abstract

The purposes of this study were to understand the current status of innovation management and organizational effectiveness in elementary schools and to examine the relationship between innovation management and organizational effectiveness and the moderating effect of organizational culture on the relationship of innovation management-organizational effectiveness.

A questionnaire “Innovation Management, Organizational Culture and Organizational Effectiveness in Elementary Schools” was randomly distributed to 1,000 teachers, directors and principles of 49 elementary schools in Taipei County. Of that, 692 were valid. T-test, ANOVA, Person’s correlation and hierarchical regression were adopted for further data analysis.

The results showed that:

1. The school practitioners of Taipei County had high degree of innovation management perception, in which the student performance was rated the highest.
2. The school practitioners of Taipei County had high degree of organizational effectiveness perception, in which the parent participation was rated the highest.
3. Innovation management is positively related to organizational effectiveness in elementary schools of Taipei County.
4. Organizational culture has significantly impact on organizational effectiveness; among three types of culture, supportive one was ranked the first.

Finally, suggestions for school practitioners and future research were discussed.

Keywords: innovation management, organizational culture, organizational effectiveness

台北縣特色學校創新經營策略之研究

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摘 要

近年來，台灣社會面臨少子女化現象，也直接衝擊國小就學學生的人數和影響學校的經營。本研究台北縣特色學校創新經營策略之研究，乃由於台北縣教育當局採取推動特色學校，獲得社會大眾的讚賞，也讓教育部將特色學校作為後續施政的重點。研究發現台北縣特色學校，以創新經營的理念、善用學校周遭地理環境的優勢、同時將社區納入經營的夥伴，運用社區網絡資源、顧及市場的競爭性，以及在地文化的特性，已經走出一條兼顧特色和創新經營的道路。而從藍海策略的寬闊視野中，特色學校勇敢的跨出步伐、邁向未來，創造更多生命感動的故事，以特色學校活化台灣教育的生命力，激起更多教育生命的火花。

關鍵詞：特色學校、創新經營、社區網絡、藍海策略

A Study on Innovation Management of Featured Schools in Taipei County

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Abstract

Confronting the low birthrate in Taiwan in recent years, schools are forced to face the impact of decreasing number of students each year. The research is based on how the Education Bureau of Taipei County gains commendation through impetus of featured schools, which later become the main follow-up policy. The result shows that featured schools in Taipei County have found a way in both distinguishing features and innovation management by using geographical advantage, building partnership with the community, and doing marketing research. As the Blue Ocean Strategy aims to create new market space or a blue ocean, featured schools also take a huge brave step into the future and so to create numerous touching stories in life. The life-force that featured schools have brought into the education in Taiwan will only inspire more and more sparkle in life and education.

Keywords : Featured Schools, Innovation Management, Social Networks, the Blue Ocean Strategy.

如何建立具創意氛圍的學校-以「自行車」為例

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摘 要

本計劃是由台中縣立新國小，一群號稱「自行車達人」的基層教師所提出，這群教師平日用心教育、關愛學生、勇於創新，假日熱愛單車運動，儼然成為校內「勢力」最為龐大的非正式組織。基於的「知識創新、經驗分享」理由，他們嘗試將與自行車相關的一切統整為推動「創造力教育」的校本課程，經過為期三年的摸索與實踐之後，總結而成。

綜觀台中縣的各項條件，享譽全國的「兩馬觀光季」活動舉辦多年。縣內自行車步道四通八達，連結台中市的環市自行車道，可形成一個相當完整的自行車騎乘網絡。再加上本縣宜人的氣候環境，一年四季均適合騎乘的優勢。因此，台中縣的自行車人口相當可觀。縣內自行車相關產業眾多、資源豐富，如「巨大機械股份有限公司」、「自行車暨健康科技工業研究發展中心」便是本計畫結合的產業。

計畫中所推廣的活動結果摘要分述如下：

一、創意學子扎根教育

「學生是學習活動的主角」，過程中鼓勵學生發揮創意、主動探索、獨立思考、問題解決、激發學生想像力創造力：1.體育課(周)自行車騎乘教學 10 次，學習成功率百分之 95% 2.交通安全教育宣導影片教學 330 人。3.(廢棄物變黃金)資源回收車組裝 30 台。4.舉辦立新國小畢業生自行車騎乘(技術與體能)認證活動 332 人，已成為本校特色。

二、創意教師研究成長

以教師非正式團體為核心，鼓勵教師發揮創造力，將創意融入教學與課程當中，發展統整課程，提昇教師創意教學知能。經由共同討論、經驗分享、組成學習型組織，帶給學校活動另類嘗試的新風貌。1.教師週三進修(腳踏車簡易維修故障排除)，教師人數 20 人。2.騎乘技巧演練：頭汴坑溪自行車道騎乘(50 人)、日月潭環潭騎乘(12 人)3.設計自行車結合 GPS、google earth 進行認識社區、鄉土環境教學教案 3 件。4.自然科簡易機械單元(自行車的傳動原理教學)教案 2 件。

三、親師生戶外生活體驗，經由自行車運動的推廣促進相關產業升級

結合「自行車暨健康科技工業研究發展中心」、「台灣鐵路管理局」、「巨大機械股份有限公司」，進行環保兩鐵觀光(鐵路+鐵馬)親師生活動，共進行兩次：1.集集兩鐵遊 50 人次。2.雙十 bike 遊通宵 100 人次。平面媒體報導 10 則，電視媒體報導 2 則。由於相關休閒旅遊配套措施需求殷切，促使台鐵調整相關營運方式。

四、創意校園總體營造

增加校園公共學習環境的規劃與營造，將創意融入巧思、豐富校園創意文化、融入學校本位課程學習。1.校園內成立立新車行，服務學生人次超過 45 人，維修 100 輛次。2.網站建立，內容涵蓋交通安全、自行車騎乘相關知識，提供成果查詢、分享功能。

關鍵字：創造力教育、兩鐵

How to Build-up Creative Atmosphere in School – Take Bicycle as an Example

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Abstract

The project is proposed by those so-called “Bicycle Experts” teachers of Lishin Elementary School of Taichung County. They devoted themselves to education, students and creation. Bicycling is their favorite on holidays, and this group of teachers is almost the non-formal organization with the greatest influence in the school. For the reason of “creating knowledge and sharing experience”, they attempt to integrate everything related to bicycles as school-based curriculum to promote “creativity education”. The accomplishment achieved after three years’ trying and practice.

With years of holding nation-famed “Bicycles and Horses Tourist Festival”, the government of Taichung County extends its bikeways to many directions in the county, forming a complete bikeway network connecting with bikeways around Taichung City. Because of hospital climate and biking advantages for all seasons, plus the above conditions, Taichung County has considerable biking population. There are many bicycle-related industries and resources within the county, such as GIANT and Cycling & Health Center, the latter is the connecting industry of this project.

The campaign accomplishments of the project are summarized as follows:

Creative Students Rooting Education

“Students play the leads of learning exercise”, the students are encouraged to develop creation, active discovery, independent thinking, problem solving and to inspire imagination in the processes:

1. PE class (week): ten sessions of bike riding, learning success rate 95%.
2. Traffic safety guidance film session: 330 attendants.
3. (Waste to Gold): 30 bicycles recycled.
4. Certification Day of Bike Riding (skills & physical fitness): 330 attendants.

The above campaigns now become features of our school.

Creative Teachers Refreshing

Led by the non-formal teacher organization, teachers are encouraged to develop creation, to integrate creation into teaching and lessons, to develop integrated curriculum, and to upgrade teachers’ creativity and Pedagogical Content Knowledge. Teachers bring an extraordinary style of trying for school activities through discussion, experience sharing and learning organization.

1. Wednesday Refreshment (bicycle maintenance and trouble shooting): 20 attendants.
2. Riding skill drills:
 - Tou-Pien-Keng Stream bikeways: 50 attendants.
 - Biking around Sun-moon Lake: 12 attendants.
3. Bike GPS and Google Earth integration design to community tour and local environment teaching plans: 3 cases.
4. Natural science lessons engineering mechanics unit (bicycle transmission principle) teaching plans: 2 cases.

Section: B-1

Parents, Teachers & Students outdoor life experience and advance bicycle-related industries development by bicycle exercise promotion.

To start green campaign twice of bike and rail for parents, teachers and students by integrating Cycling & Health Center, Taiwan Railways and GIANT:

1. Bike and rail tour in Jiji, 50 attendants.
2. Double Tenth Day biking tour in Tungshiau: 100 attendants. Print media 10 reports; television media 2 reports.

For the urgent demand of cooperating measures related to leisure and travel, Taiwan Railways is prompted to adjust correlative management modes.

Creative School Development

To set up planning and development of school learning environment, to integrate idea thinking into creation, to enrich school creative culture, and to integrate learning into school-based curriculum lessons:

1. To set up Lishin Bicycle Shop, more than 45 students serviced; maintenance 100 bikes.
2. To set up websites with contents of traffic safety, biking-related knowledge and achievements of searching and sharing functions.

Keywords: creativity education

Section: B-1

圖像符號應用於國民小學音樂創作教學之研究

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摘 要

本研究旨在設計應用圖像符號於國小高年級節奏創作與曲調創作之可行課程方案。研究者採探索性個案研究為研究方法，以立意取樣的方式選擇台北市興興(化名)國小五年三班共二十四位學生為研究對象，進行為期九週共十八堂課之教學實驗。

教學實驗內容根據高年級學生所應具備之能力及其先備經驗訂定教學目標，透過欣賞、認譜、音感之教學活動引導至音樂創作。在教學策略上，使用圖像符號傳達音樂知識概念與音樂創作技巧，結合圖形譜音樂欣賞策略，從引導活動刺激學習動機，以小組活動作為個人學習鷹架

資料蒐集以質性資料為主，輔以量化資料。透過質化軼事紀錄、訪談、參與觀察、學習單、問卷、音樂創作態度量表、音樂能力測驗前後測等方法獲得相關資料，並加以分析探討，使用三角校正策略檢視其內在效度。

根據資料分析與結果討論顯示，透過圖像符號的引導，能提升學生音樂的認譜能力，傳達及激發學生的想像力，也能讓教師了解學生創作的想法和音樂學習的成果。學生的演奏能力通常為音樂創作表現的一大限制，但不影響其創意思考，而應用圖像符號於音樂創作學習中較能獲得成就感的學生其特性為喜歡繪畫、不熟悉五線譜或學習能力較強的學生。研究中更發現對符號系統的熟悉度與習慣性會影響學生在音樂創作時所選擇記譜的方式。

關鍵詞：創作、音樂創作教學、圖像、圖像符號、圖形譜

A Study of Applying Iconic Symbols to Elementary School for Music Creativity Instruction

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Abstract

The purpose of this study was to design a feasible curriculum program that applied iconic symbols for higher-grade level rhythm and melody composition in elementary schools. The researcher adopted the exploratory case study method. With purposeful sampling, the 24 students of one fifth-grade class from Shin-Shin Elementary School (pseudonym) in Taipei City were chosen as the research subjects. The instructional experiment lasted for nine weeks, coming to a total of eighteen lessons.

Regarding the content of instructional experiment, the related educational goals were based upon subjects' prior experience and what ability that upper-grade level students were expected to obtain; through instructional activities of music appreciation, score reading and aural skills, subjects were gradually introduced to music creation. The instructional strategies included using iconic symbols to deliver music concepts and composition techniques, implementing iconic scores for music appreciation, paying attention to introductory activities to stimulate learning motivation, and building students' learning scaffolding with group work.

Data collection comprised mainly qualitative one, with quantitative data as supplementing source. Approaches of anecdotal records, interview, participant interview, study sheet, questionnaire, rating scale of attitude toward music creation, and pretest and posttest of music ability were incorporated to obtain related information for further analysis and triangulated internal validity examination.

Data analysis and results discussion revealed that, with the introduction of iconic symbols, students' score-reading ability could be improved, imagination could be communicated and inspired, creative thinking and musical learning outcomes could be understood. Generally speaking, students' performing ability tends to stand in the way of their music creative presentation while exerting no impact upon their creative thinking. The application of iconic symbols to music creation learning helped those students who had an inclination for drawing pictures, who were not very familiar with staff notation, and who were opening to learning. It was also found that the familiarity with and habits of notational symbol systems influenced how students chose to notate when they did their composition.

Keywords: creation, composition, music creativity instruction, icon, iconic symbol, iconic score.

國小五年級向量繪圖創造性教學之成效研究

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摘 要

本研究目的在探討國小五年級電腦向量繪圖課程中，運用創造思考策略引導構思，是否能提昇學生的創造力。在數位圖像創作領域中，科技提供人們創作鷹架，但無形中也給了想像框架，複製藝術到處可見，致使圖像同質性高、作品創造力低落。在先行的試探性研究中，研究者以向量繪圖結合 SCAMPER 策略進行創作，研究結果顯示：此創作教學方法不僅可以避免數位創作中，最為人詬病的特效氾濫問題，在創作執行階段又可提供電腦繪圖鷹架；但是，作品仍有同質性高、低創造力的問題。所以，正式研究的重心將置於：自創作構思階段提高作品的創造力。

正式研究計畫中以 Amabile 的創造力成分模式為理論依據，將成分模式中之三成分：「創意思考技能」視為自變項，「專業」與「工作動機」定位為外擾變項，三成分交集之「創造力」為依變項。研究設計採不等組前後測準實驗設計，實驗組和對照組皆先進行相同的向量繪圖技能教學，待兩組學生在「專業」成分具相同基本技能後，實驗組施以「創造性向量繪圖教學」，在引導構思時，導入 SCAMPER、腦力激盪、屬性列舉法、分合法及 CPS 創造性問題解決策略等創造思考策略；控制組則以範例作品欣賞及全班問與答的方式進行引導。

在學習成效評估方面：以 Amabile 共識評量技術進行研究對象的作品評量，自「創造性思考」及「向量繪圖技能」兩方面評量其創造力。為避免單一評量偏誤，輔以新編創造思考測驗，評量研究對象的擴散思考能力，以此兩方面量化數值檢測研究成效。最後，進行統計分析時，以單因子共變數分析檢定實驗效果的顯著性。

關鍵字：創造力、向量繪圖、創造力成分模式、共識評量

The research of 5th graders' creative learning effect — An example of vector drawing

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Abstract

The objective of research is to discuss if use creative thinking strategy can promote students' creativity in vector-drawing class of fifth graders. In digital picture creation, technology provide creation scaffold. However, it limit imagination imperceptibly. Too much copy art cause high homogeneous of pictures and low production creativity. In advance research, researchers work by vector-drawing with SCAMPER strategy. The result of research shows: the method of create teaching can not only keep off the problem of overabundant special efficacy in digital creation, but also provide scaffold of computer Graphics. However, the productions still have the problem of high homogeneous and low creativity. Therefore, the key of this research is to raise product's creativity from creativity phase.

The research based on Amabile's component model of creativity. It separates the model into three parts, the first part is 「creative-thinking skills」 (independent variable), the second parts are 「expertise」 and 「motivation」 (extraneous variable), the third part is 「creativity」 (dependent variable). The research use nonequivalent pretest-posttest control group design. Experimental group and control group proceeded to the same vector-drawing teaching. When they get the same basic skill. 「Creativity vector-drawing teaching」 will carry out to experimental group and using SCAMPER、brainstorming、attribute listing、Synectics and creative problem solving (CPS) to guide students to conceive. The control group will guide by present work of students and discussed.

To evaluate learning achievement, we use Amabile consensual assessment technique to evaluate students' creativity by 「creativity thinking」 and 「vector-drawing skill」. To avoid mono-operation bias, we evaluate students' divergent thinking with New creativity test to quantify study result. In the end, using one-way analysis of covariance to check statistic significance when proceed statistical analysis

Keywords : creativity、vector-drawing、Amabile、CAT

乘著想像的翅膀起飛 —國小電腦繪圖教學課程設計激發學童創造力之行動研究

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摘 要

科學巨人愛因斯坦說：「想像力比知識更重要。」拜網際網路發達之賜，彈指之間在鍵盤上輕輕敲打，數萬筆資料呈現在我們眼前，也因此知識淘汰速率之快，超乎我們想像。每一刻都有新數據證明新理論，分分秒秒之間，新的知識不斷地持續產出中。因此現在已從「知識經濟」的年代，來到「創意經濟」的年代。著名趨勢專家平克(Daniel H. Pink)在新書《未來在等待的人才(A Whole New Mind)》(2006年)中預告：所有的產業，終將成為藝術創意產業。國小教育是為國家培育未來優質公民的搖籃，更需注入創意教學。日本設計教育學者朝倉直巳教授指出：「作品最重要的還是在於創意展現，如何讓學生富有創意，是一個教學上的重點。」以朝倉直巳教授豐富的教學經驗來看，終究以創意為藝術創作的最終靈魂。

本電腦繪圖教學課程研究採兩階段進行。第一階段由學生自行獨立創作，創作前不引導，過程中不討論、不賞析。第二階段教學者本著「創意教學」的精神，採刺激、引導、討論、鑑賞等方式，藉由聯想圖片與動畫影片激發學生聯想，透過「聯想地圖」串聯想像，最後「聽我說故事」的活動讓學生創意的火花互相激盪，猶如編出一幅幅充滿童趣的繪本插畫。本研究透過「行動研究」與「質性研究」分析兩階段學生獲得創意啟發與知能之差異，進一步檢視創意教學課程設計模式之優劣。

本研究獲致結論如下：

- 一、透過學生的創作心得歷程分享、上課紀錄、訪談與問卷調查，驗證此教學模式對啟發學生創造力有實際助益。
- 二、教學者課程的設計與上課的引導，是創意教學的重要靈魂。
- 三、藉由教學者聯想圖片之引導、聯想地圖、同儕共同分享與故事聯想的方式激盪彼此創意，並非透過制式化、僵硬化的聽講上課方式獲得，這是激發學生創造力的優良教學模式。

被譽為「亞洲劇場之翹楚」的賴聲川認為藝術是一門栽培創意很好的學科，在藝術殿堂裡可以汲取養分、涵養美學，藉腦力激盪激發出源源不絕的靈感。國小學童是個愛做夢、愛說故事的年齡，身上充滿了天真、好奇、想像的細胞。所以藝術教學者何不妨透過課程的設計，與學生乘著想像的翅膀，飛向創意的國度！

關鍵字：創造力教育、創意教學、電腦繪圖、教學課程設計。

Flying with Imaginative Wings- The Action Research of Computer Drafting Tuition Program to Inspire Students' Creation Ability in Elementary School

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Abstract

“Imagination is more important than knowledge.” said the science giant, Albert Einstein. In the era of easily accessing internet, millions of data can be found in seconds with simply clicking on a keyboard. The updating speed of knowledge is extremely beyond our imagination. New data, evidences and theories are continuously coming to our world every moment. The era of “Knowledge Economy” are turning into “Origination Economy”. “All businesses will become art origination businesses eventually.” forecasted by trend expert Daniel H. Pink in his new book named “A Whole New Mind” in 2006. The elementary education is the cradle of high quality citizens. Origination education is especially required in this phase. Japanese Design Education Professor Asakura Naomi indicated, “The origination presentation is the most important in a work. How to increase students’ origination becomes a key point of education.” According to Asakura Naomi’s abundant tuition experiences, the origination shall be the ultimate soul of art creation.

There are two stages in this research of Computer Drafting Tuition Program. The first stage: students independently created their own works without any guide, either no discussion, appreciation and analysis during this process. With “Origination Tuition” spirit in the second stage, teacher used stimulation, guide, discussion and appreciation approaches in tuition. Pictures and animation, even “Fancy Map” were applied to inspire students’ thinking. The final activity of “Listen to My Story” inspired students’ creation associated with illustration images like a delight child book. Through “Action Research” and “Qualitative Research”, the differences of origination inspiration, knowledge and ability students obtained during these two stages were analyzed to further verify the advantages and disadvantages of origination tuition program.

The conclusions of this research are as follows:

1. To verify this tuition mode is actually beneficial to inspire students’ creation ability by using class records, interviews and questionnaires, even sharing what they learned during creation process with each other.
2. Teacher’s program design and tuition guide is the ultimate soul of origination education.
3. A perfect tuition mode to inspire students’ creation ability is based on teacher’s guide with fancy pictures, fancy map, sharing and story imagination. It could not be achieved with systematically and inflexibly traditional tuition mode.

With reputation of “Asia Top Theater Leader” Mr. Sheng-Chuan Lai indicated that art is a very good academic course to cultivate origination. In the art palace, the art nutrition and aesthetics could be absorbed by students, and brain storming excites the inspiration continuously. In the childhood of elementary school, it is an age of dreaming and telling tales. The children are fully growing with innocent, curious and imaginative cells. Therefore, via adequate tuition program design, why don’t art teachers and students fly toward origination country with imaginative wings?

Keywords: Education of Creation Ability, Origination Tuition, Computer Drafting, Tuition Program Design

交互教學對青少年創造力與國文學習動機之影響

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摘 要

二十一世紀是知識經濟的時代，爲了強化國家競爭力，創造力和想像力的培養不容忽視。國文是基礎學科，良好的國文能力可增進思考與學習，進而迅速了解問題的核心，因此如何讓學生喜歡國文，願意主動學習，是現今我國教育所注重的。而交互教學是國外實施語文教學具有良好成效的教學法之一，如何使此教學法應用在本土化的國中國文教學，並提高學生的創造力是本研究關心的重要課題。本研究的研究目的如下：（一）發展出適合國中國文科的交互教學；（二）研究交互教學的適用性與可行性，並在施行過程中找出實施的瓶頸，以作爲實務上的參考；（三）探討實施交互教學與傳統教學的學生在國文學習動機與創造力上是否有差異。

本研究採準實驗研究法，在研究對象上，以台中縣某國中七年級學生爲實驗組，另一班七年級學生則爲控制組。實驗組予以一學期的交互教學，而控制組則否。主要研究工具有兩項，分別爲「激勵的學習策略量表」與「新編創造思考測驗」。經由統計分析結果發現：

- 一、交互教學與傳統教學的學生在國文學習動機中的價值成分（內在目標導向、外在目標導向、工作價值）及期望成分（學習的控制信念、學習的自我效能、期望成功）均有顯著差異，但在情感成分的測試焦慮中沒有顯著差異。
- 二、交互教學與傳統教學的學生在新編創造思考測驗中的語文測驗及圖形測驗均有顯著差異。

關鍵字：交互教學、創造力、學習動機

Section: B-2

謝智玲、徐千惠
No Provided

台灣與美國在創造思考表現上的差異

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摘 要

此研究比較美國和台灣大學生在創造思考方面所表現出的差異，並透過這些學生表現及背景的差異，企圖瞭解造成不同的創造表現的因素為何，並藉此探尋提昇創造思考力的可能因素。

此量化研究比較台灣和美國修習教育課程的學生，針對他們的教學觀念、學習經驗、學業成績、和創造思考進行比較。參與研究的學生需填答教學取向問卷，並完成創造力測驗。教學取向問卷根據教學取向量表(TPI)，將學生本身的教學觀念，及其過去的學習經驗〈亦即自覺過去接受的教學方式〉以數值呈現不同的教學取向。創造力表現為陶倫斯創造思考測驗(ATTA)分數。學業成績在台灣是大學學科能力測驗成績，在美國是加州教師檢定考試成績。

研究結果顯示，台灣和美國大學生在創造思考表現上的差異，就創造測驗的四大項能力來看，台灣和美國學生的創造力表現在流利度、原創性、及靈活度上差異不大，唯一重要的差異僅出現在細節闡述力上。

由各項相關性(Correlation)的研究顯示，創造思考與個人觀念較為相關，與自覺過去接受的教學方式比較無關。至於自身觀念，倘若高度信仰某一面向的教學觀念，無論是教師為中心或學生為中心的教學觀，都可能對創造思考有負面的影響。另外，學業成績應可預測創造思考表現。研究結果同時呈現，細節闡述力僅與讀寫測驗成績相關，與數學測驗分數無關。因此，訓練讀、寫、及表達能力，可能有助台灣學生提昇創造思考能力。

關鍵字：創造力、創造思考、比較教育、教學觀念、教學方式

Differences on Creativity between Taiwan and the United States

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Abstract

This quantitative study compares differences on creative thinking between university students in Taiwan and the United States. Through a comparison of their performance on a creativity test and their background information, the study attempts to understand what factor may cause the difference and what may help promote creative thinking abilities.

Creative performance, teaching beliefs, learning experiences, and academic achievement of 258 student teachers in Taiwan and the United States were compared. Participants were tested for creative thinking with the Abbreviated Torrance Test for Adults (ATTA), and reported their own beliefs about teaching and their previous learning experiences in K-12 schooling in a questionnaire based on the Teaching Perspective Inventory (TPI). Their academic achievements were the test scores of the CBEST (California Basic Educational Skills Test) for the U.S. group, and of the entrance examination (Ability Examination) for the Taiwan group.

The results show that the most distinctive difference found on the creative performances between the two nation groups is the ability of elaboration. The score of elaboration was not correlated with any perspective of teaching practices, and was negatively correlated with beliefs in the Apprenticeship or the Nurturing perspectives. In addition, the score of elaboration was positively correlated only with the reading and especially the writing scores of the CBEST, but not with the math score of the CBEST in the United States, nor with the achievement test scores in Taiwan. Implications of the findings are discussed, as well as recommendations for future practices and research.

Keywords: creativity, creative thinking, comparative education, teaching beliefs, teaching practices

資訊社會的創造力引擎—奧地利林茲電子藝術中心(Ars Electronica Center)及其社會網絡研究

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摘 要

創意產業已成為全世界從中央到地方帶動經濟發展的主力政策，在全球化的環境中唯有充分強化自我優勢，方能從中勝出。台灣科技發展與高水平人才、製造業長久累積的製程與管理 know-how，成功打響科技王國名號。因此站在未來經濟發展策略置高點，文化創意產業發展方向不但是「文化產業化、產業文化化」，更應利用現有優勢推動製造與服務雙引擎發展機制—「服務科技化、科技服務化」，進一步發展出新思維、新營運/生產模式、新地域觀念等之「創意產業化、產業創意化」。

本文從史諾自六〇年代起呼籲重視重建科技、人文兩種文化交融的知識教育體系角度，探究一公設媒體藝術中心如何能充分扮演其社會公器的角色，結合媒體藝術、技術研發和媒體本身溝通連結的特質，在公共空間中進行創意環境氛圍的改造，並舉出此面向的翹楚—奧地利林茲電子藝術中心(Ars Electronica Center，簡稱 AEC)，當地人視為林茲的動力引擎(Impulse)；藉由相關理論、歷史文獻與在地人士深度訪談，從整個社會鉅觀的網絡架構與策略面透視其如何與地方共生聯動，成功將一工業與科技打造成一文化與創意環境，協助產業創新、培訓在地人才，勝任更具挑戰和創新的工作機會，進而開創新的數位創意經濟。

自 1979 年開始舉辦藝術、科技與社會結合的大型文化活動—林茲電子藝術節至今，對市政府投資合股的 AEC 而言，主要從教育投資觀點，發揮「cultural for all, culture by all」的精神，營造鼓勵創新的社會環境，讓當地民眾從體驗當中進而學習，培育具備國際視野、抽象能力、系統思考能力、實驗能力及跨領域合作能力的人才。

國內對於 AEC 並不陌生，但過去多著重於個別媒體藝術中心的經營面，以內部組織架構和活動設計出發，缺乏從外部社會結構面的探討，然媒體藝術中心為一整合性機構，與社會環境和科技發展密切連動，因此本研究重點主要放在 network 網絡分析，包括上而下的整體網絡架構建立，由下而上的網絡連結，系統內部和外部網絡連結經營策略。

關鍵字：創意氛圍、創造力培育、數位創意、媒體藝術中心、創意產業

Impulses Towards Creativity in the Information Society : A Study of the Social Network of Ars Electronica Center

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Abstract

This study examines how a public media art center can successfully provide public services and the ways in which media communication might be able to enhance the creative environment in the public space. It looks at the utilization of a media art laboratory, and its research and development approach, to create the opportunity for local regions to develop and create new economic means and achieve industrial reform. It uses the Ars Electronica Center (AEC) of Linz, Austria, a pioneer in this field, as an example to explore a method for achieving symbiosis with local development through macro-perspectives of network structure and strategy of planning and execution.

This fusion of art and science becomes a driving force using new media art as an interface to make headway towards the future, innovate the industry, cultivate the local talents with digital media technology and knowledge, and create a city of knowledge creativity in the age of information society.

AEC is not unknown in Taiwan, but Taiwan used to focus more on the operational aspects of the individual media art center, which sets off from the interior organizational structure and activity design, and lacks investigation into the exterior social structure. Given the fact that the media art center is an integrated organization, closely associated with the social environment and technological development, rather than being regarded as an individual art activity or event, the study shall observe a series of change processes and their interactive integrated causality relationships and show the importance for a government to place a high premium on the overall structure and other complementary designs.

Based on an in-depth case analysis, this study encompasses theory research, in-depth interviews with local individuals and documentary analysis of collected local literature. It is divided into an introduction, an analysis of related discourses and studies, the case introduction, the case analysis and the conclusion of the study.

The study explores the following major issues:

1. Understand how to improve the interaction with the local sector by learning from the design structure and operational management of the AEC's interior mechanism.
2. Given that AEC is a public enterprise owned by the Linz City Government, how does the city government help the enterprise wield its maximum effect?
3. Put forth a network mode combining the Linz's Ars Electronica Center (AEC) and its local symbiosis in an attempt to lay down general rules as a reference for the establishment and operation of a local public media art center capable of creating a creative impulse for local development

Keywords: digital creativity, media art, media art center, creative industry

歐盟青少年計畫中創造力相關行動之研究

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摘 要

為達到歐盟成爲一個活躍的、有競爭力、知識的經濟區之目標，歐盟組織在 90 年代起，在促進年輕人之自發性、創業精神及創造力方面，提出許多的討論並納入青少年相關計畫中執行。

本研究針對各歐盟組織官方歷年來出版之青少年行動計畫相關法律文件與評鑑報告、執行計畫之國家代理處等相關單位之活動記錄，以及學界相關研究著述等，進行文獻分析，目的在於探究歐盟青少年交流計畫中促進青少年創造力之相關行動之理念、內容、活動經驗及其發展。

研究顯示，歐洲國家在歐盟相關組織之支持及其青少年白皮書之指導下，實踐一系列的青少年行動方案，以非制式教育之方式，促進歐洲青少年之多元文化理解、歐洲認同、積極參與歐洲整合。已完成之方案爲 1989-1991 年第一期、1991-94 年第二期、1995-99 年第三期之「歐洲青少年」計畫，以及 2000-2006 年之「青少年」計畫。目前正執行「青少年行動」計畫（2007-2013），規模更大，參與者包括歐盟以外國家。

「歐洲青少年」計畫以歐盟各國青少年之間的交流爲重點項目，其內容涵蓋文化交流、終身學習、志願服務、藝術文化、創意活動、跨文化對話與照顧弱勢青少年等行動。其中，特別是行動三（青少年提案），支持青少年之自發提案、創意及積極參與。此行動針對青少年而設，優先選取反映各地方文化、宗教、語言多樣性之方案，提供青少年機會將其創意構想實踐於當地社群中，並直接且積極的介入方案之籌備與執行。

從歐盟青少年計畫中創造力相關行動內容中可見，創造力發展與社會關懷、積極投入、文化理解及團隊合作等密切相關，參與此行動對青少年而言，不僅是一群年輕人創意之實踐，對當地社群與青少年團體皆有正面影響，並且協助發展對參與者個人及其職業發展有用的能力：社會能力、多元文化意識、責任感、積極性與創造力。

關鍵字：創造力培育、歐盟政策、文化交流、歐洲青少年、創意活動

Creativity Promoting Youth Programme of the European Union

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Abstract

The purpose of this research was to study the aim, content, development and experience of European Union's Youth Program especially its creativity promoting actions.

Under the guidance of its white paper on Youth and the assistance of relevant organizations of the European Union, European nations have put into practice a whole series of youth action programs. The "Youth for Europe" first phase (1989-1991), the second phase (1991-94), the third phase (1995-99), and "Youth" program (2000-06) have been completed. The current phase "Youth in Action" (2007-13) is larger in scale than all above phases and includes participants from outside of the European Union.

The content of these programs include cultural exchange, life-long study, voluntary service, creative activity, cross-cultural dialogue and caring of disadvantaged youth. The action plan "young people's initiatives" supports projects where young people participate actively and directly in activities of their own devising in which they play the key roles, in order to develop their initiative, enterprise and creativity. In principle, it is for young people aged between 18 and 30, although certain initiatives may admit young people from the age of 15, as long as appropriate supervision is provided. This measure supports group projects designed at local, regional and national level and the networking of similar projects in different countries, in order to strengthen their European aspect and to enhance cooperation and exchanges of experiences between young people.

Examining the results of these programs over the last years, the cooperation of initiative activities and exchange among European youths from different membership countries of the Union did have significant effect in promoting mutual understanding, sense of responsibility, engagement and creativity.

Keywords: Creativity education; European Union policy; Culture exchange; European youth; Creative activities

香港中學教師眼中的創造力培育

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摘 要

香港課程發展議會訂定的教育目標和學校課程宗旨，期望在十年內可以發展學生創意思維等的學習能力。「創造力」成爲首批培養的共通能力之一。教師需要在任教的科目中，透過該科獨特的學與教活動，培養和應用學生的創意思維（課程發展議會，2002）。但是香港課程發展議會的課程指引中亦清楚指出「創造力是一個重要但令人困惑的概念，定義分歧」，同時註明「培養創造力需要心思和時間，而且沒有特定途徑可供依循」（課程發展議會，2002，頁 24）。既然無所依據，不同科目的教師如何在任教的學科中達到培育和應用學生創造力的目標呢？

培育學生創造力的共同元素可概括成四方面：環境、產品、歷程與個人特質 (Mooney, 1963)。可是創造力在不同學科看來形態各異，故此不同科任教師均要抉擇「教甚麼」和「怎樣教」（Starko, 2005）而達到培育創造力的目標。究竟香港的中學教師對創造力培育有甚麼觀點呢？他們的觀念會影響相應的教學行爲，轉而對學生產生不同的果效。

本文使用個案研究的方式，探討同一所中學內不同學科教師如何透過任教的科目培育學生的創造力。是次研究採用個別訪談的方式進行，受談教師的任教科目包括中文、數學、中史、視覺藝術、戲劇、專題研習、公民教育等七個學科。訪談的重點是教師對創造力的觀念，以及他們的觀點對實踐培育學生創造力的影響。

研究結果顯示教師較重視創造力中的「獨創力」，期望學生的表現與別不同。他們沒有根據特定的創造力架構設計課堂，而透過不同的教學策略，例如遊戲、角色扮演，培育學生的創造力；不同的學科對創造力的定位不同，傳統學科的教師傾向將創造力視爲學習知識的輔助工具。本文報導是次個案研究的詳細結果外，並對研究結果就培育學生創造力方式和教師培訓等方面作出討論與建議。

Section : B-3

關綺雲
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從腦科學成果看終身創造力培育的若干基本原則

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摘 要

根據 20 世紀 90 年代以來新興的腦科學的新成果和基本觀點，可以總結出培育終身創造力的若干基本原則。

第一，從神經元運作機制看終身創造力培育的超前性原則。

神經元由細胞體和樹突、軸突兩類突起組成，上述兩類突起之間的接觸點稱為突觸。不同細胞之間通過突觸傳輸神經遞質，形成腦內信息處理的基本單元神經回路。在人出生之後到少年時期（特別是 0-6 歲），腦內突觸和神經回路急劇發展，具有極強的適應性和重組能力。這一時期被稱為腦發育的關鍵期。關鍵期的存在提示了終身創造力培育的超前性原則：創造力的開發應該儘量提前，從生命誕生之初即可開始，甚至應當超前到胚胎發育階段。

第二，從神經元再生重組看終身創造力培育的持續性原則。

神經元存在再生現象。這些跡象暗示腦細胞具有自我更新能力。與此同時，成年個體神經元之間的突觸也可以重組，構成新的神經回路。腦內神經系統的先天預成性結構與功能可能發生變化的傾向稱為可塑性。可塑性理論提示了終身創造力培育的持續性原則：創造力開發應當貫穿人的一生，永遠沒有終點。

第三，從鏡像神經元看終身創造力培育的體驗性原則。

當個體觀察到同類執行某個動作或經歷某種情感狀態時，其腦內相應的神經元會像照鏡子那樣被啟動，這類神經元被稱為鏡像神經元。鏡像神經元能使觀察者將基本的肌肉運動和複雜的動作意圖對應起來，直接理解對方的行為與意圖。鏡像神經元的存在提示了終身創造力培育的體驗性原則：創造力開發的有效途徑是引導被開發者親身體驗，在合適的環境中感悟創造的真諦。

第四，從神經元活動產物看終身創造力培育的綜合性原則。

神經元運作過程中有一類腦內分泌激素叫神經肽，其中的 β -內啡肽具有提高免疫力、增強記憶力、解除精神緊張等功能以及能產生快感和高效鎮痛。 β -內啡肽與人的精神狀態密切相關，只有心態健康、情緒愉快時才會產生，否則就會被去甲腎上腺素等有害成分替代，造成不良後果。所以保持健康心態至關重要。神經元活動特殊產物的形成機制提示了終身創造力培育的綜合性原則：創造力開發應當跳出只講訓練的狹隘思路，強調情商教育，提高被開發者的綜合素質。

關鍵字：腦科學 神經元 超前性 持續性 體驗性 綜合性

Some Fundamental Principles of Lifelong Creativity Development from View of Achievements of Brain Science

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Abstract

According to the new achievements and basic views of Brain Science arising since 1990s', some fundamental principles of life-long creativity development can be summarized as follows.

1. Operative mechanism of neuron and rule of advancing of lifelong creativity development

Since one's birth to the end of his/her childhood (especially from 0 to 6 years old), the synaptic and neuron circuits in brains develop rapidly and possess strong ability of adaptability and regeneration. This period is called key-stage of brain development. The existence of key-stage suggests the rule of advancing for lifelong creativity development. The beginning of creativity development should be as early as possible. It is important to develop one's creativity from the beginning of life and even be ahead to the stage of embryo development.

2. Regeneration and regroup of neuron and the rule of durative of lifelong creativity development

There exist the phenomena of neuron regeneration and regroup of synaptic. The variable trend of pre-birth structure and function of neural system is called plasticity. The theory of plasticity suggests the rule of durative for lifelong creativity development. Creativity development should be through the whole period of lifetime and without end.

3. Mirror neuron and the rule of experience of lifelong creativity development

Mirror neuron is found in the brain. The mirror neurons will make the observer's muscle movement corresponds to the complex intention of action, and understand directly the behavior and intention of the opposite. The existence of mirror neuron suggests the rule of experience for lifelong creativity development. The effective way to develop creativity is guiding the students to sense the true meaning of creation by their practice and experience.

4. Product of neural function and the rule of all-round education of lifelong creativity development

One kind of hormone secreted by brain during the process of neuron operation is β -endorphin. It possesses the function of increasing immunity, enhancing memory, and relaxation. It will also produce thrill and eliminate pain efficiently. β -endorphin is related to people's mental state. It will be produced with healthy attitude and pleasure emotion. Otherwise, it will be replaced by some harmful ingredients. So it is very important to keep healthy mentality. The forming mechanism of special product of neuron action suggests the rule of all-around education for lifelong creativity development. In the process of creativity development, we should bounce out of the narrow-minded thinking of only training, but stress the importance of emotion, and optimize the comprehensive quality of students by all-around education.

Key Words: brain science; neuron; rule of advancing; rule of durative; rule of experience; rule of all-around education

傳統方法與現代科技對於學生創意表現的影響

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摘 要

隨著時代的演進與科技的進步，近年來設計方法與設計工具蓬勃發展，如Photoshop、Illustrator、InDesign、Flash、CorelDRAW、Paiteer等都是學生在進行設計時所常用的軟體。學生的創作逐漸揚棄傳統紙筆繪畫工具，國內各大專院校設計相關系所亦跟隨此趨勢，而逐漸加重軟體應用設計課程，影響所及的就是傳統紙筆創作時數的減少。這樣的轉變是否影響學生的創意表現？而現代設計軟體的應用是否有助於學生的創意表現？是本研究所探討的課題。

本研究以中國科技大學視覺傳達設計系日間部四技二年級學生為研究對象，總計52位學生參與研究，其中男生36位、女生66位。研究者分別讓研究對象以傳統方法(紙筆)及現代科技(電腦)進行商標設計，並以流暢力、開放性、變通力、獨創力及精密力等五個指標進行創意表現評量。研究結果顯示傳統方法有較佳的創意表現。

關鍵詞：創意表現、設計工具、傳統與數位

Comparison of students' creativity performance with digital and traditional design tools

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Abstract

The progress with time and advances in technology have brought out a great development in design methods and tools, such as Photoshop · Illustrator · InDesign · Flash · CorelDRAW · Paiter, which have become the common software that students apply when doing graphic design. As traditional design tool has gradually disappeared from students' works, design-related departments in domestic colleges noted this trend and have increased software-application design classes, and as a result, the paper and pencil drawing working hours have diminished. Will this change affect student's creativity performance? Does the application of digital tools help on students' creativity performance? These are the topics for this study.

The 52 research subjects, 16 males and 36 females, are sophomores from Visual Communication Design, China University of Technology. The subjects are asked to design trademark with both traditional (paper and pencil) and digital (computer); their works are evaluated with criteria of fluency, openness, flexibility, originality and preciseness. The result shows that traditional method produces better outcomes in creativity performance.

Keywords: Creativity Performance, Design Tools, Digital and Traditional

大學醫學系醫病溝通創新教學初探

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摘 要

本研究目的在探討大學醫學系「醫病溝通」課程實施創新教學的情形。今日在一個網際網路的時代，醫病關係與醫療決策形成模式，從過去的父權模式逐漸改為賦權模式，醫病溝通技巧成為不可或缺的專業能力。慈濟大學醫病溝通創造教學計劃擬以創新教學策略，訓練學生具備良好的溝通技巧，並能配合個人的個質，激發學生的創造力，型塑具有個人特質的醫病關係。課程內容包括：個人基本溝通能力、醫病溝通技巧、與病人家屬溝通技巧、與不同族群溝通技巧、不同議題溝通技巧等。運用的創意教學策略包括：自我覺察、角色扮演、影片解析、標準病人、生命故事等。研究採質性研究的方法進行資料的分析。結果發現創新教學方案能引發學生學習的興趣，但是要改善長久以來的溝通習慣，還需要以縱貫的方式繼續加以研究。

A Preliminary Report on the Innovative Communication Training Program for Medical Student

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Tzuchi University

Abstract

Communication with the patient is an essential part of doctor patient relationship. In order to establish good rapport with the patient, medical students should be trained as a good communicator and good listener. Such training should not be limited to one semester or one course, but should be integrated into the whole undergraduate curriculum. The outcome objective of the training included the ability of self-reflection, communication with the colleague and team member, communication with the society and communication with the patient and family.

The first innovative program of teaching and learning communication in medicine started since the second semester of the six year medical student in Tzuchi University. The program is one part of the seven year program and is focused on the communication skill for medical student with the standardized patient. Each student interviewed with two standardized patients, one with abdominal pain and the other for telling the bad news. The whole process was videotape and reviewed by two other students. They discussed about the performance of themselves and the other two classmates based on the preset standard. This learning process increased the interest and interaction between the students. However the result of skill improvement of communication should be evaluated after long term follow-up.

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Chin-chi Chao
未提供

Dimensions of Innovation and Creativity in Foreign Language Teaching— Views from EFL Teachers

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Abstract

Teaching creatively is regarded as, in Cropley's terms (2006), having multiple dimensions. This brings up the question of what "dimensions of creativity" there are when it comes to teaching foreign languages (FL). This study explores dimensions of creative language teaching through reflective and collaborative inquiry of a group of experienced language instructors in Taiwanese higher education. As lecturers or professors from many different universities and colleges, all of the teachers have extensive experience teaching English as a foreign language (EFL) and often engage in creative or innovative classroom activities. The activities are regarded by the teachers as new and innovative; however, the rationales of the activity design are seldom articulated. This study aimed to identify dimensions of creativity from analyzing these experienced language teachers' narratives on innovation or creativity in foreign language teaching and learning.

This symposium thus is part of a qualitative inquiry which adopts interviews, narratives, and group discussions as data collection methods before the conference, while the symposium itself constitutes a necessary part of the collaborative effort to clarify what the teachers think about innovation and creativity in FL teaching as they reflect on what they do in the language classroom and why they do it. The preliminary results include dimensions related to the language teaching and learning process and the value of engaging in innovative teaching. A set of preliminary dimensions has been derived inductively. They are related to (1) the language-learning process (e.g., reinforcing positive learning habits such as reviewing in a timely manner), (2) nature of the learning experience (e.g., refreshing, different, fun, cross-cultural), (3) relationships (e.g., showing our learners that we care about them and their learning, even when they themselves may not), and (4) learner-centeredness (e.g., helping learners create a product to express their identities). To go beyond language teaching and see other reasons why the teachers engage in creative practice, the study compared and contrasted the teachers' narratives with Cropley's (2006) dimensions of

creativity. It is found that as college language instructors these teachers tend not to think of creative practices as “the servant of the society.” However, what the teachers provide is considered a pathway to their own “individual self-fulfillment.” It is also necessary to create a new category to accommodate sources of creative ideas, which has emerged as another dimension of creative teaching. Through this collaborative inquiry, the dialogues before and during the symposium are expected to provide more useful insights and clarify the nature of creative foreign language teaching which can be examined or implemented in future research.

Keywords: foreign language education, teachers in higher education, collaborative reflection

Section : B-5

年輕人的創意空間與生命脈絡的勾畫： 個人生活與創意發展

林碧芳 邱皓政

摘 要

爲了瞭解中學生的生活空間與發展脈絡的特性，以及對其創意發展的相關因素的影響，本研究以問卷調查法抽取台灣地區 10 所中學(30 個班級)的 1155 位中學生(高中生 750 名，高職生 405 名)，施以有關中學生的校園生活、家庭生活、同儕生活、個人生活以及各項創意的量表。本文主要係從中學生的個人與學校生活的相關因素，來探討不同面向的創造力測量的關連性。由表 1 的相關分析的結果發現，性別在創意認知、創意情意與創意生活經驗的部分項目有性別上的差異，除了「科學嘗試」是男生優於女生之外，其餘皆是女生優於男生。對於高中生而言，留校時間越長並不能幫助各項創意的發展，但對於高職生來說，留校越長，其「頓悟問題」與「多元角度」分數越高，但「變通力」越低。平日或週末是否複習課業能夠幫助某些創意的發展。從學生成績變項來看，成績越高對於高中職學生的創意發展大多有正向的影響力，但在部分的變項上有影響力的程度差異。一個有趣的現象，如果學生打工時間越長，對於高中生的創意發展而言，則有較爲負面的影響。此外，個人的情緒特質對於高中職學生的創意認知較無明顯的關係，而對於創意情意與創意生活經驗的部分項目則有效果存在。另外，由表 2 學生課外活動與創意變數的相關係數結果發現，「聽古典音樂、觀賞舞蹈或戲曲表演」、「參觀科技展、電腦展或科學博物館」、「參觀美術展、藝文展覽或博物館」、「看知識性課外讀物的時間」等變項，不管對於高中或高職學生來說，在創意情意與創意生活經驗皆有正向的關聯，在創意認知則有部分項目的正向關聯。另外，「聽流行音樂或參加流行音樂會」、「看球類比賽或運動競技」以及「看小說、雜誌、漫畫等休閒性的課外讀物」在少數幾項創意項目有正向關聯。「上網」的影響力有正有負；而「看電視」對於創意發展則幾乎沒有效果。此外，在「何時學會使用電腦」的影響力，發現越早學會使用電腦對於高職生的創意認知較有幫助，而對於高中生而言則在創意生活經驗的「創作表演」、「數位運用」以及「幽默玩興」有正面的影響。本研究的發現可提供給高中職學生如何透過個人特質的提升以及學校生活與課外活動的加強協助其創意認知、創意情意與創意生活經驗上的激發。本研究的細節將於研究中加以詳細討論。

林碧芳、邱皓政

No Provided

年輕人的創意空間與生命脈絡的勾畫： 校園生活與創意發展

黃郁婷 詹志禹

摘 要

爲了瞭解中學生的生活空間與發展脈絡的特性，以及對其創意發展的相關因素的影響，本研究以問卷調查法抽取台灣地區 10 所中學（30 個班級）的 1141 位中學生（高中生 707 名，高職生 434 名），施以有關中學生的校園生活、家庭生活、同儕生活、個人生活以及各項創意的量表。本文主要係從中學生的學校環境變項與學校生活的相關因素，來探討不同面向的創造力測量的關連性。相關分析的結果發現，「校園氣氛」越開放多元，越有助於某些面向的創意發展，而校園氣氛與各項創意表現的關聯性對於高中學生而言更加明顯。從「教師支持」層面來看，教師提供學生越多的正向支持，對高中職生的創意情意以及創意生活經驗有正向的影響力。此外，教師支持對高中學生的部分創意認知有正面影響；對高職生而言，教師支持與創意認知之間則無明顯的關聯。從「教師多元教導」層面來看，教師採越多元的教導方式，有助於學生創意情意與創意生活經驗的發展，此關聯對高中生而言較爲明顯。此外，對高中生而言，教師有越高的支持，學生的「流暢力」與「頓悟能力」分數越高，但教師支持度與高職生的創意認知間並無明顯關聯。而從高中職生對「學校修習科目的喜好」來看，高中職學生感興趣的主修科目與技能科目的數量越多，有助於各項創意的發展，而此變項對高中職學生部分部分創意項目發展的影響力具程度上的差異。學生的「多元社團經驗」對高中職生的創造力也有影響，參與過的社團類型越多，學生的創意情意以及創意生活經驗也越高，但其對高中職學生的創意認知則無明顯的影響力。

另一方面，本研究檢視高中職生對不同修習科目的喜好以及各類社團的參與和不同面向的創造力測量之關連性。由表 2、表 3 及表 4 的相關分析結果發現，對於不同類科的喜好及不同的社團參與，有助於不同面向的創意發展。

本研究的發現可提供給高中職學校如何透過學校環境與學校學習活動加強協助學生創意認知、創意情意與創意生活經驗上的激發。本研究的細節將於研究中加以詳細討論。

黃郁婷、詹志禹

No Provided

年輕人的創意空間與生命脈絡的勾畫： 同儕生活與創意發展

楊智先 關秉寅

摘 要

爲了瞭解中學生的生活空間與發展脈絡的特性，以及對其創意發展的相關因素的影響，本研究以問卷調查法抽取台灣地區 10 所中學(30 個班級)的 1155 位中學生(高中生 750 名，高職生 405 名)，施以有關中學生的校園生活、家庭生活、同儕生活、個人生活以及各項創意的量表。本文主要係從中學生的同儕生活相關因素，來探討不同面向的創造力測量之關連性。相關分析的結果發現，高中職生良性的同儕生活與創意發展具正向關係。針對高中職生的「班級互動與創意發展」而言，班級成績良好對於高中職生的頓悟聯想具正向關係。班級同學一起討論功課、唸書，對於高職生的創意認知、創意情意以及創意生活經驗的部份項目具正向關係；對高中生而言，則在挑戰成就、科學嘗試與數位運用的得分較高。班級學業競爭愈激烈，對高中生的創意認知、創意情意以及創意生活經驗的部份項目具正向關係；對高職生僅在獨創力與頓悟聯想具正向關係。班級同學愈常討論升學之事，對高職生的流暢力、變通力、獨創力、頓悟聯想、科學嘗試與多元角度具正向關係；卻不利於高中生的流暢力與獨創力。班級同學愈常結伴參觀展覽、聽演講，對高中生的科學嘗試與工藝巧思具正向關係，但對高職生僅在科學嘗試具正向關係。班級中愈難提出不同意見時，高中職生的多元角度創意生活經驗愈貧乏。班級同學愈常找老師聊天時，對於高中生而言，遠距聯想、想像力、創作表演、多元角度與工藝巧思愈佳；對高職生而言，則有助於變通力、獨創力、工藝巧思與幽默玩興。其次，關於高中職生的「社團參與與創意發展」，大致而言，高中職生參與社團經驗愈多，多元角度的創意生活經驗愈多。此外，高職生參與自治性社團經驗愈多，創作表演與幽默玩興創意生活經驗愈多；參與服務性社團經驗愈多，獨創力與挑戰成就愈高；參與學術性社團經驗愈多，遠距聯想得分愈高；參與藝術性社團經驗愈多，頓悟聯想、挑戰成就與數位運用得分愈高。對高中生而言，則是學術性與藝術性社團經驗愈多，數位學習得分愈高。至於高中職生的「友誼經營與創意發展」，大致而言，高中職生的益友互動有助於創意的展現。對於高中生而言，愈常與朋友一起活動者，流暢力、變通力、獨創力、創作表演、工藝巧思與幽默玩興的得分愈高；對於高職生而言，創作表演、工藝巧思與幽默玩興的得分愈高。高中職生的朋友圈中，愛讀書的朋友愈多、多才多藝的朋友愈多，創意生活經驗的表現愈佳。此外，高中職生平時與朋友從事愈多學習性的活動，如：一起讀書做功課、參加自己動手做的活動、相互討論與辯論，以及參觀展覽或表演等，創意生活經驗愈豐富。綜合言之，高中生的同儕生活愈正面且愈豐富時，其創意表現愈佳。本研究的發現，可協助高中職學生透過班級互動、社團參與以及友誼經營來提升其創意認知、創意情意與創意生活經驗。本研究的細節將於研究中加以詳細討論。

Section : B-6

楊智先、關秉寅

No Provided

年輕人的創意空間與生命脈絡的勾畫： 家庭生活與創意發展

洪素蘋 陳學志

摘 要

爲了瞭解中學生的生活空間與發展脈絡的特性，以及對其創意發展的相關因素的影響，本研究以問卷調查法抽取台灣地區 10 所中學（30 個班級）的 1200 位中學生（高中生 770 名，高職生 430 名），施以有關中學生的校園生活、家庭生活、同儕生活、個人生活以及各項創意的量表。本文主要係從中學生的家庭背景與家庭環境等相關因素，來探討不同面向的創造力測量的關連性。首先，多變項變異數分析考驗的結果發現，不論是高中或是高職學生其父母親的是否受雇於他人以及父母親所從事的職業別在創意認知、創意情意與創意生活經驗都不具顯著差異。其次，由表 1 家庭背景與創意變數相關分析結果發現，就父母的教育程度而言，與高中職學生的創意認知、創意情意與創意生活經驗多數項目有顯著正相關，尤其是母親教育程度愈高則學生在創意認知、創意情意與創意生活經驗也愈高。高中職學生家庭月收入與創意生活經驗各向度都有顯著正相關。另外，由表 2 學生家人相處與創意變數的相關係數結果發現，相較於父親的接納態度而言，母親的接納對於高中職學生的創意情意各向度皆有顯著正相關，與創意生活經驗部份項目也同樣具有顯著正相關。至於父母親的管教嚴格則僅與高職學生在創意認知中的單一項目有顯著相關。另外，「家人會珍藏或展示我的作品」、「花時間或心思布置或裝飾家」以及「容許發展自己的興趣」與創意情意與創意生活經驗多數項目有正向關係。而「只注重學業表現」與高中生的多元角度與工藝巧思有負向關係。「家裡長幼尊卑關係清楚」則與高中學生里的流暢表現有負向關係但是與新奇冒險則有正面相關。此外，家庭氛圍塑造出喜歡設計、喜歡創作、有幽默感、有好的點子的家庭與高中職學生的創意情意以及創意生活經驗所有分向度有正向的關係，而與創意認知部分向度也有正向的關係存在。另外，由表 3 家庭文化刺激與創意變數相關分析結果發現，家庭所提供的文化刺激對於高中職學生創意發展有不同的影響。「逛書店、書展或各種展覽」與創意認知各項目有正向的關係；而「外出旅遊」則與創意認知各項目無顯著相關。不過不管是任何一種文化刺激都與高中職學生在創意情意與創意生活經驗多數項目呈現顯著正相關。綜而言之，父母的接納與家人鼓勵與容許適性發展，並且提供較多的多元文化刺激，均有助於學生創意發展。本研究的發現可提供給家長瞭解如何透過家庭氣氛的塑造與經營以及文化刺激的提供藉以激發高中職學生在創意認知、創意情意與創意生活經驗上的表現。本研究的細節將於研究中加以詳細討論。

洪素蘋、陳學志

No Provided

面對面創意行銷術－台客點子庫設計

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摘 要

經由創意點子庫的設計，我們進行了靜態和動態兩系列的「台客」活動規劃，靜態的平台、講台中佈置豐富的創意教具、創意小書、選才紀錄等實物展示，呈現台灣師大創意學院的四個子計畫－創新選才、創意教師、創意課程、創意校園之成果。動態的擂台、舞台裡則精心設計爆爆樂、義大利斜塔、師大威利彩等互動式創意競賽，展開與國中、小學子到社青成人的面對面接觸，穿著自行研發的紅 T 恤和頭戴黑人頭的造型，搭配自編「創意是我的花朵」的歌舞表演宣傳方式，成功的吸引到兩千多人的參觀，達到創意行銷的目的。

利用尪仔標、橡皮糖、小王子麵等三項臺灣古早風的獎品，還有內容新穎、製作精美的五冊創意小書和十二款自製創意點子貼，以及『參觀即贈送、人手一本』的諾基亞留言本策略，讓我們的台客創意點子與全民更接近。

在面對面與參與者的活動過程中，應用趣味活動設計、「台客們」親切仔細的說明、鼓勵自由創意解題的態度、不批評和給予充分解題時間的方式，進行從解題紀錄中整理參與者之創意發想成果，將參與者回饋和約一千份的滿意度調查問卷整理、歸納、分析後，整理出本活動的歷程、結果與討論，並於結論後提出活動規劃、宣傳方式及人員安排等三方面的建議。

台客的點子庫透過 2008 國際創造力教育博覽會現場實施，熱鬧愉悅地推廣創意，榮獲創造力示範區之創意傳播首獎的榮譽，在探討創造力的培養中提出體驗式創意教育的實際活動案例。

最後，透過本活動之創意歷程與活動結果之討論，提出我們的結論與建議作為相關單位與人員之參考。

關鍵字：台客、點子庫、創意行銷、國際創造力教育博覽會

Face-to-face Creativity Marketing

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By way of the creativity of idea storehouse design, we have carried on the static and the dynamic two series of activities. In the static exhibition, we represent creative teaching materials, creative pocket storybooks, and creative ways to pick up those who are wanted in order to show the performance of the four projects of the Creative College of NTNU, which includes creative ways to pick up the talented, creative teachers, creative teaching curriculum, and the creative campus. The other dynamic activity includes Q&A and building towers with spaghetti. To contact with elementary school students, high school students, and adults face to face, we use creative ways in which we make T-shirts ourselves, perform a creative dance. It is the way that we successfully attract over two thousand people to participate in our ctivities.

By sending Nokia notebooks, five sorts of creative pocket storybooks, twelve types of stickers, and ancient Taiwanese items, containing old pokers, jelly beans, and small packs of instant noodles, we make the visitors willing to take part in the activities and be closer to our ideas.

During the process, Taikes explain the rules to the visitors, encourage them to show their creativity while they are answering the questions without criticizing. After the activity, the answering process of the participants is analyzed to make suggestions about activity planning, advertising and staff arrangement.

The idea house of Taikes' is practiced to develop creativity enthusiastically during the 2008 International Creative Exposition. Winning the first prize of creative communication, the Taikes provide some examples of creative education of self-experiencing.

Finally, some conclusions and suggestions are made to provide some references for the related units.

Keywords: Taike, the idea storehouse, creativity marketing, 2008 International Creative Exposition

反璞歸真：成人創造力的展現－ 以永和社大兒童文化研究社為例

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摘 要

本研究旨在探討社區大學公共性社團成人創造力的展現。社區大學提供了成年人一個重新再學習的管道，其強調跳脫套裝知識的教學方式，以及與生活經驗結合的教學內容，讓創造力的展現更加具有可能。此外，社區大學透過公共性社團的設立，期許學員藉由公共參與和所居住的大社區相結合，並起而帶動塑造社區的新文化，而這種新文化是學員與社區居民對內在自我與外在社會的深刻反省後所蘊生的。本研究即以永和社區大學的「兒童文化研究社」為研究對象，透過觀察、訪談，探求兒童文化研究社所展現的成人創造力。研究發現，兒童文化研究社本著「每個人心中都有一個小孩」的理念，在社團活動的過程中，學習用小孩的觀點、態度來思考與生活，跳脫成人既定的框架與制式的思考架構，試著讓自我回到小孩的純真、好奇、敏銳、與創新，這樣子的中心理念，為成人創造力的展現開啓令人期待的可能性。另外，兒童文化研究社在一系列公共參與的行動中，一方面透過「兒童觀」的傳遞，影響更多成人回復孩童特質、發展對於兒童的觀注，一方面對於社團成員自身，也從一個原本只是到社區大學上課的學生，轉變成積極參與公共事務的社會公民，如此的轉變亦是成員個人生命的創造。最後，兒童文化研究社的成員均表示，參與社團活動、和大家一起努力完成一件事的樂趣與情感是無法被取代的。本研究認為，社員在社團參與的過程中心所獲得的心流經驗，對於創造力的展現是一重要驅力。

關鍵字：成人創造力、公共性社團、公共參與

Return to Innocence: Performance of Adults' Creativity —A Case Study of Children Culture Study Club in Yunghe Community University

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Abstract

This research is aimed at the performance of adults' creativity in public associations of community universities. Community universities provide adults ways to relearn. They emphasize that teaching methods should get rid of package knowledge, and teaching contents should include daily life experiences. This kind of learning atmosphere enables creativity to emerge. Besides, by establishing public associations, community universities expect students to participate in community affairs and then form fresh community culture with residents after reflecting on their inner selves and outer society. This innovative curriculum gives grown-ups opportunities to realize their creative ideas into actions.

Motivated by this social reformation, we take one of the eleven public associations of Yunghe Community University, Children Culture Study Club, as research target. Through observations and interviews, we find that club members hold one belief that every person has a child-like mind, and try to apply children's point of view to their attitudes and lives. They free themselves from original limitations and traditional thinking structures, attempting to be innocent, curious, sensitive, and creative, just like children. Moreover, through a series of public affairs participations, club members not only spread out their belief to influence more adults regaining their child-like characteristics and giving attention on children issues, but they also transform themselves from absolute students to qualified members of civil society. This transformation is also a remarkable exhibition of individual creativity. Finally, because most club members' state that it is a unique life experience to join club activities and complete things with great efforts, we propose that the flow experience is an important motivation to adults' creativity.

Keywords: adults' creativity public associations public participation

台北場

場次 C

TAIPEI

SESSION C

中年期心流經驗的探索與創造力之研究

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摘 要

心流經驗 (flow experience) 乃是一種個人主觀的內在自發經驗，當個人從事某項活動而進入心流狀態時會非常沉浸於所做的事情中。心流經驗結束後，經常會達到高程度的正向心理、滿足感、快樂感、以及創造力。中年期按照人類發展學者 Erikson 的論點，正經歷的第七個常態危機－「創造感」對「停滯感」(generativity versus stagnation) 時期，此時期傾向對生命進行重估，生活型態改變、或面臨空巢期、更年期等，容易導致沮喪、憂鬱的身心危機，因此，若能擁有正向心理與高度掌握生命創造能力的技巧，相信應能有效促進中年人解決所面臨身心的複雜問題、並且可能提升其創造產能。本研究運用 Csikszentmihalyi 於 1975 年，提出的心流理論(flow theory) 做為提升中年人開展正向心理的焦點，並輔以美國心理學家 Martin Seligman 正向心理學的論點說明心流帶來正向的心理動力。並融合國外學者 Jonathan J. W.、Gaynor S.與 Graham S. 於 2006 針對心流過程進行探索的研究，作為本研究理論基礎。

本研究邀請 5 位擁有創造性成就，並且目前仍持續擁有極佳創造力表現的中年期男女，使用本研究事先設計之心流記錄表，連續每日登錄心流過程的發展，持續進行 2 週。之後根據日誌記錄與另外一份半結構式的訪談大綱，在不同時間，與每人進行長達約 1 至 2 小時的深入訪談，試圖分析、瞭解及勾勒心流開始前的可能條件，與心流詳細過程。以提供成人教育工作者協助更多中年人擁有更多機會營造及體驗心流，藉助心流創造更多正向經驗，順利克服中年時期身心可能的危機。研究結果發現，在心流經驗多發生於從事挑戰及技能方面活動此點上，呼應 Jonathan 等人的研究。此外，研究也發現心流過程提供成人教育者協助中年人促進心流經驗的幾個條件、心流經驗有利個人處理中年可能產生之負向情緒困擾、固定閱讀以及主動接觸新事物的習慣有助於中年期心流經驗的出現。深入了解心流過程以及心流經驗的內涵，將使成人教育工作者、諮商實務工作者、更知道如何協助更多中年期的男女，從日常生活中辨識及接受挑戰與技術平衡的活動，體驗心流經驗所帶來的樂觀性與創造力，擁有積極樂觀的創造性人生。

關鍵字：中年期、創造力、心流經驗、心流過程、正向心理

林貞均

No Provided

「說戲、入戲...」喚起中高齡者的心流經驗

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摘 要

分析心理學家榮格(Carl Jung)指出：個人在 40 歲以後，心靈活動會取代身體的活動，心靈活動逐漸成爲中高齡者生活和學習的重心，因此心靈成長課程對於每一位中高齡者都是必要且重要的。根據研究。中高齡學習者除了注意力和記憶等認知上的改變外，心理上普遍較爲敏感、自尊心強、學習的信心卻相對的降低。因此透過人際互動、社會參與和團隊學習，可以提昇中高齡者生活的樂趣感，降低其孤獨感，對於中高齡者的心理健康是十分重要的。Csikszentmihalyi 以大量個案資料分析個體在日常生活各種活動中產生「心流經驗」(flow experience)的情形，同時探討「自我」與「心流」的關係。他指出：「動機」是影響創造力開展的個人因素之一，個人在創意探索過程中會感覺到「樂在其中」，其當下所產生的經驗就是一種心流經驗，始人成爲擁有豐富資源的個體。

本研究以「戲劇的扮演」爲主軸，開展個體的創造力和創意思維，引導中高齡者自在的分享彼此的喜悅、珍惜自我的特質。同時將自我的生命故事轉爲戲劇的腳本。本研究是以筆者目前正帶領的中高齡學員爲對象，並擇其連續的 12 節課程爲範疇，進行紀錄、對談與行動演出。課程包括幾個主軸：(1)正向思考的引導、(2)生命故事敘述、(3)說戲與入戲；活動主題包括：正向思維、呼應與引導、身心放鬆、面具下的自我、單面劇與雙面劇、即興演出、肢體雕塑、角色扮演、個人生命故事寫作、生命短劇展演等。同時運用 Csikszentmihalyi 的經驗品質(quality of experience)的紀錄，引導學員在每一次的戲劇活動之後，察覺自己心靈的改變和成長。

研究結果部分首先忠實的呈現學員對自我解放的描述和反思，閱讀學員們的自我成長紀錄時，彷彿可以看到她們一個個正拍打著翅膀，奮力的往天空飛去，她們逐漸地不再受到過去生命「陰影」的限制，能夠尋找原本就屬於她們自己的「真我」，能夠掌握生命原已存在的喜悅感。建議部分則針對中高齡者戲劇引導課程的規劃內容，以及生活經驗品質的紀錄方式提出一些建議，包括培育更多中高齡戲劇課程引導人才、增加中高齡者戲劇觀摩或展演的平台、生活經驗品質紀錄表格的改進等。

期待有更多的教育工作者投入這個領域，期待中高齡者能透過「說戲、入戲」，找回原本充滿喜悅、清安自在的真我境界，能充分體驗存在心理學家 Rollo May 所說的：「我是『我能夠』的那個『我』」。

關鍵字：心流經驗、中高齡學習者、中高齡戲劇課程

Arousing the elders' flow experience through dramatic play

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Abstract

Analytical psychologist Carl Jung pointed out: "Personally after 40 years old, the mind activity can substitute for body's activity". And the mind activity becomes the gravity of the elder's life and study gradually, and the mind growth curriculum regarding the elder is necessary and important. According to the research, besides the changes in cognition, attention and memory, the elder learner's psyche is generally more sensitive than before. Normally the elder has higher self-respect, but lower self-confidence relatively. Therefore, the inter- personal and social participation may promote the level of the elder's life satisfaction. Csikszentmihalyi had the research of "flow experience", through the massive case study in daily life activities, he indicated : "the motivation" is one of the individual factors which affect the creativity development and people will be in the "flow experience" when he is engaged in the creativity exploration.

This research focus on the curriculum of dramatic play which is helpful for developing individual creative thought and thinking model. So that the elder can share with each other joyfully, treasures the self-special characteristic and transfers the self-life story to scripts. This research is part of the routine instruction, including continual 12 sections of curricula. The curriculum includes: positive thinking, imagination, movement, relaxation, improvisation, mask, role play, one-sided play and the two-sided plays, individual life story writing, etc. Each of the members will record her experience via the chart of Csikszentmihalyi's "quality of experience" after the activity,

The findings part first presents the self-liberation description of each member, we can differentiate the reconsideration by their self-growth records. After the continuing practice and interaction, they seem to be whipping the wing, furiously flies toward the sky, they no longer keep "the shadow" of life. Hope they can grasp the joyful feeling which the life already exists. Suggested that so plentiful as the flow experience through the record, much more dramatic proposals for the elder should be designed, and more performance opportunity for the elder. Moreover, the recorder of quality of experience should be redesigned, to indicate the different level of the experience or encounter.

Keywords : flow experience · elder learner · dramatic play

用什麼樣的觀念去教導孩子更有創造力呢？

—競爭力、學習力、創造力的關係—

胡雅茹

雅斯貝爾股份有限公司

總監

摘 要

- 一、什麼才是競爭力？
- 二、是雞生蛋？還是蛋生雞？
- 三、到底要多聰明？到底要多有智慧？
- 三、培養孩子成爲會讀書的人？還是聰明的人？
- 四、心態影響能力，能力影響方法，方法影響效率
- 五、看總分？還是看單科成績？
- 六、聯想力奠定知識吸收與思考的基石
- 七、聯想力的分類
- 八、聯想力之水平思考
- 九、邏輯力開通解決問題的能力
- 十、只是複製思想並不會讓你成功
- 十一、創造=創意+可行的做法
- 十二、習慣是創意的殺手
- 十三、想像力是創造力之母
- 十四、投資時間去捕捉創造力

Section: C-1

胡雅茹

No Provided

Flow in Shared Wholeness : Social Transformation through Deep Encountering with Global Mindfulness

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Abstract

Background: Inner World and Outer Problems

In the contemporary world, problems are intertwined in a complicated and chaotic way beyond our control. Especially under the impact of globalization, local problems might be engendered into global ones. Meanwhile, due to the wholeness nature of the world, any part of the inner and outer world systems could exert great influences on the rest of it. Moreover, the nature of problems, be it personal, social or global, is contaminated. Worse than that, people tend to hold negative attitudes and emotions toward problems. According to Csikszentmihalyi's theory of flow psychology, the negative mental states, the so-called psychic entropy in his words, as well as the positive mental energy-psychic negentropy, compose our daily experiences. It is well recognized that when we are confined in problems with negative mentalities, the problems will get even more complicated and worsened. The perspectives we impose on the problems and the attitudes we project toward them would shape our understanding of the problems and guide our actions accordingly. In short, how we look into the problems determines how the problems reshape and stigmatize our perception.

In order to further understand the mentalities which might have prevented us from cultivating insights into the root of problems, we need to look into how our perceptions are intertwined with either psychic entropy or psychic negentropy. We also need to challenge our fear of relating selves to the problems framed by our habitual perception and attitudes. The author contends that when we come to realize that all humans, as well as the universe, belong to the same system; no one can live in isolation and simply analyze other's problems. It is only when we come to dialogue and collaborated with global mindfulness that our shared wholeness will nurture the emerging flow for social creativity, which would resolve the long-existing problems and emerging human crisis.

Goal and Purpose: Process of Flow in Shared Wholeness

In this paper, the author first analyzed the problem maze we have been long confined, and how this confined mentality might have constrained our capacity in problem analysis, problem diagnosis and problem restructuring. Then, she drew upon the Middle Way Philosophy in both western and eastern traditions to illuminate the nature of shared wholeness for managing our social and global problems creatively. Along with the explication of shared wholeness, she would elaborate on the multi-dimensional process of “flow” activities and “flow” experiences. Finally, based on such shared wholeness, the author would elaborate on the essence of global mindfulness. The author contends that a mindfulness community would nurture collective flow in shared wholeness, and enhance social transformation and innovation in the global society.

Methodology

In this study, the author undertook a case-analysis approach to frame a multi-dimensional model of creativity for nurturing a mindfulness community. First, she critically reviewed and compared Csikszentmihalyi’s flow experiences, Maslow’s peak experiences and Zohar’s quantum self, and illuminated the neglected facets of these creative experiences from the perspectives of Middle Way philosophy. Then, she interviewed two mindfulness communities, U Theater and the Pu-De Chan Meditation Center, to explicate the multiple-dimensional process of individual and collective flow experiences. Finally, she would ground her theoretical model of collective flow in shared wholeness on the findings from the two case analyses.

Presentation of Results

In this paper, the author will present the results as follows:

1. Presentation of the nature of problem maze in the global society
2. Reconceptualization of optimal experiences –collective flow
3. Illumination of shared wholeness for nurturing mindfulness communities
4. Findings of the two case analysis
5. A multi-dimensional model of “Nurturing Collective Flow in Shared Wholeness”
6. An innovative model of managing complexity and crisis

靜極思動、動中取靜的品格教育」

~國中生靜思語創意教學之探討

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摘 要

「創造力教育白皮書」揭示未來世界公民應具備創新與彈性適應的能力；而「學生創新能力的培養，需要教學創新的激勵」(教育部，2004)。在資訊發達、價值多元的時代裡，品格教育益發顯得重要，透過品格教育的實施能使學生學習明辨是非、發展自我實現，然而往往陳義過高，多屬高標準或超難度的理想設定，使學生「可望不可及」，常與實際生活及現實社會脫節(教育部，2004)。研究者欲藉由結合行之有年、素有成效的靜思語教學，以創意教學方式進行品格教育；透過靜思語創意教學的課程設計，激發學生學習動機，培養學生創造力與建立良好的倫理價值觀。本研究採行動研究法，進行靜思語創意教學，目的是增進七年級國中生創造力的表現及人際關係，進而培養人與人間相互尊重、關懷、合作與良性溝通的態度與能力。本研究透過「尊重你我他」、「溝通百分百」和「惜福愛物感恩情」三次主題課程，以每週兩節，共十二週進行。課程步驟依靜思語五段式教學法：「體驗」、「講述故事」、「省思」、「靜思」和「生活實踐」，引導學生運用「六頂思考帽」、「七何檢定法」、「曼陀羅思考法」與「六三五腦力激盪」等創造思考技法，以多元、創意的思考面對日常生活中的人際問題，進而發展自己與他人的良好關係。研究者藉由行動研究「計畫」、「執行」、「觀察」與「反省」的過程，瞭解創意靜思語教學實施的成效與教師的自我成長，持續修正與調整教學活動設計與實施，將創造力發展與美善的價值觀合而為一，培育學生人文素養與創造力。

研究結果發現：

- 一、學生能運用創造思考技法或靜思語聯想，表現創造力之流暢力、變通力與獨創力，並以創意的方式解決人際問題。
- 二、靜思語創意教學促成學生人際關係的成長與班級氣氛和諧。
- 三、透過靜思語創意教學設計與實施，增進教師創意教學和實行品格教育的成長。
- 四、透過靜思語創意教學，提昇教師在教學者與輔導者角色間的成長，並發展經營良好師生關係的策略。

關鍵字：靜思語創意教學、創造思考教學、行動研究

The Action Research of Still Thoughts Creative Teaching

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Abstract

By action research, the study conducts a still thoughts creative- teaching. It aims at improving a class of students' interpersonal relationship and at developing their creative performance on getting along with their classmates also. The study is combined in three topics of courses: "respecting each other", "communicating in a well-understand way", treasuring materials and thanks giving. It is performed by course planning, plan executing, question identifying and teacher reflecting, teaching activities correcting and redesigning. Four results of the study go as follows:

1. By the process of still thoughts creative- teaching, the study raises students' learning interest and promotes the professional development of the teacher.
2. Students apply creative skills and still thoughts association well to perform fluency, flexibility and originality in creativity.
3. It is discovered that still thoughts creative- teaching promotes students' interpersonal relationship.
4. By conducting the still thoughts creative- teaching, the researcher understands that the foremost is to identifying the teaching questions. She acquires knowledge of designing creative teaching activities and understands how to manage teacher-students relationship by creativity.

Key words: still thoughts creative- teaching, teaching for creativity, action research

年少不輕狂

——國中生的創意人生起跑線

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摘 要

本研究以新竹縣八、九年級為分析對象，經研究小組分兩各部分逐一進行，輔導學生紀錄各行業歷程部分，除了訪視不同行業別的從業者，探討其成功背後的努力足跡，並以學生的角度訪視從職業試探課程中獲得以自己為主的選擇想要的職類生涯，以及紀錄目前校園中所實施的技職教育學程實況，紀錄的方式是以照相器材、攝錄影機、電腦等資訊媒材為工具。第二部分研究小組以新竹縣參與技職教育學程的學生為對象，以問卷為工具抽樣調查的方式，分析技職生選擇職類的動機以及技職生涯徑路發展的狀況，兩者於研究結果出爐後經研究小組深入分析發現如下：

1. 學生選擇職類以餐旅課程與的比率最多佔 21.84%，其次是餐飲技術佔 20.85%，而園藝（農業）、廣告（設計）技術、商用資訊課程及食品加工課程，在問卷抽樣群體中沒有人選擇或學校未開設此職類課程，因此這五項職類所佔的比例均為 0%，問卷填答學生中有 9.92% 是選擇玻璃藝術課程，這項課程是新竹縣市的珍貴傳統產業，因此在學校本位課程當中加上此職類課程，以提升產業價值、發揚傳統產業傳承之價值。
2. 問卷分析顯示，技職教育學程學生對學校學科課程的學習興趣比率偏低，數學課程的比率在 2.91%~8.30% 間；自然科學的興趣比率在 7.05%—8.30% 之間；國語文課在 4.15%—9.20% 間；習學英文的興趣比率在 11.20%—14.82% 間；社會的興趣比率在 15.35%—18.91% 間。因此，除了技職課程之外，學校應加強提升學生學習基本學科的興趣和能力。
3. 影響學生升學徑路程度最大的是學生「自己的興趣」，其次是「自己的個性」、「學校技能證照的通過率」、「學校安排的課程內容」三個選題，而「學校之名氣」反而在學生選項中大部分學生的反應是趨向於「非常不重要」的指標。
4. 由問卷資料分析得知國中技藝學程學生對於進入高職升學徑路深具信心。但是和「技藝學程學習興趣」的選項交叉結果，有效填答總數「沒有幫助」和「非常不滿意」的交叉個數有 3 個，佔的比率有 2.52%。也就是技職教育升學職類和學生學習興趣之間有顯著的落差。

關鍵字：生涯發展教育課程、國中技藝教育學程、職業試探課程、學校學科課程、技職學生升學徑路。

Youthful but Not Reckless: The Starting Line of Junior High School Students' Creative Life

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Abstract

The aim of this study is to evaluate the vocational exploration curriculums design for the students of the 8th and 9th grades in Hsinchu County. This curriculum consists of several vocational and technical education programs to assist students choosing their future careers.

This study surveyed and analyzed the motivation and background of students taking this curriculum. Additionally, the experience in choosing occupations and their development of vocational career pathways also included.

Summary:

- I. The short of class hours, limitations of space and the travel distance of vocational high schools result in the retardation of the career exploration curriculum.
2. The “normal class grouping” policy of government forces the students who take the vocational exploration curriculum have to leave their original classes to career exploration class. It is difficult for the teachers to make up the missing classes in their original classes.
3. The occupations offered in the career exploration curriculum are hard to be found in local vocational high schools. This discontinues the occupational categories when students of the 9th grades enter vocational high schools.
4. Classes in business, machinery and computer science are sufficiently offered public schools. New classes in home economics including beautification, hairdressing and childhood education are only provided by required private schools. As a result, students might be forced to shift their occupational categories due to the expense difference between public and private schools.

Keywords: Career development curriculum, junior high school skill learning program, career exploration curriculum, school curriculum, pathways to further education

中學生的創意生活經驗與評量工具的修訂發展

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摘 要

本研究的目的是瞭解當前中學生的創意生活經驗內涵，並發展「中學生創意生活經驗量表」。基於威廉斯所提倡的認知情意二元測量的觀點，本研究納入了發散性思考測驗與情意特質的測量，藉以瞭解高中職學生的創意生活經驗測量的效度，並進行高中職與性別差異檢驗。研究樣本隨機取樣自 10 所學校 30 個班級的 1997 位北部地區高中職學生，研究一是以傳統量表發展程序進行「中學生創意生活經驗量表」的修訂，並列舉各項背景變項與效標測量的分析結果，研究二則是採結構方程模式取向進行多樣本測量恆等性檢驗。研究發現「中學生創意生活經驗量表」可萃取出六個因素，分別是「創作表演」、「科學嘗試」、「多元角度」、「工藝巧思」、「數位運用」、「幽默玩興」，信度介於.71 至.80，與創造思考測量有低度顯著相關，與創造情意測量有中度顯著相關，顯示效度良好。測量恆等性的分析則發現，量表量尺恆等性在高中職群體與性別群體比較中獲得支持，但是潛在平均數顯著有別，因素間相關具有不等性，亦即量表內在結構良好，但結構參數具有群體差異。文末針對量表計量特徵以及青少年創意生活經驗相關實務議題進行討論。

Section: C-2

邱皓政、陳學志、關秉寅、詹志禹

No Provided

非視覺化創造力：一位盲人書法家的創作方法研究

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摘 要

本文章的研究目的是探討中途失明者如何能在黑暗環境下，運用個人「非視覺化」的藝術創造力，進行「視覺化」的書法創作。研究對象是一位台灣知名的視障書法家-廖燦誠先生，他在失明前從事美術設計工作，罹患眼疾後便將生活重心轉移到書法創作上，直到 42 歲完全喪失視力後，才逐漸在黑暗中摸索出自己的創作方式，結合象形文字的圖像概念發展出一套新的創作風格，進而延續他的創作生命。

經由觀察與紀錄剖析廖燦誠先生的書法寫作過程，我們發現在他的創作過程中運用許多不同於明眼人的創作方法，來取代創作上的視覺主導模式。首先，他會先將所有的書法用具擺放在固定的位置，接著，利用手掌來當作構圖形式的測量單位，並且將紙鎮當作數個定位點，來決定構圖的方向與大小。最值得注意的是，他的握毛筆的方式是將手指捏在筆毛的位置，並非一般明眼人寫書法時將手指握在筆桿中央的方式。這個方式縮短了運筆的距離，讓他能輕易控制書法線條的粗細與運筆的方向。同時，他在寫書法時會利用手指的觸覺來判斷乾溼度與作品範圍，以確認構圖表現能符合自己心中的圖像。最後，若是作品能表現出他個人創作理念，他便會加上落款與蓋章，讓作品更加完整。

從本研究中我們分析出廖燦誠先生充分運用敏銳的「觸覺」感官取代視覺上的缺失，以及作為輔助定位的「物件」，並且融合失明前的視覺記憶與獨特的創造思維，強調「心眼」取代肉眼的非視覺化書法創作。因此，在結論的部分可以歸納出「觸覺」、「物件」與「心眼」三個創作元素的相互配合，使他能夠在完全無視力的狀態下進行自我創造力的開發，也期許廖先生的創作技巧將來能提供給其他後天失明者學習藝術創作，拓展更多元的創造力思維。

關鍵字：廖燦誠、非視覺的、書法創作、觸覺定位、物件定位、心眼定位

Non-Visual Art Creativity: Learning From an Adventitiously Blind Chinese Calligrapher

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Abstract

The research aims how late blind people explore the creativity of visual art creation without vision. Tsann-Cherng Liaw, a famous Chinese calligrapher with blindness in Taiwan, had employed as an advertisement designer until he became totally blind at 42 years-old. However, Liaw encouraged himself to conquer obstacles under blindness. He focused on Chinese calligraphy, instead, and discovered a particular style which combines calligraphy and patterns to persist on his life with non-visual art creation.

We observed and recorded the writing procedure of Liaw's Chinese calligraphy. Liaw operates many methods to replace the creative model which guilds by vision, differing from the sighted. First, Liaw arranges his calligraphic tools in fixed positions to familiarize him with the working space and to calm his nerves. Then, he uses his palms as the base from which to measure the paper size and confirm the mental composition of the work to be created, and paperweights are strategically placed on the paper to serve as orientation points. Next, Liaw has also developed a special way to grip his Chinese calligraphy brushes that enables him to shorten the bristles' distance from the paper and, thereby, write more steadily. This unique way of gripping the Chinese calligraphy brush allows Liaw to use his tactile perception to confirm the amount of ink on the pen and, simultaneously, control the movement and direction of the bristles as he paints. After having arranged his mental working space, Liaw then carefully sketches the images in his mind onto the paper by comparing each stroke with the one preceding it. In the final step, Liaw places his signature and official chop onto his work.

As detailed above, the findings contain that Liaw uses his tactile perception to retrieve the loss of vision and takes some objects as orientation assistances. Moreover, he follows his mind-eye to create his non-visual Chinese calligraphy. Therefore, we conclude that "tactile orientation, object orientation and mind-eye orientation" are the main elements of his creativity without vision. We also expect Liaw's methods on Chinese calligraphy will encourage for those people with visual impairments and blindness to learn visual art creation by their other senses and explore much more creativity in Taiwan.

Keywords: Tsann-Cherng Liaw, Non-visual, Chinese Calligraphy, Tactile Orientation, Object Orientation, Mind-Eye Orientation

探究美術教學對幼兒創造力展現的影響： 系統模式之觀點

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摘 要

早期過去創造力相關研究大多偏向是單一取向，直至近年來許多學者開始認同「當多種因素匯聚在一起時，創造力才會產生」的觀點，因此匯合性（confluence）的研究取向開始受到重視。換言之，如果要更清楚地了解創造力的本質，不應侷限在個人層次上，也要考慮到整個社會和文化的脈絡。Csikszentmihalyi 所提出的「系統取向（Systems Approach）」，便是將創造力視為一個動態模式，由領域（domain）、個人（individual）和學門（field）三個相互影響的次系統所組成。Csikszentmihalyi & Wolfe (2000)將系統取向模式應用在教育上同樣包含了課程內容與教材（Domain）、老師（Field）、學生（individual）三者的交互影響。故，本研究將以系統取向來探究國內幼兒美術教育在創造力上的展現。

本研究以兩位幼教美術老師為研究參與者，採訪談、觀察與文件蒐集的方式來探究兩位老師之課程內容與教材（學門）、教師（領域）、幼兒（個人）交互影響下，幼兒創造力的展現。研究結果發現：其中一位幼兒園美術老師重視幼兒美術技巧的習得，透過多變的課程主題（如：孔雀、雨傘、公雞等），提升幼兒的學習動機；同時，透過示範來讓幼兒了解每個技巧的分解步驟，並讓幼兒在依循其原則下加入個人創意。另一位老師則重視幼兒在體驗多元素材，並充分展現個人的美術創作。他以畫法來當作是教學主題（如：拼貼畫、手指畫等），提供幼兒許多操作素材的機會，讓幼兒用最簡易的操作完成他們自己的創作。兩位老師不同的教學內容與教學方法，使得幼兒在創造力上有著相當不同的展現。故提出什麼樣的老師、教學活動是有助於幼兒創造力的發展之結論。

本研究並依此提出對幼兒美術教學、幼兒美術教師培育及課程內容等相關建議。研究者相信，幼兒美術教師或相關單位若能提供相對應的領域教材與資源不僅能激發幼兒創造潛能，也能從幼兒美術創作來欣賞其創造力。

關鍵詞：幼兒美術、美術教育、創造力、創造力系統取向

To Explore Creativity on Children Art Teaching: A System Approach of Creativity

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Abstract

The development of researches on creativity has gone through single approach to confluence approach. Many scholars consider that creativity is result of interaction among multiple factors, especially cultural and social contexts. Csikszentmihalyi viewed creativity as the dynamic model, composed of domain, field and individual. Csikszentmihalyi and Wolfe (2000) use a system approach of the creative process to take into account these essential features: material (domain), teacher (field) and student (individual). Therefore, this research is based on Csikszentmihalyi system approach for creativity and aims at early childhood art education on creativity.

Through observation, interviews, relevant documents, we explore two veteran kindergarten art teachers' teaching and material (domain), teacher (field) and children (individual) as well as the emergence of creativity.

Results of this research showed that one teacher emphasized that children need to learn the techniques, principles and skills of drawing by teachers' modeling and demonstration first. Her topics of teaching were various, such as peacock, umbrella. She thought that after children have learned all skills and followed the rules, they could draw with imagination and enrich their works. The topics of the other teacher's art activities were named technique of painting (ex: finger painting, collage painting, and rubbing). She provided children diverse materials and encouraged children to explore as much as possible. In her class teaching, firstly she spent a lot of time for children to operate and experience, then discuss all raw materials, and supported children to create freely by these materials. Two teachers' different teaching contents and activities would make children different creative expression.

This research provides suggestions and recommendations for children art education, children art teacher education and children art teaching content. With the provision of appropriate teaching activities and materials provided by children art teachers and administrators, creative children may have the avenues to put their creativities into play.

Key word: children art, art education, creativity, system approach of creativity

以都市空間韻律之親體驗培養與啓發溫良敦厚的創意 -以台北市信義計畫區為例

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摘 要

隨著全球自由經濟貿易體系的形成與發展，國際各城市將無可避免地面對各種經濟資源的合作與競爭，全球將是一個新的都市世界，國家能否在全球秩序下獲得生存與維持優勢，繫於其主要城市的發展與競爭力，台北市信義計畫區的定位發展主軸即是以首都作為引領角色地位，作為區域、國家的對外連結的重要「節點」，而這樣的任務，需要源源流出的都市活力，都市活力需要一流人才與一流的創造能力，一流的創造力源自「樂思考、喜思考、好創作、肯創作」的體驗。

都市的空間韻律（spatial rhythm）由都市計畫、若干都市設計與建築規劃等實質都市發展活動，以及人文、歷史活動等，在時間與空間維度中疊合整構而構成。韻律是人類與生俱來的基本特質，一種來自於心中的跳動模式，韻律之奧秘是需要經驗體會的，而都市的空間韻律是我們所有生活印象及意義的呈現，為了不要落入都市建設具有一役定江山的匡限，溫良敦厚的修為顯得格外的重要，對人、對事抱持溫良恭儉讓、諒解的心態，才有不取巧而富有人情味的創意，才能發展出具有擴散能力、為人樂於接受的創新或創意，生活在兼顧歷史、社會、經濟、文化發展的場域環境下，才能自然而然地讓住民對於城市產生共同的情感。

都市意象的實質環境可由自明性（Identity）、結構（Structure）、意義（Meaning）等三方面構成，本文以都市發展作為研究的場域，由通道（Path）、節點（Node）、區域（District）、地標（Landmark）、邊緣（Edge）等六種都市設計元素在視覺角度上的呈現，嘗試加入主觀對其象徵意義及環境的政治、經濟、社會涵構之詮釋，架構對於對都市空間、氣氛的「體驗」、「活動」、「反思」、「實踐」等學習領域，使得親體驗者能在多元活動中，瞭解都市發展演化的理念與構想，進而發現與挖掘自己的性向與興趣，培養生活能力，並應用在實際的生活情境中，經由這樣自我學習、察覺意義，思考問題、共同討論的過程，獲得真實的學習。因為都市的發展可以清晰的表達與滿足市民的價值與夢想，從人文的觀點探討實質環境的感覺經驗形式，整合我們對外部地景與心靈內部地景兩者之親體驗，有助於繪製親體驗者的「心靈地圖」（Mental Map），瞥見其豐盛的心靈寶藏，啓發這些都市意象親體驗者溫良敦厚的創意。

The Application of Subtle and Gentle Cultivation and Edification on the City's Spatial Rhythm - A Case Study of Taipei Xin Yi District

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Abstract

Following the form and development of free trade worldwide, many international cities cannot avoid collaborating with or competing for economic resources. The world has indeed become an entirely new city. The ability of a country to achieve superiority under the international order greatly depends on its city's progress and competitiveness. In line with this, the focal point of Taipei Xin Yi District's development is to make this capital a shining model and the country's "node" for external relations. This task requires an incessant metropolitan dynamism that involves world-class talent and conception. First-class concepts should emanate from "delightful ideas, remarkable creations and the willingness to create".

The city's spatial rhythm includes urban plan, several urban designs and construction plans and other essential development activities, as well as cultural and historical activities which serve to fully engage both time and spatial dimensions. Rhythm is one of human's inherent characteristics that springs from the beating of his heart. Its mystery is realized only through experience. Thus, a city's spatial rhythm is the manifestation of our life's impression and meaning. In order not to tear down the city's natural landscapes, a subtle and gentle upkeep is necessary. It must be tolerant and should embrace both man and his pursuits so that it does not become opportunistic but rather, be a rich source of human creativity. This will also pave the way for bigger expansions that would facilitate man's openness to greater innovations and originality. Man shall also become more attentive to his historical, social, economic, and cultural environment and thus, make harmonious living occur naturally.

The essence of metropolis image is composed of identity, structure, meaning. The metropolitan development considered in this study has six visual design elements, namely: path, node, district, landmark, and edge. There is also an attempt to arbitrarily incorporate government, economy and social annotations into its symbolic significance and environment. The framework on the study of "experience, activities, introspection, and practice" of city space and atmosphere must allow the person to understand the ideas and conceptions behind developmental evolution in the midst of diverse activities. The process must also allow the person to discover one's own aptitudes and interests, and cultivate his abilities. This process may also be applied in real life situations where one examines oneself, discover his life's purpose, reflect, and participate in group discussions. Given that metropolitan development can distinctly express and fulfill the value and dreams of residents, this study shall discuss perceptual experiences from the cultural standpoint. This is followed by the integration of experiences from both physical and mental landscapes to facilitate the creation of a "Mental Map". Finally, we shall be able to catch a glimpse of the flourishing and valuable intellectual deposits that edify the city's image using subtle and gentle creativity.

建構老街文化圖像之藝術創新行動課程

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摘 要

「公民美學」的理念在現今台灣社會不斷地受到重視，藝術與公共領域的議題愈來愈受到關注，藝術逐漸進入社區，並牽引出藝術與環境的發展關係；然而一個美好視覺藝術環境的建構，需要每一位公民的投入，甚至視為一種責任；但對一般大學生而言，公民美學的概念如何透過藝術課程，讓他們在心中紮根，甚至衍生出一種社會實踐的力量與改革的行動力，這對高等藝術教育而言，是一種新的挑戰與新的議題。為了實踐此理念，研究者以創新教學為發展主軸，以大學生為研究對象，「行動研究」為方法，「問題導向學習」為教學策略，針對一條百年老街為研究場域，進行約四個月的課程實驗。本研究目的為：（1）設計「藝術介入社區」為議題的藝術行動課程；（2）以「問題導向學習」為教學策略，探討藝術介入社區的各種可能性；其研究結果為：（1）「藝術介入社區」的行動藝術課程，可以反應出大學生對社區環境的關心和革新力量；（2）「問題導向學習」的教學策略，可以引發學生多元探討藝術如何改變社區的各種形態。最後亦針對未來課程的設計與努力方向，提出兩點建議：（1）課程設計可以培養社會人文關懷的行動者與實踐者；（2）課程內容應兼具正式學習與非正式學習的特質。

關鍵字：藝術教育、問題導向學習、公民美學、行動研究、創新教學

Constructing an Creative Art Action Research Curriculum about Cultural Images of A Old Street

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Abstract

Concept of “Civil Aesthetics” has been called out attentions to the public in recent years in Taiwan due to constructing a wonderful visual environment needs involvement of individual citizens. However, for general college students, who may have potential motivations to practice and further revolutionize the concept of “civil aesthetics”, how to make them to deeply root this concept through art curriculums becomes an important issue for studying. By taking college students as subject and a hundred-year-old street as research site, as well as using method of action research, this study aims to 1) design action art curriculums related to theme of artistic implementation in communities, through investigating an old street’s various cultural images, and 2) discover possibilities of artistic implementation in communities by taking problem-based learning as teaching strategy. Results of this study include 1) action art curriculums of artistic implementation in communities may be able to reflect college students’ concern and willing of making revolutions about community environments, and 2) teaching strategy of “problem-based learning” may be able to initiate students’ motivations in multiple directions in learning how art can make a change for communities. The results of the teaching and the goal for future directions are as follows: 1) the curriculum design could cultivate active participant for social and cultural caring; and 2) the course content comprises both formal and informal learning attributes

Key word : Art Education 、 Problem-Based Learning 、 Civil Aesthetics 、 Action Research 、 creative teaching

探討 FLASH 動畫應用於劇場設計之影響-以紙風車劇團為例

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摘 要

劇場環境是在劇院中為演員表演提供的空間，它可以使觀眾的注意力集中於演員的表演並獲得理想的觀賞效果，是異於電視電影獨特觀賞經驗，及演員獨特魅力一一相結合的展現。戲劇一直以來以「創造認同、經驗感情、組織時間」的獨特社會功能，深深影響群眾與社會，無論戲劇的類型與國界分別，社會進展如何擴大，文明如何成長，對戲劇的喜好卻不會因為時代的進步而消逝，而是隨著時代變遷不斷的創新戲劇型態。紙風車劇團致力於兒童劇場的發展，本身兼具教育性與娛樂性質，對於故事資訊的呈現，礙於道具組合無法即時完整呈現給觀眾看，導致欲表達一些抽象的意念時受到限制，因此本文中提出利用 FLASH 動畫來輔助原有的劇場設計，讓觀眾能夠利用 FLASH 動畫透過投射的效果獲得更加即時性的訊息，並且探討 FLASH 動畫投射應用的可行性與效益評估。

關鍵詞：FLASH 動畫、劇場設計、道具

Section : C-5

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No Provided

以線上遊戲進行學童創造力評量之研究

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摘 要

長久以來創造力的評量大多是使用紙筆測驗的方式，但是此種測驗方式有兩項需要改進的地方，首先為評分方式，目前創造力評量評分方式為評分者將學童答案與指導手冊比較，進行評分，容易受到評分者主觀意識影響評分結果；第二為評量環境，傳統評量方式是讓學童在教室中進行，容易讓學童感覺緊張，無法全力發揮其創造力。

因此本研究提供了一個新的方式，利用線上遊戲即時互動、能帶領學童進入心流經驗的狀態進行學童創造力的評量，讓學童能在自然、安全情境中，盡其所能的展現其創造力。經由實驗證明，本研究所發展的線上遊戲系統與威廉斯創造力測驗之結果皆呈現正相關及顯著相關，也就是說，以線上遊戲進行學童創造力評量之概念是正確可行的。

關鍵字：創造力評量、線上遊戲

On-line Game for Creative Assessment

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Abstract

Creative assessment often used written examination since long-time, but this method has two items need to improve. The first one is the scoring method, this method is relying on people compare students' answer and guide handbook. This method is easy to influence with the subjective consciousness. The second one is the environment of assessment, traditional creative assessment executes in classroom. It's easy to let students feel nervous and can't amplify on their creativity.

This research provides a new way to execute creative assessment. Researchers use on-line game to create a nature and safe environment and bring students into Flow experience. When students in the Flow experience status, their creativity is in the maximum. And then researcher can execute creative assessment. The result of experiment is shown that the assessment result of on-line game and Creativity Assessment Packet display positive and significantly correlated. So Researchers infer that the concept of using on-line game to execute creative assessment is correct .

Keywords: Creative assessment, On-line game

在遊戲情境中以沉浸經驗探討玩興對創造力的影響

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摘 要

創造力的表現是受個體因素及其環境交互作用之影響，當不同的個體處在相同環境中會有不同的創造力表現。本研究將個體玩興視為內在動機的特質，遊戲情境視為外在動機的條件，去探討在遊戲情境中，不同玩興特徵的個體的沉浸經驗是否有差異，以及個體的玩興是否透過在經歷遊戲情境後所引發的沉浸而影響到其創造力的表現。本研究採實驗相關研究法，研究樣本為國小四年級學童(N=330)，以問題解決的單機電腦遊戲：「機械反斗城」為情境。所有學童都經歷包含6個關卡的問題解決遊戲情境，以了解不同玩興的學童經歷遊戲情境後的沉浸狀態，並進而瞭解學童創造力表現的程度。在經歷遊戲前，以「玩興感受量表」來定義學童的玩興特徵。在經歷遊戲後，先施以「活動之後的沉浸經驗調查」，以測量出學童經歷遊戲後的沉浸狀態，接著再以「問題情境科技創造力測驗」做為學童經歷遊戲情境歷程(發現問題、解決問題歷程及結果)之後的創造力評量。

根據實驗結果分析發現：1. 個體的玩興對於在遊戲情境中所產生之沉浸狀態有正向的影響。2. 個體在遊戲情境中所產生的沉浸狀態對於創造力有正向的影響。3. 個體玩興對創造力表現的影響中，沉浸狀態是扮演「中介變項」的關鍵因子。4. 個體的玩興、沉浸狀態能有效預測其創造力。

關鍵字：創造力、遊戲情境、玩興、沉浸經驗

Exploring the Influence of Playfulness on Creativity through Flow in Playing Situation

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Abstract

Creativity is affected by interaction between individual and the environment. Different creativity behaviors can be inspired when individuals are in the same environment. We take playfulness as the individual motive and play situation as external motive to probe different flow experience that individuals with various playfulness characteristics could experience from play situation. We also discuss creativity behavior after individual experience flow in play situation. The research sample is fourth-grade elementary students (N=330). A computer game named "Machine-Rus" is used as play situation. All students are instructed to experience six-level problem solving play situations. This helps us to understand students' flow state after the play situations and their creativity behaviors.

Our results show: 1. Playfulness has positive effect on the flow state in play situation. 2. The flow state has positive effect on creativity. 3. Flow state is an intervening factor in the effect of individual playfulness to creativity. 4. Playfulness and flow state can effectively predict individual creativity.

Keywords: Creativity 、 Playing Situation 、 Playfulness 、 Flow experience

活用數位音樂啟發兒童與青少年的創作潛能

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摘 要

在這日新月異的時代，數位已經成為世界的潮流，數位音樂也是最近幾年來被廣泛討論的題目之一，爲了跟得上先進國家的腳步，經濟部還大量的安排這方面的培訓課程，讓我們能在這嶄新的時代中佔有一席之地。

教育是根本之計，而最重要的是從小扎根，筆者從事音樂教學三十六年，四年前更進一步研究數位音樂，並且實地教導兒童和青少年，讓音樂創作變得非常有趣，即使不會彈奏樂器，亦能運用十指神功讓內心跳躍的音符盡情的奔放，把它和文學相結合，唐詩也有新的風貌，兒歌更加千變萬化，喜歡那一首樂曲可以再重新配樂，就像魔術師般立即展現另一種風格，於是童話、卡農、多啦 A 夢等樂曲都在孩子的巧思巧手上賦予更多元的面貌，作品完成後家長們都嘖嘖稱奇。

以前想要創作一首大的樂曲，必須動用許多音樂家進錄音室，現在你也許只要用兩三個手指頭就可以創作出百人樂團的效果，這是多麼神奇的事！而且這些聲音都是世界頂尖的演奏家預先把樂器的音色錄製的，所以可以有各式各樣的樂器，管樂、絃樂、敲擊樂器、應有盡有，這是以前的人無法想像的。

幾個人把故事編成劇本，加上自己獨創的配樂，分配角色進錄音室錄製，要掌握每個人物的特性，用聲音表現不同的情境，這樣串聯起來就變成一齣齣的劇情，可能是廣播劇也可以變成音樂劇，大家在分工合作中分享彼此的創作，這樣還不夠，因爲我們還需要背景、道具，於是運用電腦繪圖，各自創造所需要的角色背景等，音樂、視覺藝術與表演藝術緊密的結合，讓大家共同創作出一個大的作品，呈現在觀眾的面前。

有一位媽媽說她的女兒本來不大開口說話，但是看到她居然能夠作詞、作曲、運用電腦配樂，並且親口唱出自己創作的歌，還能爲所創作的歌曲設計圖畫，這樣的改變讓她感動萬分。事實上數位音樂只是個工具，透過它，孩子能夠發揮豐富的想像力，將他們在音樂、文學、繪畫、戲劇等潛能一一展現出來，而我們在孩童歡笑的臉龐中，看到數位音樂帶給他們的不只是創作的喜悅，還有那份成就感與自信心。

關鍵字：音樂，數位音樂，兒童，青少年，電腦配樂

Section : C-5

陳惠齡
No Provided

創造力的應用：從教育與心理健康到資訊科技

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摘要

雖然不同面向的創造力會因為不同的研究重點而被強調，創造力往往是能跨越紀律的一個重要元素。透過對創造力相關領域的廣泛討論及探索，從嬰孩以至於成年人，跨越各種不同領域像是心理健康、教育、高等教育、以及資訊科技，這篇論文的目的在於開啓一個對話，對創造力的重要性、它的多面向特色、以及它超越年齡層的廣泛使用作深入探討。

這篇論文的第一個部分著重於高等教育中具有創意的洞察力。一個對各領域中受過良好教育人士所作的創造力研究顯示，這些人很多都曾在接觸某些自然形式時經歷過具有創意的洞察過程。引用文學中對於創造力洞察的描述以及大自然對幫助復原的正面影響，大自然毫不費力即可吸引注意力的力量(魅力) 呈現的方式就像是擁有洞察能力的機械一般。除了展示這個理論性的框架以呈現大自然的角色在於促進有創造力的洞察之外，臨床實驗的結果與發現也會在論文中展現。博士生在致力於論文撰寫的思維以及工作地點將可以透過重複測量評估。跨越各種工作環境的洞察力與注意力之間的比較以及認知經驗和環境魅力的關係也都會在論文中深入分析。這個研究的重要性在於辨析工作環境，特別是在集中性工作中以及在各種不同專業領域中的創造性解題模式具有傳導性質的環境。這個由自然促進洞察力的機械體調查研究也預期在大自然的恢復作用及洞察力方面促成文獻的產生。

超過了一個世紀，大學教育基本上都遵循著一個標準的格式：教師用講授的方式上課，學生聽著教師念著發黃的、折爛的書上記載的內容。接著學生被指定一個作文題目或是到實驗室做著好幾代都重複做的相同實驗。在教學方法上，這個方法已經落伍了。一個聽力實驗將可以滿足那些擁有口語及語言知識的人，但對於那些透過視覺及實作學習的人而言就沒有那麼有效果了。理想的方法將是讓教師對每個學生一對一指導，學習並指出他們的需要。這對一個人數常常逼近百人的大一課程教室規模而言是不合理的期待。當今的教師們要如何有創造力地將傳統大學規格應用於現今學生身上呢？最明顯的策略將是減少學生人數對教師人數的比率，也就是增加教師人數或減低學生人數。這兩者都不是教師本身能掌控的，但是有創造力的方法可以在本質上反映出這樣的企圖。要在表面上增加教師的數量，只要增加學生可以求助的專家數量；要做到這點，可以採取聘用研究生、助教、高年級生、或是已經修過此課程的同學作為協助。而要在表面上減低學生的數量，在課程中可以採納分組的方式；將學生分成不同組別，讓學生互相幫助進而達到減少學生對於教師尋求協助的數量。

這份論文的第三個部分有兩個層面。首先文中將會談論到，針對有特殊需求的學生，要如何在教室環境中運用有創意的教學法來吸引並維持他們在課堂上的注意力。接著將會有針對創意教學實施在有特殊障礙學生上之效用的理論性討論與文獻探

討。創造力教學迫使教師必須發展出替代的教學框架像是改變教學方式，所以訓練的重點將會是有關教師的準備工作，因為就以往的傳統方法而言，教師在與擁有各種不同需求的學生互動時往往沒有接受創造力教學的技巧訓練。透過這份論文我們希望能夠促進更有深度的探索與發現，讓教育工作者能夠了解這份工作的難度並貼近孩子們的需要。

這份論文的最後將透過對幼童及其家庭的個案研究以探討創意治療的技巧。研究中指出孩童在親近且擁有安全感的人與人關係中表現出經驗、調整、並且表達情感能力的重要性。含有風險的因素包括:早產、營養不良、生理或神經受損、藥物及酒精傷害、父母心理健康因素、生活壓力(工作和婚姻)、早已存在的養育子女信念、以及移民狀態都有可能影響健康的協調性以及父母和孩子間的關係。

總而言之，這個針對孩童心理健康的實驗是將不同領域學問及大成的成果，目的是幫助孩童能在生理健康、社會心理功能、以及可理解的養護關係中達到最理想的發展潛能。換句話說，健康的情感連系將有助於促進正常的發展模式、汰換不健康的人際關係並且在必要時終止功能不良的惡性循環。當一對親子在互動時，適時運用創意治療性的技巧像是遊戲治療及感官玩具以促進健康的情感聯繫、自我管束以及人際關係是非常重要的。

關鍵字: 創造力, 教學, 自然, 心理療法

*由於本文作者為外國學者，逕由本辦公室特聘人員翻譯，以利中文讀者閱讀。

Applications of creativity: from education and mental health to information technology

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Abstract

Creativity is often an essential element across disciplines, though different aspects of creativity might be emphasized depending on the subject matter being investigated. By providing a broad discussion and exploration on the relevance of creativity from infancy to adults across various study domains such as mental health, education, higher education, as well as information technology, this symposium intends to initiate a conversation about the significance and multi-faceted constructs of creativity and its use with diverse population across lifespan.

This first section of the symposium will focus on creative insight in higher education. A study on creativity in the lives of accomplished individuals across diverse domains indicated that many of them had experiences of creative insight while in contact with some form of nature. Drawing from literature on creative insight and nature's impact on attention restoration, nature's ability to attract attention effortlessly (fascination) is presented as the mechanism allowing the insightful experience. Apart from presenting this theoretical framework for nature's role in facilitating creative insight, the findings of a pilot study will also be reported. Doctoral students' thought processes and work locations while working on a Master's thesis proposal will be assessed in a repeated measures design. Comparisons of insight and attention across work settings and the relationship between cognitive experiences and the setting's fascination will also be analyzed. The applied significance of this research is in identifying work environments that are especially conducive to focused work and creative problem solving across different professional domains. Investigation of the mechanism by which nature facilitates insight is also expected to contribute to the literature on nature's restorative impact as well as insight.

Undergraduate education has typically followed a standard format for well over a century: faculty members orate, regaling their students with lectures read from yellowed, dog-eared pages. Students are then assigned paper topics or sent to laboratories to engage in the same tasks as their predecessors for generations. Pedagogically, this approach falls short. An auditory experience is satisfying for those with verbal and linguistic intelligence, but less effective for those who learn visually or through doing. An ideal approach would be for the faculty member to spend one-on-one time with each student, learning about and addressing their needs. This is an unreasonable expectation with class sizes for first year courses often ballooning into the hundreds. How can today's faculty creatively engage students within traditional university parameters? The most obvious strategy would be to decrease the student to faculty ratio by increasing the number of faculty or decreasing the number of students. Neither of these are within the control of the faculty member themselves, but creative approaches can essentially mirror such endeavors. To seemingly increase the number

of faculty, one need only increase the number of experts to whom a student has access. This can be done through the recruiting of graduate students, teaching assistants, senior undergraduates, or classmates who have already completed the course. To seemingly reduce the number of students, allow group experiences within the curriculum. By combining students into small groups, students often assist one another, reducing the number of demands made on the faculty member.

The third portion of the symposium will be twofold. First, ways to engage special needs students in classroom setting will be discussed as these students often require creative uses of pedagogy that attempt to capture and sustain students' attention in the learning process. This discourse will be followed by theoretical discussion and literature review that highlight the foundations of using creative interventions with students with disabilities. For the reason that creative instructions necessitate teachers to have an alternative framework that often entails paradigm shifts, training issues with regards to teacher preparation will be the focus since teachers who have traditionally not been trained in creative teaching techniques when interacting with their students, especially students with different needs. It is hope that this discussion will facilitate an in-depth discovery for educators to meet the needs of difficult to serve children.

This symposium will conclude by the exploration of creative therapeutic techniques with very young children and their families through case examples. Research has documented the importance of children's capacity to experience, regulate, and expression emotions through the formation of close and secure interpersonal relationships. Risk factors including premature birth, poor nutrition, physical and neurological damages, drug and alcohol exposure, parental mental health issues, life stressors (job and marriage), preexisting parenting belief, and immigration status might affect healthy attunement and attachment between parents and their children. In sum, the practice of infant mental health is a strength-based multidisciplinary collaboration to support children in achieving optimal developmental potentials in physical health, socio-emotional functioning, and attuned care-giving relationships. In other words, healthy attachment will support normal developmental progress and alter unhealthy relationship patterns to break cycle of dysfunction when deemed necessary. In working with parent-child dyad, creative uses of therapeutic techniques, e.g., play therapy, sensory toys, etc., that promote healthy attachment, self-regulation, relationship are of prime importance.

Keywords: creativity, teaching, nature, psychotherapy.

知識移轉對組織學習與創新績效的影響： 組織文化的調節效果

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摘 要

本研究基於組織學習理論探討組織知識移轉、組織學習及創新績效的關係模式，並進一步探討不同組織文化對此創新績效模式的調節效果。以問卷調查法蒐集資料，研究對象為台灣前 1500 大企業組織之教育訓練部門，回收有效樣本為 1106 份。以結構方程進行資料分析，基於研究結果，顯示組織學習對知識傳播與創新績效具部分中介效果，而組織文化中的內/外向文化對創新績效模式具部分調節效果。最後依據研究結果提出理論與實務意涵。

關鍵字：組織文化、知識移轉、組織學習、創新績效

The Impact of Knowledge Transfer and Organizational Learning on Innovative Performance: an Moderation Effect of Organizational Culture

Yu-Shu (Jason) Chen & Ming-Chien Kuo

Abstract

The purposes of this study, based on organizational learning theory, are to explore the structural relationships among knowledge transfer, organizational learning and innovation performance, and the moderation effect of organizational culture on the innovation performance model. The survey method was used to collect data. Study samples are departments of education and training from the Top 1500 fortune companies and got 1106 effective questionnaires. The results of structure equation modeling found that the partial mediation effect of organizational learning on knowledge transfer and innovation performance and the partial moderation effect of internal/external organizational culture on the innovation performance model. Basing on the result, theoretical and practical implications were proposed.

Keywords: Innovative performance, knowledge transfer, organizational culture, organizational learning

目標導向對創造力訓練效果之影響：HLM 成長模式分析

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摘 要

本研究採用準實驗研究設計以及縱貫研究的方式，探討目標導向與創造力訓練成效的關係。本研究目的主要有二：其一，探討時間對創造力訓練之影響趨勢；其二，探討不同目標導向對創造力的影響趨勢。參與實驗之學生共計 61 人，刪除不適樣本後，最後分析樣本為 56 人。在訓練過程中共實施兩次創造力測驗（訓練前、訓練後），及一次目標導向量表（訓練後）。在訓練後則進行創造力測驗的持續追蹤（訓練後三個月、訓練後六個月），共計得到四個創造力測驗時間點，並於第二個時間點加測了目標導向量表，整個實驗及追蹤研究共歷時 15 個月。在資料分析上，以階層線性模式來進行整個創造力成長的改變情形分析。本研究結果發現時間可預測創造力訓練之遷移情形，並呈現先上升後下降的二次成長曲線形式。不過個人目標導向皆無法顯著預測創造力成長曲線的改變情形。最後，本研究針對上述結果，進行理論意涵與實務意涵上的討論，並說明本研究之限制及後續研究建議。

關鍵詞：目標導向、創造力、縱貫研究、創造力訓練、階層線性模式

The Impact of Goal Orientation on Creativity Training: An Analysis of Growth Model of Hierarchical Linear Modeling

Yu-Shu (Jason) Chen & Chi-Wei Chou

Abstract

In this study, we used quasi-experiment and longitudinal design in order to explore the relationship between personal goal orientation and the effect of creativity training. This study had two purposes. First, it was to explore the impact of the time on the trend of creativity training. Second, it was to investigate the impact of personal goal orientation on the trend of creativity training. There were 61 students participating in this experiment. After deleting unsuited samples, there were 56 final samples to be analyzed. Creativity test was conducted twice during the creativity training (pre-training and post-training) and a goal orientation scale was conducted once (post-training). After the creativity training, we also tracked the behavior of the participates by administering the creativity test once after three months and also once after six months. Over a 15-month period, the creativity test data was retrieved from four time points, with an additional administration of the goal orientation scale. Data analysis was conducted using the hierarchical linear modeling (HLM). The result indicated that time could predict the transfer of creativity training and the transfer had a growth curve in the form of a negative quadratic trajectory as. However, personal goal orientations could not predict the changes in the growth curve of creativity. Based on the aforementioned result, theoretical and practical implications were discussed and the limitations of this study were identified with suggestions for further research.

Keywords: goal orientation, creativity, longitudinal study, creativity training, hierarchical linear modeling.

教師創意教學職能量表發展：試題反應理論之應用

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摘 要

為培育出新一代的創意學子，教師本身所具備的創意教學職能則顯得相當重要。本研究旨在透過 Spencer 與 Spencer 的職能發展方法，來發展一份教師創意教學職能量表。本研究以 200 位創意教師以及 200 位一般教師為分析樣本，並透過試題反應理論中的 Rasch 模式來分析教師創意教學職能量表，以區分職能行為的難度。最後，本研究將根據受試者的反應分析以及結果發現，提出理論與實務意涵及後續研究建議。

關鍵詞：創意教學、職能、試題反應理論、Rasch 模式

The Scale Development of Teachers' Creative Teaching Competency: An Application of Item Response Theory

Yu-Shu (Jason) Chen & Chi-Wei Chou

Abstract

In order to develop students' creativity, the teachers' creative teaching competency becomes more and more important. The purpose of this research is to develop teachers' creative teaching competency inventory based on Spencer and Spencer's development method of competency. Rasch model analysis was used to analyze the test data from 200 creative teachers and 200 normal teachers. Based on the response of the samples and aforementioned result, theoretical and practical implications were discussed and the limitations of this study were identified with suggestions for further research.

Keywords: creative teaching competence, item response theory, Rasch model

大學教育相關課程融滲式創造思考教學量表編製

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摘 要

本研究結合創造思考教學與融滲式教學之觀點，將專業課程視為「承載課程」，創造思考教學之內容則為「寄載課程」，將兩種課程以融滲(infusion)的方式進行，使學生在原本的專業課程中，能針對所學，激發其創造思考的能力。因此本研究目的在於歸納融滲式創造思考教學之原則與策略，進而編製為量表，建立其信、效度。本量表共分為 5 項構面，分別為：(1)支持與鼓勵的態度；(2)團隊互動與合作；(3)問題解決；(4)挫折容忍及(5)評鑑多元化。研究對象為大學校院中教育相關之課程，包含各教育大學、一般大學及技術學院中師資培育中心所開設之教育課程，共 183 種教育課程，回收 203 份有效問卷。並且為讓學生能真實感受大學教師之授課方式與內容，問卷填寫時間為期中至期末。本研究採用多特質多方法(MTMM)統計方式，採用大學教師與其授課課程中 5 位修課學生兩種方式，對 5 項特質進行問卷的填寫，進而進行聚斂效度、區別效度及方法效應的檢驗。本研究結果顯示，經由 203 位教師及其學生的填答，量表信度良好，驗證性因素分析結果顯示收斂與區別效度達顯著，然 MTMM 分析結果顯示聚斂效度與區別效度效果不顯著，並存在方法效應，可提供教學人員對於教學上之參考。

關鍵字：創造思考教學策略、融滲式教學、多特質多方法、大學教師

The Scale Development of Infusing Creative Thinking into Instruction for the Courses related to Education at Colleges

Yu-Shu (Jason) Chen & Jung-Yuan Yeh

Abstract

In order to encourage creativity of undergraduate, professor should infuse creative thinking instruction into the original curriculum. The purpose of the research is developed a scale for infusing creative thinking teaching. The scale, developed by 5 factors (support, group, problem solving, frustration and assessment) including 20 items in this study, is a measure of college teachers and who's 5 students. A total of 203 college teachers in the university delivered the course about education were used for filling out the questionnaires. Result indicated the reliability are supported, but the construct validities are not supported via MTMM. The usefulness and limitation is discussed.

Keywords: creative thinking, infusing creative thinking into instruction, MTMM, college teacher

創造力訓練對創新教學行爲的影響：HLM 成長模式分析

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摘 要

本研究以 55 名國中、小學在職進修教師為對象，探討創造力訓練課程對在職教師創造力的訓練效果與遷移效果。透過階層線性模式(HLM)之成長模式分析，瞭解創造力訓練對在職教師的創造性認知、創造性情意與創新教學行爲的影響。並以目標導向理論作為調節變項，探討其對學習曲線與遷移曲線的影響。結果發現，創造性認知與創造性情意的學習效果二次曲線趨勢顯著，但創新教學行爲的學習效果二次曲線趨勢不顯著；目標導向能顯著預測創新教學行爲的截距項且對創造性情意的曲率具有調節效果；創造性認知、創新教學行爲的遷移效果二次曲線趨勢顯著，但創造性情意的遷移效果二次曲線趨勢不顯著；目標導向能顯著預測創新教學行爲在遷移效果的截距項且同時對曲率具有調節效果。

關鍵字：在職教師、階層線性模式、學習曲線、遷移曲線、目標導向。

The Impact of Creativity Training on Innovative Teaching Behavior: An Analysis of Growth Model of Hierarchical Linear Modeling

Yu-Shu (Jason) Chen & Cheng-Yi Cheng

Abstract

This research take 55 elementary and junior high school incumbent teachers in order to explore the impact of creativity training to the creativity training effects and transfer effects of incumbent teachers. Use an analysis of growth model of hierarchical linear modeling to understand the impact of creativity training to creative cognitive, creative affective, and innovation teaching behavior of incumbent teachers. And use goal orientation theory as moderator to understand it how to impact learning curves and transfer curves. The result indicated that the learning curves of creative cognitive and creative affective are significant, but the learning curve of innovation teaching behavior is non-significant. In learning effect, goal orientation can predict the intercept of innovation teaching behavior and have a moderated effect of creative affective. The transfer curves of verbal creativity, creative affective, and innovation teaching behavior are significant, but figural creativity is non-significant. In transfer effect, goal orientation can predict the intercept of innovation teaching behavior and have a moderated effect of innovation teaching behavior.

Keywords: Incumbent teacher, hierarchical linear modeling, learning curve, transfer curves, goal orientation.

台北場

場次 D

TAIPEI

SESSION D

Huang-Yao Hong
未提供

Examining Pre-service Teachers' Perception of Knowledge-Building Principles for Building Community Knowledge

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Abstract

Previous research has suggested that teacher's deeper understanding of, and capacity to implement, knowledge-building principles are critical for the development of a knowledge building community. Yet, it remains a challenge as to how to effectively help beginning teachers attain a deeper understanding of the principles. As an exploratory research, this study attempts to assess pre-service teachers' early conceptions about the knowledge building principles. Preliminary findings based on survey data suggest: pre-service teachers do not necessarily perceive of all knowledge-building principles as equally important or feasible for knowledge advancement; and there is a significant discrepancy observed between knowledge-building theory and practice as perceived by the participants. Implications for instructional design in order to help pre-service teachers develop a deeper understanding of knowledge-building principles are discussed.

Keywords: Knowledge building principles, pre-service teachers, instructional design

Shu-Hua Kao
未提供

Fostering the Students' Creativity in their English Learning through the Promotion of Learner Autonomy

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Abstract

Creativity education has been largely stressed in modern education, and so has the concept of learner autonomy in the field of English language teaching. Although the concept of creativity is not a new theme in English language teaching, however, there seems to be a neglect of research on linking the concept of creativity education directly to the promotion of learner autonomy. An exploration of such a link between the concept of creativity and learner autonomy seems to be significant as they both involve important factors that influence students' English learning. To be specific, the most successful approaches to teaching creative thinking "seem to be those that involve both cognitive and emotional functioning" (Torrance and Torrance, 1973: 6). Such a focus on aspects of 'cognitive' and 'emotional' functioning could be reflected on the two important factors that influence the development of learner autonomy, which are 'capacity of learner autonomy' and 'willingness to be autonomous in language learning' suggested by Holec (1981) and Little (1996). As the capacity of learner autonomy embraces concepts such as the learners' cognitive and metacognitive knowledge (Sinclair, 2000b), it seems that it involves a great deal of the 'cognitive' aspect of functioning. On the other hand, the learners' 'willingness to be autonomous in language learning', which is closely related to factors such as the learners' attitude (Little, 1996), and motivation (Dornyei, 1998), seems to be related to the 'emotional' functioning. On the basis of this inference, it might be possible that helping the students to develop greater learner autonomy could lead to the development of the other and vice versa. This paper aims to explore how the students' creativity could be fostered through a series of learner training activities adopting a four-phase framework of promoting learner autonomy (Kao, 2007) to a group of undergraduate students. Qualitative research methods were employed in this study based on a constructivist stance. The results suggest that the students seem to be able to ask more creative questions in relation to their English learning. Besides, with an explicit encouragement of brainstorming on all possible ways to learn English, the students show much greater confidence talking about their imaginative ideas. The evidence seems to suggest that, through the promotion of learner autonomy, the students seem to be more confident in sharing their creative ideas. However, the issue of whether or not these creative ideas, especially the very practical ones, will be employed by the students in their English learning may require further investigation.

Yu-Ming Fei

未提供

Integration of Creativity, Innovation, and Entrepreneurship: A case study of “creativity problem-solving” course design.

Yu-Ming Fei
Huang-San Wang

Chiuhsiang Joe Lin
Ching-Jung Liao

Abstract

The purpose of this paper is to analyze the important competitive elements of knowledge economy - Creativity, Innovation, and Entrepreneurship (C.I.E.). In this knowledge age, our knowledge changes continuously and rapidly. With outdated knowledge, teaching materials will not be able to create a competitive advantaged environment. Therefore, teachers need to constantly adopt creativity, to pursuit innovation, and to develop the imagination in their course base on the fundamental knowledge. With these special designed courses, students will have outstanding competitive ability in this knowledge economic age. In this research, it will focus on the course of how imagination can be well applied step by step in “creativity problem solving”. In the course, there were three classes with total numbers of 125 students. Students from different faculties with different thinking style were grouped by heterogeneous teams. In the team, they learned from the special designed imaginative course and interacted with each other followed by the instruction of the collaboration of learning. In the end of school term, students utilized their knowledge in their own specific field to produce a creative and innovation product with full of imaginative power from the initiative phase of product design and product promotion. According to the analytic results of the observer’s record, the inter-relationship is discussed among elements of affective learning and course contents. Results of this study showed that a creative teacher can combine life experiences with scientific innovative teaching, to help students develop problem-solving ability. The study points out the importance in explaining the dynamic relationship between creative teaching situation and strategy used, as well as stimulating the teachers to be more creative with a better understanding of how students’ beliefs about affective learning related to their strategy used. Through the studying, students can have confidence in developing new product or adopting new ideas in the future.

Keywords: creativity; innovation; entrepreneurship; creativity problem solving.

台灣、加拿大與美國姐妹校和姐妹市的創造力結合教育與市政單位

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摘要

這份論文的目的在於研究台中縣市(台灣)、Fraser-Fort George 地區(加拿大, 不列顛哥倫比亞省)、Algoma 地區(加拿大, 安大略省)以及 Chippewa 地區(美國, 密西根州)在政策擬定以至於實行, 從過去到未來對於雙方教育以及城市協定的願景特色。這些縣市省份的個人面談及意見調查表都在市長、立法委員、初等及中等學校校長、教育委員會、家長會代表、教育總監、以及各大學校長的指揮下進行。

這些研究參與者清楚表達了市政單位與初等及中等學校為何要主動參與國際間合作之原因及價值的概念。這些市政及教育關係人都盼望和國際間的夥伴尋求合作關係以尋求共同的教育、社會、政治、以及經濟上的國際合作機會。這份研究的參與者認為, 現今社會的學生們早已運用起科技主動地與世界各地的年輕人有所接觸; 只是, 在教育體制方面似乎還未跟上這個現象的腳步, 依舊在原地空轉。這些教育體制應當要採用並引導這種 "學生對學生" 以及 "教師對教師" 的相互連結; 如此一來, 全球公民課程將可以從淺層的認知領域拓展進步到實際的時間、參與、以及行動的實質學習領域。

就過去歷史來看, 市政當局, 也就是高等教育單位以及商業實體早已跟他們的對等機構有所接觸; 值得注意的是, 負責管理初等及中等教育的教育體制並沒有向外尋求與全球夥伴的合作關係。在我們的教育體制中, 是否可以找到一個全球合作與創造力的新契機呢? 這份研究將會展示國際合作將在不同領域間相互作用, 包括: 社區、校區、各級學校、行政人員、教師、學生、以及家庭。事實上, 當許多回應者希冀追求的只是用 "姐妹市" 及 "姐妹校" 形式創造的雙方協定時, 很多人認為在一個可實行的準則被提出之前, 這樣子的關係只是虛設的而已。這份論文將會針對這些現有的協定、未來何種協定或是安排將最有潛力提出關鍵性的意見, 並且為想要參與雙方市政及教育協定的管轄權提出一個明確的規範。

關鍵字: 姐妹校; 姊妹市; 初等及中等教育; 雙方協定, 國際合作; 全球公民

Engaging Education and Municipal Stakeholders with the Creation of Sister Schools and Sister Cities in Taiwan, Canada, and the United States

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Abstract

The purposes of this paper is to investigate the characteristics of past, present and future prospects of bilateral education and municipal agreements from policy to practice in the City and County of Taichung, Taiwan, R.O.C.; the Regional District of Fraser-Fort George, British Columbia, Canada; the District of Algoma, Ontario, Canada; and, the County of Chippewa, Michigan, U.S.A. Personal interviews and questionnaires were conducted with mayors, legislators, elementary and secondary school principals, board of education trustees, chairpersons of school district parent advocacy associations, directors of education and presidents of colleges and universities. These research participants articulated their conceptualization of the desire, value, and reasons why municipalities and elementary and secondary schools ought to actively engage their international counterparts. These municipal and education stakeholders yearn for engagement with their international counterparts in order to seek and pursue mutual educational, sociocultural, political, and economic opportunities for international cooperation. Participants in this research study are cognizant that students today are already actively engaging other young people across the world using technological applications yet it appears that these education systems are sitting idle and not capitalizing on this phenomenon. These education systems ought to be embracing and leading this “student to student” engagement and “teacher to teacher” engagement so that the global citizenship curriculum could move out of the cognitive domain of simple awareness into the authentic learning domain of real time participation and action. Historically, while municipalities, institutions of higher education and commercial entities have long since engaged their counterparts, it is noteworthy to point out that the education systems governing elementary and secondary schools have not typically sought to reach out to their global counterparts. Could there be a new opportunity for global engagement and creativity in our education systems? This study will demonstrate that international engagement can occur mutually in a number of spheres including communities, school districts, schools, administrators, teachers, students, and families. Indeed, while respondents desire the pursuit of creating bilateral agreements in the form of “sister cities” and “sister schools”, many view such relationships as merely hypothetical until a feasible model is provided to them. This paper will offer critical reflections on these existing agreements, what potential future agreements or arrangements might look like, and propose a prescription for jurisdictions that would want to engage in bilateral municipal and education agreements.

Keywords: **sister school partnerships; sister cities; elementary and secondary education; bilateral agreements, international cooperation; global citizenship**

特性要因圖對高職生創意問題解決能力之影響

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摘 要

特性要因圖（又稱魚骨圖）已被企業界廣泛運用在各項問題解決並獲致立意甚佳的創新成效（William J. Kettinger, James T. C. Teng and Subashish Guha, 1997）。然而在我國高職教育實習課程中運用此策略之研究甚為少見，因此本研究嘗試使高職學生運用特性要因圖作為工具，對其設計專題作品過程中所遭遇的問題進行分析，進而發揮創意思考能力以解決問題。本研究採取質性研究方法，以高職資訊科三年級「專題製作」課程為探究背景，共三十六位學生，每四人分成一組進行學習；課前預先設計八週創意思考教學教案，以腦力激盪法及特性要因圖為主要策略，課中採用課堂記錄表觀察各組如何運用上述策略，能否順利解決設計作品過程中出現的問題。研究期間並進行訪談，所蒐集資料以創意問題解決（CPS）三成分進行編碼與分析，小組創意作品完成後邀請專家進行評量，其數據與訪談資料進行交叉比對，並邀請評量專家、研究者、授課教師、小組成員等進行三角檢證，歸納後獲致以下結論：一、小組善用特性要因圖程度對其創意問題解決能力表現具有正向影響。二、小組善用特性要因圖程度對小組在專題設計作品創意度上表現具有正向影響。本研究對教師採用相關教學之建議如下：一、協助學生釐清特性要因圖定義及使用方式。二、對於無法善用特性要因圖進行問題分析的小組，教師須立即支援回饋。

關鍵詞：特性要因圖（魚骨圖）、創意問題解決（CPS）能力、專題製作

陳秀玲、蘇筑筠、許信德

No Provided

Section: D-2

Yi-Hsin Chen 、 Chu-Hsun Kuo

未提供

A study of integrating “green energy” into senior high school curriculum by thematic inquiry teaching

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Abstract

The purpose of this study was to integrate green energy (GE) course unit into physics curriculum of senior high school by thematic inquiry teaching. By way of observation the teaching process, we are interested in knowing the practicability of GE being integrated into physics curriculum of senior high school. Employing face-to-face interview, we wish to comprehend the attitude changes of students. Subjects were 42 senior high school students in the central of Taiwan during 2007 schooling year. First of all, four senior high school master teachers were invited to assess material for GE course unit. Then, we used observation and interview to comprehend teaching process, interaction between teacher and students, and students' attitude toward this curriculum.

The major findings of this study are as follows:

1. It's feasible for integrate GE into physics curriculum of senior high school by applicable strategies instruction and cohere with living topic.

2. Thematic inquiry curriculum design has to match up life experiences. The teacher is expected to serve as a guider, and conduct students to debate.

3. After finishing this experiment, students' learning attitudes toward GE are verified as follows:

(1) As compared with control group, this course unit had provided the experimental group students a positive attitude toward learning on GE subjects. When confront problems, students' attitudes convert to active and energetic; and, the ability of problem-solving is improved.

(2) Students are accepted GE course unit as one of major physics curriculum, definitely rose learning interest in energy topic and knowledge.

According to the results of this study, we provide some concrete suggestions for the physics curriculum development of senior high school in the future.

Keywords: Green energy, Senior high school curriculum, Thematic inquiry teaching

高中生自製短片中配樂運用之創意研究

桑慧芬

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摘 要

近年資訊傳播媒體的高度發展，傳播媒介已經成為年輕一代建立世界觀及價值觀的重要來源。有識於資訊時代的來臨，教育部亦鼓勵學校發展資訊能力與應用資訊科技之相關課程。其中，高中生活科技領域的課程設計因其學科本質最貼近資訊科技的學習與應用，已蔚為趨勢地由專業教師設計相關教材與課程，於正式課程中授予高中學生，學習影音製作技術的知識，並指導學生實地操作完成短片拍攝。本研究立基於肯定這類課程培養思辨能力並提升閱聽素養與品味的學習成效，期進一步了解學生作品中所呈現的音樂創造力，如何在影片創作中，創意運用音樂元素，發揮音樂輔助影像敘事的功能。

研究對象為台北市立建國高級中學所舉辦之「駝斯卡金像獎」比賽之歷屆得獎作品。研究方法為運用「批判論述分析法」(Critical Discourse Analysis)之質性研究，進行影像與音樂元素的文本分析。首先藉由文本分析法解構影像的敘事元素，找出符徵[能指項](signifier)與意義顯化[所指項](signified)的符號。繼之分析音樂元素的來源、性質，並加以分類。接著將影像與音樂元素找出對應關係，運用「批判論述分析法」探討影音符號之間的顯性與內隱含意，目的在於瞭解音樂元素之選擇與應用的創意思維為何。

研究發現音樂素材來源與學生生活經驗有極大的關連，同時音樂類型反映出流行音樂文化是高中生生活風格的重要部分。運用手法以後現代拼貼方式為主，其中不乏熟練運用非線性數位剪輯技術所創造的新穎音響。同時，少見整曲或大篇幅運用原曲的例子。自創之新音樂所佔整體音樂來源的比例最低。綜合而言，音樂元素被視為輔助影像敘事的工具，雖頗有創意表現，但尚未能認知音樂本身亦有敘事功能，研究者推論此現象或因缺乏對於影音敘事中關於音樂美學的知識。本研究有助於教學者與創作者了解影像敘事之外的音樂元素的運用與創意表現程度，進一步思考創意教學策略與創作觀點的調整。

關鍵字：應用音樂、音像藝術、駝斯卡金像獎、批判論述分析

High School Students' Creative Short Film Production : An analysis of the winners of Toscar Contest

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Abstract

This paper examines two winners of the Toscar Contest with the purpose to illuminate how high school students perceive music as a crucial element in film production. In our digital world, technological literacy is an important part of a student's education. With the 'Toscar' contest, participating students have a unique opportunity to show their knowledge and skills of film production as well as nurture creativity, innovation and leadership skills. It is acknowledged by researchers and school teachers that after completing the project, students would have been able to use a digital video camera to film their piece of work and add music or sound to their project from their personal audio-video library. Moreover, they are able to tell an original story in a different format and become more discerning viewers of film. With respect to this, the present study aims to explore the way students use to create a short film and in particular how they employ the audio elements as well video elements to deliver their ideas and perform their creativity.

The focus of this study falls on the applied music employed in students' short films. Historically, film music is a contingent necessity. It has been said that film music originally appeared largely to cover up the sound of the clanky machines which projected the earliest of the silent films. Yet the accompaniment of film by music survived beyond the end of its means. The reason that film music survived and flourished was and is that it represents a flowering unfoldment of a deeper necessity, located in the way subjects process reality. The deeper reality of film music involves the way the film tries to evoke a sort of temporary and illusive "film-subjectivity," which closely mimics our everyday subjectivity. To do this, the film experience must imitate in some way all three overlapping dimensions of subjective reality: the symbolic, the real and the imaginary. The method by which this is done involves very heavily the use of film music.

For this study a qualitative method is used to create a holistic and natural setting for interacting with the data. The benefits of qualitative research in this study include the potential for rich contextual insights, and to allow for the construction of potentially significant understandings. A critical stance is accordingly taken to capture the complexity of creative short films, which are multifaceted, socially situated texts, and therefore requires methods of discourse analysis. Critical Discourse Analysis is an interdisciplinary approach which views language as a form of social practice and focuses on the ways discourses are reproduced in social contexts.

The potential audience of this study is wide and diverse but in this study it is defined as teachers, curriculum designers, and others whose work relates to creative media production. Prior to teaching students to understand the technical skills of film production, it is concluded that a teacher needs the musical knowledge and aesthetic perception to firmly build students' musicality, particularly the ability to comprehend music through listening.

Keywords: Applied Music Arts, Arts of Images and Sound, Toscar Award, Critical Discourse Analysis

餐飲業的商業創新模式

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摘 要

近年來，台灣「王品集團」和「展圓國際」戮力「自創」多個餐飲品牌，發展連鎖經營體系，並且跨足中國大陸市場，已有一定的成果。至 2007 年底，「王品集團」在兩岸共有 9 個自創餐飲品牌，兩岸合計 95 家「直營店」（臺灣 67 家；中國大陸 28 家），兩岸營業額 43.1 億；「展圓國際」在兩岸共有 1 個代理餐飲品牌和 6 個自創餐飲品牌，兩岸合計 48 家分店（臺灣合計 38 家「直營店」和「加盟店」；中國大陸 10 家「直營店」），兩岸營業額預估已達 10 億。

本文將描述兩個餐飲集團如何用不同的方式—「從激發創意、評估創意和辨識機會、研究開發新產品到商業化」的創新流程，揭開兩個餐飲持續開發新餐飲品牌的秘密。

關鍵字：創意、創新模式、創新流程、商業化、王品集團、展圓國際

Section : D-3

楊舜慧、溫肇東

No Provided

結合腦力激盪與心智圖法協助職場衝突解決之研究

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摘 要

腦力激盪法與心智圖法是近年來對創造力或問題解決等有所助益。本研究的目的是在應用腦力激盪法與心智圖法提升解決職場衝突的思考方向。以國外某一個職場衝突管理個案簡化為測試題目，採取個人與團體運作的方式，來瞭解有關腦力激盪與心智圖法在解決部門衝突時的思考面向。研究發現，心智圖法的運作上，結合腦力激盪法時，所得的思考面向及解決之道最為周延，並發展一些相關指標來比較不同方法所產生的效果。本研究結果可提供學校與業界在解決職場衝突問題之參考。

關鍵字：腦力激盪、心智圖法、衝突、職場衝突

Using brainstorming and mind mapping methods to solve workplace conflict

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Abstract

Brainstorming and mind map methods play an important role in improving personal creativity and ideas. The purpose of this study is to find solutions of workplace conflict brainstorming and mind map methods. The case is adopted by foreign company. The results indicated that most effective are mind map combined with brainstorming method. Those results of workplace conflict solutions could provide some suggestions for academics and practices.

Keyword: Brainstorming, Mind Map Method, Conflict, Workplace Conflict

從社會環境成份探討國中學童的科技創造力： 透過科技競賽策略

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摘 要

本研究以 Amabile (1996) 所提出的創造力成份模式之社會環境成份理論為基礎，旨在探討「科技創作競賽」現場中的社會環境因素對參賽學生科技創造力展現之影響，藉由影響學生科技創造力展現因素的歸納與分析，提供未來相關類型科技創作競賽舉辦時之參考，並作為生活科技教師營造適當學習環境以增進學生科技創造力之參考。

本研究透過科技競賽教學模組的設計實施，以問卷方式收集競賽中學生對環境之感受，並與其科技創造力分數做出比對分析。樣本取自國中八年級普通班學生共 248 人，分 82 組進行模組教學與競賽實施。

本研究主要發現如下：

一、創造力成份模式理論引用至教育情境中時須經過適當的變化，其中社會環境對學生科技創造力產生影響之主要因素為：「工作團隊的支持」與「工作負荷壓力」。

二、社會環境之「工作團隊的支持」成分，對學生於科技競賽中科技創造力展現產生影響之主要因素為：參賽小組分組類型、小組人數以及競賽場地之設計，其中以「小組分組類型」及「小組人數」等兩項因素對學生科技創造力展現產生之影響達到顯著。

三、社會環境之「工作負荷壓力」成分，對學生於科技競賽中科技創造力展現產生影響之主要因素為：評審老師是否在旁觀察、小組人數及家長或教師是否期待得獎，其中以「評審老師是否在旁觀察」及「家長或教師是否期待得獎」等兩項因素產生之影響達到顯著。

四、在活動後，由觀察學生的反應顯示：學童對於競賽課程較感興趣，且題目應給予充足的想像空間，並適度的限制材料以強迫思考，將對學生科技創造力之展現與持續成長有所助益。

五、部分社會環境因素對學生科技創造力展現之以影響雖未達到顯著，但其平均分數及實際觀察結果卻顯示該因素是值得再次研究之課題。

根據以上發現，研究者歸納提出若干舉辦競賽或教學及未來研究上的建議。

關鍵字：創造力成份模式，社會環境成份，科技競賽，科技創造力

A Study of the Junior High School Student's Technologic Creativity from Social Environment: Through the Strategies of Technology Contests

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Abstract

This study aimed at investigating how social environment factors influence the junior high school students' technological creativity performance in technology contests.

In this study, we reviewed the social environment influences of Amabile's component model of creativity, Nine-year curriculum Guidelines and the technology contests in Taiwan to design a technology contests teaching module for junior high school students. After the implement of technology contests teaching module, we investigated the self- perceive of students about the social environment influences in technology contests by questionnaire surveys. Then, we anglicized the questionnaires and students' technologic creativity performance in technology contests. Results of this study are summarized as followings:

1. The key social environment influence for students' technological creativity performance in technology contests are 「work group supports」 and 「workload pressure」.
2. There were significant differences in students' technological creativity performance in technology contests of the different group types
3. There were significant differences in students' technological creativity performance in technology contests of the numbers of members in a group.
4. There were significant differences in students' technological creativity performance in technology contests if the teachers observing the students' behaviors or not.
5. There were significant differences in students' technological creativity performance in technology contests between their teachers and presents' extent of expectation.
6. Students showed more interest in technology contests and their technological creativity would be enhanced with open-ended problem and moderately restricted materials making them to think.
7. Some of the social environment influences were not significant in this study, but they were still worth to do some research about the topics in the future.

Based on the findings, recommendations for practice, plan technology contests or curriculums and further research directions are provided.

Keywords: component model of creativity; social environment; technology contests; technological creativity.

高一基礎物理課程融入創造性問題解決策略之初探

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摘 要

普通高級中學課程綱要中，強調高中課程設計應該以啓發學生的問題解決能力、創造思考與探究精神，進而適應生活中的挑戰。本研究以CPS策略設計兩個科學議題之活動，並以實徵研究初探此教學模式對高一學生在創造力之情意與認知特質之影響。本研究以台北市某公立高中一年級之37名學生為研究對象，採用單組前後測之實驗設計方式，比較高一學生在實驗教學處理前後，創造情意特質與認知特質之表現情況，藉此評估所設計教學活動之有效性。

本研究的結果如下：（1）學生經過教學後，情意特質在冒險性、好奇心、想像力、挑戰性等四個向度與總分皆達顯著之進步；（2）學生經過教學後，認知特質在流暢性、開放性、變通力、獨創力、精密力與標題等六個向度上，除了流暢性與獨創力未達顯著進步外，其它向度皆達顯著之進步；（3）情意特質中之想像力特質在不同性別與學業成就間之交互作用達顯著差異，其效果為女生中的低分組表現顯著優於高分組，而男生中的高分組與低分組則未達顯著差異；低分組中的女生表現顯著優於男生，而高分組中的女生與男生則未達顯著差異。其它未達顯著交互作用的向度中，在總分的表現為女生顯著優於男生，另在好奇心特質為高分組表現顯著優於低分組。（4）認知特質中的六個向度，在性別與學業成就間之交互作用皆未達顯著差異。只有開放性特質為女生表現顯著優於男生，其它向度男女生表現皆未達顯著差異；另在高低分組在各向度的表現皆未達顯著差異；（5）CPS活動融入基礎物理課程中，學生大多對此學習方式與內容持正向的觀感及學習態度，普遍認為這樣的教學方式可增加創意與問題解決能力，並能引起學習物理的興趣。

關鍵詞：創造性問題解決、創造力、基礎物理

蔡子祥等

No Provided

創造力教學研究---以 T 大現代舞團體創作教學為例

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摘 要

創意不是藝術家的專利。企業界、教育界、家庭主婦、政治家、乃至一個準備聯考的學生都可以發揮創意去完成夢想（林懷民，2006）。奧修說：「創造力是存在中最大的反叛。」是的，當你要創造的時候，你得先拋棄一切的制約，不然你的創造只是一個仿效，一個複製品而已。人類需要一塊新的土壤——自由的土壤，當你用自己的方式去過生活時，創造力就如雨後春筍般油然滋長，那是個體在自由後展露的芬芳。然而，創造力即是產生創造行為的能力表現（葉玉珠,2006）。本研究之研究目的為探討不同場域環境的創造力培育，特以學校體育課程中的現代舞為主，以台灣某 T 大學之體育課程中的現代舞初級課為例，立意取樣其班級中的 2 組學生，隨機抽樣為研究對象，在取得受試者同意後，以 E-Mail 方式連絡進行半結構式問卷訪填，在根據填答卷內容取得 2 位同學進行深度訪談。將其所有資料收集並進行分析，研究結果顯示，同學對此創作教學表示有創造力啟發作用，認同其團體創作教學法，同時，同學間的互動及學習也有正面積極的價值，也表示喜歡創作，有同學表示在未來的時間將繼續從事與創作相關的活動（現代舞團體創作之動態成果將於多媒體圓桌論壇中呈現）。

關鍵字：現代舞、教學、創造力、創作、大學生

Section : D-5

李文心

No Provided

創意文學營課程教學與實施成效之研究

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摘 要

相關子題：不同場域環境的創造力培育

本研究旨在藉由「創意文學營」的創意寫作課程教學來激發學生寫作的創造力，並且研究「創意文學營」的教學歷程，與課程中師生教與學的互動情形、學生寫作的影響因素與教學後的成果呈現，最後則更進一步探討「創意文學營」教學方法在國中學生寫作作文教學上的適用性。

本研究的研究方法是以質的研究方法入手，藉由觀察、文件蒐集、訪談、量表與問卷、錄音錄影等方式，蒐集豐富的資料，進行資料的分析、描述，架構出研究對象在研究現場的種種思考、行動等等。其研究對象是基市某國中國二 16 位學生。

本研究主要結論如下：

- 一、根據教學實施結果分析得知：學生的作文在創意寫作評定量表上有顯著的進步，學生寫作的想像意象更鮮明，文字表達的能力更精準流暢，對於增進學生的作文寫作表現是有效且可行的。
- 二、根據寫作情意態度量表、課後訪談與課後回饋單的分析得知：全部 16 位學生認為「創意文學營」的寫作教學可以提升寫作能力和創造力。學生的作文態度有正面的轉變，更加肯定作文課程的價值，對於自己的寫作技巧也有所認同。
- 三、教師在「創意文學營」課程的教材設計，必須注意靈活運用多樣的教學策略，善於融入創造思考技法，則更能助益學生學習。
- 四、在「創意文學營」的教學方法方面，教師要注意到以下原則：（一）教學目標的單純化。（二）教學引導的重要性。（三）尊重學生的個人創作特質。（四）活動式的學習（六）給予學生適當而充足的創造引導素材。
- 五、創思作文教學中面臨的困難，在教師教學部分包括：課程設計上的堅持、教學時間的限制、教師教學態度的影響等等。
- 六、「創意文學營」的寫作課程可以啟發和訓練學生的創造力，活絡學生的創思想法、概念。學生經過本創思作文教學實施後，其寫作的意願大幅提升，寫作能力也逐漸增長中。

關鍵字：創新教學、寫作教學、創造思考教學

梁雅晴、張景媛

No Provided

開啓昆蟲世界的鑰匙

—小四生創意益智昆蟲賓果卡之產出

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摘 要

隨著時代的變遷，國小教師不僅是學生知識的傳播者，更肩負著開啓兒童探索及個人人格、習慣養成的重要推手，老師不單是知識傳遞者，而且是促進者。二十一世紀是具有創意，就具有競爭力的知識經濟時代，創新教學不僅可以激起學習的動機與興趣，更可以培養學生思考與多元的能力，教育當更能展現其價值。教學的產出，並不是僅代表培養具有豐富知識的學生，而是提供給學生豐富的學習機會，教師就像一個藝術家，結合各種要素創造出一個支持、培養與鼓勵學習的環境。用「有系統的思考方式」來教導學生，經過長年不斷日積月累地耕耘，學生漸漸懂得將習得腦海的知識與感受經驗，轉化為有創意、有想法的心血結晶。學習者可以將這些概念不斷反思、更新、重建，無論是創新思考、批判思考或解決問題之能力，皆是未來世界公民應具備的基礎能力。

本主題探究乃以教學單元設計為主，在內容上，以生活化、趣味化，導向昆蟲專門知識為主；在組織上，整合部分學科的特性；在學習方法上，以激勵學習者成為生產者及利用遊戲方式活化學習的內容；就現代教育觀點而言，課程或教材的發展已走向跨學科、整合化的方向，因此在教學上，結合一般專長及特殊專長教師，共同進行協同教學，師生共同討論，立下單元學習目標，期使學生能在自發性且有規劃性的多元課程安排下，成為一有創意的生產者。

此教學設計，我們透過「益智昆蟲賓果卡開麥拉」、「昆蟲王國」、「昆蟲日誌」及「再續益智昆蟲賓果卡」等四個相關主題，循序漸進，最後由師生共同研發設計，製作完成一套精緻的益智昆蟲賓果卡遊戲教具，並且經過學校的評選，交由廠商製版印行，當作校刊的隨刊贈品。這套創意的益智昆蟲賓果卡上的昆蟲照片由學生親自拍攝，不足部分由教授及教師支援；評量則由學生整理相關介紹資料，各自親自出題製作。此套益智昆蟲賓果卡教具，可藉孩子在遊戲中想「贏」的心理，提升學生主動學習的動機，將有關昆蟲的專門知識內化成自己的認知，達成從遊戲中學習的目的。而設計完成這套益智昆蟲賓果卡成品的這群四年級孩子，在整個學習活動的進行歷程中，不僅達到知識養成與問題解決的目標，且也培養了自發自主的學習態度。

此教學研究方案，具有以下幾個特色：一、在課程進行之前，先籌畫舉辦家長課程說明會，讓家長事先瞭解課程的時間軸及應配合事宜；二、在前測及影片教學的初探中，教師推估瞭解學生的先備知識，設計適當的教學架構（鷹架導向）；在活動的推展過程中，因需設計完成研發成品（專題導向），因此會不斷出現困難（問題導向），教師必須不斷協助並鼓勵孩子，尋求支持解決困難，堅持完成師生共同定下的目標（契約導向）；而從後測的結果中，我們亦可清楚看出學生在專門知識及情意態度的提升；三、昆蟲日誌的安排，使學生能時常內省，更清楚課程的安排及課後作業的進度要求，而促發自我要求的負責態度；四、課程結束後，學生樂意將所研發設計完成的益智昆蟲賓果卡教具推廣，分組實際至各班進行活動分享。

The Door to the World of Insects

--Fourth Graders' Making of Creative and Intellectual Insect Bingo Cards

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Abstract

In the 21st century, a knowledge-as-asset century in which people with more creativity will have more competitive ability, innovative teaching will not only arouse students' interest in studies but also develop their ability of multiple thinking. With the change of time, elementary school teachers can't be only satisfied with the role of knowledge-spreaders; they should go on to encourage students to study further by themselves. With this in mind, teachers should combine various conducive factors to provide students with a lot of learning opportunities. They should teach students in a way of systematic thinking so that students may gradually turn their knowledge and experience into creative and thoughtful products.

This subject research emphasizes unit design teaching, with vivid and interesting knowledge of insects as its content, combination of some subjects as its organization, and multiple course arrangement as its study method. The teaching design will go through four related topics--"intellectual insect bingo cards- camera," " insect kingdom, " " insect journal, " and " subsequent intellectual insect bingo cards" and then teachers and students will collectively research, design, and make a set of insect bingo cards as teaching tools, which can be given as gifts with the school bulletin. The pictures of insects on the bingo cards will be taken by students themselves. If the pictures are insufficient, professors and teachers will provide necessary pictures to make them complete. The questions in the evaluation will be given out by students themselves after they digest related introductory information. Just because students want to "win" in the games, this set of bingo cards can enhance their motive of active learning and help internalize their knowledge of insects. The fourth graders, the designers of these bingo cards, can not only achieve the goal of increasing knowledge and solving problems but also develop their active study attitude.

This teaching research plan has the following characteristics: (1) Before the course starts, teachers will explain the course plan to the parents so that they can understand the time axis of the course and the needed help. (2)By the pre-test and the movie teaching, teachers may estimate students' background knowledge and then design suitable teaching structure (scaffolding -based). Just because students need to design, research, and develop new products during the process (project -based), they will encounter difficulties again and again (problem -based). Under the circumstances, teachers should always encourage students and help them resolve their difficulties and achieve the expected goal planned together by teachers and students (agreement -based). By the result of the post-test, we can understand the promotion of their expertise and concern. (3) Insect journal keeping can enable students to make a self-examination and understand more clearly the course arrangement and the requirements of after-class assignments. In this way, they can develop a sense of responsibility. (4) After the course is over, students will be glad to spread their bingo cards and share them with other classes.

高創造力資優生對創造力之觀點

—以全國高中職智慧鐵人創意大賽首獎得主為例

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摘 要

本研究旨在了解高創造力資優生對於創造力之觀點。本研究的主要參與者為六位參加教育部所舉辦之第三屆全國高中職智慧鐵人創意大賽暨第一屆智慧鐵人創意大賽國際邀請賽，並獲得國內組及國際組雙冠軍之高中数理資優班學生。

研究者於智慧鐵人創意大賽活動期間擔任工作人員進行四天三夜的觀察與紀錄，並於競賽結束之後針對高創造力資優生及其父母進行半結構式的訪談，運用個別訪談、團體訪談、電話訪問方式蒐集資料，佐以相關的報導與文件，以質性研究方法分析、歸納研究結果如下：

個人創造力：人人都有創造力的潛能，創意會在生活中潛移默化而生，創造力除了是與生俱來的，也建立於既有知識基礎之上；發展個人創造力可藉由多方涉略知識並培養多元能力、與他人多接觸、分享交流；創造力的實踐必須靠不斷嘗試與改變，過度補習扼殺個人創造力。團隊創造力：團隊成員的信任與合作默契是團隊創造力展現的關鍵；重視團隊成員的殊異專長與特質；團隊合作依據個人才能分工，團隊氣氛有助個人發揮專長；團隊創意競賽的實力需仰賴個人平日對於各項能力及領域知識的覺知、訓練與培養。

關鍵詞：高創造力資優生、智慧鐵人創意大賽、創造力

陳錦香、陳昭儀

No Provided

台灣傑出工業設計師創造歷程之研究

徐銘峯

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摘 要

本研究係邀請台灣五位傑出工業設計師作為研究參與者，以深度訪談及搜集相關文件、作品進行研究，據以瞭解傑出工業設計師之創造歷程。綜合本研究之結果，五位傑出工業設計師之創造歷程可分為七個階段：(1)瞭解及搜集資訊；(2)擬訂設計規範；(3)構思；(4)繪圖、製作模型；(5)合理化；(6)提案；(7)量產上市。

根據上述研究結果，研究者對於台灣工業設計系所相關學子以及未來仍待研究的方向提出建議，以作為台灣未來工業設計領域於研究創造力之相關參考。

關鍵詞：傑出工業設計師、創造歷程

Creation Process of Distinguished Industrial Designer in Taiwan

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Abstract

The study was targeted five of the distinguished domestic industrial designer. Data were obtained through in-depth interviews and literature reviews. The main purposes were directed toward examining creation process of the targeted subjects. The creation process involved all the five subjects could be delineated as the following 7 steps: (a) understanding and researching data; (b) making the design rule; (c) structuring of thinking; (d) constructing and making the model; (e) reasonableness; (f) making proposals and (g) making mass products to the market.

Key Words : Creation Process, Distinguished industrial designer

創意生活產業中創意餐廳之探討

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摘 要

全世界的產業結構都在變化，重視文化創意產業是必然趨勢。這幾年政府已經開始推廣台灣的文化創意產業，且列為國家發展的重點計畫，台灣絕對有這個優勢，趕上此世界潮流，重新創造另一波經濟奇蹟，重要的是建立出我們自己獨特的風格、形象，也就是所謂的台灣品牌形象。

想到法國立刻聯想到博物館、LV、名牌精品；想到義大利，蕃茄、Espresso 跳入腦海；想到台灣，希望世人想到什麼呢？台灣是一個蛻變的品牌，優勢在哪裡我們的競爭力就在哪裡。運用創造力落實在產業，重新塑造「食」的形象，會是台灣建立品牌的一個優勢。

本研究篩選出兩家創意餐廳為研究參與者：食方餐廳及食養山房。他們提供顧客五感體驗，提升了台灣人「食」的精神。本研究採用質化研究，以個案研究法對兩家創意餐廳的負責人及主廚進行深度訪談，輔以餐廳內外場的觀察。目的是從研究得到的資料中探討創造性人格特質、創造環境、創造歷程、創造產品及創造力 4P 在系統論中串連的關係。

本研究主要發現與所得結論如下：一、創造性的人格特質成就事業；二、創造性人物的產生是與創造性環境互動的結果；三、創造的歷程是過去人生學習的累積，游刃有餘的自然發揮出來；四、創造力的發揮要能符合個性與突破條件限制；五、賺錢不是成功唯一的定義；六、系統論完整呈現研究結果；七、創造力的產生是因緣際會。

關鍵詞：創意生活產業、創意餐廳、創造力 4P、系統論

彭僊懿、陳昭儀

No Provided

歌仔戲導演之創作歷程

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摘 要

本研究旨在了解歌仔戲導演之創作為何獨具「創意」，其引發個人創意的系統是有多重原因的，研究者以本身之實務經驗對歌仔戲導演進行研究創作之歷程觀點，從而由其中發覺更多創造力及創作新觀點。

本研究的主要參與者為八位民間歌仔戲導演，也均獲得獎項，並受到各界肯定。本研究發現研究參與者本身創作環境不佳，引發導演們創作的隱憂與承襲家業的辛勞，如此惡劣的環境卻能刻苦耐勞從平日演出中累積出創作源，細心對其他類藝術的觀摩與平日閱讀更加強創作靈感，充實了不同創作歷程，獨特的人格特質有著執著的毅力，堅毅不拔的精神造就創作精彩。隨著經濟的不景氣，歌仔戲導演的創作歷程也越加艱辛，充滿危機與轉機，這也是大時代的考驗。

此研究題材的考量方向使研究者在構想主題時激發了新的連結；身為歌仔戲導演的我更加對歌仔戲導演的感情抒發與研究內容創造歷程的融合感動，這樣具創造性研究內容的出現；就像一齣戲的創作，按部就班從構思架構、剔除多餘素材；累積長期構思、發展創作，具體呈現舞台畫面；堅持勇於面對的精神受到社會鼓勵與外界肯定。研究這樣的題材是鮮少見，整個研究的歷程是悲欣交集的。

關鍵詞：人格特質、歌仔戲導演、創作歷程、創造力

Section : D-6

劉同貴、陳昭儀

No Provided

建構新的生命認同即是創意～

馬偕的創意生命故事

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摘 要

本研究以心理傳記為研究取向，敘寫馬偕的創意生命故事，並以匯合取向的創造力理論為基礎看視馬偕生命的創造力展現。研究過程中，以馬偕的日記、委託他人出版的著作《From Far Formosa》為主要自我敘說材料，並輔以其他研究文獻、他傳等材料進行敘寫，企圖還原現象，勾勒、詮釋馬偕的性格與一生。

以 Amabile 的脈絡理論來看，馬偕具有強烈的特質動機，在宗教動力下追求自我實現，具備教育及醫療領域相關專業知能，並富有利於創意思考的立法型認知風格與工作風格，能跨界學習；這三者交集產出馬偕的創造力，具體展現於他突破教育準備時期所習得的典範，進而創造自己的台灣宣教模式。而以 Csikszentmihalyi 的系統取向觀之，馬偕生逢十九世紀基督教史上海外宣教的大世紀，成長在信仰虔敬的家庭與支持宣教的教會；在奮而不解的努力下，成功在系統中位移為守門員，進而影響學門、領域及北台灣與加拿大的社會文化。

馬偕一生奔騰在不斷突破疆界的超越之路，並且以英雄造時勢之姿整合資源於宣教工作；而他在生命擴展的過程中，從意志的決定、情感的深化到建構出對自己身份的新認同，是他創造力展現的丰采樣貌，從而亦詮釋了何為創造即是勇氣。

文末提出對當代社會處境台灣的建議，亦提出後續研究相關建議—進行本土宗教領域傑出人物生涯歷程研究，並從中應用或發展新的創造力理論於研究傑出人物生涯歷程，如此信可為心理傳記、創造力範疇之研究帶來豐碩成果。

關鍵詞：馬偕、心理傳記、生命故事、創造力

徐柏蓉、陳昭儀

No Provided

中原大學校園之創意環境與創意社羣

The Creative Environments and Creative Communities in the Campus of Chung Yuan
Christian University

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摘要

本文係討論中原大學設計學院執行教育部輔導大學校院「推動創意學院計畫」兩年的成果與經驗。設計學院執行本計畫之初，即先解讀教育部對推動本案之目的；其包含之子計畫：選才制度、組織創新、校園場景、教師創新、課程創新、創意學子（以上簡化名稱）等六項。從英文案名“Development of Creative College Environments”中的 Environments 複數字義來看，並非僅指學院環境，其實是以學院氛圍（college aura）來解讀。即是涵蓋一個學院的整體創意教學氛圍和創意學風，包含創意課程、創意環境、創意工作坊...等。本院四系（建築、景觀、室內設計、商業設計）的行政主管均認同美學經濟及創意文化是廿一世紀重要時代趨勢之一，在院務會議中修改了本院的發展和辦學理念為「永續關懷、服務創意」。隨後本院擬定了在校學生從入學到畢業後進入社會形成一個「創意社羣」（creative community）或「創意新貴」（creative class）的思維。亦即一個成功的設計學院是牽引學生畢業後仍繼續形成一個創意網絡及彼此合作的社群，以創意及美學經濟服務社會。本人以院長身份及創造力學理出發，也認為強化創意學子的基礎實為首要改善學生的創意體質。因此，本人研發了「八個創意習慣」的模型，經院課程委員會落實於各系大一的課程中，並輔以「經典閱讀」、「萬里路行動計畫」、「創意競賽」、「帳篷工作坊」、「設計合院生態村」、「友善校園」、「動態式招生選才實驗」、「畢業前實習網絡」等全院推動的教學改革政策。本人又受託本校執行教育部教學卓越計畫的子計畫—「深植創意、創新、創業的專業教育」。本人並與教發中心主編出版本校的「三創教育白皮書」。期望本計畫的執行成果持續落實影響中原大學的卓越教學及令全校營造軟硬體的「創意環境」和「創意社群」。

關鍵字：創意學院、中原大學創意環境、創意社群、創意習慣

The Creative Environments and Creative Communities in the Campus of Chung Yuan Christian University

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Abstract

This article discusses the working report of a two years project named “the Development of Creative College Environments” from the College of Design of Chung Yuan Christian University, which has been granted and supported by the Education Ministry of Taiwan. The project contains six subprojects that are: the concept of choosing the freshman students, the innovative administration of the college, the redesign of the campus landscape, innovative teachers, innovative curriculums and creative learning. From the beginning we understand that the aim of this project would regard to the plural word of “environments” which might mean not only the physical environment of the college, but also interprets the aura of a comprehensive teaching atmosphere and creative teaching style of a college. The dean and chair of the college and departments (Architecture, Interior Design, commercial Design and Landscape Architecture) have realized that the 21st century has an important contemporary trend of aesthetics economy and creative culture. We have made the decision at the College General Meeting for provisioning a new mission of the college development’s direction as “sustainability concern and creativity as service”. Then the college describes a consideration which may lead the students to contribute themselves during the study period as well as after graduate into a network of creative professional association through collaboration projects and serving the society. Following the theory of Creativity, I as the dean of the college have developed a model of “the Eight Habits of Creativity” for the Improvement of the personal character of the students. Parallel to that there will be supplemental teaching projects to enhance the reform of teaching action program such as “reading classical literature”, “ten thousand miles outreach teaching”, “design competition”, “workshop camp”, “designing a college eco-village”, “designing friendly campus environment”, “experiment of dynamic entrance examination”, “practice network for graduate students” etc. . I have been also ordered by our university to direct another project of “Excellence Education Project” which is also supported by the Education Ministry of Taiwan. Regarding to that I edited together with the Teaching Development Center of our university a “White Book of Creative Teaching” We hope that the result of the project of Development of Creative College Environments would continue to integrate the excellence teaching program and create the conceptual and physical creative environments and encourage the graduate students to contribute creative associations in the future. .

Keywords : creative environment, creative college project, the eight habits of creativity

臺師大總計劃-創造力發展國際研討會

國立臺灣師範大學推動創意學院團隊¹

摘要

「2008 創造力發展國際研討會」希望能夠結合教育界以及企業界，將這些創造力發展過程(Creativity Development Processes)，以及描述性研究(Descriptive Research)的成果做分享。讓創意不再僅是點子(an idea)，而是能夠被具現化的具體行爲。目前有很多創造力組織團體致力於創造力發展，而臺灣社會所需要的正是創造力教育的深耕，有鑑於此，此次研討會將第一次移師於臺灣師範大學舉辦，屆時許多國際知名的創造力教育專家皆會來台發表相關文章與研究經驗分享，此時將帶領臺灣創造力教育領域邁向新的里程碑。

本次主題有以下四項：創造力評量、創意教學、學校創新管理、企業創新管理。本次研討會針對創造力研究與開發進行討論，尤其是教育界或企業界對創意有興趣的人，將可在本研討會瞭解創新的機制。此外，創造力不僅是一種想法，如何掌握也是一個問題，必須多加以探討，才能夠發揮其成效。本次研討會將邀請國內外創造力評量、創造力教學等學者專家分享他們的研究與心得。邀請的對象來自美國 **Zorana Ivcevic**、英國 **Kay Stables** (創造力行動評量)及日本 **Makoto Takahashi** (創造技法之應用)。相信對此方面有興趣之學者專家參與本研討會，將能夠對創造力有更進一層的瞭解。

本研討會進行兩天，內容有師大創意學院的成果發表、三場外國學者的創造力專題演講、以及九場共三十三位創造力發展相關的論文發表。對創造力發展的分享、以及國際交流的與會分享，實有極大的助益，會後已有諸多正面的回響。

關鍵字：創造力教育、創意學院、創造力評量

¹教育學院何榮桂院長,洪榮昭教授,陳學志教授,潘裕豐副教授,蔡崇建教授,楊紹裘教授,侯世光教授,林潔如助理,張家綺助理,戴家慶助理,黃彥融助理,薛儂彥助理,黃慧勤助理,林毓庭助理,洪周位助理,鄒小蘭助理,陳錦雪助理及創造力發展碩士在職專班全體學生們等團隊成員

National Taiwan Normal University Proposal-International Creativity Development Research Conference

Creativity Department of National Taiwan Normal University*

Abstract

“2008 International Creativity Development Research Conference” plans to adjoin the education community and the business community in order to share the results of Creativity Development Processes, and Descriptive Research together as a cohesive concept. This concept advocates that creativity is no longer mere illusive ideas, but ideas that can be realized into actions. There are currently a number of creativity organizations working toward creativity development, which is exactly what is needed here in Taiwan: the implementation of concrete creativity in the field of education. Therefore, this conference will take place, for the first time in National Taiwan Normal University. Internationally-known experts in creativity education will be attending the conference to present and share related articles and research studies. Evidently, this conference will be a milestone for creativity education in Taiwan.

The main topic of the conference includes the following: creativity evaluation, creativity in teaching, creativity in school management, and creativity in business management. The conference will focus on the discussion of creativity research and development. Those in the field of education and business who are interested in creativity development will also have the opportunity to further inquire about the mechanism in creativity. Moreover, creativity is not just a thought, how to grasp that thought and further expand it into something tangible will also be discussed at the conference. Zorana Iveevic from United States, Kay Stables (creativity action evaluation) from United Kingdoms, and Makoto Takahashi (creativity techniques and the uses) from Japan are invited to share their research findings. Attending the conference will bring further understanding to creativity development for scholars and experts who are interested in the topic.

The conference will take two days. The content of the conference includes results from the Creativity Department of National Taiwan Normal University, three speeches on Creativity Development by three overseas scholars, and 9 sessions of 33 research presentations in Creativity Development. The conference will benefit not only the creativity development sharing, but also international communication.

Key Words: Creativity Education, Creativity Evaluation, Creativity Institutions

* Creativity Department of National Taiwan Normal University
Rong-Guey Ho, Jon-Chao Hong, Hsueh-Chih Chen, Yu-Fong Pan, Chung-Chien Tsai, Shau-Chou Young, Chieh-Ju Lin, Chia-Ching Tai, Hsiue-Chun Yan, Yan-Rong Huang, Hui-Chin Huang, Yu-Ting Lin, Chou-Wei Hung.....

Section : D-7

台北場

場次 E

TAIPEI

SESSION E

創意學經濟-運用問題與遊戲導向學習法之教學設計

譚經緯

醒吾技術學院財金系助理教授

摘要

傳統教材與教案解說方式的經濟學課程對學生漸漸失去吸引力（尤其是學習動機與基礎相對薄弱之技職院校學生），此種講演式教學實屬「資訊傳達」而非「學習」，教師呈現的是其本身所認定之重點與進度，不必然為學生所能吸收，雖然大部分教師具有不錯的課程介紹與規劃，但真正的挑戰是如何確定大部分的學生並未迷失在其授課過程中，以及學生是否因而有強烈之自我學習動機，並能以多元創意角度活用經濟知識。

PBL(Problem-Based Learning；問題為基礎之學習)被認為是一種可以培養學生「自我導向學習(self-directed learning)傾向」能力的學習模式，其具有以學習者為中心、強調內在動機、鼓勵合作學習、給予學生展示表演機會等特色，目前為止，國內之研究主要應用於生物醫療、室內設計與高中職教育方面，而國外已有許多機構應用於經濟學教學。另外，2002年起美國電影業產值被遊戲業產值超越的背景因素下，許多學者亦認為應重新審視與定位電腦遊戲對學習的價值，其中的「嚴肅遊戲(serious game)」即是關注之主要焦點之一，其基本概念是認為遊戲屬於一種解決問題過程與方法的認知，廣義來說就是用來協助解決包括學習等問題的非娛樂性質(non-entertainment)應用科技，適度運用此學習方式，可以引發競爭及合作精神，可能將經濟學理論中較制式、單調或需要記憶性的部份透過反覆刺激練習加速學習效果、增強學習動機，讓學習痛苦降低，許多寓教於樂、從遊戲中學習(learning by playing)新知的課程設計，已紛紛在經濟學專業學術期刊上發表呈現。

本研究對象為技職院校大學學生，研究目的為建構發展一套經濟學創意教案，有別於傳統以工具及理論架構方式編排，本研究是以問題與遊戲為基礎之學習(Problem and Game-Based Learning)方式設計經濟課程，作者從實際教學經驗出發(含技職院校：清雲科大及醒吾技術學院，及一般大學：交通大學非商管系之跨領域學生)，融合一般文化先驗知識之「成語式主題」為單元(如「以彼之道還施彼身」帶出賽局理論中知名的「tit for tat策略」、「我不殺伯仁伯仁卻因我而死」則表「外部性」問題)、流行生活時事現象與問題為導向(如仿刑案偵查之「症狀診療」單元：資訊展為何只有 show girl 沒有 show boy?)，先帶動學生的學習動機，配合競賽與遊戲：如「熟能生巧大逃玩(針對失業率觀念練習與應用)」及「手中無劍、劍在心中(供需均衡變化之訓練)」-令學生極快掌握理論關鍵以及需記憶與熟練之部份，除欲降低其學習痛苦與門檻，並可刺激學生與同儕比較學習(如「窮人大翻身」瞭解 M 型社會或貧富不均現象之形成)，及培養舉一反三之創意思考(如「幸運草電玩」之公共、私有財生活實例試學)，課中輔以網路系統即時動態掌握及評估學習成效(藉醒吾技術學院之數位學院「(即時)討論室」及「測驗系統」功能)，作為教案修正與進度掌控之依據，目前已初步得到相當之成效(於醒吾技術學院開設之「生活經濟學」課程獲教育部顧問室 96 學年度第一學期優質通識教育課程計畫補助，並遴選獲得優質通識教育課程獎)。

關鍵字：經濟學、問題導向學習法、遊戲導向學習法

Problem and Game - Based Creative Learning Applied in Economic Curriculum Design

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Abstract

The traditional lecture–seminar format (TLS) is not suited to all students. With lectures, the emphasis is on giving information rather than learning – lectures represent what teachers do and not necessarily what students need. Although most lecturers can ‘talk’ a good syllabus, the real teaching challenge is to ensure that most students are not lost in the process.

It revealed that PBL(Problem-Based Learning) method has positive impact on the students’ ability of self-directed learning. An attractive feature of PBL is that the teacher can focus on the economics (via problem design), while transferable skill development represents an added bonus that occurs simultaneously alongside discipline-related activities. The use of PBL as a teaching method originated within a medical and health-care context during the 1960s. Although it is now implemented across a wide range of disciplines, PBL research literature is still dominated by medical-based applications. However, from a teacher perspective, PBL appears to be a very satisfying method of teaching. On the other side, the concept of Serious Game has been proposed to couple the ever increasing interest of using types of interactive technology in education and training. The basic idea is that the most part of this entertainment is a solved problem. If using the benefit, it even can stimulate the competition and cooperation and learn by playing.

This research is developing a creative economic curriculum based upon the existing economics courseware and the newly teaching experiences. Topical style of Chinese idiom and the real world problems and phenomena are set to motivate students. Designing games and contests, let students capture the key idea rapidly and learn and practice how to use it from different students’ points of view and teacher’s instruction. Starting from this, the purpose of this research is focused on all college students: firstly, construct the courseware by the Problem and Game-Based Learning (PGBL) method; then trace and evaluate the teaching results and dynamically feedback to the courseware (establishing the mechanism of self-evaluation) ; and use digital tools to carry out the learning purpose of centralized by learners. This research is sponsored by MOE and one of courses is awarded the prize of superior quality general education course.

Keywords : Economic Curriculum Design, Problem-Based Learning, Game-Based Learning

商學院學生策略個案自主性學習障礙之研究

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摘要

企業優勢的根本來源是創新，但商學院教育方式卻不盡然提供學習者學習創新的機會。近年來由於哈佛商學院的大力推廣，以學習者為中心的學習方式（Participant-Centered Learning）漸為風氣，但在 PBL(problem-based learning)倡導者的眼中，個案教學只是 PBL 方法中的一種選擇(Tanner, Keedy, & Galis, 1995)，而且可能太重知識和技能的訓練，不如 PBL 更針對問題的創造性學習而放寬這些限制(Breton, 1999)。

本案為擴充個案學習者的主動權，及克服商學院大班教學的限制，引進網路輔助學習平台，讓學習者有較長的時間閱讀個案及自由討論，並在課堂上由學員模擬主持企業會議，以解決指定的個案問題，最後再由教師分析整個問題的探索與解決過程。為進一步實現學員的創新學習成效，本研究擬從學員對個案問題的探索與解決程中，經由長期觀察歸納出學員創造性解決問題的障礙，以供後續教學之改善。

在研究設計上，本研究分別以輔仁大學 94 學年度與 95 學年度必修課「企業政策」（3 學分）之修課研究生為研究對象（分別是 33 人與 43 人），觀察與蒐集整個學期，學習者在網路平台上的討論內容與課堂上的會議行為，進行歸納與分析，最後提出本研究之結論。

研究結果發現，績效較高的學習組別在定義問題所引用的來源上，顯著地較低績效組別來得多元，也比較有意願進一步釐清不一致的策略概念對問題的解釋；此外，績效較高學習組別在定義問題時，較能從實際商業模式來思考，比較不侷限於僅從個案提示的角度，而且其思考也比低績效組別更具完整性。最後，本研究發現，學習者課堂討論的整體績效普遍低於先前網路討論的平均績效，進一步探索後發現，主席團在課堂上引導討論的行為有可能產生群體迷思的現象，進而影響對問題的定義與多元解決方案的發展。

關鍵字：以問題為基礎的學習（PBL, problem-based learning）、學習成效（learning effect）、策略決策（decision making of strategy）、管理學院（college of management）

周宗穎 林良陽

No Provided

學生創意思考發想、國際學術潮流： 傳播管理教育之暫時性一般目標初探

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摘要

參考自泰勒（Tyler）課程設計架構，此研究從學生創意思考，以及國際學術潮流兩面向，探討傳播管理教育的暫時性一般性教育目標。研究對象為三班，共 186 名之大一傳管系新生。此研究進行兩項文本分析，以指涉出學生興趣與國際學術潮流。針對傳播管理教育一般性目標之探討，此研究提出三項建議：（一）針對傳播細產業之偏重，學生興趣與國際期刊偏好出現差異；（二）傳管系新生似乎結構性地較無法連結到傳播產業之結構性議題；（三）爲了使傳播管理教育教材選擇迎向國際化，此研究提出四項課程教材較符合國際學術潮流之選擇建議，這包括公司個案的地理區域別選擇，進行產業分析的路線選擇，廠商績效評估方式之偏好選擇，以及方法論的選擇等等。

關鍵字：傳播管理教育、課程發展、泰勒課程設計架構

Exploring the General Goals of Communications Management Education With the Aspects of Students' Creative Thinking and International Academic Trends

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Abstract

Referring to the framework of Tyler's curricular design, this research aims to explore the general goals of communications management education with aspects of students' creative thinking and international academic trends. Three intact classes of 186 college freshmen in the department of communications management participate in this study. Text analyses are conducted to identify the interests of students and international academic trends. Three guiding directions for the exploration of the general goals of communications management education are provided: (a) comparison of two text analyses could indicate that students' interests contradict the international academic trends, regarding the foci of sub-communications- industries, (b) there seems to have structural limitations for students to consider industrial structural issues, (c) to align with the international academic trends, four suggestions of teaching-materials-filters are provided, including decisive choices regarding to the geographic choices of cases, the approaches toward industrial analysis, the evaluative preference toward the firms' performance, and the methodological preference.

Keywords: Communications management education, Curricular Development, Tyler's Framework on Curricular Design

關於傳播學如何教的一些創新想法與作法 – 以「傳播理論課」為例

臧國仁

國立政大新聞系教授

摘要

這些散佈於領域中的困難【問題】，提供了介於矛盾與整合的辯證，讓我們有機會重新檢視原先視為金科玉律的一些問題。即使其結果可能不過在於證實已知事實之無誤，但是新舊思想間的碰撞仍對我們的知識領域有益 (Dozier & Lauzen, 2000: 15; 添加語句出自本文作者)。本文延續作者近年來對新聞傳播教育的思考 (參見臧國仁, 2000; 鍾蔚文、臧國仁、陳百齡、陳順孝, 1997; 鍾蔚文、臧國仁、陳百齡, 1996)，試圖透過對知識內涵的探索重新定位教學與研究的關連本質。本文作者持續認為 (此段改寫自臧國仁, 2000)：-- 知識的傳授 (即教育) 重點不在提供解決問題的經驗式答案 (常稱之為「實務教學」)，而應側重訓練學生體驗情境之變化並自行練習擬定因應之目標與策略，發展一些研究者慣稱之「行動知識」 (thinking in action; Scribner, 1986) 與「情境知識」 (contextual knowledge; 見 Duranti & Goodwin, 1992)。-- 此類知識與其他著重原則與步驟的陳述性知識 (declarative knowledge) 不同 (鍾蔚文、臧國仁, 1994)，涉及了在特殊情境下採取「臨機應變」或「即興演出」式的程序性知識 (procedural knowledge; 張文強, 1999: 144)，包括「知道如何解決問題」、「為何採取某些解決問題的行動」、「尚有其他哪些解決途徑」等知識 (見鍾蔚文等, 1996)。-- 新聞傳播學門之特色即在其內涵多屬「默識」 (tacit knowledge; Wagner & Sternberg, 1986; Sternberg, Wagner, & Okagaki, 1993)，解題方式常隨社會情境變異而難以尋得標準作業程序與固定答案，需經「概念化過程」 (conceptualization) 組織與整理後始能將其 (「默識」) 轉換為具體「外顯知識」 (張文強, 1999; Chung, Tsang, Chen, & Chen, 1998)。-- 因此，在新聞傳播學門此種廣泛缺乏「已知」知識的領域，學習者需要練習自行組合各式應變結構，而非僅賴教師傳授標準答案並在教室內之測驗獲取高分。一些以案例討論 (case studies) 或情境陳述 (scenario description) 方式讓學生練習解題，或由教師介紹一些中度 (intermediate) 解析結構 (而非單一答案) 皆屬可行教學方式 (參見 Grabe & Kaplan, 1996: 131)；若由教師講授如何解題的傳統教學方式，似難應付此一學門的特殊情境知識。有關「傳播理論」課程如何教授之相關文獻不多。本人稍早曾經建議如「【新聞】基礎採訪寫作」此類實務課程似應「努力揮別過去以媒介實務為主要內涵的研究與教學取向，重新建立具有理論知識的獨立思考多元傳統，方能立足大學殿堂，成為高等教育的一環，建立學術正當性」 (臧國仁, 2000; 底線為本文所加)。但「傳播理論」課原就屬於上述文字所稱之「理論知識」，其涵蓋內容本就多為具有內在結構性之「理論」知識，其命題間常彼此相關且上下層級互有連結，與上述「基礎採訪寫作」課面對之實務情境迥異，所需解決之教學問題亦當不同。而「傳播理論課」 (以下簡稱「本課」) 在國內外各大學傳播學院 (系) 皆屬必修課程，政大傳播學院 (以下簡稱「傳院」) 亦不例外，係院屬六門必修課之一，與「研究方法」各為三學分，開設於大二，學生來自新聞、廣告、廣電三系，另有雙修、輔系生，每班分配約有五十五至六十人。從課程結構觀之 (見【表一】)，本課係傳院大一入門課程「大眾傳播概論」之「後接」課程，又係大二下「研究方法」之「前接」課程，有其「起承轉合」之效。設課前提乃在期盼透過此課協助學生獲取傳播學院基礎領域知識 (傳播理論)，以便其後能順利進入各 (新聞、廣告、廣播電視) 系修習系屬專業課程。

Section: E-1

臧國仁

No Provided

情感教育與美術創意訓練—Q 點的創意

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摘 要

國民教育的總目標，在培養德、智、體、群、情(美)五育的平衡發展，藝術教育與其中的美育或情感(意)教育有最多的關聯。美育，被視為在培養對美好事物的感受。情意教育強調個人對人對事，有良好的態度與適當的 EQ 情緒管控，也即有敏銳感受的心、合適的行為表達。美術是視覺的藝術，也是視覺傳達的核心基礎，透過一系列視覺與美術實作訓練，有助於對美術敏銳度與圖像創意的提升，建立對美術正面的態度與興趣。

一系列「美術創意訓練」課程教學設計，30 名非美術系學生，參與一學期 18 週，每週二節的「藝術鑑賞」課程。每週課程分三個小單元，其中包括約 30~40 分鐘之課堂畫作製作。課堂作業，由教師設定每週的作業主題，一學期中的單元主題從最簡單的線條表現，到立體造型，顏色運用，形與色的塑造到肖像製作等七個主題。美術創意訓練的教學策略，透過學生實作，激發學生的 Q 點創意，與對作品的敏銳感受，並透過語言文字對感受加以述說澄清，分享心得，增強互動，強化學習效果。

依據研究構想、理論基礎、課程規劃與設計、教學策略與教學實錄，綜合整理完成「美術創新過程中滾動式思考與網狀迴路連結的教導模式」，以說明整個「美術創意訓練」的理念與教學過程。

關鍵字：美術教學，創意，美育，情意教育，EQ

Creative Art Training Program used for Affective Education --- Q Creative Ideas

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Abstract

Affective education is concerned about healthy EQ mood, positive attitude and appropriate behavior. A 'Creative Art Training Program' as the core of the 'Art Appreciate' course was designed. To test students' artistic attitude and interest after art training has positive change.

Thirty non-art students--some afraid doing any art objects, joined the 'Creative Art Training Program' in one semester 18 weeks 'Art Appreciate' course, 2 credits unit. The classwork are making paintings follow the teacher sets up the weekly themes. The 7 themes included: the simple lines expression, three-dimensional modeling, color express, shape and color mould, color portrait painting etc. The instruction strategies are that driving the motivation of students doing painting, stimulate students' Q(questioning and searching) creative ideas, to bring on the sensitive keen perception feeling to the works' quality, to clarify sense through the speak out and written down her/his works' feeling, share her/his feeling with others, interaction with peers, reinforce and feedback of learning.

According to research idea, theoretical foundation, course design, instruction strategy and teaching processes, put to gather synthetically into an '*Instruction Model of the Creative Art Rolling- thinking with the Feedback netted Circuit*'. It is helpfully to explain the idea of the 'Creative Art Training Program' and teaching methods.

Keywords: creative art, aesthetic education, affective, EQ

《立體構成》教學創新與藝術類課程創造力開發

徐凌志

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摘要

爲了通過《立體構成》課程有效地開發學生的創造力，首先必須實現課程教學的創新。具體指導學生努力實現以下三個方面的創新。一是設計理念創新。改變傳統的無主題“構成遊戲”模式，以命題設計（如“概念照明”等）爲主題展開課程，進而啓迪學生樹立“設計就是藝術”、“觀念也是材料”等觀念，明確設計的重要性和價值所在。二是設計概念創新。闡釋設計的眾多功能，使學生正確理解“設計是一種特殊藝術”的含義，並且進一步分辨“照明”和“燈具”概念的異同，將狹義的“燈具”轉化爲廣義的“照明”，從生活和藝術的關係中找到設計靈感。三是設計表達創新。從審美意識出發，探求設計表達的嶄新元素，無論是材料、造型，還是色彩、風格，都追求打破常規，標新立異，使學生們懂得“設計藝術的生命力在於創新”的道理，幫助他們破除思維定勢，獲取嶄新的設計成果。

學生于《立體構成》課程中完成的不少作品已在較高層次的設計作品競賽中獲獎，這一事實雄辯地證明了該課程教學創新的豐碩收穫。

《立體構成》課程的教學創新體現了大多數藝術類課程能夠實現的創造力開發途徑。這些途徑可以歸納爲以下三個方面的結合。一是“破壞”與“再造”相結合。追求先破壞（創）後建設（造），引導學生培養創新再造意識。二是“感性”與“理性”相結合。追求形象思維與邏輯思維相結合，引導學生學會開展創造性思維的方法。三是“生活”與“藝術”結合。追求源于生活而高於生活，引導學生激發靈感，善於創新。

關鍵字：立體構成、設計藝術、教學創新、創造力開發

Teaching Innovation of Course of "Three-dimensional Composition" and Creativity Development of Arts Courses

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Abstract

"Three-dimensional Composition" is one of the three basic courses of art design professionals of colleges. In order to reach the purpose of creativity development of students, it is necessary to practice teaching innovation in the course of "Three-dimensional Composition".

The first thing is to innovation in design idea. We changed the traditional model of composition game without subject and practice "thesis design" such as concept lighting. Thus the students would be enlightened and set up ideas of "design means art", "idea is also material", and realize the importance and value of design.

The second is innovation in design concept. We explained the multi-function of design and led students to understand the meaning of "design means a special type of art", to identify the similarity and differences of lighting and lamp, change the narrow concept of lamp into the widen concept of lighting, and search for insight from the relation of life and arts.

The third is innovation of design expression. We asked the students to explore new elements of design expression from aesthetic perception, to break usual rules whether in material, modeling, color or style, to break thinking sets and achieve new design results.

Many results produced by students in the course of "Three-dimensional Composition" got prizes in different competitions of higher levels proved strongly that abundant achievements have been reached by teaching innovation of the course.

According to the achievement experiences of the course and by extension, we realize that most art courses will possess the function of creativity development of students through the ways of combining destruction with reproducing, combining perceptual understanding with rational understanding, and combining life with art.

Key words: three-dimensional composition; design art; teaching innovation; creativity development

中國詩·e 世情—資訊科技融入統整創意教學之研究

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摘要

資訊科技一日千里，網路已是青少年主要的溝通工具，不過卻也衍生出現今的 e 世代，在電玩與網路過度的刺激與依賴下，不但網路用語充斥浮濫，甚而夾雜注音文與火星文，令人讀之不僅「艱澀難懂」，而且幾乎「不知所云」，當然更談不上通順優美了。此外，從學生的聯絡簿、作文及部落格中也明顯看出中學生的國語文能力大幅低落，然而寫作與口語表達的能力卻又扮演著學生未來在社會上能否成功的關鍵要素。

而「詩」、「詞」是中華文化的瑰寶，也是一種優美與精鍊的語言，具有潛移默化的特質，不僅能提升語文能力，更能陶冶品德和情操，可見「詩詞教學」，不只有它的重要性，更有它的時代性與教育性。細究詩教沒落，實肇因於社會、教育制度的快速變遷，從而影響了學校課程的設計、教材的選擇，造成學生無法充份接觸學習，過去人人耳熟能詳的詩詞名句，對中學生而言，更是所知有限。

爲了彌補以上所面臨的困境，以及避免詩詞教學流於枯燥，「詩詞吟唱教學」將有助於激發學生的學習興趣與提升語文能力。本校向來對於推動「詩詞吟唱」教學不遺餘力，不僅自編教材《古典詩詞曲譜選輯》，更列爲「學校本位課程」，除了長期固定於週會進行全校詩詞吟唱教學之外，並舉辦年度班際競賽。因此本研究整合學校的資源與環境，嘗試以中國古典詩詞爲主題，在融入教學上首先製作多媒體教材以活潑教學，再引導學生利用網際網路延伸閱讀，輔以學習單自主學習；更進一步運用創意與新穎的教學策略，不但跨領域統整電腦及藝術與人文領域，並引導學生自己發揮創意利用動畫、表演、RAP 及漫畫等有趣多元、寓教於樂的方式來表現詩詞，藉此厚植提升語文能力並適應個別差異。同時結合生活應用面，將流行樂曲、簡訊、廣告文案等融入教學設計中，使之脫胎爲嶄新的面貌，以引發學生的學習動機與共鳴。最後並將活動成果利用網路平台分享推廣與交流心得，以帶動詩詞創意教學的風氣，達成提升語文能力的目的。

關鍵字：資訊融入教學、資訊科技、中國古典詩詞、創意教學、詩詞吟唱教學

Applies Flexibly Digital Music to Inspire The Child and Young People's Creation Potential

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Abstract

To change with each new day which in this era, Digital already became the trend of the world, Digital Music also were the recent for several years one of topics which widely discussed, in order to be able to follow the advanced countries the footsteps, the Ministry of Economic Affairs also massive arrangement this aspect training curriculum, enabled us to own a position in this brand-new time.

The education is the basic fundamentality, but the most important is to build up the base since childhood, the author is engaged in the music teaching for 36 years, four years ago the further studies Digital Music, and taught on the spot the child and the young people, let music creation become extremely have the interest, even cannot play the musical instrument, also can utilize ten finger of marvelous abilities to let the innermost feelings of music caper heartily, unifies it with the literature, the Tang poem also has the new style, the children song even more ever changing, favorable music being possible to dub again, like the magician immediately unfolds another kind of style, therefore fairy tale, Canon, Dolaemon music and so on, all in child's ingenious conception on the clever artisan entrusts with a more multi-dimensional appearance, after the work completed, the parents all click of the tongue to express admiration.

Formerly wish to create a big music, must use many musicians to enter the recording room, now perhaps you may create hundred human of philharmonic orchestras so long as with 2 to 3 fingers, this is the how mysterious matter! Moreover these sounds all are the world apex concert performer transcribed the musical instrument timbre in advance, therefore may have all kinds of musical instrument, the wind instrument music, the stringed instruments, the rap musical instrument, have everything expected to find, this is anterior persons are unable to imagine.

Several people forming the story as a script, in addition dubbing in music with own original creation, the assignment role enter recording room transcribing, must grasp each character's characteristic, with the sound performing different situation, connects all parameters to become a scene, possibly is the radio drama also may turn the musical, everybody work and cooperate together as well as share the creation each other, like this still not enough, because we also need the background, the stage property, therefore the utilization of computer cartography, respective creation needs the role background and so on, music, visual art and the performing arts close union, lets everybody work together to create a big job, presents in audience's front.

One of mothers said her daughter was poor speaking originally, but saw she can write words unexpectedly, composing music, dubs in music using the computer, and personally sings the song which own create, but also can design drawing for the song which creates, such change lets her be moved extremely. In fact Digital music is only a tool, penetrates it, the child can display rich imagination, unfold their music, literature, drawing and so on potentials, but we in the facial cast which the child laughs heartily, saw the Digital music bring the joy which not only they create, but also has that sense of achievement and the self-confidence.

「家政教育創新與整合之行動研究」 -一個整合家庭生活、創思服裝秀、慈善餐會、多媒體教學的活動方案

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摘 要

新的高中職課程延伸九年一貫課程的理念，強調結合生活情境培養解決問題能力。家政課程屬於生活學科，長期以來針對「衣著、飲食、家庭生活」三方面課程綱要發展，實施課程；家政課程是活潑生動的學科，可以整合資訊能力、團隊合作、生命教育、關懷典範、待人接物等，從活動設計方案中貫徹「體驗、實踐、省思」的活動目標。

而創意教學，一直以來是教育部推動發展的重要理念之一，本計畫以家政科之創新觀點，在去年申請 96 年度高中職創意學校建構計畫案，主題為「整合型創意家政(家庭生活實習、創思服裝秀、慈善餐會、多媒體教學)教學計畫」，專案通過並獲得教育部經費補助，在一連串的學年活動設計，專注於學生創思、創意的引導發展與提昇。

本計畫研究方法以行動研究為主軸，以施教者任教的班級為研究對象，含高一、高二學生。強調以創新思考方式做為教學策略，加上教師資訊、整合能力之提昇、教學媒材設備、硬體設施的充實、師生「創意」腦力的激盪，以活動辦理為主要之方式，倡導學生符應杜威學者「從作中學」的概念，建置一系列之行動活動方案。

透過學科之創新與創意思考之實施，帶動學校整體的創新風氣，也致力生命教育、關懷典範的落實，並先以體驗式教學、多媒體操作的方式，導入創意教學環境，提升教學成效與能量，進而達到家政教育之落實。

關鍵字：創意教學、創造力、生命教育、行動研究、家政教學

Section: E-2

朱蘭慧 潘裕豐

No Provided

好玩的學習：蘭陽技術學院數位建築設計研習營

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摘 要

本文的目的在為數位建築設計工作室，建立一個好玩的學習教學法。我們利用 TPL-輔導（Tutoring）、玩耍（Playing）與學習（Learning）的教學模型，作為此研究發展的理論基礎。輔導意味著老師的行動、同儕的支持與鼓勵學生的環境因素；玩耍定義為提供學習的行動；學習則須藉由具體化的經驗所產生。TPL 的模型中包含了好玩（playfulness）的六項特色：化身（embodiment）、合作（collaboration）、行動（action）、敘事（narration）、創造力（creativity）與洞察力（insight）。在蘭陽技術學院所舉辦的數位設計研習營中，我們利用這些項目設定了一個好玩的環境與活動。經由這個案例的分析，觀察學生們在此設置中所獲得設計學習的成果。最後發現：好玩的情境引發有效的人機互動，並且激勵學生們產生多樣化的建築設計作品。

關鍵字：好玩的學習、數位設計工作室、建築設計過程、形變

王菀玲、陳上元

No Provided

結合繪本與創造性戲劇教學對國小三年級學童多元智慧之影響及可行性分析

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摘 要

本研究旨在透過行動研究分析結合繪本與創造性戲劇教學之可行性，並探討其對國小三年級學童語文智能、肢體—動覺智能、人際智能及內省智能等多元智能及繪本結局改寫能力之影響。本研究採用行動研究法，以台中市聰明國小三年級之三十三位學童為研究參與者，共計進行十六週、32 次的教學，並於每次教學時，將教學的過程予以錄影，教學後再做謄寫及分析。研究中透過教案、教師省思札記、課堂觀察紀錄表、深度訪談和教學回饋單等方式進行資料的蒐集。歷經十六週的教學研討後，研究者漸能靈活運用結合繪本與創造性戲劇的教學，並獨立進行教學設計，對自己的教學更有信心。而在教學歷程中，師生互動的時間及學童討論的時間增多。

至於學童的學習成效部份，則是以量化資料的考驗為主，輔以質化研究的歷程分析。研究結果發現：學童對於結合繪本與創造性戲劇教學覺得有趣、富有創意，對結合繪本與創造性戲劇教學持正面且積極肯定的態度；更在多元智能之語文智能、肢體—動覺智能、人際智能、內省智能及繪本結局改寫之能力，呈現顯著的增進效果。

關鍵字：繪本、創造性戲劇活動、結合繪本與創造性戲劇教學活動、多元智能

Action Research of the Integrated Picture books and Creative drama activity on elementary school children's multiple intelligence

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Abstract

Abstract content : The purposes of this study were : (1) to investigate the effects of the “Integrated of Picture books and Creative drama activity” on elementary school children’s multiple intelligence; (2) and to analyze the action research. The participants were selected from an elementary school in Taichung. The third graders were from one classes and received the “Integrated of Picture books and Creative drama activity” for two sessions per week during 16 weeks, and performed better on linguistic intelligence, bodily-kinesthetic intelligence, interpersonal intelligence, and intra-personal intelligence. Furthermore, the rewriting ability of picture books’ ending would increase gradually. Many children liked the “Integrated of Picture books and Creative drama activity”, they thought it was interesting. After many teaching sessions, the “Integrated of Picture books and Creative drama activity” were more flexible and practicable.

Keywords: picture books, creative drama activities, multiple intelligence, the Integrated of Picture books and Creative drama activity

以繪本創意教學提升幼兒創造力之協同行動研究

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摘 要

本研究採協同行動研究的模式，由本案研究者和四位幼兒園大班教師共同討論如何以繪本創意教學來啟發幼兒的創造力。本研究目的有三：一、強化幼兒園教師繪本創意教學的能力；二、評估繪本創意教學的效果；三、記錄協同教師在研究歷程中的成長與轉變。我們安排定期的討論會和幼師分享教學心得；透過參與繪本創意教學工作坊以激盪幼師的教學創意。並以行動和動作創造思考測驗(TCAM)來評估 60 位大班幼兒在實施繪本創意教學之前後其創造力的變化。結果顯示一、在幼兒園教師繪本創意教學的能力方面，參與的幼師表示她們在繪本創意教學方面的收穫很多。二、評估繪本創意教學的效果，量的方面，整體參與受試幼兒在流暢性、獨創性與想像性等創造力特徵前測分數均優於後測分數；質的方面，大部分幼兒表達對閱讀繪本與延伸活動的興趣，顯示繪本創意教學有助於促發幼兒的創造力。三、在協同教師的成長與轉變方面，幼師認為從教學討論會與教學工作坊中均有具體的收穫，有利於教學實務之應用。幼師從開始的不知所措，擔心自己不夠有創意，到最後的樂在其中，體會到專業成長的重要性，並能掌握繪本創意教學的原則。最後研究者討論整個研究過程對幼師及研究者本身的意義，作為延續合作的參考基礎。

Section: E-3

林慧芬、陳依萍

No Provided

國中生動手做電子繪本的學習成效與學習動機之探討

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摘 要

本研究之目的在於探討國中七年級學生自己動手製作繪本，對他們學習國語文的成效與動機之影響，此外，本研究亦比較男、女學生在此教學模式的環境中，他們的學習成效、學習動機以及繪本設計方式之異同。

量化分析結果顯示，學生在「夸父逐日」單元的學習成效，其前後測驗之成對樣本 t 檢定，發現有顯著差異，又整體而言，學生對動手製作繪本的學習動機頗佳，從性別差異看來，男、女學生在學習成效與學習內在動機(含五個面向)上均無顯著差異，此表示男、女學生都適合此種教學模式。

質性研究的資料則顯示，學生透過寫故事，繪圖、配音與簡報製作等任務，不僅能盡情展現其能力，而且能發揮其創造力。男、女學生在故事編寫上有些差異，男生編寫故事會加入一些電玩、少年漫畫之情節；女生的故事則受到言情小說的影響，且女生的故事長度平均比男生長。大多數的學生對透過繪本方式來學習國文的活動，持肯定的態度，且 82.4% 的學生希望能再次參加類似的活動。由教師觀察、學生心得與訪談，可歸納成下列四點：（1）動手做繪本能促進學生主動學習；（2）小組競爭能激勵組員向上；（3）此資訊融入教學模式，學生不僅覺得有趣，且收穫多重；（4）此教學模式可激發學生潛力、創造力與發展個人才能。

關鍵字：電子繪本、夸父逐日、學習成效、學習動機。

Students as Electronic Picture Books Developers: Exploring Seventh Graders' Achievement and Motivation

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Abstract

This study aimed at exploring the effects of asking seventh graders to develop electronic picture books on students' learning and motivation. Additionally, the study also compared male and female students' achievement, motivation, and designing of electronic picture books.

A paired t-test indicated that there was a statistically significant difference between students' pre- and posttest scores on a lesson about "Kua Fu Chasing the Sun." In addition, male and female adolescents' levels of intrinsic motivation in the activity were high and not statistically different. These results suggested that this type of learning was suited to both genders.

Analyses of qualitative data indicated that through completing various tasks such as writing stories, drawing pictures, recording narrations, and making PowerPoint slides, students were not only able to demonstrate their different talents but also creativity. Some gender differences were observed with respect to storylines. Stories written by males would have plots similar to those found in computer games or comic books, whereas stories written by females were longer and influenced by romances. Moreover, most students were positive about learning Chinese myth via developing electronic picture books. According to field notes, open-ended questions, and interviews, the following points could be made. First, asking students to develop their own electronic picture books could promote active learning. Second, group competition might encourage students to work harder. Third, students felt that developing electronic picture books were interesting and fruitful. Finally, requiring students to construct electronic picture books could inspire students' potential talents and creativity.

Key words: electronic picture books, Kua Fu Chasing the Sun, achievement, intrinsic motivation.

閱讀環境、玩興、父母創意教養與國小中、高年級學童科技創造力之關係

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摘 要

本研究旨在探討閱讀環境、玩興、父母創意教養與國小中、高年級學童科技創造力之關係。研究參與者來自台北市的國小中、高年級，有效樣本計 374 人。本研究採用的研究工具包括「科技創造力測驗」、「家庭閱讀環境量表」、「班級閱讀環境量表」、「兒童玩興量表」及「父母創意教養量表」。資料分析所用之統計方法包括描述統計、單因子多變量變異數分析及線性結構模式分析。

本研究主要發現如下：

1. 不同性別的三、五年級學童對家庭閱讀環境、班級閱讀環境、玩興的知覺皆無差異，但在父母創意教養的知覺上和科技創造力的表現上卻有差異。三、五年級女童對於父母創意教養的感知程度皆些微地優於男童；而三、五年級男童在整體創造力測驗上皆優於女童，且五年級男童比女童有更好的「視覺造型」表現。
2. 不同年級的三、五年級學童在家庭閱讀環境、班級閱讀環境、玩興、父母創意教養的知覺程度上和科技創造力的表現上有顯著差異。五年級學童除了在科技創造力的表現上有高於三年級學童的傾向外，在閱讀環境、玩興、父母創意教養的知覺程度上皆有低於三年級學童的傾向。
3. 三、五年級學童的家庭閱讀環境對其整體科技創造力表現分別有些微和明顯的正效果，而五年級學童在「精進力」指標的表現尤其顯著。
4. 三年級學童的班級閱讀環境對其整體科技創造力表現有正效果，反之，五年級則無。而三年級學童在「視覺造型」指標的表現尤其顯著。
5. 三、五年級學童的玩興對其整體科技創造力表現皆有正效果。三年級學童在「精進力」、「視覺造型」指標的表現較顯著，五年級則在「流暢力」、「精進力」上較顯著。
6. 五年級學童的父母創意教養對其整體科技創造力表現有正效果，但三年級學童只對「視覺造型」指標之表現有正效果。而五年級學童在「精進力」指標之表現尤其顯著。
7. 家庭閱讀環境、班級閱讀環境、玩興、父母創意教養似乎對三年級學童的「視覺造型」指標較有預測效果，而對五年級學童則是在「精進力」指標較有效果。
8. 三、五年級學童皆透過閱讀環境、父母創意教養，先對玩興產生直接或間接效果，然後才對學童科技創造力產生間接的影響效果。

最後，本研究依據上述的研究結果進行討論，並提出相關建議，以供教育、心輔等相關人員在課程、教學與輔導上之參考。

關鍵字：國小、中高年級學童、科技創造力、閱讀環境、玩興、父母創意教養

王昕馨、葉玉珠

No Provided

創造思考教學策略運用於藝術與人文統整課程之研究 以國民小學高年級為例

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摘 要

Gardner (1993) 指出教師在創作者的發展過程中，扮演著極重要的角色，老師如何在藝術與人文課程統整過程中，運用創造思考教學策略，培養學生創作與思考的能力？因此，本研究主要目的即在於：（1）探討老師運用創造思考教學策略，發展藝術與人文統整課程的歷程。（2）藉由課程統整的實施成效，探討創造思考教學策略在藝術教學上的價值。

本文採用行動研究，由音樂、視覺藝術、資訊組長等三位國小現職教師組成團隊，以「面對不同狀況，建構可行的創意」為基本精神，經過文獻探討後，由教師根據學生的學習狀況與經驗來擬定主題；在課程中透過對話、拋出想法的相互激盪方式讓學生思考要呈現的內容，從六 W 角度輔以學習單聚焦，藉由「動畫」拍攝，運用資訊科技的操作過程嘗試從錯誤中學習解決問題，進而將自己的想法實現；在透過反覆的教學實驗後，從 2005 年 9 月到 2007 年 6 月本團隊共同教授的一個班級 32 名學生當中，選取兩位人格特質不同，但對此課程皆十分投入的學生進行個案報告。

經由完整的教學活動，研究者發現：老師需以包容的心和敏銳的觀察力，在一定規範之下啓發學生的創造思考，同時運用靈活的策略、緊密的互動，讓學生在體驗創作之餘，不致於受到規範的束縛而扼殺他們的創造力。此外，教師依據不同專長組成團隊，能滿足學生多元發展的需求，但最重要的是創造思考需由老師做起，學生是受到老師影響而主動建構，並非老師創意的執行者。經由行動研究，研究者除得到自我專業成長外，藉由資源分享，並能成為其他教師鑑賞教學之參考資源。

關鍵字：創造思考教學策略 統整課程 藝術與人文

An Action Research of Creative Thinking Teaching Strategies on Integrated Arts and Humanities Curriculum

-Take High Graders in Primary School for Example

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Abstract

Gardner (1993) stated that a teacher performs a crucial role throughout the development of creative student. Hence, with the aide of the integration of arts and humanities curriculum, how can a teacher develop creative thinking teaching strategies to shape a student's creativity and thinking ability? The purpose of this research focuses on: (1.) to investigate a teacher's utilization of creative thinking teaching strategies for establishing the integrated arts and humanities curriculum. (2.) to explore the significance of applying creative thinking teaching strategies in art education based on the result and effectiveness of integrated curriculum.

This research was conducted through action research, which was lead by three elementary teachers with music, visual art and computer specialty. They were first-line practitioners and willingly compose the instruction team. After an intensive-document research, the teachers followed the ultimate theme of "generate the possible creative solution when encountering different situation" to set a topic in accordance with the students' learning condition and experience. In order to help the students stimulate and reflect upon ideas, the curriculum was conducted through a series of dialogue and brainstorming. With the perspective of "6W" as the teaching guidance, through the medium of "animation", the students' struggle on operating information technology signified their abilities in coping with mistakes; moreover, this also enabled the students to put their ideas into practice. This teaching experiment was repeatedly tested from September 2005 through Jun 2007. Our team chose two very enthusiastic students of contrary personalities from a class of 32 people as a case study.

Such comprehensive teaching activity provides some evidences suggesting: a student's creativity and thinking ability are generated by teacher's high tolerance and sharp observation under an established normal. The utilization of an inventive strategy and intensive interaction ensure the students' enjoyment toward the process of creativity, without the restriction and suppression of traditional norm. Teachers of different expertise ought to set up teams to enlighten students with diverse development. Most importantly, the teacher acts as a vital head start for student's creative thinking ability. The student is further shaped and under the influence of teacher, yet not an executioner of teacher's creativity. Through the action research, the researcher not only built upon professional knowledge, but also contributed to the teaching resources. Hopefully this will serve as reference for other teachers.

Keywords: creative thinking teaching strategies, integrated curriculum, arts and humanities

國中地理科心智繪圖教學方案對學生創造力、學業成就表現、學習歷程之成效研究

黃雅卿

台北縣立崇林國中

摘 要

本研究旨在根據 Tony Buzan 的心智繪圖編擬一套適合國中八年級學生的地理科心智繪圖教學方案，探討此方案對增進國中學生創造力及地理科學業成就表現之成效。

本研究採不等組前後測準實驗設計，立意抽取台北縣立某國中八年級兩班學生，並將之分為實驗組與對照組。實驗組實施每週二節，每節四十五分鐘，總共十週的地理科心智繪圖教學方案，對照組則實施傳統教學，無實驗處理。本研究主要的研究工具為自編之「國中地理科心智繪圖教學方案」、「國中地理科心智繪圖心得記錄單」、「心智繪圖構圖技巧評量表」，以及林幸台、王木榮(1994)修訂之「威廉斯創造力測驗」，所得資料以單因子共變數進行考驗。

根據研究結果，本研究主要發現如下：

一、實驗組在威廉斯創造性思考活動測驗的改變情形

(一) 實驗組與對照組在「威廉斯創造性思考活動測驗」之「精密力」達顯著差異。顯示實驗組在創造性思考活動之「精密力」優於對照組。

(二) 實驗組與對照組在「威廉斯創造性思考活動測驗」之「變通力」、「獨創力」、「總分」未達顯著差異。

(三) 實驗組在「威廉斯創造性思考活動測驗」之「開放性」、「標題」達顯著差異。顯示實驗組在創造性思考活動之「開放性」、「標題」優於前測。

(四) 實驗組在「威廉斯創造性思考活動測驗」之「流暢力」未達顯著差異。

二、實驗組在威廉斯創造性傾向測驗的改變情形

(一) 實驗組與對照組在「威廉斯創造性傾向測驗」之「冒險性」未達顯著差異。

(二) 實驗組與對照組在「威廉斯創造性傾向測驗」之「好奇心」未達顯著差異。

(三) 實驗組與對照組在「威廉斯創造性傾向測驗」之「想像力」未達顯著差異。

(四) 實驗組與對照組在「威廉斯創造性傾向測驗」之「挑戰性」未達顯著差異。

三、實驗組在地理科學業成就的改變情形

實驗組在經實驗教學後，實驗組在地理科學業成就的表現沒有顯著的差異。

四、實驗組在學習歷程之改變情形

實驗組在心智繪圖構圖技巧的「規則」、「整體結構」、「線條」、「顏色特性」、「總分」方面已有明顯的進步。表示實驗組學生在接受心智繪圖教學方案之後，對於心智繪圖的技巧方面已經熟悉。

五、實驗組的學生對於地理科心智繪圖教學課程表示喜愛。

大部分實驗組學生認為心智繪圖有用以及好玩，並有超過半數的同學認為心智繪圖適合其學習風格。在實驗結束後，有超過半數的同學會將心智繪圖應用在其他科目上。

最後根據本研究結果加以討論，並提出未來進一步研究的建議，以作為後續心智繪圖教學的參考。

關鍵字：心智繪圖、創造力，地理科

The effect of the mind mapping teaching course in geography for 8th grade students on creativity, grades in geography and learning process

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Abstract

The main purpose of this study were to design a set of mind mapping teaching course in geography for 8th grade students based on Tony Buzan's "Mind mapping" and to investigate the impacts of student's creativity and the grades in geography.

A nonequivalent pretest-posttest experimental design was employed . Two classes subjects are convenience sampling from the 8th grade classes in Taipei County . These two classes are assigned to the experimental group and the controlled group . The experimental group attends the mind mapping teaching course in geography two times per week and 45 minutes per course , totaling 10 weeks . The controled group is taught under traditional geography course without any experimental methods . The main instruments of this study are the mind mapping teaching course in geography for 8th grade students , the experimental groups' thoughts of the mind mapping teaching course in geography , the scale of mind mapping skills , and the " Willians Creativity Test " revised by Lin Sing Tai & Wang Mu Rong . (1994). The outcome data are examined by ANCOVA.

The major findings of this study were concluded as follows:

1.The results of the " Willians Creative Thinking Test "

(a)The experimental group's score of elaboration are significantly higher than those of the controlled group in the " Willians Creative Thinking Test " . Namely , the experimental group's creativity is better than that of the controlled group in the elaboration .

(b)There were no significant differences between the experimental group and the controlled group in flexibility , orginality and total scores in the " Willians Creative Thinking Test " .

(c)The experimental group's posttest scores of opening and title are significantly higher than the pretest in the " Willians Creative Thinking Test " . Namely , the experimental group's creativity is better than that of the pretest in the opening and title .

(d)The experimental group has no significant differences between the pretest and the posttest in fluency in the " Willians Creative Thinking Test " .

2.The results of the " Willians Assessment of Creative Tendency"

(a) There were no significant differences between the experimental group and the controlled group in risk taking in the "Willians Assessment of Creative Tendency".

(b) There were no significant differences between the experimental group and the controlled group in curiosity in the "Willians Assessment of Creative Tendency".

(c) There were no significant differences between the experimental group and the controlled group in imagination in the "Willians Assessment of Creative Tendency".

(d) There were no significant differences between the experimental group and the controlled group in complexity in the "Willians Assessment of Creative Tendency".

3.The results of the study in geography

After the experiment teaching , the experimental group has no significant differences between pretest and the posttest in geography score .

4.The results of the "mind mapping skills"

The experimental group's rules , whole structure , lines , color characteristic and total score are better than that of the pretest in the mind mapping skills . Namely , the experimental group's students are Familiar with the mind mapping skills after the mind mapping teaching course in geography.

5.The experimental group students enjoyed the mind mapping teaching course in geography.

Most students of experiment group think that mind mapping is useful and fun, and over half of the students think the mind mapping is suitable for their studying styles. After experiment , over half of the students will apply mind mapping to other subjects.

企業數位學習與專業發展創新模式

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總經理

摘 要

提案人（召集人）：黃雲龍副教授 台灣體育大學/休閒產業經營系/副教授
預計邀請投稿共四篇：

- 1.黃雲龍副教授（台灣體育大學/休閒產業經營系）/ 陳昭良（群崴 TeamWell 管理顧問公司副總經理）：「市場實戰模擬演練模型與成效初探」
- 2.王思峰副教授（輔大心理系）：「創造力教學之後設認知策略：情境模擬演練的教材設計」；
- 3.陳旻萃副主任（資策會數位教育研究所數位學習中心）：「企業訓練學習成效評估創新模式」；「混合式學習實際案例-主管訓練、語言訓練、成效評估」
- 4.蘇文華總經理（勝典科技公司/中山大學博士候選人）：「Virtual Leader 模擬式情境訓練模型」。

Session: E-5

黃雲龍、王思峰、陳昭良、陳旻萃、蘇文華

Not Provided

混合式學習實際案例

-主管訓練、語言訓練、成效評估

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摘 要

資策會執行工業局數位學習專業人才培訓多年，均依據學習目標採用混合學習的方式，辦理數位學習的課程。這一年來由於深感混合式學習的重要及成效，也逐漸將其應用在主管的訓練、職場英語、學習成效評量、提升訓練績效、非正式學習上(如下表)，得到企業及學員的肯定與認同。

課程主題	目標/策略	混合方式
主管訓練-coaching	課程及工作上持續演練	實體課程(DDI)+6 週 6 個模擬案例演練+實體分享
職場英語	聽說讀寫	線上自學教材(空中英語)+線上作業+每週一次與美籍老師同步
學習成效評估	學習後 Level 3 工作應用評估	實體課程(國外顧問)+課後 Level2,3 問卷+實體分享與討論(Skype)
企業達致最佳績效 規劃實作	應用 ABCDE 成效評估模式提 升訓練成效	實體課程+實際案例實作與分享
非正式學習	應用 wiki 工具協助工作進 行，並達到做中學之效果	經由結合實際工作之應用達到學習的目的

國內外很多專家學者也都提到不久以後將不再有所謂的混合式學習，因為所有的學習都勢必將是混合式，因為學員以不同的方式學習，規劃者或講師只是協助學員自我學習而已。不論對於教育訓練工作者或是身為學習者，如能在原有的實體教室或純線上的學習上多加一些學習的輔助、延伸、或指導，讓學員因此能夠有機會再去回想、練習、複習，學習效果定能有所提升。而近來因為 web 2.0 之趨勢興起，非正式學習亦隨之而受到注意，如何善用此新工具，亦值得重視。

關鍵詞：混合式學習、延伸學習、訓練成效評估、非正式學習、Web 2.0

Real Cases for Blended Learning

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Abstract

Cultivating professional e-Learning manpower for many years, Institute for Information Industry has designed the classes by blending different instructional strategies and methods according to learning objectives. Since blended learning is actually effective, we continuously practicing it on various topics of classes/workshops, such as Coaching, Work English, Learning Impact Evaluation, ABCDE Model, Informal learning , summarized in the following table, which are well received:

Class/Workshop	Objective	Blended methods
Coaching	Practicing the methods by simulative cases and on jobs	Classroom lecture(DDI) + 6 simulation cases for 6 weeks + Classroom sharing
Work English	Listening, speaking, reading, writing	Online contents(Classroom Studio) + online exercises + synchronous session once a week with native instructor
Learning Impact Evaluation	Level 3 Evaluation	Classroom lecture (consultant) + Level2,3 questionnaire + classroom sharing and discussion (Skype)
Planning to Get the Upmost Impact	Elevating learning impact by applying ABCDE model	Classroom lecture + on-job application sharing in one month
Informal Learning	Learning by doing through implementation of Wiki	Learn by performance supporting

Many experts mentioned there will be no blended learning in the future, because all the learning must be blended. And because every learner has his own preferred learning methods, instructor is now in the role of a facilitator in learning. If we can add any extra supporting, extension, or mentoring, it would definitely give learners the opportunities to reflect, practice, and review, and thus help to improve the retention rates. In addition, through the emerging technologies such as web 2.0, informal learning is getting important. How to appropriately apply the technologies to enhance learning, is now a big issue.

Key words: blended learning, extension, learning impact, web 2.0, informal learning

市場實戰模擬演練模型與成效初探

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摘 要

數位學習已經是當代企業訓練與人力資本專業發展的重要途徑。作者根據本研究已研發多年之教學發明專利技術（專利名稱：『數位學習下決策或分析之學習引導方法』），結合行動學習理論方法，透過近四年來企業訓練的行動研究實證，建構「市場實戰模擬」的創新專業發展與訓練模型，以及發展評估創新模型訓練成效的方法。

「市場實戰模擬」的演練模型是讓學員在課堂上，進行「實作、實戰、實踐」的「市場沙盤推演」學習，透過電腦人工智慧的數位技術，創造出模擬市場競爭的「賽局市場」，讓企業主管藉由角色扮演及分組競爭的方式，實際演練與熟悉市場經營的動態競爭情境。透過這種學習方式，學員更能夠在電腦即時運算分析和克服市場經營問題的過程中，鍛鍊市場競爭力、團隊建立與行銷策略的決策能力，建構以行動學習為主的專業發展途徑。

課程中，學員將在課堂上面臨一個複雜、艱鉅的市場環境，必須在有限的資金預算與決策時間壓力下，快速掌握市場情勢並經由小組團隊的共同合作，一起著手解決市場經營危機，考驗學員是否作出合理的決策？是否作出正確的計劃？經營成果將在電腦即時運算之下，立刻輸出，並透過講師與學員的互動討論，體認到自己的「經營盲點」與「未來改進的方向」，逐步建構專業經理人在真實市場決策的學習地圖。

本研究將分別從模擬經營決策的學習行為改變，主題知識技能提升、競爭思維方法調整，以及市場競爭地圖實作成果，評估創新訓練模型之成效。

關鍵詞：行動學習、市場實戰模擬、訓練成效評估黃雲龍、陳昭良

黃雲龍、陳昭良、劉慧玲

No Provided

創造力教學之後設認知策略：情境模擬演練的教材設計

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摘 要

「創意與創造力實踐」課程有不同的設計模式，但在教學實務上，該類課程很難脫離「創意思考技法」的安排。然而，這樣的安排卻會面臨到 Gihooly (1999) 所稱的「創意思考之迷思與誤解」(Myths and Misconceptions about Creative Thinking)問題、或者 Okuda, Runco & Berger (1991)及林緯倫、連韻文與任純慧 (2005) 所稱的流暢力訓練於真實情境之預測效度問題。亦即，課堂中的小 C 創思技法訓練，與真實情境的大 C 議題間¹，存在著學習遷移的問題。本研究嘗試以「情境模擬演練的教材設計」，以協助自己與其他大學教師，克服此學習遷移問題。

¹ 「小 C」為小尺度的創造(creation)，譬如生活上的產生點子(idea generation)，「大 C」為大尺度的創造，牽涉到 Csiksentmihalyi 所言的場域與領域的變異與選擇的系統，譬如「創新」、「理論創造」等。

王思峰

No Provided

大學如何更有創意—台北科技大學創意學院計畫的經驗

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摘 要

在以「腦力」決勝負的「知識經濟時代」，創新思考以解決問題之能力，是未來世界公民的重要基礎能力。台北科技大學設計學院欲活化跨領域整合之創意思考能量，以人本文化為思考中樞，提升設計學院之創新氛圍，積極推動產學互動、師生創意激盪之情境設計空間，強化學生之體驗學習；使全院師生經差異化過程的觀察反省與對話交流中獲得創新的態度信念，並將之整合運用於未來新情境的創新設計解決行動方案或策略上。

本文將台北科技大學設計學院執行創意學院的計畫目標、過程與結果詳述，包括選才制度創新實驗、校園場景創新實驗及創意學子人才培育為主軸等內容。首先，透過「設計工作營」之行動研究，有效甄選適才適性之具有設計潛力的新生軍；再藉由落實動手實踐教學，培養學院師生創意互動，以雙手實現夢想，打造出富有創新構想且具多元展演激盪並能放鬆壓力解放思考之創意空間。在有形場景及無形潛移默化中薰陶活化師生之創意思考能量，並透過創意社團的成立與運作，針對學生之概念知識、過程技能、態度情意，以循序誘發方式導引創意設計有效轉換成具體成效及推廣適性化設計教育意義。經過兩年的努力，師生對於創意思考的理念與應用有更深入的啟發；計畫期間的實驗、養成與互動隱然成為創新研發知識服務平台，為未來集結成卓越的專業設計社群做好準備，並確立師生「創思、活化、新生」的願景。

關鍵字：創造力、選才制度、設計工作營、校園空間營造、創意社團

彭光輝

How Could A University Be More Creative? – The Experience of Creative College Plan from National Taipei University of Technology

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Abstract

While living in the knowledge economic era, a creative thinking in problem solving has become the most significant fundamental ability of future citizens. Design Colleges intend to coordinate the creative thinking energy among various disciplines. This action requires humanistic culture as the main frame of thinking, which promotes atmosphere of creativity, interactions between academic and business entities and experiences from learning that faculties and students obtain innovative ideas from observations, conversations and review of differentiate procedures. These ideas are then employed in the action schemes / strategies design for the future environment. This plan focuses on the creative experiments in recruiting system, academic environment and design student incubation. Firstly, an action research of “design workshop” is conducted to recruit adequate candidates in design disciplines. Faculties and students then interact with each other to create spaces where are tension-released, creative and innovative. The energy of creative thinking is thus enhanced via the operations of creativity communities that the design profession can be effectively converted and contributed to the public design education. It is expected the students from various design disciplines will be ready for future challenges that each of us reaches the vision of “creative thinking, vitalization and renovation”

Keywords: creativity, recruiting system, design workshop, shaping campus space, creative organization

南亞技術學院推動創意學院計畫的經驗分享

王昌、邱英嘉、柴希文

摘 要

南亞技術學院推動創意學院計畫，以建置創意平台與培育創意人才為主軸，藉由『技職體系學生創新人才評量機制建構』、『校園場景整體營造與實現』、『教師創新能力提升』等子計畫，透過播種、推廣、落實等循序漸進的推動，將創意的心靈意念化為具體行動，融入師生的生活與教學環境中。在本計畫的執行成果方面，(1)已開發一套具有信度，且與陶倫斯創意思考量表(Torrance Tests of Creative Thinking)印證效度，可適用於初步評量工科技職學生的創造力與創意設計能力；(2)在校園場景營造方面，結合教學課程與師生共同參與的操作模式，完成屋頂花園與園藝教學平台，以及荒廢空間再造休閒綠地，提升校園空間的使用效率，結合既有的太陽能與風力設施提供電力，並規劃雨水回收系統提供景觀池用水，朝向「永續校園」；(3)在教師創新能力提升上，透過教師培訓與研習、通識與專業的相關創意課程開設、專題演講，以及活動的參與和學習等過程，創意與創造力的意念與行動已逐漸融入校園的課程、社團與競賽活動中，並擴大到日常生活中，逐年的發酵與成長。

Experience- Sharing of Nanya Institute of College's Creative College

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Nanya Institute of Technology

Abstract

The aims of the project - Creative College- promoted by Nanya Institute of College are to build a creative platform and to cultivate creative personnel. Through the sub-projects of "Building an Evaluation Module of Students' Creativity in the Vocational Colleges", "Implementing the Campus", and "Enhancing Teachers' Innovation Ability", we have step-by-step started, spread, and realized the ideas of creativity into actions. They have been integrated into the life of students and teachers and also into the teaching environment.

The accomplishments of the project are:

1. We have developed a credible evaluation module, whose validity can be proved by Torrance Tests of Creative Thinking. It can be adapted to preliminarily evaluate both of the creativity and creative design ability of a polytechnic student.
2. In the sub-project of "Implementing the Campus", we've integrated lecturing and hands-on modes to build a roof garden and a teaching platform for Gardening. We also developed a wasteland into a recreational space to increase the campus usable space. The solar energy and the wind power provide the electric force, and rainfalls have been recycled and used in the landscape pond. All in all, we've made every effort to construct a sustainable campus.
3. In "Enhancing Teachers' Innovation Ability", teachers are encouraged to attend related training sessions and seminars. The school also offers creativity-related courses in both the General Education program and other specialized programs. There are also invited to attend thematic lectures and to participate in activities.

These processes have also brought the ideas and the actions of creativity into school curriculum, students' clubs and competitions. The ideas and actions of creativity have also leavened and spread into our daily life, and hopefully, they will increase in the future.

台北場

海報

TAIPEI

POSTER

美術館的教育活動與創造力的培育之研究初探

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摘要

美術館的教育活動主要是搭配展覽主題，規劃生動活潑的活動，讓觀眾藉此來記憶、體驗藝術。以當期展覽元素為發想起點、構思，用一種寓教娛樂方式讓大眾去接觸藝術。所面對的族群則以學校團體和家庭親子為主，但卻沒有強制的限定。

Betty Edwards (1989)在“*The New Drawing on the Right Side of the Brain*”(像藝術家一樣思考)一書中提到創造力的定義：能夠把手頭上的資訊，即所有人都能獲取到的普通感官資訊，用全新的方式處理。因此試著去改變一種觀看的方式，學習如何去觀看，用自己的方式思考，這便是一個創造的歷程。就認知心理學的角度而言，人是一個訊息傳遞的系統，但不是一個被動 (passive) 接受訊息的系統，而是一個主動 (active) 詮釋外來訊息的系統。而認知是包含知覺、記憶與思考過程各個層面，是所有人類專有的特徵 (Solso, 1998)。這樣的一個感知過程，就如同訊息的傳遞過程。創造力的培育要強調的應當是感知能力，而不是技巧的訓練。

在美術館教育活動的場域裡，透過義工老師的引導，強調對「物件」的觀察、詮釋，提供參加者一個自我對話的過程並讓所有參與者能夠去分享彼此過程的經驗。沒有結果的好壞，而是去欣賞不同的創作方式。

本研究透過筆者在台北市立美術館「資源教室」擔任義工老師的經驗中，觀察美術館的教育活動與參加者之間互動的情境脈絡，以參與觀察的方式，對美術館的教育活動與創造力培育做一初步探討。

關鍵字：美術館的教育活動，創造力，認知

An Initial Study of the Effects of Creativity Education in Art Museum Workshops

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Abstract

The Art Museum workshops support the exhibitions through related programs that embrace diverse aesthetic, imagination, and creation perspectives by playful learning. Play is central to so many kinds of learning and inspiring to Art. The workshops, in the main, offer the chance for the family and school to meet, learn and create about art together.

Dr. Betty Edwards, the author of *Drawing on the Right Side of the Brain*, mentioned that learning to see things differently-- to see in ways not used in ordinary life. Learning to a "different way of seeing", is an active, creative and self-directed process. This processing in human cognition, such as perception, recognition, memory, and comprehension, is the characteristics of human (Solso, 1998). Human is the information sent – received system, it is the active encode –decode the message not just passive receipt. Hence, this sensory processing is as like the information communication. Creativity Education is emphasized on perceptual of thinking not skill levels.

The museum is an environment for people to develop their unique visions of the “objects” in the workshops lead by the voluntary teacher's guidance. It emphasized the observation and annotation to provide the participant a self-directed process and enable all participants to share the sensory processing. That’s the way to approach the different creative experience from participants and to see things differently no matter it presents the skills well or poorly.

This article aims to act as an initial study of the effects of creativity education in art museum workshops. By participant observation, holds the post in the voluntary teacher's experience by the author in the Taipei Fine Arts Museum, observes the workshops interact with the participant, and makes a preliminary discussion.

Keywords: Workshop, Creativity, Cognition

職業婦女日常創意生活經驗與幸福感之相關研究

林品秀、修惠蘭

摘要

本研究目的主要先探討職業婦女日常創意生活經驗現況；然後研究職業婦女的背景變項(婚姻狀況、年齡、子女數、最小子女年齡、職業別)與日常創意生活經驗的關係；最後再深入探討職業婦女之日常創意生活經驗與幸福感間關係。本研究採取問卷調查法，以研究者自編的「職業婦女之日常創意生活經驗量表」，及「中國人幸福感量表」為調查研究工具。研究過程可分為三階段，第一階段先以開放式問卷訪談幾位有豐富創意生活經驗的職業婦女，編製「職業婦女之日常創意生活經驗量表」。第二階段，以方便取樣的方式，抽取一百名職業婦女進行預試。第三階段正式施測，以方便取樣的方式，抽取以新竹以北之縣市為主的職業婦女，共得 370 份有效問卷。並將收集資料以描述性統計、t 檢定、單因子變異數分析、迴歸分析、集群分析進行分析。本研究主要發現如下：一、職業婦女的日常創意生活經驗的內涵可分為六個向度，分數由高至低分別為：「運用資源處理生活事務性創意」、「空間或概念重組性創意」、「運用專業知識或技術性創意」、「人際互動性創意」、「即興的表達與因應性創意」、「家務性創意」。二、不同婚姻狀況、不同子女數的職業婦女在日常創意生活經驗上無顯著差異。三、不同最小子女年齡、不同職業別、不同年齡的職業婦女在日常創意生活經驗上有顯著差異。四、不同背景變項的職業婦女在幸福感上無顯著差異。五、職業婦女的日常創意生活經驗對幸福感有顯著的預測力。六、職業婦女的創意類型可分為四種：「全面創意型」，「懶人創意型」，「平凡無奇型」，「一成不變型」，且四類型的幸福感有差異。綜合上述結果，本研究發現越會使用日常創意生活經驗的職業婦女，其幸福感越高。特別是越會使用「人際互動性創意」「即興的表達與因應性創意」、「運用資源處理生活事務性創意」創意生活經驗的職業婦女，幸福感越高。最後，根據本研究的結果與討論為職業婦女、其他相關人員、諮商實務工作及未來研究提出建議。

Session: Poster

林品秀、修惠蘭 No Provided

Session: Poster

魏延斌 未提供

The Effects of Creativity Institution on Teachers'
Professional Development and Teaching Innovation:
Narrative Inquiry on Vocational High School Teachers in
Taiwan

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摘要

The purpose of this study, methodologically based on narrative inquiry and qualitative action research, is to explore the effects of creativity instruction for students to attend the yearly creativity competition in Taiwan on teachers' professional development, teaching innovation, and teaching/learning outcomes. In some vocational school of middle Taiwan, which has won the third place of that creativity competition for the past two years (<http://140.122.79.189/acc>), several leading teachers and two school teams for yearly creativity competitions will participate in this present study. By way of data collection and analysis from classroom observation, interviews with teacher and student participants, teaching-related documents, field notes and the research journal, we hope, from the experience of creativity instruction, to improve the way to develop creativity instruction for the further reference of other high school teachers who are eager to explore or further their creativity instruction.

學校行政創新經營的藍海策略

魏士欽

宜蘭縣羅東鎮成功國民小學

摘要

學校行政健全之發展是推動國家教育政策及運作的基礎，更是學校達成優質教育願景的重要關鍵。尤其是邁入 21 世紀的新時代之後，資訊的更新及流通更顯得迅速，為因應國際社會之快速變遷，學校行政經營的事務的確面臨著競爭的壓力，如何以創意點燃源源不絕的創新火苗，創造優質的校園學習環境，帶領全體師生迎向更完善的教育目標，的確是個重要的課題。事實上，有關學校經營發展的課題，已日漸受到政府及教育相關單位之重視。誠如，教育部（2002）為強化國家競爭優勢，即有計劃地推動創造力教育計畫，並指出行政機制的活化為當務之急，唯有創新的行政，方能促進教育政策之整合與銜接，俾能發揮學校行政經營之群效。另外，教育部同時結合中華創意發展協會辦理「全國學校經營創新獎」（Inno School），以鼓勵學校推展創新與多元的行政措施，進而帶動校園創新文化之氛圍。

「價值創新」是藍海策略的基石，是金偉燦（W. Chan Kim）、莫伯尼（Renée Mauborgne）兩位教授所提出的一項嶄新的經營概念，其中理念即是鼓勵組織勇於嘗試與突破，才能不斷創造更多新的價值。爰此，欲落實學校行政創新經營，即必須以主動積極的精神，勇於創新，整合多元化資源、組織夥伴關係的核心團隊，兼顧內外環境的影響因素，規劃優質的校園學習環境，研發創新經營的方案或策略，期以提升學生學習樂趣及教師教學效能。基於上述背景，本文析述有關學校行政及創新經營之文獻，透過「藍海策略」的分析架構，探究學校行政創新經營的可行策略，提出學校行政創新經營於教育現場的具體作為，期能提供學校及相關單位，以為參考，開創屬於學校經營的教育藍海。

Blue Ocean Strategy of the school administration innovation management

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Abstract

The development of school administration is the foundation of national education policy, and is also the important key to the achievement of high quality school education prospect. In the new era of the 21st century, the information renewal and circulation appears even faster. School administration indeed is facing competition. How to innovate new ideas in a steady stream, create high quality campus environment for learning, lead all teachers and students to the perfect education goals, surely is the most important topic that we should all attend to. In fact, the topic related to school management development, has received the attention from the government and been valued by the education authority. For instance, the Ministry of Education (2002) launched "The Creativity Education Plan" in order to strengthen the country's competitive advantage, and pointed out that the activation of the administrative mechanism is an urgent matter. The innovation of the administration is the only way that can promote conformity and engagement of the education policy, and to display the efficiency of school administration. Moreover, the Ministry of Education simultaneously works with Chinese Creativity Development Association to organize "The National School Management Innovation Prize" (Inno School), which encourages schools to promote the innovation and the multi-dimensional administrative measure, and the atmosphere of the campus innovation culture.

"value Innovation" is the cornerstone of "Blue Ocean Strategy", proposed by W. Chan Kim and Renée Mauborgne, which encourages the organizations to innovate and create more new values unceasingly. Therefore, the attempt to carry out the school administration innovation must be based on the initiative positive spirit, the courage to innovate, the conformity multiplication resources, the organization partnership of the core team, the proper attention to both inside and outside factors in the environment, plans for the high quality learning campus environment, the research and development of innovation management plan or strategy, in the hope that it can help the students to enjoy the pleasure of studying and the teachers to develop teaching potency. Based on the above background, this article states and analyzes the related literature on school administration and the innovation management. Through the analysis construction gained from the "Blue Ocean Strategy", we inquire into the school administration innovation management and the feasible strategy, and propose some practical ideas in perfecting administrative and educational environment. We humbly hope that our little effort can help the related schools and the education authority to create the "Blue Ocean Strategy" that belongs to school administration management.

幼教教師回應幼兒創意表現之再思

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摘要

研究者認為幼教教師本身具有創意教學風格或對於幼兒創意表現給予正向回應，對幼兒的學習發展上有重要的影響，但在文獻中發現幼教教師身處於支持創造力與現實環境限制中的矛盾，因此，研究者欲觀察幼教教師在教學現場是如何回應幼兒的創意表現，以更進一步了解實際狀況。

故本研究目的在於了解幼教教師如何解讀幼兒的創意表現，藉由幼教教師對幼兒創意表現回應的實際情況，並以批判的角度再思影響教師回應的因素。

本研究採質性研究取向，以兩名幼稚園教師為主要的觀察對象，為提高本研究之信度故研究小組四人同時進入教學現場，以參與觀察法及事件取樣的方式記錄幼教教師對幼兒創意表現的回應，將現場觀察記錄的文字稿分類後，再歸納出幾個主題事件，然後依「創造力教育白皮書(簡楚瑛、陳淑芳、黃譯瑩，2001)」提出之教師影響幼兒創造力阻力與助力因素，加以分析。以後現代觀點中對教師行為的詮釋，再思影響教師回應的因素，以下為本研究結果：

- 一、教師的教學目標呼應家長的期待，最主要給予孩子一些認知與技能上的學習，後現代的教學應著重方法的傳授，而非知識的灌輸。
- 二、教師在與孩子討論的過程中，教師發問的主導性太強，候答時間太短，後現代的教學認為應擴大學生的思考空間，賦予學生在學習上的主權，鼓勵學生表達自己意見。
- 三、在師生互動關係中，學生常是投其所好，希望可以得到教師的正面回饋。當幼兒隨著教師的偏好而去迎合教師的期望時，可能因此打斷自己的創造歷程而形成非自發性的創造產品與創意表現。
- 四、影響幼兒創意表現的助力與阻力同時存在於教師的教學行為當中，無法明確地劃分哪位教師支持亦或阻礙幼兒創意表現。
- 五、幼兒幾乎少有自發性的創意表現，創意表現反而是需要經由教師引發才會出現，在教室裡教師常是權力的主控者，主導著幼兒的行為，幼兒常是處於被動狀態，而創意表現也是屬於幼兒行為的一種，可見幼兒創意表現多由教師主導所引發。

Session: Poster

姚育儒、曾薰霆、吳蕙惠、高如瑩

No Provided

博物館競賽活動培育創造力策略探討-以土石流主題

為例

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摘要

創造力在許多動手做競爭活動中扮演一個重要的因素，學童和父母、老師或同儕互動時如何提高創造力是本研究的焦點；文中，我們提出一個以問題導向為基礎的情境式競賽計畫 - 「少年水保智慧王」，計畫中提供觀眾土石流災害的主題式教學課程及動手做的競賽活動，鼓勵每一組競賽觀眾學習有關土石流防災觀念，並以討論、實驗、探索等方式動手製作一個具土石流防災機制的機械關卡作品。目的是刺激學生的動機而且在合作學習的基礎下激發他們的創造力思考。更進一步地，每一組藉由解說作品時貢獻創作思路，因此，營造合作學習的環境與各組在競賽活動中的思路分享是本研究計畫培養創造力的兩個要素，同時希望藉由本文的討論及提供的建議，使未來推廣創意教學活動的人士能分享整個創意競賽的實施經驗。

本文以 42 組競賽組為研究對象，資料顯示親子組參加的組數比率較多而師生組較低，從觀察和訪談中也發現：當應用科學知識時，父親可引導小孩進行討論並獲得較好的成就，至於同儕組中，男學童比女學童較易產生爭執，但有較好的成就，可能因衝突使同伴更了解彼此的動機。這些結論有助於形成博物館今後發展創造力計畫時的基礎，並可促進觀眾在博物館的學習經驗更具創造力。

關鍵字：創造力，水土保持，合作學習、互動模式

Session: Poster

張百慈 No Provided

成語融入創意寫作的教學策略與成果展現

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摘要

本文之撰寫，係以「語文的創造力與教學」課程中，有關「成語融入創意寫作」單元的教學策略與成果展現為本。藉由學生運用「成語」的作品呈現，傳達創意融入書寫的方式，以及融入資訊教學的可能。在多元書寫與拼貼的練習過程，嘗試掌握「成語」的表達與運用，並以此呈現創意教學與語文結合的創新意義與時代價值。

關鍵詞：成語、創意、寫作、語文教學

The instructional strategies and achievements of the Creative writing by idioms

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Abstract

This research points at presenting the instructional strategies and achievements of the creative writing by idioms in course of the language creativity and teaching. It's expressed the writing of creativity and the feasibility of information instruction with students' compositions. To attempt gripping the expression and command of the idiom, then presenting the innovative meaning and the epochal value of the creative teaching and language integration in the process of practicing by the multiple writing and collage.

Keywords : idiom, creativity, writing, language teaching

性別對於教學科技幫助知識創新認知差異之研究

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摘要

本研究分析男女對於教學科技幫助知識創新認知上有沒有差異做研究，初步研究發現男女在利用教學科技幫助知識創新的認知上沒有顯著的差異，所以對於性別而言教學科技都可視為幫助知識創新的輔具。

一、動機：

教學科技對於學習新知、幫助知識創新有相當大的助益（Hoadley & Pea, 2002），學生若能利用教學科技來學習幫助知識創新，那會使學習由資訊的時代（Information age）邁進到知識的時代（Knowledge age）。過去研究中，性別對於學習科學或是對於科學的態度之研究結果有些不同，有研究者指出性別會明顯影響科學學習（熊同鑫，2001；Simpson, 1988），但也有研究指出性別對於科學學習沒有差異（徐淑娟，2003）。因此，研究者欲知性別對於教學科技幫助知識創新認知上有沒有差異。

二、方法：

本研究假設性別對於以教學科技幫助知識創新的認知上沒有差異。研究以受試者內設計（within-subject design）實驗方式進行，49 位教育學程受試者被要求在實驗前後對問卷進行回答，問卷內容主要包含三個開放式問題，要求學生分別針對「學習」、「教學設計」、及「教學科技」三個議題進行定義。實驗內容主要為介紹學習典範從過去到目前的歷史發展情形，主要四個學習典範包含（1）學習即行為改變（learning as behavioral change）(Waston, 1913)（2）學習即認知改變（learning as acquisition）(Sfard, 1998)（3）學習即活動參與（learning as participation）(Sfard, 1998)（4）學習即知識創造（learning as knowledge-creation）(Paavola, Lipponen, & Hakkarainen, 2002/2004)。本研究主要目的之一是想瞭解不同性別學生對於教學科技可以幫助知識創新的學習典範在認知上的接受度。回收有效問卷共 47 份，前、後測分析重點主要在呈現學生對教學科技的主要概念，回答的內容例如：「教學科技是利用科技產品來輔助教學」、「教學科技可以幫助學生學習及創新的輔助器具」、「運用教學科技可以創造更深層的議題」等，研究者針對四個學習典範所呈現的不同概念進行編碼，以學生所呈現主要概念（key concept）作為編碼單位，之後再將敘述性的回答轉成量的數據，並以 SPSS 15.0 進行：1. t 考驗分析實驗前、後對於教學科技幫助知識創新之差異；2. t 考驗對後測中男女對於教學科技幫助知識創新之差異。

三、結果與討論：

研究結果發現：(1)在前測中，不論性別，受試者皆一致認為教學科技只是輔助學習的一種科技，均未提到教學科技作為知識創新工作上的角色。受試者的回答舉例有：以科技的方式來輔助教學活動，一種教學的道具，新奇好玩等，都只把教學科技視為教學的輔具器具。(2) 實驗後，學生在認知上普遍認為教學科技可以促進知識創新，與前測差異達到達顯著水準（ $t=6.362$ ， $p<.001$ ， $M=0.468$ ， $SD=0.504$ ），受試者的回答舉例有：科技除了輔助外，更重要是深入理解及製造新的創意、一種幫助知識創造的媒介。(3) 後測亦發現性別對於教學科技幫助知識創新此概念上未達到顯著差異（ $t=-1.022$ ， $p>.05$ ；男生， $M=1.39$ ， $SD=0.499$ ；女生， $M=1.54$ ， $SD=0.50$ ）。傳統刻板印象對於女性「學習」自然科技方面都比男生弱，而且隨著年級增加，其差異越趨明顯（鄭宜真，

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2002)。雖然「學習」上是如此，但在「認知」上，本研究卻發現，不論性別，男女皆認為教學科技可以用來幫助知識創新，意即女學生與男學生都認同教學科技可以輔助知識的創新，研究結果將可作為提供往後在教學現場教師在使用教學科技時之參考。

詹雯靜、王博賢

No Provided

師培生對「學習即知識創造」概念的理解研究

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摘要

一、動機：

資訊和傳播科技的突飛猛進已使我們所處的社會從資訊社會邁進了知識社會(UNESCO, 2005)。為因應此一社會發展，未來教育在養成更多具有創造力的教師也變得越來越重要(Hargreaves, 1999)。然而，研究卻顯示大多數教師對教師角色的定位仍傾向於認為教師是知識的傳遞者而非知識的創造者(Bereiter, 2002)。本研究的主要目的即是要了解 (1)師培生對「學習」此一概念的想法是否如過去研究所指出，認為「學習」仍只是一個知識傳遞的過程，以及(2)在透過適當的教學活動以介紹 Paavola, Lipponen, 和 Hakkarainen (2002/2004)等人所提出的「學習即知識創造」之概念後，是否可以進一步改變師培生原本只是將「學習」視為「知識傳遞」的概念。

二、方法：

運用受試者內設計(within-subject design)，本研究針對教育學程之師培生(N=49)進行問卷調查。問卷內容共包含三個開放問題，要求學生分別針對「學習」以及其相關概念(即「教學設計」與「教學科技」)等進行說明。實驗操弄係介紹四個重要學習典範的歷史發展過程，主要包含(1)學習即行為改變(learning as behavioral change)(Waston, 1913);(2)學習即認知改變(learning as acquisition)(Sfard, 1998);(3)學習即活動參與(learning as participation)(Sfard, 1998);以及(4)學習即知識創造(learning as knowledge-creation)(Paavola, Lipponen, & Hakkarainen, 2002/2004)。回收有效問卷共47份，前、後測分析重點主要在探討學生在理解上述概念上是否發生轉變。舉例而言，受測者在前後測時對「學習」此一概念及其它相關概念有如下的回答：例如，在前測時，有學生對「學習」的概念的回答為「獲得新的知識」。在後測時，有學生對「學習」的概念的回答為「讓自己變得更有創造力」。研究者針對受試者在答案中的主要概念(key concept)作為編碼單位，之後再將這些概念敘述轉成量化數據，並以SPSS 15.0進行：(1)描述性分析前測時，受試者是否普遍認為「學習」即知識傳遞；(2)t考驗以瞭解受試者在前測與後測上對於「學習」以及其相關概念(如「教學設計」和「教學科技」)是否有發生重要概念上的改變。

三、結果與討論：

研究結果發現：(1)在前測中對學習等相關概念變項，師培生主要皆認為學習即「行為改變」或「認知改變」，未有任何受試者提到學習即「知識創新」的概念。舉例而言，有受試認為學習就是接受知識後，能吸收它成為內在資源。也有受試者認為教學設計就是設計並規劃如何進行教學活動以達到讓學生有效吸收知識的目的；(2)在實驗操弄後，學生則在認知上普遍認為學習等三個主要相關概念變項是與知識創新有關，並與前測間的差異達到達顯著水準，分述如下：(1)學習($t=-7.450$, $p<.001$, $M=-2.020$, $SD=1.898$)、(2)教學設計($t=-7.762$, $p<.001$, $M=-2.102$, $SD=1.896$)、(3)教學科技($t=-4.819$, $p<.001$, $M=-1.367$, $SD=1.986$)。例如：學習概念方面受試前測回答「是獲得知識，且能有所改變」，後測則轉變為「是創造，產生新知，形成願景」。在教學設計概念方面，受試前測回答「幫助教學活動更具體流暢」，後測則轉變為「啟發創作思考的歷程」。在教學科技方面，受試前測回答「運用相關的工具資源輔助教學」，後測則轉變為「輔助創造活動的媒介」。

Session: Poster

詹雯靜，王博賢

No Provided

Session: Poster

Anamika

未提供

Community, Creativity and Knowledge Building: Role of a Teacher Researcher

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Abstract

School is a miniature form of society. It should ideally works collectively in the direction of knowledge creation and enhancement. In the age of knowledge economy such kinds of knowledge building communities are become crucial agencies. In such scenario the role of a teacher who is simultaneously a researcher too becomes significant. The current study is founded on six teachers' interview who practice knowledge building in their classrooms and conduct research as well. In the present study, the main argument is the role of a teacher and researcher are complementary to each other and can be pursued together.

Keywords: community, creativity, knowledge building, teacher researcher

文化創意產業與行銷組合之研究－以台中縣沙鹿鎮大肚山達賴休閒農場為例

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文化創意產業自 2002 年列為國家重點發展計畫，雖然還處於新興的階段，但在相關部會的積極推動下已日漸成熟，產、官、學界對文化創意產業的重視程度日益提升，也成為經濟發展的新方向，更逐步影響我國經濟發展的結構。在工藝技術的產業化方面，台灣將致力營造具台灣特色之創意與品味兼具的工藝文化產業，運用台灣地方特色的優勢，協助工藝及觀光產業提升附加價值，創造高附加價值的產品，進而實現國民豐富之生活品味及促進國際視野的廣度。

休閒農場的經營管理不再像傳統農業經營般的單純，除了要與其他相關類型的休閒產業競爭外，與政府之間的合作也是相當的重要。休閒農場的發展除了要展現及維持其具有傳統農業搭配休閒的特性外，但最主要還是以營利為其主要的目的，所以農場推出的產品、服務必需要能夠符合及滿足遊客需求的，否則最終還是走向經營不善而關閉的結果。目前休閒農場的經營者大多多保持著較保守的經營方式，雖然會透過少數遊客的反映而對農場內部做小部分改善，但始終無法確實滿足大部分遊客的需求，因此本研究認為行銷管理中的行銷組合策略可以解決消費者的問題及滿足消費者。透過行銷組合策略中產品、通路、通路與促銷四個方面的策略擬定，更是幫助文化創意產業的發展。本研究主要探討的 3 個層面為：

- 一、瞭解休閒農場經營管理與行銷組合策略應用的現況與其困難處。
- 二、瞭解遊客對於休閒農場的認知程度、需求與滿意度。
- 三、綜合經營者與遊客方面的資訊研擬出一套適合休閒農場的行銷組合策略，藉此可以幫助該休閒農場文化創意產業的發展。

本研究先以文獻探討的分式，找出對文化創意產業行銷組合策略的影響因素，並根據先前之研究目的，以擬出供給及需求兩份不同之間卷。運用 SPSS (statistical package for social science) 軟體中的描述性統計及單一因子變異數進行分析。行銷組合策略雖然是由理論演變而成的，但它會依據不同休閒農場的自身資源條件與特性，而有所差異。本研究以台中縣沙鹿鎮大肚山達賴休閒農場為個案分析對象，並針對個案對象研擬出一套行銷組合策略，並由此研究個案的經驗及策略擬定以改善目前之狀況，提高文化創意產業的成果。

【關鍵字】：文化創意產業、行銷組合策略、休閒農場

A analysis on the marketing strategy of leisure farm resorts – A case of the Dalay Leisure Farm, Datu Mountain, Shalu Town, Taichung County

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Abstract

In most country, the farming industry is root of most nations. With regards to Chinese, since the early days farming is directly connected and related to the peoples' daily living. Survival and the satisfaction of basic needs are also related to the harvest gathered from farming activities. But due to the change in time, advancement of technology and the development of various industries caused the farming industry to be forgotten. In 2002, after Taiwan joined the WTO the farming industry became more globalize. In addition to the downward trend of the industry, change is inevitably needed. With the help from the government and experts, the industry slowly transforms its ideas and form. Because of these the rise of the so-called Leisure Farming, Tourist Gardens, Leisure Farm and many other, but with farming as the basic function with the addition of basic life needs and nature caring, thus developing the farming industries uniqueness.

Management of a leisure farm is different with the traditional farming industry. In addition to the competition which arises from other leisure farms, cooperation with the local government is also a must. Besides the need for maintaining and developing their natural functions, leisure farms basic goal is to make profit. With these in mind, leisure farms tend to promote various products and services that would cater to the needs of the guests and tourists. Operator of such leisure farms are mostly farmers, which maintain their traditional conservative method of running their business. Although there is much exposure of the industry, but still there is a lot expansion and development needed to fully satisfy the needs of the tourists. With these in mind, these study aims to discuss and analyze the marketing strategy of leisure farms with respect to products, commodity channels, marketing channels and schemes, in order to help attract more customers and thus increase the income of such industry.

Research phases:

1. To understand and analyze the current marketing strategies employed and its problems
2. To understand and analyze the exposure of leisure farms to the clients, together with the needs of the clients
3. Information from operators and clients was organized into a combined marketing strategy, which could aid in client attraction and thus increase the operators' profit.

A combined marketing strategy is evolved from theories, due to the different nature of the industry and the uniqueness of the leisure farms; thus having their differences. This study uses the Dalay leisure farm located in the Shalu town of Datu mountain, Taichung County as a sample cases. While using the case study method and setting the goals and needs of both operators and clients, thus developing a set of experimental marketing strategies which can serve as guidelines and give insight for the operators.

Keywords: Leisure Farm, Combined Marketing Strategy

創造力教學信念量表的編製

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摘要

近年來，許多創造力的學者從其研究中提出創造力是可變動的特質，並致力於發展各種教學策略，希望透過教育的力量提升學生的創造力，然而在教學現場落實創造力教學仍面臨許多問題，如教師對於創造力教學的誤解，或是認為學習條件較差的學生不適合接受此類教學，由此所形成的創造力教學信念將可能影響教師的教學行為，反而限定了學生的創造力發展，相關文獻與研究指出探討教師的教學信念有助於預測其教學行為，故了解教師創造力教學信念有其重要性。以往測量教師信念多半以自陳量表為主，部分填答者容易順應社會期待，造成填答不實，再者，自陳量表多以概括性的描述呈現教學行為的傾向，與實際教學情況仍是有落差。因此本研究的目的為發展適合測量創造力教學信念的測量工具。本研究根據文獻探討，以國民小學中高年級的國語科、數學科與社會科教學內容為主，呈獻實際教學情境，並參酌批判思考學者 Torff(2005)所發展之「教師信念問卷」(Teacher Belief Questionnaire)題型，設計高、低不同的創造力教學，高創造力教學題型如後：「教師在社會課進行『家鄉』單元的教學，老師先與學生討論哪些方式可知道家鄉的歷史，並假設家鄉即將面對一場戰爭，如果要讓後代的人了解現在的歷史，請學生寫出會留下哪些東西，再說明會擺在甚麼地點以防毀壞或流失。」之後，再請受試者依據不同學生的「能力」、「先備知識」與「動機」判斷教學的有效性，故形成「高創造力教學－學習優勢者」、「高創造力教學－學習劣勢者」、「低創造力教學－學習優勢者」與「低創造力教學－學習劣勢者」四個構面。量表編製完成後，先進行專家效度評分，得內容效度係數為.92，顯見專家在高、低創造力教學題型的內容給分一致性高。之後再以「非師資培育大二學生」、「大二師資培育學生」、「大四師資培育學生」與「正式教師」共175個樣本做為預試對象，再以同樣的分組方式對425位受試者進行正式施測，進行量表的信、效度分析，結果顯示：(1)經因素分析後，四個構面皆呈現較高的因素負荷量，最高為.823，最低亦有.312。(2)總量表信度 Cronbach α =.88，四個構面的信度分別為.84、.84、.87與.82。由上述分析可知，本量表具有不錯的信、效度，可供後續相關創造力教學研究做為參考。

關鍵字：創造力教學(teaching for creativity)、創造力教學信念(beliefs of teaching for creativity)、學習優勢學生(high-advantage student)、學習劣勢學(low-advantage student)

Construction of the Scale for Teachers' Beliefs about Creative-Thinking Activities

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Abstract

In recent years, researchers of creativity had pointed out that creativity is changeable, and devoted to develop many models and strategies of teaching. However, it appears that some problems exist in teaching for creativity, for example, some teachers had misunderstandings about creativity, or refer to that disadvantage students were not suitable for creative-thinking activities. Then, these beliefs of teachers hold to use creative thinking activities (CT) or disadvantage students would affect the behavior of teaching for creativity. The purpose of this study was to develop an instrument for measuring the Teachers' beliefs of creative-thinking activities. The scale comprises a series of 12 prompts-vignettes describing classroom activities in Chinese, Mathematics, and Social. The prompts are divided equally between high CT and Low CT. The scale was designed to allow teachers' beliefs to be assessed specifically for high-advantage and low-advantage learner. To avoid response bias caused by leading questions, a contextualized assessment scheme was designed drawing on the characteristics teachers take into consideration as they judge learners to be high advantage or low advantage. Three such advantage characteristics were used: ability, prior knowledge, and motivation. A 36-item scale was administered to 175 participants for item analysis in the pilot study. Subsequently, a sample was collected from 425 for factor analysis and reliability estimation. Result revealed that the developed scale- Scale for Teachers' Beliefs about Creative-Thinking-had satisfactory reliability and validity. Finally, the significance and implication of this scale are discussed.

Key words: teaching for creativity, beliefs of creative-thinking activities, high advantage student, low advantage student.

易經創造思考訓練模式之建構與應用

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摘要

創造思考能力在資訊科技所引發的知識革命時代，越來越重要，而中國的群經之首－《易經》，其所隱含的思維模式影響中國人最深也最久。因此，透過歸納分析，整理出《易經》的創造思維模式，並與西方的各種創造思維模式做比較分析後，建構出一套有系統的創造思考訓練模式，並將之應用在各個領域，藉以提升個人及團隊的創造思考能力與問題解決能力。

Session: Poster

蔡巨鵬 No Provided

是孕育知識的搖籃？還是終結知識的墳墓？

非正規教育培育個人終身創造力之初探

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摘要

本文從 Bourdieu 文化資本的理論來探討非正規教育培育個人終身創造力的利弊與提出深思，提供未來研究之參考。

研究發現，非正規教育培育個人終身創造力的優點為：對個人而言，可以方便學習與符合個人需求；對國家而言，可以提升國民素質與提高國家競爭力。缺失為造成 M 型社會加劇與加重財力負擔。整體而言，是利大於弊。

關鍵字：非正規教育、終身學習、創造力

Is breeding knowledge cradle ? or is end knowledge grave ? Nonformal education cultivations individual lifelong creativity initially searches

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Abstract

The purpose of this study was to explore and analyze the advantages and disadvantages of the application of Bourdieu' theory of culture capital into non-formal education for develop an individual's life-long creation capability.

The research discovered that, nonformal education breeds individual lifelong creativity the merit is: Speaking of individual, may facilitate the study and conform to individual demand; Speaking of the country, may promote the national quality and enhance the country competitive ability. The flaw creates the M society to intensify and aggravates the financial resource burden. The whole says, is the advantage is bigger than the shortcoming.

Keywords : nonformal education, lifelong, creativity

藝術的新創意:造形與音樂的創造與統整

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摘要

本研究從多元藝術創造的探討觀點出發，試尋求東西方文化中在不同族群、語言、歷史經驗中，音樂與造形藝術在形式差異下如何創造整合融入彼此，進而衍生新創意及新藝術的產生。本課程研究的設計將從視覺、聽覺、表演藝術等面向來推展多元音樂媒體教學活動為出發點，深入淺出地探討在音樂藝術與造形藝術文化的議題之間的相互關係。

本研究的主要目標是要推動多元藝術的教學，讓學生對於藝術統整的理念、內涵、歷史背景學習能有所認識。本研究試圖以注重學習過程的檔案評量為教學導向，以七年一貫制四年級的學生為研究對象，進行運用檔案評量於”藝術對話:造形與音樂”課程以提升學生藝術統整學習成效之初探。在多元文化與藝術整合觀點的強調之下，共有三個主題教學主軸，分別從視覺、聽覺、表演藝術等面向來推展多元化媒體教學活動。課程內涵包含：增進對聽覺與視覺藝術之基本形式與原理有認識與分析能力；加強對藝術與人文社會之間的關係有明確認知(文化比較)；促進藝術個體之間的對話(創作精神)；藉由藝術創作中學習賞析藝術之能力(美術及音樂批評)；及視聽媒體之運用，希望從各個層面來豐富多元及創意的教學內容。

本課程研究透過跨藝術的整合觀點，在多元文化的強調之下，以互動式的教學訓練學生對音樂與造形藝術描述、分析、解釋及判斷的能力，並啟發他們對相關藝術的創作興趣。課程尤其著重透過小組討論的方式，激發學生觀察、分析與批判西方與東方文化之差異，並省思藝術和我們日常生活的關係，以涵養學生對現代藝術生活的賞析、創造與批評。

藉由研究課程主題整合教學經驗之初探，協助教師客觀地了解學生學習歷程的演變，給予教師教學改進之協助並進而提昇學生在藝術統整學習的動機，並涵養其對新藝術的創造。而透過此經驗的結果，期盼未來也能朝向跨多元性、科技化藝術與創作的課題研究上去努力。

關鍵詞：藝術統整、檔案評量、藝術對話

The New Creative Arts: Form and Music

Creation and Integration

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Abstract

This study from the artistic creation of multiple point of view and try to seek in the culture of different ethnic groups, languages, historical experiences, music and art in the shape of how to create different forms of integration into each other, thus derived new ideas and new art produced. This course will study the design vision, hearing, the performing arts, and other music-oriented to promote multi-media teaching and learning activities as the starting point to learn more on art and music in the arts and cultural shape of the relationship between the issues.

The main objective of this study is to promote multi-arts teaching, allowing students to the arts integration concept, content, historical background study can be recognized. This study attempted to focus on the learning process of portfolio assessment for teaching-oriented, consistent system of seven-year coherent college to the fourth grade students to study, use of portfolio assessment in the “Arts Dialogue: Form and music” courses to enhance students learning the arts integration of . In multi-cultural and artistic point of view of integration under stress, there were three main themes of teaching, from vision, hearing, the performing arts, such as to promote diversification of the media-oriented teaching and learning activities. Course contents include: the promotion of the auditory and visual art forms and principles of basic knowledge and analysis capabilities, strengthening the arts and humanities, and social relations between the clear understanding (Culture); promote dialogue between the individual arts (creative spirit) ; Through art appreciation of art in learning ability (art and music criticism), and the use of audio-visual media, from all levels hope to the rich pluralism and creative teaching content.

This course on the integration of the arts through an inter-view, in a multicultural emphasis, to the interactive teaching and training students to music and art shape description, analysis, interpretation and judgment capacity, and inspired them to the relevant interest in the creative arts. Courses in particular, mainly through group discussions of ways to inspire students observation, analysis and criticism of Western and Eastern cultural differences, and reflect the arts and our daily lives, to cultivate the students living on the appreciation of modern art, creativity and criticism.

With the theme courses on the integration of teaching experience, to assist teachers in an objective understanding of the evolution of student learning process, to improve the teaching and thus help improve student learning in the arts integration of motivation, and conservation of its new artistic creation. Through this experience and the results can also look forward to the future towards the creation of art and boost research efforts.

Key words: arts integration, portfolio assessment, art dialog

藝術創造力個案研究與視覺創意呈現：運用後設認知

探討藝術研究生的藝術生命歷程

賴怡欣

國立花蓮教育大學科技藝術研究所 研究生

本論文海報的研究目的在於探究與呈現一位研究生的藝術生命故事：先運用後設認知探索自我的藝術生命歷程，然後以創意的視覺化形式呈現個人的藝術生命經驗。

本篇論文的研究方法採「個案研究」。研究生（作者）在教師的輔助下，在「視覺藝術心理學專題研究」的課堂，運用後設認知自我剖析藝術成長歷程，以生命數線和個人符號表達自己在各年齡階段對於藝術賞析和創作的特色，然後運用創意策略與同儕分享個人的藝術生命故事。

「藝術生命歷程」的研究設計分為二階段：第一階段為整合質性與量化的研究，教師引領研究生在藝術生命座標的 X 軸標上年齡，將 Y 軸分為創作與賞析兩層面，並各分為五等級。在溫馨感性的引導中，讓每位研究生回憶與分析自己的成長歷程，有哪些事件觸動了自己的美感經驗、自己曾進行哪些藝術活動？教師鼓勵研究生發展個人的視覺符號進行座標圖示，每一符號寓含藝術主題與背景故事的質性描述，而符號落在座標的位置，包含發生年齡（X 軸）與藝術等級（Y 軸）的量化分析。在第一階段以後設認知搜尋記憶，整理出自己的藝術故事，在座標上呈現點點滴滴的各種藝術經驗；第二階段強化後設認知的概念和實際體驗，研究生必須分析與歸納自己藝術風格發展，經過選擇、組織與評估後，以視覺符號表達自己的藝術生命故事，展現創意、美感和思維。例如，研究生將藝術生命歷程從幼稚園時期到研究所時期分為六個成長階段，每一階段皆有獨特的藝術經驗與表現策略；此外，研究生從台中遠赴純樸又美麗的花蓮求學，受大自然環境的影響，心中充滿了感動與感恩，經由後設認知將心靈感受轉化為視覺印象，在構思藝術生命歷程時，以大樹圖像作為基礎元素，在樹枝上使用圓球符號，運用形狀、大小和色彩來表現自己的個性、藝術經驗與風格發展。

經由後設認知整理出的藝術生命歷程個案研究，將結合學術研究的嚴謹和視覺創意的活潑，以圖文並茂的海報呈現於「2008 創造力教育國際學術研討會」。

關鍵詞：藝術創造力、後設認知、視覺化、藝術生命、藝術鑑賞與創意表現

Session: Poster

賴怡欣

No Provided

文學生活與通識教育－「文學與人生」教學研究

陳韻琦

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摘要

一、授課對象：「非人文類科」的大學學生

二、研究動機

- (一) 確認「文學」的定義。
- (二) 樹立文學價值觀，提高人文意識。
- (三) 規劃讓學生衍生研讀文學興趣的課程內容。

三、研究目的

本課程歷經一次的學期教學後，在第二次學期教學作出課程的調整與革新。

四、研究方法

主要根據「行動研究」精神進行：

- (一) 研究者即教學者。
- (二) 研究的進行以解決教學問題為起始點，研究歷程以解決教學問題為依歸（driving force）。過程中透過回饋機制，反映「教師教」（teaching）與「學生學」（learning）的問題，以期能反應問題並解決問題。而研究者亦必須對研究議題保持高度自覺（sensitivity）。
- (三) 設計「李克式量表」（The Likert Scale）設計問卷調查，作課程調整的根據，並回應學生的意見，彙整為教學省思的記錄。

(四) 本課程欲解決的問題：

- 1、如何讓「文學」的深廣內容，讓非人文科系的學生所接受與理解。
- 2、確立「文學」在「通識課程」的意義。

五、研究內容

(一) 教學研究歷程與分析

1、教學目標

- (1) 找出文學與生活的關聯性。
- (2) 以文學觸動學生對生命的熱誠。
- (3) 強調教學目的。
- (4) 強調多元文化批判思維。
- (5) 強調多元識讀的能力。

2、教學內容

以「古典文學」與「現代文學」著作為研讀主軸，包括：詩、散文、小說、新聞時事與電影欣賞。

- (1) 課程的特質。

Session: Poster

(2) 多元文化的思維。

(3) 個人課程意識的實踐與批判。

(4) 課程發展的階段。

(5) 確定課程取向 (orientation or approach)：課程設立的歷史脈絡、蒐集各校開設課程的規劃、訪談教育先進。

(6) 教材編選

興趣原則、價值原則、能力原則、類化 (溫故知新) 原則。

「多元文化的思維」：文學相關概念的文章、材料。

新興的媒材：動畫、遊戲、網路、電影。

(7) 教學方式

自學輔導法、問答法、講述法、引導法、欣賞法、討論法。

安排教學與學習內容和活動：重視學習過程的經驗。

課程的過程模式：教育應關注具有內在價值的活動，而非僅完成某些預先決訂的目標與學習成果。

強調教學脈絡及經驗的重組。

強調教育的方式而非只是教育的內容。

訂定程序原則 (principles of procedure)：活動、內容、問題選擇的依據：引發學生的疑問與認知上的衝突。

視探索為適當，促進其開放的討論，即使沒有肯定答案也無所謂。如：金庸在《雪山飛狐》中，製造了一個給讀者「當武俠小說作家」的機會，結尾中金庸寫道：

胡斐舉起樹刀，一招就能將他 (苗人鳳) 劈下岩去，但想起曾答應過苗若蘭，決不能傷她父親。然而若不劈他，容他將一招「提撩劍白鶴舒翅」使全了，自己非死不可，難道為了相饒對方，竟白白送了自己性命麼？.....

胡斐到底能不能平安歸來和她 (苗若蘭) 相會，他這一刀到底劈下去還是不劈？根據金庸在該書後記 (頁 245) 說：

「雪山飛狐」的結束是一個懸疑，沒有肯定的結局。到底胡斐這一刀劈下去呢還是不劈，讓讀者自行構想。

即使多年來一直有讀者請金庸寫一個明確的結尾，但他仍認為要保留原狀，多一些想像的餘地，也是一種趣味，金庸自己亦想過多種不同的結尾。所以，本課程要求學生憑自身個性、歷練與對人性的看法，自己當作者，寫《雪山飛狐》結局，並「角色扮演」，在課堂中「演出」此段情節。

鼓勵學生抒發己身的感情與反省自己的經驗。

隨時省思以建立對自身課程的理解：

第一個層面：透過省思達到課程設計的實體呈現，以達成課程發展的工作。

第二個層面：涉及個人「多元文化」課程意識的省思，包含自我對多元文化的反省，以及本身「多元文化」課程意識的教學實踐，是如何對學生建構多元文化的概念產生影響的理解。

第三個層面：了解學生對多元文化的態度、學生如何將這種態度表現在對文學研讀心得的詮釋，以及學生在發展對多元文化理解與實踐的困境。

通識課「金庸、古龍、梁羽生武俠小說欣賞」教學省思

陳韻琦

聯合大學通識教育中心講師

摘要

一、研究方法

從行動起點開始

(一) 研究者即教學者

(二) 研究的進行以解決教學問題為起始點，研究歷程以解決教學問題為依歸(driving force)。過程中透過回饋機制，反映「教師教」(teaching)與「學生學」(learning)的問題，以期能反應問題並解決問題。而研究者亦必須對研究議題保持高度自覺(sensitivity)。

(三) 本課程欲解決的問題：

1、如何讓「武俠小說」的深廣內容，讓非人文科系的學生所接受與理解。

2、確立「武俠小說」在「人文通識課程」的意義。

二、課程研究

(一) 確定課程取向(orientation or approach)

1、課程設立的歷史脈絡

2、蒐集各校開設課程的規劃

3、訪談教育先進

(二) 訂定課程的教學目標

1、強調教學目的

2、強調多元文化批判思維

3、強調多元識讀的能力

4、確定主題：三位武俠小說作家著作與其內涵

(三) 發展與選擇教材

1、興趣原則

2、價值原則

3、能力原則

4、類化(溫故知新)原則

5、「多元文化的思維」：武俠小說相關概念的文章、材料

6、新興的媒材：動畫、遊戲、網路

(四) 安排教學與學習內容和活動：重視學習過程的經驗

1、課程的過程模式

教育應關注具有內在價值的活動，而非僅完成某些預先決訂的目標與學習成果。

2、強調教學脈絡及經驗的重組。

3、強調教育的方式而非只是教育的內容。

(五) 訂定程序原則 (principles of procedure)：活動、內容、問題選擇的依據

1、引發學生的疑問與認知上的衝突。

2、視探索為適當，促進其開放的討論，即使沒有肯定答案也無所謂。如：金庸在《雪山飛狐》中，製造了一個給讀者「當武俠小說作家」的機會，結尾中金庸寫道：

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即使多年來一直有讀者請金庸寫一個明確的結尾，但他仍認爲要保留原狀，多一些想像的餘地，也是一種趣味，金庸自己亦想過多種不同的結尾。所以，本課程要求學生憑自身個性、歷練與對人性的看法，自己當作者，寫《雪山飛狐》結局，並「角色扮演」，在課堂中「演出」此段情節。

3、鼓勵學生抒發己身的感情與反省自己的經驗。

4、隨時省思以建立對自身課程的理解：

第一個層面：透過省思達到課程設計的實體呈現，以達成課程發展的工作。

第二個層面：涉及個人「多元文化」課程意識的省思，包含自我對多元文化的反省，以及本身「多元文化」課程意識的教學實踐，是如何對學生建構多元文化的概念產生影響的理解。

第三個層面：了解學生對多元文化的態度、學生如何將這種態度表現在對武俠小說研讀心得的詮釋，以及學生在發展對多元文化理解與實踐的困境。

(六) 課程與教學的評鑑與修正

(七) 結論：課程未來的發展方向

1、多元識讀能力的培養

2、使用武俠小說進行跨領域統整課程之規劃

關鍵詞：（3-5 個）古龍、武俠、金庸、梁羽生、通識

電影歷史學

——60 至 80 年代之香港邵氏武俠電影

陳韻琦

國立聯合大學通識教育中心講師

摘要

本論文以 60 至 80 年代，香港邵氏具代表性的國語武俠電影，諸如：「獨臂刀」系列、金庸與古龍武俠小說所改編的電影，作為論述主軸。目的在於：爬梳邵氏武俠片的興衰歷史。撰述與研究方法為：根據本論文作者的觀點，以年代為經（60 至 80 年代），極具特色的邵氏武俠代表作為緯。結論為：在生活中以熟悉的語言（國語武俠電影）「看電影，學歷史」，了解邵氏武俠片的進展流程。

關鍵字：武俠電影、邵氏、歷史。

Movie History Study - - Shaw Studio's martial arts movie from 60 to 80 decades

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Abstract

This essay is to mainly explore the rise and decline of Hong Kong Shaw Studio's martial arts movie from 60 to 80 decades. The samples we are going to examine are the most typical Mandarin speaking martial arts movies, such as the series of "One Armed Swordsman", and other adaptation of martial arts novels written by Jin Yong and Gu Long. My objective is to straighten out the history of these movies and examine the process from their rise to decline. The main theme of analyzing and researching this topic is to outlining the social background from 60 to 80 decades and its intercross with the distinguish feature of the Shaw's martial arts movies. The Conclusion of this essay is : With a familiar language used in daily life, Mandarin, to understand the flow of progress of Shaw Studio's martial arts movies to finally achieve the goal of "watch the movies and learn the history"

Keywords : martial arts movie , Shaw Studio , History

科技創造力評量工具之發展

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摘要

自 1950 年以來，在創造力的研究領域中，如何去評量一個人的創造力，一直是許多學者面臨的挑戰。本研究突破以往僅著重於創意概念的評量方式，設計以科技競賽情境為主的評量方式，讓學生透過實際動手的實作活動，來發揮科技創造力以解決問題。而所謂科技創造力則是指學生在科技活動中所展現的創造力，與創造力最大的不同在於除了創意的發想以外，更注重實際執行與成果。因此，本研究依據學生在科技競賽中所產出的活動記錄單與實作作品，來評量學生的科技創造力。

為了發展出適合評量科技創造力的工具，本研究先透過文獻探討整理出科技創造力的評量項目，再經由改良式德懷術(modified Delphi technique)研究法來彙整專家的意見，修訂完成科技創造力評量表初稿。然後在台北縣某國中舉辦科技競賽，並使用此評量工具進行參賽者科技創造力的評量，以提升此評量工具之實用性。此外，本研究將所蒐集評量的數據建立常模分數對照表，並編撰評量指導手冊，讓此評量工具能夠標準化並且達到通用性。經改良式德懷術調查後，科技創造力的評量項目及比重如下：思維多樣性(15%)、思考深度(5%)、思維獨創性(15%)、變通反應力(10%)、思維可行性(10%)、材料適切性(10%)、造型獨特性(10%)、構造特殊性(10%)、功能適切性(15%)。

關鍵字：科技創造力、評量工具

Development of technological creativity assessment tool

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Abstract

How to assess creativity had been a challenge in the field of creativity research since 1950. Instead of focusing on assessing one's creativity concepts, this research designed a technological contest oriented assessment tool so that students can utilize their technological creativity through practical hands-on performance. Technological creativity is a kind of creativity that students show through technological activities. Making thought into practice is what technological creativity different from other forms of creativity. Therefore, this research assessed students' technological creativity by the outcome, such as process record and product, of technology contests.

In order to develop appropriate technological assessment tool, this research gained elements of technological creativity by references. With modified Delphi technique, we designed the technological creativity assessment tool by gathering panelists' opinion and suggestion. Putting the assessment tool into practical use made the tool more useful. Through modified Delphi technique, we summarize the items of technological creativity assessment and their percentage as following: a multiplicity of thought (15%), depth of thinking (5%), originality of thought (15%), flexibility (10%), practicability of thought (10%), appropriateness of material (10%), uniqueness of feature (10%), special structure (10%), appropriateness of function (15%).

Keywords: technological creativity; assessment tool

以音樂欣賞為中心實踐創造力教學之藝術與人文課程 研究

傅瑋俐

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摘要

本研究旨在探討以音樂欣賞為中心，啟發兒童在藝術領域之創造力的成效。主要以具體實作方式進行，期能創造兒童豐富的音樂欣賞經驗，讓孩子體會音樂的美感，自然涵泳分析力與鑑賞力，進而激發孩子生命中，獨特的創造力。根據教學成果，提供國小藝術與人文課程之教師作為教學參考。茲簡述文獻探討、教學設計與實作結果如下：

一、文獻探討方面

分別探討創造力教學與音樂欣賞教學的理論之重要文獻。

二、教學設計方面

針對國小兒童，以音樂欣賞為中心實踐創造力教學為目標，選擇名曲作為教學主軸，進行音樂欣賞教學，研究者探討各派學說之相關理論，發展出以音樂欣賞為中心的藝術再創造策略與七個教學步驟，經由實際教學操作後，發現兒童之藝術創造力是有無限可能的，且可以經由教師的引導而被啟發，透過兒童在團體中分享與對話，激起共鳴與想像力，形成一個完整的音樂交流作用，達成藝術與人文課程中音樂與視覺藝術、表演藝術的再創作。最後，以團體展演方式，在音樂發表會中展現不同風貌的音樂詮釋，交流不同的創新想法，達到創造力教學之目的。

三、實作結果方面

以台北市三玉國小四年級學生為教學研究對象，以音樂欣賞為中心實踐創造力教學之後，兒童所展現的藝術創造力成果如下：

- (一) 音樂與視覺藝術的再創作：兒童能透過色彩、線條、造型等具體創作來表現所聽到的音樂。
- (二) 音樂與表演藝術的再創作：兒童能設計肢體律動或創作戲劇來表現所聽到的音樂。
- (三) 創造思考能藉著團體討論活動，共同解決問題而激發。

兒童的藝術創造力是可以被期待的，教師們應該提供更多深入、多元的機會！

關鍵字：音樂欣賞、創造力教學、再創作。

Music appreciation in creative instruction -in the curriculum of Arts and Humanities learning area

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Abstract

The goal of this study focuses on music appreciation to inspire children's creativity in the field of Arts and Humanities. Authentic practice and teaching activities are intended to enrich children's experience of music appreciation. Let children realize the beauty of music and foster music appreciation naturally. Unique creativity in children's life could be inspired. The results of research may provide instruction reference for teachers in Arts and Humanities learning area. Briefly literature review, instruction design, and results of authentic practice are as follows.

1. Literature Review

Individually discuss literature of creative instruction and theory of music appreciation instruction.

2. Instruction Design

Focus on music appreciation to put creative instruction into practice for elementary pupils. Strategy for arts re-creation and seven creative teaching procedures were developed in the study. Famous songs were chosen as the leading part of music appreciation teaching. Stimulate children's imagination and resonance through sharing and conversation in a team to form complete music communication. The re-creation of Music, Visual Arts, and Performing Arts can be achieved. Finally, the purpose of creative instruction is accomplished by music performance. Children can present varied music interpretation and communicate different innovation idea.

3. Results

All grade 4 students in Taipei Municipal San-Yu Elementary School were chosen for teaching research. The results of children's creativity in the field of Arts after executing creative instruction focusing on music appreciation are as follows.

- (1) Music and Visual Arts Re-creation: Children can present what they hear by means of concrete subjects such as color, line, and modeling.
- (2) Music and Performing Arts Re-creation: Children can design body rhythm or create drama to present what they hear.
- (3) Creative thinking can be inspired by team discussion and co-resolving problem.

The arts creativity of children might be able to be anticipated. Teachers should provide deeper and more diverse opportunities for helping children to enhance music appreciation in order to inspire the proceeding music creativity.

Keywords: music appreciation, creative instruction, re-creation

科技創意競賽活動之高中生創造性問題解決歷程與科技態度的影響

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科技不斷的演進與發展，其對於人類所帶來的影響並非只有正面的貢獻，也造成了許多負面的影響。本研究旨在瞭解參加科技創意競賽活動之高中生創造性問題解決歷程與科技態度的影響及相關因素，並探討在創作過程中遭遇的問題與解決策略。本研究之創造性問題解決模式是以科技創意競賽活動的形式來呈現，採準實驗研究設計，包含量化分析與質性分析。量化部分以高中生在「對科技的態度量表」上之得分進行單因子共變數分析，質性資料則針對高中生對活動之看法及科技創意競賽活動對高中生對科技的態度之相關影響進行討論。研究對象針對台北市某公立高中科技研究社團學生做為研究觀察對象，進行為期數年的觀察、訪談等方法收集相關資料。將量的資料及質性分析資料加以收集整理歸納分析，獲得以下研究結果：

一、科技創意競賽活動中，影響高中生創造性問題解決的因素：

(一) 競賽提供的訊息可能影響高中生對競賽任務的思考方向。

(二) 高中生創作點子來自於：競賽提供的訊息、書籍、網路搜尋、他人意見、組員的經驗、電視媒體、生活中的事物與觀摩等。

(三) 影響高中生評估選擇點子與作品構想轉變的原因為：以完成作品參賽為前提、競賽任務的訴求、材料、時間、父母、兒童對創意的認知、製作問題、競賽的觀摩與學習等。

二、參賽高中生創作過程中可能遭遇的問題與解決策略：

(一) 缺乏共同時間討論：解決方式包括利用課餘時間討論、分工各自回家製作、以電話或網路相互聯絡討論等。

(二) 材料的獲得：解決方式可能為找尋替代品、放棄、尋求外界資源。

(三) 組員間的衝突：解決方式可能為各自為政、溝通與讓步及師長的意見。

(四) 製作問題：解決方式為改變構想、試做、尋求幫助、忽略問題和找尋替代方案、尋求專家資源等。

(五) 面對失敗與心理調適：組員間的相互激勵與家長、師長的支持可幫助高中生重拾信心與創作興致。

三、高中生喜愛科技創意競賽活動的原因有：好玩有趣、競賽引起的緊張刺激、具挑戰性、可與興趣結合、發揮創意和想像力、動腦思考動手實做、和同學一起

合作、獎勵制度、表現優良、知識的獲得、對升學有直接幫助等。

四、科技創意競賽活動之實施帶來以下幾點影響：（一）增加高中生對科技的喜好。（二）半數以上的高中生認為科技變簡單。（三）高中生對科技產生好玩的印象。（四）高中生可以從動腦思考和動手實做的過程中應用數理知識。（五）活動中之成長讓高中生藉由作品的製作對科技產生興趣。

根據研究結果，研究者對科技創意競賽活動及提升高中生對科技之興趣提出幾點參考，並建議未來科技創意競賽活動之實施可配合正式課程的設計，供科技教育推廣及未來研究之參考。

陳怡靜

No Provided

以大學為核心促進產業發展之研究-以我國育成中心的成效 為例

張瑞娥 林鴻儒

行政院經濟建設委員會專員 行政院經濟建設委員會專員委員

大學的角色與功能隨著全球化與知識經濟時代的來臨而轉變，除了傳統教學與學術研究的功能外，尚需成爲一個開放的有機體，回應社會的需求與期待，才能永續大學的發展。因此，大學與政府、產業間三螺旋模型的產學合作模式儼然而生，進行技術的創新與應用，以釋放大學的知識協助企業轉型及創新的需求。主要 國家多透過大學設置育成中心，做爲大學、產業及政府之間三螺旋交互作用下的產學合作平台，本文係針對我國育成中心的成效，做爲實證研究的主題，並針對發現 提出政策建議。

關鍵字:三螺旋模型，產學合作，育成中心

Research on promoting industrial development with the university at the core – An example from the effectiveness of Taiwan’s incubation center

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Abstract

With the globalization and the knowledge-based economy, the roles and the functions of the University are changing. This paper elucidates that in addition to traditional teaching and research functions, the University needs to become an open organism in order to response to the demand and the expectations from the society, as well as to be able to develop sustainably. Accordingly, the university-industry-government triple helix model has emerged to assist business transformation through proceeding the technical innovation and application in the university and releasing the knowledge to the business. Many countries set up incubation centers at universities as the industry-education cooperation platforms under the interaction of the university-industry-government triple helix model. This paper researches on the effectiveness of Taiwan’s incubation center, and proposes policy recommendations according to the findings.

Keyword: triple helix model, industry-education cooperation, incubation center

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以藝術教育作為培育幼兒創造力的途徑之分析

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摘要

自 2002 年教育部發表「創造力教育白皮書」，為打造「創意共和國 Republic of Creativity, R.O.C.」以來，創造力的議題與重要性在國內引起廣泛的注意。在創造力的諸多議題中，本研究選擇結合「不同人生階段」與「不同知識領域」二個主軸來探討「以藝術教育作為培育幼兒創造力的途徑」之分析。

「創造力」雖然是人類與生俱備的能力，但卻也仰賴後天環境的塑造與培養，才能逐漸開花結果。如果創造力是逐漸發展而來的，那麼在人一生當中是否有哪些階段特別適合創造力的發展呢？根據 Gardner(1983)認為幼兒期是「具有豐富創造力的黃金歲月」的階段；此外，葉玉珠(2006)、Arasteh & Arasteh(1976)與 Dacey(1989)等人亦認為：個人創造力的培養，學前階段是個重要的時期，而且是第一個最佳的時期。然而，在幼兒階段受限於其自身的認知發展和語言發展的階段，過去大多數的作法，大多是從建立一個「勇於嘗試、不怕錯誤、不怕失敗的環境」來著手。然而，採用建立接納的環境與重視內在動機等方面的措施，來提升幼兒的創造力，在某種程度上仍然是被動的作法。

其實，我們可嘗試從一個更貼近幼兒生活經驗的方式，來作為培養創造力的路徑...藝術教育在此即扮演著關鍵性的角色。因為在幼兒的活動中「塗鴉和繪畫」是經常進行的方式，它表現了視覺藝術的雛型；兒童喜愛唱歌或有節拍的律動，這是幼兒對音樂與節奏喜愛的展現；此外，幼兒也喜愛裝扮遊戲，從中展現了戲劇創意的端倪。無可否認，幼兒的生活充滿著藝術活動，也說明了經由藝術在幼兒學習中，扮演著相當重要的角色(范瓊方，2002)。

「藝術教育」與「創造力」雖然是二個相當受到關注的議題，但是在過去的研究中，探討二者對幼兒影響的文獻並不多見。一來是因為過去創造力研究的對象多著重在國民教育階段的學生；二來是因為幼兒創造力測量的工具並不多見，在使用上需有幼教老師協助；再者少數探討藝術教育對創造力表現的研究，多偏重在「表演藝術」方面的類科(如創作性戲劇、舞蹈遊戲等)。既然，許多研究指出幼兒時期為創造力發展的關鍵階段，而藝術又是最直接貼近幼兒生活形態的活動，因此有必要針對：若採用藝術教育作為培育幼兒創造力的策略時，所應該注意的事項進行釐清與統整，此即為本研究的主要目的。

關鍵字：藝術教育、創造力、幼兒教育

Multiple pathways to facilitate creativity by the lenses of art education

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Abstract

Majority of studies propose that creativity is increasingly important and that is a foundation to their and our nation's future success. The creativity is inherent with human being and facilitated by the supporting of environment. In short, the creativity is a developing process, and the childhood stage is the critical period.

Because of the limitation of language and cognitive development, the instruction of creativity for children is hard to progress effectively. Multiple intelligences theory proposes that students absorb and internalize concepts differently. The arts can provide a variety of paths for learning especially appropriate for children under the developmental limitation.

Art education and creativity are two important issues in child education, but it is rarely discussed at the same time. Since the early childhood is the critical period for the creativity, the art education is the most closely and directly pathway to facilitate creativity. We try to integrate the related child education and development theories and to clarify how to foster the creativity of children by art education. The curriculum and instruction practice will be discussed in the text.

Key words: art education, creativity, child education

部落格 (Blog) 於國民小學語文創造力教學 之應用模式探索

謝文惠

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蔡政宏

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摘要

隨著資訊科技的發展與普及，近幾年來最新興的網路使用模式莫過於部落格的應用。實際上來看，在公開化的網路平台世界中，部落格使用者往往具備不吝分享，勇於分享與主動發言之使用特性。本研究者實際擔任國小第一線教師，藉由本身實際教學經驗來看，認為部落格使用者所具備之特性，當有助於國小語文創造力教學之實施。然而，部落格又當以何種應用模式協助進行國小語文創造力之教學？整體而言，本研究之主要目的，即是透過文獻蒐集與探討，針對部落格的發展、特色，以及部落格於教育應用上之優點三方面進行歸納與彙整。同時，提出符合語文創造力教學之部落格應用教學模式，分別可為線性呈現、提問互動、引導式學習或開放式探索、腦力激盪，以及模擬角色扮演。期望透過本研究之論述，提供相關教學者、未來研究者與教學單位日後嘗試推廣使用部落格輔助語文創造力教學時可行之參考依據。

關鍵字：部落格、Blog、創造力教學、創意教學、資訊融入教學

The directed way of Blog to language creativity teaching in the elementary school

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Abstract

With the popularity of using Internet, Blog was popular among Internet users. Bloggers often have shared actively in the Internet. In this study we present the use of Blog was helpful to language creativity teaching. The major purpose of this study was to research the directed way of Blog in language study. Finally, conclusions are presented and suggestions are made for further research.

Keywords : Blog, creativity teaching, Information Technology Integration in Education

“舞動線條之美”—創造性舞蹈教學活動之行動研究

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舞蹈自遠古時期便已存在，藉著自由自在的舞動身體，使身心靈都達到一種平衡協調的狀態。在現今社會，人們拘束起軀體以符合社會的禮儀，也因此逐漸失去對身體的敏感知覺。身為藝術人文教師的我，不斷思索以及嘗試，希望讓學生重新釋放能量，重拾對舞蹈的熱愛。

「教育部創造力教育白皮書」中指出，人類正面臨「第三次產業革命」——一個以「腦力」決勝負的「知識經濟時代」。此時，不論是創新思考、批判思考或解決問題之能力，皆是未來世界公民的重要基礎能力。過去數年來，國家投注相當多的經費用於推廣創造力教學，其目的便是希望讓未來的下一代是一群心理活動活絡，具有創造力的優秀份子。

創造性舞蹈教學是以學生為創作主體，教師則為引導與啟發學生個人創作潛能的角色，其特性在於啟發學習者觀察、想像、思考、創造以及表現等能力，由活動中培養其敏捷性、協調性、以及自我表達的勇氣與自我肯定的信心，進而享受參與的樂趣，產生對團體的歸屬感與認同感。在此教學活動中，以創造性舞蹈教學為設計的藍圖，將雲門舞集立團之作--「薪傳」中「渡海」與「節慶」兩片段介紹給學生，讓學生體會到舞蹈的力與美，並藉此知道彩帶舞的揮動方式與隊形變化，以此為立基，學生分組自編一套彩帶舞，並加以練習、展演。之後透過觀賞自己以及其他同學的展演影片，加以回顧與反思，形成後設性認知，提高學習效能。

在這個教學活動中，運用彩帶這個媒介，讓學生自行將不同舞蹈的元素加以安排，其舞蹈元素包含肢體在空間中的造型、層次的高低、方向的改變等，另外力道的輕重、力度的鬆緊、動力的改變也在其中。在教學時則是運用小組的形式，從動作探索中引發相關經驗與聯想，讓課程更加樂趣化、生動化。這樣的進行方式所強調的是關係強調個體與個體、個體與群體間的交互性。

創造性舞蹈教學過程中，除了達成主要目標--創造力被激發、提升外，學生感受到的尊重以及全然的被接納，也使得自信心提升、群體活動技巧增強，這也是當初我在設計活動所期望的另項目標，期望學生在這樣的學習環境下，自在的啟發心靈、激發創造力，以成為未來時代的核心份子。

Session: Poster

方美霞

No Provided

生命中的巫婆與紅蘋果： 白雪公主對大學生創造力和人際互動之影響

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摘要

《小紅帽》與《白雪公主》以及其他的童話故事，已經成為大家的記憶中的一部分。然而，過去有關童話故事的研究的重點，幾乎都放在童話故事的文本分析和道德評析等，而近年來的心理輔導的敘事治療法，強調故事的運用，開啓了敘事治療另一扇門。然而，童話故事和創造力如何扯上關係？當人們不斷在尋找創造力的有效方法，甚至在教創意時，我們認為我們從小的床邊故事，即是我們創造力的來源。

本研究把童話故事視為心靈的藍圖，故事的原型，它與個人的性格養成和行為模式有關聯。個人對於認同的童話故事，無論喜歡或不喜歡，都反映了個人聲明的主題與日常的生活型態。而這主題不斷地複製在其生活中，在與人的互動上、在完成工作上等等。因此，本研究透過深度訪談的方法，了解個人喜歡和討厭的童話故事，並且試圖和其生活做連結，找出共同點，進而了解如何從童話故事中，了解一個人的生命的主題、遇到的問題與困境、如何突破問題等。從童話故事中，發現這些故事的隱喻，儘管這些隱喻因人而異，而且會隨著時間和空間有所不同。

在歸納訪談、實地札記與文獻資料後的發現如下：

一、個人對於故事的理解，呈現出刻板印象、自我中心、以及認同主角的認知特徵。

二、個人在透過道德討論、故事改編、角色扮演的過程中，對於故事的理解呈現出概念轉化、角色認取的態度。

三、個人在故事敘述和分析後，了解自身的經驗與童話故事的連結，並引用童話故事中的解決問題的途徑，試圖解釋自己面對的人際問題。

四、個人了解自己生命中的主題故事之後，有能力進行改編，藉以轉化成現實生活中的解決問題的途徑。

五、創造力的原動力，在於當陷入喜歡的童話故事的困境，而無法解決的時候，藉由所討厭的童話故事的動力來改變。

關鍵字：童話故事、白雪公主、創造力、人際關係

The Witch and the Apple in Our Lives : How Snow White Influence Student's Creativity and Interpersonal Interaction

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Abstract

Almost everyone has heard about the bedtime stories such as "Snow White and the Seven Dwarves" or "Little Red Ridding Hood" and so on. The previous research about the "Fairy Tales" is most emphasis on the moral value and the impact, or on the literature part.

However, this research intend for treading the Fairy Tales as an interior blueprint and prototype of story in which influence the readers mind and everyday lives. These fairy tales are not only bedtime stories but also as a tutor in ones lives. People see the same element in their lives as they selected their favorite story and abhorrence one. They will discover the same story in their lives in parallel with the fairy tales they love most.

The main findings are as follows:

1. Research finds out that fairy tales easily left stereotype of one character to the readers, which reflect the reader's ego.
2. Readers manage to convert the stereotype of one character when the role-playing and moral discussion take place.
3. When readers understand the condition of the fairy tales and his own lives experiences, he will notice the similarity in both lives experiences and the fairy tales.
4. When readers understand the condition of the fairy tales and his own lives experiences, he will try to find out a way to solve the problem which happened to be one of the arguments in the fairy tales.
5. Ones will find the way out in the abhorrence fairy tales.

Keywords: Fairy Tales, Creativity, Snow White and the Seven Dwarfs, Interpersonal Interaction

高中生創意生活經驗、刺激尋求與自我實現之關係

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摘要

本研究主要目的在探討高中生創意生活經驗、刺激尋求與自我實現之關係，採用問卷調查法的方式，以台灣東部地區之公立高中學生為取樣範圍，取得有效問卷共 398 份，並以「個人基本資料」、「高中生自我實現量表」、「創意生活經驗量表」及「高中生刺激尋求量表」作為本研究工具。研究資料分析方面，採描述統計、信度分析、因素分析、獨立樣本 t 檢定、典型相關、多元逐步迴歸等統計方法進行研究假設考驗。本研究所獲得的結果如下：

一、創意生活經驗部份

本研究中之高中生樣本的創意生活經驗並不高，且會因「性別」、「就讀類組」的不同，其整體創意生活經驗而達顯著差異。女生的創意生活經驗比男生多，而自然組學生比社會組學生在創意生活經驗上亦來的較多。

二、刺激尋求部份

本研究中之高中生樣本的刺激尋求為中等程度，但不會因「性別」、「就讀類組」的不同，其整體刺激尋求而達顯著差異。然男生在「生活經驗需求」、「反社會抑制行為」兩項層面之刺激尋求比女生來得高。

三、自我實現部份

本研究中之高中生樣本自我實現並不高，會因「性別」的不同，其整體自我實現而達顯著差異，但不會因「就讀類組」的不同而有差異。然女生在自我實現傾向程度上比男生高。

The Relationships among Creative Life Experiences, Sensation Seeking and Self-Actualization of Senior High School Students

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Abstract

The main purpose of this study is to investigate the relationships among creative life experiences, sensation seeking and self-actualization of senior high school students. The study adopted a method of questionnaire survey. The students out of the public senior high schools in Taiwan East areas (Ilan area, Hualien area, and Taitung area) were targeted as the population. 398 effective questionnaires were analyzed as research data. Instruments used in this study were "Basic Information Inventory", "Self-Actualization Scale", "Creative Life Experience Scare" and "Sensation Seeking Scale". The information gathered was described, analyzed, and tested by statistical methods such as descriptive statistics, reliability analysis, factor analysis, t-test of one dependent sample, canonical correlation and multiple stepwise regressions.

Results of the study are concluded as follows:

a) Creative life experience

The creative life experiences of senior high school students in there area of Taiwan (Ilan area, Hualien area, and Taitung area) was not in high condition. Also, senior high school students with different variables such as "gender" and "associate of degree (Arts/Science)" made significant differences to the creative life experiences.

b) Sensation seeking

The sensation seeking of senior high school students in there area of Taiwan (Ilan area, Hualien area, and Taitung area) was in median level. Also, senior high school students with different variables such as "gender" and "associate of degree (Arts/Science)" made no significant differences to the sensation seeking.

c) Self-actualization

The self-actualization of senior high school students in there area of Taiwan (Ilan area, Hualien area, and Taitung area) was not in high condition. Also, senior high school students with different gender made significant difference to the self-actualization. However, the variable such as "associate of degree (Arts/Science)" made no significant differences to the sensation seeking.

d) Significant canonical correlation with three functions exists in creative life experiences and self-actualization.

e) Significant canonical correlation with two functions exists in sensation seeking and self-actualization.

f) The senior high school students' creative life experiences could significant predict self-actualization, and "open mind" is more powerful as the predictor.

g) The senior high school students' sensation seeking could significant predict self-actualization, and "thrill and adventure seeking" is more powerful as the predictor.

These constructive suggestions have been made according to the analyses of literature and conclusive research. It can be used as a reference for not only teaching and consultation in school education but also making further researching.

Key words: creative life experience, sensation seeking, self-actualization

國中學生創造性傾向量表之編製研究

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摘要

本研究旨在發展一套適合我國國中學生之創造性傾向量表，以用來做為評量國中學生創造性傾向之工具。

本研究首先透過文獻探討，探究創造性傾向的意義及所包含之內涵，參考現有之創造性傾向量表及當今創造性傾向趨勢，編擬量表，以李克特氏四點量表方式編製，完成之國中創造性傾向量表計31題，分為「勇氣」、「好奇」、「挑戰」、「自信」、「熱情」、「幽默」等六個分量表。

研究對象以隨機取樣，預試有效樣本289人，正式施測有效樣本984人。所得資料經統計分析，結果如下：

一、量表編製

- (一) 因素分析：本量表以陡坡法抽取六個特徵值大於1的共同因素，再以最大變異法進行正交轉軸，計萃取出六個因素，累積解釋變異量為56.5%。
- (二) 效標關聯校度：在效標關聯效度的研究中以威廉斯創造傾向量表(林幸台、王木榮, 1994)作為效標，求其創造性傾向的總分與本量表之相關為.625，達統計上之顯著水準。
- (三) 信度分析：本量表六個因素內部一致性 α 係數分別為0.891、0.811、0.755、0.751、0.750、0.733，總量表內部一致性 α 係數為0.924，各因素相關係數介於.365 至.820 之間，均達顯著水準。
- (四) 重測信度：本量表間隔兩個星期的重測信度分析，總體量表相關係數為0.81。

二、國中學生創造性傾向與個人變項的關係

- (一) 不同地區的國中學生在創造性傾向上有差異。
- (二) 不同性別的國中學生在創造性傾向上有差異。
- (三) 不同年級的國中學生在創造性傾向上無差異。
- (四) 不同父親教育程度的國中學生在創造性傾向上有差異。
- (五) 不同母親教育程度的國中學生在創造性傾向上有差異。

最後，根據本研究發現提供若干意見，以供相關單位人員在教育及學術研究上作為參考。

關鍵字：創造性傾向、創造性傾向量表、個人變項。

Development of a Creativity Aptitude Scale for Junior High School Students

ABSTRACT

The aims of this study is to develop a creativity aptitude scale for junior high school students , as a tool to assess the aptitude toward creativity of junior high school students.

The step of this study are first identifying the meaning and items of creativity aptitude , next develop the scale refer to existed creativity aptitude scales and the development of creativity aptitude technology today . There are 47 items in the pre-test by 4 point Likert 's - type scale , the finished creativity aptitude scale are 31 items , divide to courage ,curiosity ,challenge ,confidence ,enthusiasm ,humor. There are 285 samples for pre-test and 984 for formal testing .The results of the data analysis are as follows:

1. Creativity aptitude scale

- (1) Factor analysis : using VariMax principle components analysis with orthogonal rotation , and find six factors , cumulative are 56.5% .
- (2) Criterion-related validity : using the Creativity Assessment Packet (Williams, 1994) as criterion, the reliability coefficient is .625.
- (3) Reliability analysis : the reliability of this scale are using Cronbach's alpha test , the reliability coefficients of six components are .891 \ .811 \ .755 \ .751 \ .750 \ .733 , total is .924 . It reveals that there is a good reliability and conformity among the items.
- (3) Test – retest reliability analysis : the scale's test-retest reliability of six components are is .81 at .01 significant level .

2. Personal variable

- (1) The area had influence on creativity aptitude.
- (2) The sex had influence on creativity aptitude.
- (3) The grade had no influence on creativity aptitude.
- (4) The Father's education grade had influence on creativity aptitude.
- (5) The Mother's education grade had influence on creativity aptitude.

Finally, the author proposed some suggestion for education authorities, teachers, and further research.

傳播媒體與教育範疇的整合與匯流： 教育廣播電台之產製網絡研究

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摘要

傳播媒體近年來除了扮演第四權與提供資訊的角色外，也被視為必須擔起教化與啓蒙公眾之責任。在國內傳播媒體中，教育廣播電台乃目前唯一以教育閱聽眾為創台理念之類型化媒體，也在台灣各主要地區設立分台，並透過多元化與新科技傳媒應用，整合各地區之教育、文化與人力資源，進行當地社區與區域性教育機關的交流與宣傳。本研究旨在透過深度訪談方式對於該電台如何透過整合多元傳播的教育媒體平台，將其啓蒙理念推廣至公眾。深度訪談部分從各部門之間的關係到探索其它媒體部門之資訊建構，並從相關該電台文獻彙整與歸納以輔助理論摸索的視野。理論檢驗方面，則是透過該電台的產製流程探討其價值網的建構，如何形構成價值網雛型，進而連結整合行銷傳播的概念，推廣教育政策、教育觀念等資訊訊息。

本研究環節從該電台各部門產製分工價值鏈的延長生產運作至各部門彼此互惠之價值網形構，探討該電台「有聲資料庫」、「六十天廣播節目線上收聽」與「有聲資料下載」、《教育廣播月刊》等多元媒體功能整合與資源分配。本研究以該電台內部組織產製觀點，透過價值網的營運管理模式之觀念，聚焦於整合行銷傳播範疇。殷盼透過本研究之調查，不僅推知教育廣播電台在教育整合行銷傳播上營運之方向，並可發掘傳播媒體在啓蒙公眾的附加價值存在，以給予媒體產業與教育界擁有更多對話與發展的思考空間。

關鍵詞：教育廣播電台、匯流、價值網、整合行銷傳播

The Association of Medium with Education Fields : A Study of National Education Radio multimedia production

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Abstract

The study hopes to toward “in-depth interview” on National Educational Radio (NER) ,treating some issues about the radio station how to associated medium with education. First, the part of “in-depth interview” through every branches of NER, discussing the establishment of information and data. Second, chewing over Integrated Marketing Communication (IMC) & Value Nets through delving theories and texts. The study focuses on “the system of internet & voice data archives”, “the broadcasts listening of 60 days on line” and “the download system of data archives”. At last, the anticipation of encouraging the mass communication and education fields deliberating and dialogue about the organization administration and multimedia integration of NER.

Keywords: National Educational Radio (NER) , flowing together, Integrated Marketing Communication (IMC) , Value Nets

系統工程在創造力培育方面的運用

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摘要

由於當今網路通訊的便捷快速，與資訊技術的蓬勃發展，不僅強化傳統系統工程的功能，更醞釀出許多創新的商業模式，因而「快速、數位化、專業知識、可複製經驗」的「系統化服務」，推展品牌通路的創新價值鏈，開啓所謂「知識經濟時代」的新世紀。然而衡量目前國際上，特別是歐美與日本等公司，也都是在強調發展知識經濟，努力於創新工作上。儘管各公司均投入大量研究與發展經費，但大部份公司僅有非常低之「創新生產力」，現實的殘酷數據顯示，有接近96%之新開發專案，都未能達到目標或回收所投資經費。

儘管如此，歐美與日本等系統廠商仍帶給台灣十足的競爭壓力，台灣產業除要面對上述先進國家從上而下的壓力，同時遭到後勁十足的新興開發國家低價競爭往上頂的壓力。台灣產業雖然在製程改良方面具有成績，但如持續用規模經濟來取得微利，空間必將日益縮小。企業提高競爭力、創造力、與國際產業價值鏈系統接軌，已勢在必行。

從系統化角度觀之，為滿足顧客需求，從新開發系統(含服務流程)架構，以及從創新商業模式(應用該系統方式)，經由兩者重覆循環，涵蓋檢討系統選項，比較系統需求與技術整合等工作流程，以獲得全方位之新型服務性具有知識之產業已是未來產業的發展趨勢。目前我國政府科技政策發展方向，是運用革命性科技，提升傳統機械、車輛、住宅等產業水準。要導入先進新科技（例如軟性電子、RFID、奈米科技）提高產品附加價值，更希望提升產業門檻，增加產業獲利。但這方面仍須藉由運用系統工程方法，搭配協同整合管理工具，配合企業發展願景，整合組織文化與跨領域人才方可達成企業提高競爭力與創造力的目標。

跨領域人才需具有系統化思維，方能整合跨各工程領域的核心知識技術，加上應用系統工程技術，才有足夠潛能發展出適合我國產業特性的「系統工程技術」，達到整合產品與服務的境界，從而創造高附加價值。也唯有透過系統工程課程，才能培育系統化解決企業對於產品、流程等諸多問題創新方案所需的人才，而透過這一系列具有系統化創新思維的系統工程教育課程方可達到台灣產業對系統整合人才的期待。本文從導入系統工程教育角度切入創造力培育課程的開發與運用，並比較本校學生學習成果與美國、澳洲等地大學的差異。

Session: Poster

王聰榮、彭元熙、賴楷模

No Provided

Session: Poster

Gregory S. Ching 未提供

Enhancing Creativity through an Interdisciplinary Thematic Information Technology Curriculum for Elementary Students

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Abstract

In the 21st century, information technology (IT) forms an integral part of everyday living. Similarly, with the arising need of having creative skills as one of the must have talent of the future; therefore it is imperative that both IT and creativity be developed in the early stages of education. This study uses the Technology Foundation Standards for All Students of the International Society for Technology in Education (ISTE) project on National Educational Technology Standards (NETS) as a basis in designing an experimental thematic and interdisciplinary IT curriculum for elementary education. The thematic setup of the curriculum does not only contribute to the personal development and social awareness of the students, but it also reinforced the mental development of the learner and enhanced the learners' creative talents. A total of 1273 elementary students and 12 computer teachers were separated into either a control or experimental group. After one academic year, students' final scores in English, mathematics, science, social studies, and creative art were gathered and compared. Statistical analysis indicated that there were significant differences in the experimental group's academic scores. Findings also suggested that an interdisciplinary curriculum design opened opportunity for both teachers and students to enhance their creativity. Further longitudinal studies are recommended to examine the long term implications of a thematic and interdisciplinary IT curriculum design.

Keywords: curriculum design, improving classroom teaching, creative talents, interdisciplinary project, teaching/learning strategies

從藍海策略談創意教學—以學校本位課程為例

林文雄

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摘要

近年來由於台灣人口結構轉變，在面臨「少子化」效應以及偏遠地區人口外流的趨勢衝擊之下，不僅都市型學校學生減少，偏遠地區學校的學生也越來越少，小型學校的存廢便成為社會討論的熱門話題。值此競爭全球化、本土意識高漲、教學績效化的時代，學校如何提昇教學品質、建立特色、型塑品牌，越來越重要。學校應積極尋求創新與改變，運用企業經營理念，整合學校與社區資源，打造藍海課程，在保障學生受教權益原則之下，彰顯學校存在價值，積極轉型發展成為獨樹一格的特色學校。本校藉由 SWOT 分析探討學校、社區發展背景，並在九年一貫課程統整、學校本位課程及創意教學的架構下，結合地方資源發展校本課程。以循環式的課程發展模式建構知識，並以實際的課程實施，落實於社區學習、探究社區議題，採取社區行動、解決問題，增加人與人、人與社會、人與自然間的互動關係，讓學生在多元、創新的學習歷程中，發展其「學習風格與多元智慧」。課程方案對本校師生之課程發展與教學活動帶來極大的變革，讓「學校本位課程」深具特色與永續發展。

關鍵字：學校本位課程、創意教學、SWOT 分析、多元智慧

Session: Poster

林文雄

No Provided

腦力激盪、體會式訓練對服務創意之研究：

以大學生實習工作為例

田正榮

致遠管理學院企管系 講師

教學型大專院校培育啓發學生應以專業職場知識爲主，大專學生於進入職場前是較能展現創意與新觀念階段。對客戶服務之互動行銷與關係行銷爲達成客戶關係管理的執行理念，客戶服務的過程與展現並無一定之理論與法則，主賴於接觸客戶與提供服務員工自然表現，包含：交談內容與過程、舉止表現、態度等。

服務表現透過創造力思考將獲取差異化與多元的競爭力，爲企業或組織維繫更多客戶，與培育邁入職場的學生較高的競爭力，大學教育多偏重於制式專業知識，對於來自學生本身創意的啓發過度忽略，換言之過去教育取向於學生認知與投入課本教材與教師講授理論內容，對於學生在實務面表現缺少關切與研究。本研究對大三學生實習課程與活動進行觀察與分析，並實驗透過實習前的腦力激盪與訓練，分析是否提升其創意，而有良好實習表現。

腦力激盪爲使用已久的創意產生方法，在學生進入實習職場前，分組進行服務點子的創意，經過學生多元與熱烈討論，激發互相創意思考並使學生樂意溶入工作，僅是腦力激盪將不足使學生展現創意與付諸執行，在腦力激盪後結合創意產生進行訓練，分別由學生輪流扮演客戶，體驗服務新點子的感受，並修正服務創意展現，明顯影響學生實習結果。

經過分組討論、扮演、實施後，本研究明顯發現學生能產生豐富而特殊的服務活動，例如活潑的接待與打招呼方式、兩位學生爲一組在客戶前有趣話題與交談、客戶離開前的道別方式等等，能夠提升客戶滿意。

本研究透過紀錄與實驗方法，將腦力激盪、體會式訓練兩項作爲自變數，驗證其是否影響服務點子創意產生，經實證發現：體會式訓練有助學生將產生的點子實際服務於客人，新奇的點子令客人留下特殊消費知覺而維護客戶關係。對學生而言，創意產生與實習活動進行透過此過程而有效提升。

關鍵詞：服務客人的創意點子、腦力激盪、體會式訓練、實習教育

Session: Poster

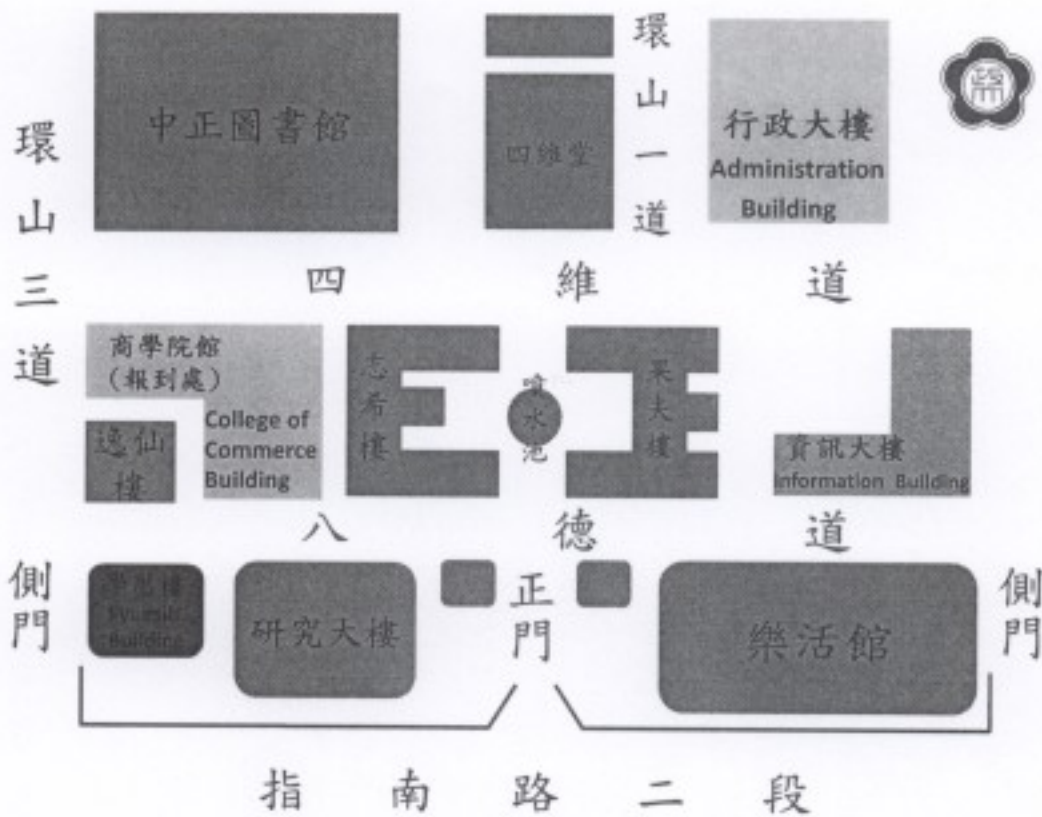
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