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## 研究領域

### ● 學術及教育專業專長

非制式科學教育(Informal Science Education)  
多元文化教育(Multicultural Education)  
科技素養(Scientific and Technological Literacy)  
永續發展教育(Education for Sustainable Development)  
環境教育(Environmental Education)、  
教學理論和策略(Teaching Theory and Strategy)

### ● 開課名稱

教育概論(Introduction to Education)  
多元文化教育(Multicultural Education)  
教育哲學(Educational Philosophy)  
非制式教育(Informal Education)  
環境教育(Environmental Education)  
非制式科學教育研究(Informal Science Education)  
多元文化教育研究(Research on Multicultural Education)  
科技素養研究(Scientific and Technological Literacy Studies)  
終身科學學習研究(Lifelong Science Learning Research)  
永續發展教育研究(Education for Sustainable Development Research)

### A.期刊論文 (\*為通訊作者)

#### International Journal

- (1) **Shein\***, P. P., & Tsai, C. Y., (2015). Impact of a Scientist-Teacher Collaborative Model on Students, Teachers, and Scientists. *International Journal of Science Education*. 37(13), 2147-2169. (SSCI; 2014 Impact Factor: 1.132; 2014 JCR Rank: 61/224)
- (2) **Shein, P. P.**, Li, Yuh-Yuh\*, Tai-Chu Huang (2015). The four cultures: Public engagement with science only, art only, neither, or both museums. *Public Understanding of Science*. 24(8), 943-956. (AHCI; SSCI; 2014 Impact Factor: 1.766; 2014 JCR Rank: 11/76)
- (3) **Shein, P. P.**, Li Y. Y., & Huang\*, T. C. (2014). Relationship between scientific knowledge and fortune-telling. *Public Understanding of Science*, 23(3), p.1-17 (AHCI; SSCI; 2012 Impact Factor 1.724)
- (4) Wu, K.-C., **Shein, P. P.**, Tsai, C.-Y., Chou, C.-Y., Wu, Y.-Y., Liu, C.-J., Chiu, H.-L., Hung, J.-F., Chao, D., Huang\*, T.-C. (2012). An investigation of Taiwan's public attitudes toward science and technology. *International Journal of Science Education, Part B*, 2(1), 1-21. DOI: 10.1080/21548455.2011.613643 (SSCI; 2010 Impact Factor: 1.063)
- (5) **Shein, P. P.** (2012). Seeing with two eyes: A teacher's use of gesture in questioning and revoicing to engage English Language Learners. *Journal for Research in Mathematics Education*, 43(2), 182-222 (SSCI; 2010 Impact Factor 1.500)
- (6) Lin, W.-C., **Shein, P. P.**, & Yang\*, S. C. (May, 2012). Exploring personal EFL teaching metaphors in preservice teacher education. *Asia Pacific Journal of Education*, 11(1), 183-199. (SSCI)
- (7) Cheng, Y.-Y., **Shein, P. P.**, & Chiou\*, W.-B. (2012). Escaping the impulse to immediate gratification: The prospect concept primes a future-oriented mindset, prompting an inclination toward delay gratification. *British Journal of Psychology*, 103(1), 129-141. (SSCI, 2010 Impact Factor: 2.72, Psychology, Multidisciplinary: Rank 16/120, doi:10.1111/j.2044-8295.2011.02067.x)
- (8) Tsai, C.-Y., **Shein, P. P.**, Jack, B. M., Wu, K.-C., Chou, C.-Y., Wu, Y.-Y., Liu, C.-J., Chiu, H.-L., Hung, J.-F., Chao, D., Huang\*, T.-C. (2012). Effects of exposure to pseudoscientific television programs upon Taiwanese citizens' pseudoscientific beliefs. *International Journal of Science Education, Part B*, 2(2), 175-194. DOI :10.1080/21548455.2011.610132 (SSCI; 2010 Impact Factor: 1.063)
- (9) **Shein, P. P.** & Chiou\*, W. B. (2011). Teachers as role models for students' learning styles.

### **Domestic Journal**

- (1) 鄭瑞洲，謝百淇，黃台珠 (2017)。臺灣公民參訪科學與工藝博物館趨勢之研究。科技博物；21(1)，p5-24。
- (2) 謝百淇、黃育真、張美珍、李馨慈(2016)。化零為整：科學學習生態系統取向之文化回應課程。科學教育學刊，24(S)，25-49。
- (3) 楊家豪，張美珍，謝百淇 (2016)。偏遠地區教師帶領學生參觀博物館之信念：以參與科工館科學趴趴 GO 的個案教師為例。科技博物，20(1)。49-69。

### **B.研討會論文**

#### **International Conference**

- (1) Tsai, C.-Y., Cheng, Y.-Y., Huang, T.-C., Cheng, J.-C., **Shein, P. P.**, Li, Y.-Y., Young, J.-H., & Lin, C.-L. (2016). A cross-cultural survey of the role of science identity on science center visit and effects. Paper presented at Asia-Pacific Educational Research Association-Taiwan Education Research Association 2016 (APERA-TERA 2016), Nov 10-12, Kaohsiung, Taiwan.
- (2) Lee, P. S. & **Shein, P. P.** (2016). Public engagement in science and technology and its impacts. Paper presented at Asia-Pacific Educational Research Association-Taiwan Education Research Association 2016 (APERA-TERA 2016), Nov 10-12, Kaohsiung, Taiwan.
- (3) Huang, Y.-C., Ruljigaljig, T., Chang, M.-C., & **Shein, P. P.** (2015). Ethnography of a Tribemuseumschool Collaboration on Developing and Implementing an Informal Culturally Relevant Curriculum on Natural Disaster and Prevention, The 31<sup>st</sup> Annual International Conference of Association of Science Education Taiwan (ASET), December 10-12, Pingtung, Taiwan.
- (4) Lu, Q., **Shein, P. P.** (2015). Developing a Culturally Relevant Evaluation to Measure the Impact of an Informal Culturally Relevant Curriculum on Indigenous Students, The 31<sup>st</sup> Annual International Conference of Association of Science Education Taiwan (ASET), December 10-12, Pingtung, Taiwan.
- (5) **Shein, P. P.**, Li, Y.-Y., & Huang, T.-C. (2015). Promoting interests in pursuing science and technology in avocation and vocation, Paper presented at the International Conference on 2015 International Symposium on Education and Psychology – Fall Session (ISEP 2015-Fall), September 8-10, Kyoto, Japan.
- (6) Huang, Y. C., **Shein, P. P.**, & Shein P. Y. (2015). Attracting and holding power of an E-Learning museum exhibit, Poster presented at the 12<sup>th</sup> Global Chinese Conference on Computers in Education, May 25-29, Taipei, Taiwan.
- (7) Ho, P. W., **Shein, P. P.** (2014). Facebook Page and Public Scientific Literacy. Paper presented at the Asia Pacific Educational Research Association International Conference 2014, November 19-21, The Hong Kong Institute of Education, Hong Kong.
- (8) **Shein, P. P.**, Hung, L. Y., Chao, D., & Fan, T. H. (2013). Scientist-Teacher Collaborative Model. Paper presented at the TERA&PROMS 2013 International Conference, August 1-8, Kaohsiung, Taiwan.
- (9) Huang, T.-C., & **Shein, P. P.** (2012). Taiwan's Survey of Civic Scientific Literacy – Past, Present, and Future. Paper presented in the symposium titled: Working towards Cultural Indicators of Science I. Paper presented at 12<sup>th</sup> International Conference on Public Communication of Science and Technology Conference, April 18-20, Florence, Italy.
- (10) Li, Y.-Y., **Shein, P. P.**, & Huang, T.-C. (2012). *Social contexts of citizens' interest in the issues of science and technology*, Poster presented at the 12<sup>th</sup> International Conference on Public Communication of Science and Technology, April 18-20, Florence, Italy.
- (11) Hsieh, P. Y., Luo, M.J., Cheng, J. C., **Shein, P. P.**, & Huang, T. C. (2011). A science teacher's

- beliefs and practices of teaching nanoscience in an informal setting. Paper presented at the 42<sup>nd</sup> Annual ASERA Conference, June 29-July 2, Adelaide, South Australia.
- (12) Wu, K.C., **Shein, P. P.**, Tsai, C. Y., Chao, C.-Y., Wu, Y.Y., Liu, C.-J., Chiu, H.-L., Hung, J.-F., Chao, D., & Huang, T. C. (2011). A study of public perception on global warming and attitudes toward science and technology of Taiwanese adults. Paper presented at the 42<sup>nd</sup> Annual ASERA Conference, June 29-July 2, Adelaide, South Australia.
- (13) Chen, H. W. & **Shein, P. P.** (2011). A case study of a low-performing elementary student in investigating representations of three-dimensional polyhedrons. Paper presented at the 35<sup>th</sup> Conference of the International Group for the Psychology of Mathematics Education, July (14) 10-15, Ankara, Turkey.
- (15) **Shein, P. P.** (2011). Development of scales to measure undergraduate students' disposition toward lifelong learning: A Rasch measurement approach. Symposium to be presented at the 12<sup>th</sup> European Congress of Psychology, July 4-8, Istanbul, Turkey.
- (16) **Shein, P. P.** (2010). An elementary mathematics teacher's use of discourse practices in supporting English learner students in repair. Paper presented in the symposium titled: Promoting teaching and learning through discourse practices: Dialoguing across diverse settings in mathematics education. Paper presented at the 2010 American Education Research Association (AERA) Annual Meeting, April 30-May 4, Denver, CO.
- (17) Franke, M.L., Webb, N.M., Chan A.G., Freund, D., Melkonian D., & **Shein, P. P.** (2009). Supporting student explanations: Variability in teacher practice across classrooms. Paper presented at the 2009 American Education Research Association (AERA) Annual Meeting, April 12-18, San Diego, CA.
- (18) Franke, M.L., Webb, N.M., Chan, A.G., Freund, D., & **Shein, P. P.** (2007). Understanding student mathematical learning: Relationships among mathematical tasks, teacher practice, student participation, and student achievement. Paper presented at the 2007 American Education Research Association (AERA) Annual Meeting, April 9-13, Chicago, IL.

### **Domestic Conference**

- (1) 謝百淇、黃育真、楊家豪、呂馨君(2016)：原住民文化回應防災教育教學與評量之研究。亞太教育研究學會暨台灣教育研究學會 2016 學術研討會，國立中山大學。
- (2) 林奇璋、陳香廷、洪瑞兒、謝百淇(2016)：探討高等教育性別議題提升師資培育學生性別平等觀念與多元性別成效。亞太教育研究學會暨台灣教育研究學會 2016 學術研討會，國立中山大學。
- (3) 黃育真、李馨慈、張美珍、謝百淇(2016)：部落-博物館-學校合作模式的初探。第 34 屆課程與教學論壇偏鄉教育發展與創新學術研討會，靜宜大學。
- (4) 林建良、黃臺珠、謝百淇、蔡俊彥、劉桂君(2014)：高中光電科技課程中情境學習的性別差異分析。全球教育論壇：教育革新與學生學習國際研討會，國家教育研究院。
- (5) 謝百淇、洪鈴雅、謝佩妤、孫國璋、趙大衛、黃台珠(2013)：高中學生科學學習興趣的經營及其成效的探討。第29 屆科學教育國際研討會，國立彰化師範大學。
- (6) 謝百淇、李育諭、陳繼成、黃育真(2013)：科技博物館對公民科技素養之影響。第29 屆科學教育國際研討會，國立彰化師範大學。
- (7) 蔡俊彥、謝百淇、黃台珠、趙大衛(2012)：以網路論證提升高中生PISA 科學能力之研究。台灣教育研究學會2012 學術研討會，12 月21-22 日，國立中山大學。
- (8) 楊家豪、曾秀玉、謝百淇(2012)：非制式科學教育場所之參訪動機與科學素養之關聯—以科學工藝博物館為例。台灣教育研究學會2012 學術研討會，12 月21-22 日，國立中山大學。
- (9) 黃鳳嬌、蔡清華、謝百淇(2012)：探索教育課程對國中班級團隊凝聚力影響之研究。台灣教育研究學會2012 學術研討會，12 月21-22 日，國立中山大學。

- (10) **Shein, P. P.**, Su, M.-J., Yu, K.-C., & Huang, T.-C. (2012). Impact of science spaces on public scientific literacy, Paper to be presented at the 2012 ASET Annual International Conference (2012 ASET), December 13-15, Taipei, Taiwan.
- (11) Li, Y.-Y., **Shein, P. P.**, Shih C.-L., Chen, Y.-H., Chen, Y., Hsieh, P.-Y., & Huang T.-C. (2012). The study of public's motivations in visiting National Museum of Marine Biology and Aquarium, Paper to be presented at the International Conference of Museum 2012, November 20-21, Taipei, Taiwan.
- (12) **Shein, P.P.**, Chao, D., Liu, C.-S., Chen, Y.-A., & Cheng, J.-C. (2011). An investigation of Taiwanese adults' scientific literacy on water consumption. Paper presented in the symposium titled: An investigation of Taiwanese adults' scientific literacy on issues around water. Paper presented at the 2011 TERA International Conference on Education, December 15-18, Kaohsiung, Taiwan.
- (13) Huang, T. C., Hsieh, P. Y., Cheng, J. C., **Shein, P. P.**, Chen, D. H., Chen, Y. F., Lin, J. F. (2011). Promoting K-12 students' understanding and situational interest in nanotechnology. Paper presented at Scientific Language & E-Learning Conference, June 3-6, Pingtung, Taiwan.
- (14) **Shein, P. P.** (2010). Professional noticing of student errors. Paper presented at the 26<sup>th</sup> The Association of Science Education Annual Conference, December 10-12, Hualien, Taiwan.
- (15) **Shein, P. P.** (2010). Imagination as the moving power of mathematical invention. Paper presented at the 2010 Taiwan Educational Research Association, November 19-20, Kaohsiung, Taiwan.
- (16) **Shein, P. P.** & Leung, S. S. (2010). Fostering a community of practice that promotes multimodal communication in mathematics discourse. In Chang, W. H., Fisher, D., Lin, C. Y., & Koul, R. (Eds.). Proceedings of the 6<sup>th</sup> International Conference on Science, Mathematics and Technology Education, Vol. 1, 441-450.
- (17) **Shein, P. P.** & Leung, S. S. (2010). Fostering a community of practice that promotes multimodal communication in mathematics discourse. Paper presented at 2010 Sixth International Conference on Science, Mathematics and Technology Education, January 19-22, Hualien, Taiwan.
- (18) Leung, S. S. & **Shein, P. P.** (2010). A study on mathematical thinking of young children in reading picture books, diary writing and problem posing. Paper presented at 2010 Sixth International Conference on Science, Mathematics and Technology Education, January 19-22, Hualien, Taiwan.
- (19) **Shein, P. P.** (2009). Enriching mathematical discourse with a wide-ranging provision of learning support. Paper presented at the 25<sup>th</sup> The Association of Science Education Annual Conference, December 18-19, Taipei, Taiwan.
- (20) **Shein, P. P.** (2009). A teacher's use of discourse practices to support English Learner students in exploring the area of a triangle. Paper presented at the Conference on Professional Development: Mathematics Teachers' Knowledge, Decisions, Actions, and Reflections, December, 16, Kaohsiung, Taiwan.

### C.專書著作

黃台珠、趙大衛、**謝百淇**、李育諭、林玉雯 編 (2012)。《2012 年科技與語文素養計畫—公民科技素養調查研究。子計畫一：健康相關情境的調查工具及效化》。高雄市：國立中山大學 公民素養推動研究中心編印。

### D.科技部補助研究計畫

#### 科技部補助研究計畫

計畫主持人：（\*為獲科技部研究計畫主持人費）

計畫名稱	起訖年月	經費總額
*綜效計畫：透過「博物館-大學-學校-部落(MUSIC)合作模式」回應、協調和聯結科學學習生態系統中的制式與非制式 STEM 學習資源	2016.8.1~ 2017.7.31	719,000

計畫名稱	起訖年月	經費總額
*部落-博物館-學校合作模式：原住民族文化回應之非制式科學課程對偏鄉原住民族學生的科學素養之影響	2015.8.1~ 2016.7.31	897,000
*高中職「環境議題領域探究式課程」研發計畫—子計畫二：評鑑計畫(3/3)	2013.9.1~ 2014.7.31	312,000
科技素養計畫—公民科技素養調查研究(第二期)—科技博物館對公民科技素養之影響	2012.11.1~ 2015.10.31	1,758,000
*永續環境相關之新興科技融入高中課程之研究總計畫-子計畫二：永續環境相關之新興科技融入高中課程與教學的可行模式及成效評鑑(2/3)	2012.10.1~ 2013.8.31	312,000
轉變學生盲點為學習機會之研究:以國小數學教師支援行動合作研究為個案	2009.11.1~ 2010.7.31	389,000

共同主持人：

計畫名稱	起訖年月
新媒體科普傳播：新興資訊科技的解密：感測、智慧運輸、人工智慧與大數據	2017.8.1 ~ 2018.7.31
科普活動：以 STEM 設計的「生活物理演示—服務市民」及「高中物理動手學—校園實驗演示」實施計畫	2017.7.1~ 2018.6.30
科普活動：106 年高雄市全民科學週	2017.7.1~ 2018.6.30
公民科技素養調查整合型計畫（第三期）--公民科技素養調查整合型計畫（第三期）	2016.2.1~ 2020.1.31
永續環境相關之新興科技融入中等學校課程研究(中山附中)—子計畫三：課程可行性及成效評鑑(1/3)	2016.11.1~ 2017.9.30
永續環境與綠能科技融入高中課程之一般整合型計畫—總計畫(含子計畫一：精緻化策略研究)(1/2)	2014.10.1~ 2015.8.31
永續環境相關之新興科技融入高中課程之研究總計畫—子計畫二：永續環境相關之新興科技融入高中課程與教學的可行模式及成效評鑑(1/3)	2011.10.1~ 2013.3.31
科技與語文素養計畫—公民科技素養調查研究	2010.11.1~ 2012.10.31
大眾科學素養研習會	2009.8.1~ 2011.5.31

### 其他機構研究計畫

共同主持人：

計畫名稱	委託機構	起訖年月	經費總額
中山大學學生基本素養與核心能力指標與量表的建構	國立中山大學卓越教學小組計畫	2010.8.1~ 2011.7.31	4,992,000
探索海洋的科學教育	國立中山大學教務處教學發展中心	2011.4~6	84,000

## **E.榮譽及獎項**

1. 國立中山大學教學優良課程「教育概論」，2015（104學年度第一學期），2010（99學年度第一學期）。
2. 高瞻計畫辦公室優良大學團隊獎，2015。
3. 國立中山大學教學優良課程「教育概論」，2013（102學年度第一學期）
4. 瞻夢起飛全國高中職創作競賽大會學校組特色課程佳作，2012
5. 國立中山大學教學優良課程「倫理學」、「教育哲學」、「數理分析 B」，2011（99 學年度第二學期）