

12th ERA ANNUAL CONFERENCE 1998

ENHANCING LEARNING: CHALLENGE OF INTEGRATING THINKING AND INFORMATION TECHNOLOGY INTO THE CURRICULUM

Monday, 23th - Wednesday, 25th November 1998

Plaza Parkroyal Hotel, Singapore

Opening the conference will be our **Guest-of-Honour, the Senior Minister of State for Education, Mr Peter Chen.**

Keynote speakers:

Professors Rodney Gerber (University of New England at Armidale), Bridget Somekh (University of Huddersfield) and Thomas Jackson (University of Hawaii).

Lined up for the conference are more than 130 papers and 5 symposia, with more than half of the presentations either on IT or on Critical/Creative Thinking Skills.

This is a 3-day conference giving recognition to two important areas of research which are likely to capture the imagination of educators and practitioners well into the 21st century. The conference registration starts at 8 am on 23 Nov. 98 and gate registration is possible at Level 3 of the Plaza Parkroyal Hotel. The Registration Fee for the conference (which include lunches & snacks and all the conference materials) is S\$240. Enquiries are welcome at 250-7700, or via e-mail at [<teletemp@pacific.net.sg>](mailto:teletemp@pacific.net.sg).

Copies of the 11th ERA Annual Conference (1997) Proceedings are now available at S\$30 (excluding postage) from:

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Summary Data: 1998 ERA Conference, 23-25 Nov 98

Individual Papers: 126
Group Symposia: 6

Keynote Papers: 3

KEYNOTE PAPERS

Keynote Address 1: [Developing a Learning Culture that Uses IT to Promote Learning](#)
(Rod Gerber)

Keynote Address 2: [Thinking about Thinking and Assessment: Isn't it Time for the Tail to Stop Wagging the Dog](#)
(Thomas Jackson)

Keynote Address 3: [Designing Learning Tasks with Information Technology](#)
(Bridget Somekh)

PAPERS ON IT (31 papers)

- [Insights into Singaporean pre-service teachers' mental models of the Internet](#)
●
(Azam MASHHADI)

- [Enhancing English language learning using SMART Net: A web-based learning model on "How to Learn English"](#)
●
(MOHAMED AMIN Embi)

- [Evaluation of an assessment software](#)
●
(YAP Ah Keng & TAY Mui Hua)

- [KIDMAPS - A diagnostic tool for teachers](#)
●
(LEE Yew Jin & YEOH Oon Chye)

- [Using IT and reflection in assessing an advanced teaching attachment](#)
●
(Steven C WRIGHT)

- [Not everything should be on the Net: A proposed model for instructional design on the Net](#)
●
(Victor CHEN & Jackie HSU)

- [Computer familiarity and attitude towards using computers among students in a Singapore secondary school](#)
●
(Chew Lee Chin)

- The impact of computers on teachers: A general computer attitude study of teachers in Singapore
- (RAHMAT Hassan & CHENG Yuanshan)
- Using e-mail to enhance teaching across the curriculum
- (Jessie WONG & Victoria HSUI)
- Exploring the Internet for teaching social studies
- (Jessie WONG)
- Infusing thinking and IT strategies within the existing curriculum: An example from Geography
- (Kalyani CHATTERJEA)
- How will my screen look like?
- (Angela WONG & CHEUNG Wing Sum)
- Information Technology - A potential tool to enhance the quality of learning in teacher education - Success, challenges and concerns
- (RUBINA Zahoor & Hannan GILL)
- Integrating IT into the teaching of English - A case study of the experiences of Normal Academic students
- (LEK Kah Cheng & Azam MASHHADI)
- Information technology and the student's academic attainment
- (MUSA Garba Maitafsir)
- Fostering information processing
- (MUSA Garba Maitafsir)
- The IT Masterplan and "Thinking Schools" initiatives: The complexity and challenges of curriculum implementation
- (DENG Zongyi & S GOPINATHAN)
- A review on Teaching Practicum websites
- (CHUA Siew Lian & Victor CHEN)
- If you cannot find it, make it yourself: Producing interactive instructional materials using a spreadsheet
-

(LOW Sik Kuan, TAY Eng Guan & Victor CHEN)

- Computer communications discourse for Singapore's practicum students
- (S GOPINATHAN, Leslie SHARPE & Steven COOMBS)

- Multimedia technology
- (CHEUNG Wing Sum)

- Designing IT instruction for real learners
- (Rena GUPTA)

- Practical issues: Computer technology in schools
- (CHEUNG Wing Sum & Angela WONG)

- Enhancing learning - Using software package to calibrate assessment questions
- (LIM Poh Seng, Gerry CHEONG)

- A case study of the development of an IT learning environment in a secondary school in Singapore
- (Mikko TAN & CHEN Ai Yen)

- Design issues related to the use of on-line communication tools and systems for an inquiry into reflective practice of student teachers
- (CHEN Ai Yen & Nancy HARKRIDER)

- A computerised adaptive testing approach: What are the benefits to students
- (CHEW Lee Chin)

- Computer attitudes of Singapore students: A developmental study
- (CHENG Yuanshan)

- Building online creative problem solving skills into polytechnic education
- (SOO Wai Mun)

- A system analysis of the electronically integrated sport learning organisation
- (Ian HASLAM)

- Masterplan for IT in Education
- (TAN Yap Kwang)

CREATIVITY & THINKING (17 papers)

- Creativity: What does it mean to teachers? A cross-cultural comparison
- (SOH Kay Cheng)
- Creating creative mathematical resources for class use
- (FONG Ho Kheong)
- How to design a thinking curriculum
- (Dennis SALE)
- Student teacher's perception of information technology and creativity
- (TAN Ai Girl & LAW Lai Choong)
- Creativity education in Japan: Some insights for educators
- (TAN Ai Girl & Peter GANEA)
- Creativity and disability: Some insights from educators
- (TAN Ai Girl & Levan LIM)
- The role of the teacher in facilitating classroom interactions which reflect thinking skills: Some considerations
- (Sue NAIR, CHEONG Mui Moi & KOH Guat Hua)
- Exploring thinking curriculum in Hong Kong secondary schools: A 5-year retrospect
- (William YU, Jack CHAN, WONG Chi-ming, CHEUNG Tak-fai, & Peter HUNG)
- Teaching of thinking skills and transmission of culture: A case in the teaching of classical Chinese short stories
- (CHAN Chiu Meng)
- Developmental needs of Chinese language teachers in cultivating students' thinking skills
- (WONG Yin Mei & Jackie HSU)
- The integration of critical & creative thinking skills into an Instructional Technology module of the postgraduate teacher training program at NIE
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(Steven COOMBS & Ian SMITH)

- Integrating thinking into nutrition curriculum to evoke behavioural change
 - (ANG Kai Ling)
 - Power thinking and thinking power
 - (YAP Kueh Chin)
 - Open-ended tasks and primary school pupils in Singapore
 - (SEE Bee Huay & Berinderjeet KAUR)
 - Critical and creative thinking in Singapore: Background to the new "Thinking Programme"
 - (Carolyn TAN & Azam MASHHADI)
 - Integrating thinking in project work in the secondary school history curriculum
 - (Grace LOH)
 - Are teachers using IT to promote thinking ?
 - (Philip WONG & Michael WILLIAMS)
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AESTHETICS EDUCATION (1 paper)

- Promoting transfer of learning through interdisciplinary learning - music and art
 - (Julisa WONG)
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EARLY CHILDHOOD EDUCATION (4 papers)

- The relationship between counting practices and performance on addition and subtraction tasks: Some implications for kindergarten teachers
- (Pamela SHARPE)
- A parent-completed computer-based screening questionnaire for the development of 15- to 36-month olds
- (NAM Sang Seok & Celina KWAN)
- Enhancing learning: Computers and early childhood education

- (SENG Seok Hoon)
 - Staff development in early childhood education: An individualised approach
 - (Deborah PUAY & SENG Seok Hoon)
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HISTORY EDUCATION & NATIONAL EDUCATION (6 papers)

- History and "National Education" in Singapore
 - (TAN Tai Wei)
 - Forging a national identity: The development of a "common culture" for Singapore
 - (Christine HAN)
 - Student thinking and making meaning in History learning
 - (TAN Lulie & MOO Swee Ngoh)
 - OH-IT-IM-LS: The formula for Oral History - Using IT based on Instructional Models and suiting all learning styles
 - (ONG Yuan Jun)
 - The east-west continuum of pedagogy and the concept of total education
 - (ONG Yuan Jun)
 - Thinking in History: Making meaning of history learning - the teachers' perspective
 - (TAN Lulie & MOO Swee Ngoh)
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LANGUAGE & LINGUISTIC EDUCATION (7 papers)

- An onomastic study of Singaporean street names: Educational tool and geolinguistic experience
- (Margit WAAS)
- Reading comprehension ability in Sri Lankan secondary students undergoing English-medium education
- (Stephen LOUW & LIM Tock Keng)

- Cognitive thinking in English reading course in universities in China
 - (YUAN Caihong)
 - To inspire cognitive thinking in reading classroom for EFL students in universities and colleges in China
 - (YUAN Caihong)
 - Developing computerised language proficiency tests at NIE
 - (Victoria HSUI, Anthony SEOW & CHEW Lee Chin)
 - Bilingual children's language choicess and language preferences
 - (Vanithamani SARAVANAN & Diana NOMANBHOY)
 - A computerised colour coded teaching system for teaching English language and literature
 - (Adrian Samuel BELL)
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MATHEMATICS EDUCATION (18 papers)

- Three G7 and three little Asian dragons in TIMSS Mathematics at the fourth grade
- (SOH Kay Cheng)
- Computer-aided system for diagnosing pupils with mathematical difficulties
- (FONG Ho Kheong)
- Fanning into flame the spirit of problem solving to enhance mathematical learning and thinking
- (LIM Pow Lee & TAN Oon Seng)
- Mathematical problem solving: Rules, steps or disposition?
- (Sitsofe E ANKU)
- The use of mindtools for matehmatics learning
- (YUEN Hoi Kau)
- Effectiveness of imagination imagery technique on creative performance in mathematics
- (SEE Kin Hai)

- Mathematical learning through appropriate classroom technology
- (SIKUNDER Ali Baber)
- Mathematical problem posing: An aspect of mathematical thinking framework to analyse students' responses
- (YEAP Ban Har)
- Chinese students' understanding of likelihood
- (LI Jun & Lionel PEREIRA-MENDOZA)
- Problem finding in school mathematics: Issues and implications
- (QUEK Khiok Seng)
- TIMSS - The strengths and weaknesses of Singapore's Lower Secondary pupils' performance in mathematics
- (Berinderjeet KAUR, YAP Sook Fwe & Lionel PEREIRA-MENDOZA)
- KASSEL Project - Pupils' performance on the applying mathematics test
- (Berinderjeet KAUR & YAP Sook Fwe)
- Some implications of the TIMSS data for primary mathematics teachers
- (Lionel PEREIRA-MENDOZA, Berinderjeet KAUR & YAP Sook Fwe)
- Three pupils' growth of understanding of the concept of equation through an individualised learning scheme
- (SOH Lai Leng)
- Identifying students' difficulties in mathematics
- (SING Kar Joo, NG Chee Loong, KOH Wan Yee)
- Communication skills of pre-service primary mathematics teachers
- (KOAY Phong Lee & NG Swee Fong)
- Aspects of non-cognitive factors in problem-solving
- (NG Swee Fong)
- A pilot study on the use of graphing calculators in the learning and teaching of mathematics
- (LOW-EE Huei Wuan)

PHYSICAL EDUCATION (2 papers)

- Enhancing teacher education in physical education: A values perspective
 - (Nick APLIN & IAN HASLAM)
 - The practicum in human movement (physical education) developing fieldwork experiences for a flexible future
 - (John SAUNDERS)
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POLICY & MANAGEMENT STUDIES (5 papers)

- Thinking steps moving out of a delegation dilemma
 - (ZHANG Yenming)
 - The politics and culture of private education in Malaysia
 - (Molly LEE)
 - The actual influence of public examination to students
 - (HO Kwok Keung)
 - Developing resilience: The role of teachers
 - (Rosalind MAU, CHENG Yuanshan, LIM Tock Keng & CHAN Tung Fong)
 - One year on - the continuing impact of ISO 9001 quality accreditation on practices within an educational unit
 - (John SAUNDERS)
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SCIENCE EDUCATION (11 papers)

- Finding out what students are thinking concerning light and sight
- (TOH Kok Aun, BOO Hong Kwen, & WOON Ta-Li)
- Finding out what pupils are thinking concerning electricity
- (BOO Hong Kwen & ANG Kok Cheng)

- Learning science using a deep approach: Case studies of two students
 - (Christine CHIN)
 - Students' conceptions of the "reality status" of electrons
 - (Azam MASHHADI & Brian WOOLNOUGH)
 - Developing an Organic Chemistry CD-ROM for enhancing learning among gifted students
 - (QUEK Choon Lang & Angela WONG)
 - Teachers' use of problem solving approach in teaching primary science
 - (TAN Li Li & Lucille LEE)
 - ICE: A model to infuse science process and content using IT
 - (YEO Keng Hoe)
 - Pre-service primary science teachers' ideas about particle model of water
 - (Lucille LEE, GOH Ngoh Khang & CHIA Lian Sai)
 - Misconceptions on the biological concept of food: Results of a survey on upper secondary students
 - (LEE Yew Jin & DIONG Cheong HOONG)
 - Some suggestions for the teaching of the mole concept
 - (Raymond TSOI, GOH Ngoh Khang & CHIA Lian Sai)
 - Enhancing critical thinking in qualitative analysis in chemistry
 - (GOH Ngoh Khang, CHIA Lian Sai & Daniel TAN)
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TEACHING & LEARNING (13 papers)

- Designing motivating lessons using learning styles
- (Agnes CHANG & ANG Wai Hoong)
- The PQRS of scaffolding meaning negotiation
- (David HUNG, (Victor CHEN & CHEUNG Wing Sum)
- Self-regulated learning in Singaporean and Australian tertiary students

- (Ian SMITH & Anges CHANG)
- Self-regulated learning in Singaporea secondary students
- (Agnes CHANG & Ian SMITH)
- Negative social comparison, academic failure, and delinquency among Singaporean self-reported delinquents
- (Angeline KHOO)
- Self-categorisations and shifts in the delinquent social identity
- (Angeline KHOO)
- Holistic counselling of gifted adolescents in Singapore
- (TEO Chua Tee)
- The learning and studying approach of NIE students: A longitudinal study
- (POH Sui Hoi, Rosaling MAU, CHENG Yuangshan, YAN Yaw Kai, & QUEK Khiok Seng)
- Parental involvement and pupil performacne in primary schools
- (Esther LEONG & MOO Swee Nghoh)
- Problem-based learning: More problems or a real solution?
- (David JOHNSTON)
- Underacheivers in a cooperative learning environment: A case study
- (PANG Siu San & GOH Swee Chiew)
- Using cooperative learning to integrate thinking and IT
- (Gabriel TAN, Patrick GALLO, George JACOBS & Christine LEE)
- An analysis of students' self-questioning techniques to determine potential for self-directed learning
- (CHAN Lim Kai, GOH Hock Kee, LOW Wai Ping & KOH Wan Yee)

TEACHER EDUCATION (11 papers)

- The process of becoming a teacher: A lesson from the Oxford internship scheme for Japan?

- (Katsumi HINO & Azam MASHHADI)
 - Reflective teaching: Is this possible?
 - (Thomas S.C. FARRELL)
 - Exploring teacher job satisfaction in a Singapore secondary school
 - (Kenneth STOTT & TAN Aik Ling)
 - Teacher job satisfaction: A new approach to an old problem
 - (TAN Aik Ling, Kenneth STOTT)
 - The juggling act of student teachers in a Malaysian university: Coping and self-concept
 - (Cynthia JOSEPH)
 - Effects of training on dispositions of pre-service primary school teachers towards information technology
 - (TEO Chua Tee & Eunice TAY)
 - Changing directions in postgraduate teacher preparation at NIE
 - (Ruth CHELLAPPAH, GOH Swee Chiew & S GOPINATHAN)
 - Strategy-based instruction of Primary Six teachers
 - (Jessie EE & Phil MOORE)
 - Challenges in teaching practice: A study of student teachers in two Malaysian secondary schools
 - (FARIDAH Haron)
 - Teachers' pursuit of professional development
 - (TAY-KOAY Siew Luan)
 - Teacher collegiality in Singapore
 - (TEO Eng Kee & TAY-KOAY Siew Luan)
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SYMPOSIA

- Symposium 1: Educational reform and quality education in Hong Kong: Trends and related issues

- (Allan WALKER, Peter BODYCOTT, David CONIAM & Chris DOWSON)
- Symposium 2: Mentoring and the professional development of teachers
- (MOO Swee Ngoh et al.)
- Symposium 3: A longitudinal study on the cognitive, psychological development and school adjustment of secondary school students - some preliminary findings
- (Esther TAN, CHENG Yuanshan, Elena LUI, SENG Seok Hoon, TAN Ai Girl, TAN Wee Kiat)
- Symposium 4: An independent school's initiatives on school organisation, management, school programmes, IT, creative thinking and national education
- (ONG Teck Chin, CHOCK Siew Hwa, Goretta MOHAN, Lenie CHO, Fanny TAN & TAN Fong May)
- Symposium 5: IT Masterplan: NIE Initiatives. (1) IT Masterplan implementation at the National Institute of Education
- (KOH Thiam Seng) (2) Preparing student teachers for IT integration into instruction (Philip WONG)
- Symposium 6: Thinking Molds and IT Holds - An RGS Learning Experience
- (Carmee LIM & teachers from RGS)
- Symposium 7: Teachers' Network as a catalyst for reflection
- (KARASI & TN Staff) (Withdrawn)