PATT-17 and
PATT-19

Proceedings

Edited by Marc J. de Vries
PATT-Foundation
# PATT-17 and PATT-19 Proceedings

## Table of Contents

### PATT-17

Engaging with issues as a focus for technological literacy - David Barlex  
1

Information Ethics in Chinese Junior High Schools: Empirical Study of  
Nanjing Region - Wen-Jiuh Chiang, Jianjun Gu, Chih-chia, Eric,  
and Chen Chia-chien, Jennifer, Teng  
8

Contents for an Invention Activity in Technology Education - Choon-Sig Lee  
16

Looking back to the future - John R Dakers  
31

Encouraging Innovation through Integrative Study & Collaboration – Raymond  
Dixon  
43

Paper Title: Student Technology Teachers’ Values and Assumptions:  
How They Impact on Teaching Practice - Wendy J Dow  
53

Online transnational collaborative learning - Rong-Jyue Fang, Hung-Jen Yang,  
Hua-Lin Tsai, Chi-Jen Lee Tien-Sheng Tsai  
65

A Comparative Study on the Technology Education Programs in Japan  
and Paraguay - Ramon Anibal Iriarte Casco and Hidetoshi Miyakawa  
71

Technology Teacher Education Programs at Undergraduate level in Korea –  
Jinsoo Kim, Sangho Woo  
89

Online Learning with Hands-on Activity Enhance Technological Creativity –  
Kuang-Chao Yu and Kuen-Yi Lin  
103

Mongolian Technology Education and its specifics - B.Davaasuren,  
S.Tugs, Sh.Saranchimeg, O. Duger  
114

The Development of the Measuring Tool of Learning Behavioral Styles in  
an e-Learning Environment in Korea - Won-Sik Choi, Kwan-Sik Ahn  
Tae-Cheon Rho  
118

Bringing Korean Educators' Experience to the Global Village: Innovations  
and Challenges of Korean Technology Education - Sangbong,  
Hyuksoo Kwon  
225
PATT-19

Technology (T), Innovation (I), Design (D), Engineering (E):
An exploration of classroom realities – David Barlex
and Torben Steeg 241

Baseline Study of Technological Literacy of K-12 Students in the USA -
Arthur Eisenkraft 259

Playing with designing: the impact of young children's play opportunities
and choices on their responses to creative design situations –
Gill Hope 289

Technology-Oriented Primary Teacher Education - a way to combine
design technology and science technology in primary teacher training.
Demands to Build up a Technology Learning Theory – Matti Lindh 298

Food technology in the English secondary curriculum: its potential contribution
to teaching and learning in technology, innovation, design and
engineering (TIDE) - Marion Rutland 305

Inclusion of Biotechnology in US Standards for Technology Literacy:
Influence on South Korean Technology Education Curriculum -
John G. Wells, Hyuksoo Kwon 315

ST?@M Education: an overview of creating a model of integrative education -
Georgette ‘george’ Yakman 335

Engineering Design as a Contextual Learning and Teaching Framework: How
Elementary Students Learn Math and Technological Literacy -
Araceli Martinez Ortiz 359

Transdisciplinarity and the definition of competencies and standards –
Walther Theuerkauf 371
Preface

In this document you find the combined Proceedings of the PATT-17 and PATT-19 conferences. PATT-17 was held as part of the ITEA 2007 Annual Conference in San Antonio. PATT-17 was a combined PATT and ICTE conference. PATT is a series of international conferences that alternates between the USA and Europe; ICTE is normally held in Asia, but for this occasion it moved to the USA. PATT-19 was held as part of the ITEA 2008 Annual Conference in Salt Lake City.

We thank ITEA for the opportunity of cooperating with them, and in particular dr. Kendall Starkweather, whose initiative it was to combine PATT conferences with the ITEA Annual conferences. Throughout the years this proved to be a very useful combination.

We also congratulate all authors with this publication. All papers have been reviewed before publication.

We look forward to next PATT conferences. In 2008 a PATT conference will be held in Israel. We cordially invite all readers of these proceedings to this next event in our series.

April 2008

Marc J. de Vries