



# Global Learn

ASIA PACIFIC 2010

---

*Global Conference on Learning and Technology*

May 17 - 20, 2010  
Penang, Malaysia



Association for the Advancement of Computing in Education

A CONFERENCE OF AACE

[www.aace.org](http://www.aace.org)

## Editors

Zoraini Wati  
Insung Jung  
Joseph Luca

# GLOBAL LEARN ASIA PACIFIC COMMITTEES

## CHAIRS & CO-CHAIRS

**Program Co-Chair:** Zoraini Wati Abas, Open University Malaysia, Malaysia

**Program Co-Chair:** Insung Jung, International Christian University, Japan

**Program Co-Chair:** Joseph Luca, Edith Cowan University, Australia

**Tutorial/Workshop Chair:** Sanjaya Mishra, Indira Gandhi National Open University, India

**Panels Chair:** Siew-Mee Barton, Deakin University, Australia

**Local Co-Chair:** Wong Tat Meng, Wawasan Open University, Malaysia

**Local Co-Chair:** Fauzy Wan, Universiti Sains Malaysia, Malaysia

## EXECUTIVE COMMITTEE AND FOUNDERS

Zoraini Wati Abas, Open University Malaysia, Malaysia  
Bill Anderson, The University of Otago, New Zealand  
Yayoi Anzai, Aoyama Gakuin University, Japan  
Melinda dela Pena Bandalaria, University of the Philippines Open University, Philippines  
Nigel Bannister, Manchester Business School, UK  
Siew-Mee Barton, Deakin University, Australia  
Theo Bastiaens, Fernuniversität in Hagen, Germany & Open University of the Netherlands, the Netherlands  
Tian Belawati, The Open University of Indonesia, Indonesia  
Curtis J. Bonk, Indiana University, USA  
Chin Chi Chao, National Chengchi University, Taiwan  
Betty Collis, Moonen-Collis Learning Technology Consultants, The Netherlands  
Josie Csete, Hong Kong Polytechnic University, Hong Kong  
Mark Curcher, Dubai Men's College, United Arab Emirates  
Niki Davis, University of Canterbury, New Zealand  
Miao Fengchu, United Nations Educational Scientific and Cultural Organization, Thailand  
John Hedberg, Macquarie University, Australia  
Sheila Jagannathan, The World Bank, USA  
Insung Jung, International Christian University, Japan  
Inae Kang, Kyung-Hee University, Korea  
Paul Kim, Stanford University, USA  
Gerald Knezek, University of North Texas, USA  
Kenich Kubota, Kansai University, Japan  
Gulsun Kurubacak, Anadolu University/ College of Open Education, Turkey  
Wing Lam, U21 Global, Singapore  
Thanomporn (Toh) Laohajatsang, Chiang Mai University, Thailand  
Jeoung-Keun Lee, Pokhara University, Nepal  
Judy Lee, National Institute of Education, Singapore

Okhwa Lee, Chungbuk National University, Korea  
Mimi Miyong Lee, University of Houston, USA  
Amornvan Limsommut (Oum), e-Learning Center of Sudan Dusit Rajabhat University, Thailand  
Meng-Fen Grace Lin, University of Hawaii, USA  
Meifeng Liu, Beijing Normal University, China  
Joe Luca, Edith Cowan University, Australia  
Paul Mace, Higher Colleges of Technology, United Arab Emirates  
Naveed A. Malik, Rector of Virtual University of Pakistan, Pakistan  
Carmel McNaught, The Chinese University of Hong Kong, Hong Kong  
Sanjaya Mishra, Indira Gandhi National Open University, India  
Kiyoshi Nakabayashi, The Open University of Japan, Japan  
Ron Oliver, Edith Cowan University, Australia  
Ron Owston, York University, Canada  
Tom Reeves, University of Georgia, USA  
Tom Reynolds, National University, USA  
Allison Rossett, San Diego State University, USA  
George Siemens, University of Manitoba, Canada  
Michelle Selinger, Cisco Systems, Australia  
Min Shi, Cyberwisdom.net, China  
Bude Su, California State University Monterey Bay, USA  
Katsuaki Suzuki, Kumamoto University, Japan  
Daniel Tan, Nanyang Technological University, Singapore  
Michael Thomas, University of Wisconsin at Madison, USA  
Michael Searson, Kean University, USA  
Feng-Kwei Wang, Industrial Technology Research Institute, Taiwan  
Wenxia Wu, Franklin University, USA  
Hsui-Ping Yueh, National Taiwan University, Taiwan  
Ke Zhang, Wayne State University, USA

## PROGRAM COMMITTEE

Habibah Ab Jalil, Univ. Putra Malaysia, Malaysia  
M'hammed Abdous, Old Dominion Univ., USA  
Rozlan Abdul Rahim, UiTM Terengganu, Malaysia  
Aishah Abdullah, Univ. Technology MARA, Malaysia  
Matthew Absalom, Univ. of Melbourne, Australia  
Durri Andriani, Univ. Terbuka, Indonesia  
Yayoi Anzai, Aoyama Gakuin Univ., Japan  
Kumiko Aoki, The Open Univ. of Japan, Japan  
Melinda Bandalaria, Univ. of the Philippines Open University, Philippines  
Shoba Bandi-Rao, New York Univ., USA  
Jedd Bartlett, CORE Education Ltd, New Zealand  
Christine Bauer, Vienna Univ. of Economics & Business, Austria  
Antonina Bauman, Hawaii Pacific Univ., USA  
Danilo M Baylen, Univ. of West Georgia, USA  
Madhumita Bhattacharya, Athabasca Univ., Canada  
Raj Boora, Univ. of Alberta, USA  
Torsten Brinda, Univ. of Erlangen-Nuremberg, Germany  
Jean Claude Callens, KATHO, Belgium  
Ana Amelia Carvalho, Univ. of Minho, Portugal, Portugal  
Norlizah Che Teh, SK Seri Ampang, Malaysia  
Kin Chu, IVE (Tsing Yi), Hong Kong  
Yoon Fah Chuah, MARA Univ. of Technology, Malaysia  
Denis Coelho, Univ. of Beira Interior, Portugal  
Jamal Ahmad Dargham, Univ. Malaysia Sabah, Malaysia  
Yasemin Demiraslan, Iowa State Univ., USA  
Aikyna Finch, Colorado Christian Univ., USA

Soon Fook Fong, Univ. Sains Malaysia, Malaysia  
Philippe Fournier-Viger, Univ. of Quebec in Montreal, Canada  
Norlia Goolamally, Open Univ. Malaysia, Malaysia  
Jan Herrington, Murdoch Univ., USA  
Seoungyoun Hong, The Catholic Univ. of Korea, USA  
Allison Huie, Texas A&M Univ., USA  
Roziana Ibrahim, Univ. of Southampton, UK  
Diane Igoche, Univ. of Georgia Doctoral Student, USA  
Emet LaBoone, Singapore Institute of Management, Singapore  
Kwok-Wing Lai, Univ. of Otago College of Education, New Zealand  
Chul-Hwan Lee, Pittsburgh Theological Seminary, USA  
Seung-hee Lee, Dong-Ah Institute of Media & Arts, Korea (South)  
C. Sebastian Loh, Collaboratory for Interactive Learning Research, USA  
Joberto Martins, Salvador Univ., Brazil  
Jeton McClinton, Jackson State Univ., USA  
Carmel McNaught, The Chinese Univ. of Hong Kong, USA  
Fnu Mihir, Southeastern Louisiana Univ., USA  
Rosmah Mohamed, Open Univ. Malaysia, Malaysia  
Cittoor Girija, Meston College of Education, Affiliated to Madras Univ., India  
Punithavathy Palanisa, Open Univ. Malaysia, Malaysia

Paulina Pannen, Univ. Terbuka, Indonesia  
Rajasegeran Ramasamy, Wawasan Open Univ., Malaysia  
Nuersan Rehati, Open Univ. Of China, China  
Valerie Ross, Univ. Teknologi MARA, Malaysia  
Elangkeeran Sabapathy, Univ. Teknologi Mara (Uitm), Malaysia  
Silvia Schreier, FernUniv. in Hagen, Germany  
Andreas Schwill, Univ. of Potsdam, Germany  
Michael Searson, Kean Univ., USA  
Zihang Shao, Indiana Univ. Bloomington, USA  
Ahmadreza Shekarchi, UTM, Malaysia  
Suneel Silphiphat, Sukhothai Thammarat Open Univ., Thailand  
Bude Su, California State Univ. Monterey Bay, USA  
Katsuaki Suzuki, Kumamoto Univ. JAPAN, Japan  
Venkataraman Swaminathan, Dunearn Secondary School, Singapore  
Imtiaz Taj, Pakistan International School, Cairo, Egypt  
Verily Tan, SIM Univ., Singapore  
Seong Chong Toh, Malaysia  
Irfan Umar, Univ. Science Malaysia, Malaysia  
Dina Vyortkina, Florida State Univ., USA  
Paul Wallace, Appalachian State Univ., USA  
Fei Jack Yang, St. John's Univ., Taiwan  
Yi Yang, Franklin Univ., USA  
Janette Yuvienco, National Taiwan Univ., Taiwan  
Joel Yuvienco, Miriam College, Philippines  
Ke Zhang, Wayne State Univ., USA  
Mingming Zhou, Nanyang Technological Univ., Singapore

Copyright ©2010 by the Association for the Advancement of Computing in Education (AACE) Cover Photo: ©Tourism Malaysia 2010.

All rights reserved. No part of this book may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, without the prior written permission of the publisher.

AACE is not responsible for papers accidentally omitted from the conference proceedings due to late or errant submission by the author or proxy, or technical electronic anomalies during the time of submission.

The publisher is not responsible for the use which might be made of the information contained in this book.

**From AACE, the Conference organizer:** This is to confirm that all Conference paper submissions are peer-reviewed by at least 2 referees prior to acceptance in the Final Program and prior to publication in the Proceedings book.

See AACE Review Policy: <http://www.aace.org/reviewpolicy.htm>

Published by

Association for the Advancement of Computing in Education (AACE)

P.O. Box 1545

Chesapeake, VA 23327-1545

<http://www.aace.org>

Printed in the USA

ISBN: 1-880094-79-7

Special thanks to - AACE Technical Coordinators: David Drucker, University of Virginia and Michael Rapp, University of Houston

## Global Learn Asia Pacific 2010 Preface

*Selamat datang.* Greetings.

Welcome to the inaugural *Global Learn Asia Pacific* 2010 conference. Penang is a fascinating fusion of the east and west and has long been one of Southeast Asia's finest destinations. Known as Pearl of the Orient, Penang offers a harmonious blend of Malay, Chinese and Indian ethnic cultures, exotic sights, gastronomical delights, beautiful beaches, mesmerising sunsets, and fabulous shopping.

This new conference in the Asia Pacific region is organized by the *Association for the Advancement of Computing in Education (AACE)* and co-hosted by, not one but, three vibrant universities: *Open University Malaysia*, *University of Science Malaysia* and *Wawasan Open University*. AACE is a not-for-profit organization that continues to be a global leader in promoting the advancement of innovation in learning and technology (<http://www.aace.org/>).

With ED-MEDIA, E-LEARN and SITE conferences operating in Europe, Canada and America, establishing *Global Learn* for the Asia Pacific region is a natural extension for AACE to have a truly global presence. We are delighted to be working with Dr. Gary Marks, the Executive Director of AACE, who with many years of experience, consistently provides amazing support, resources and expertise to deliver exciting and well-coordinated conferences.

The focus of *Global Learn* is to engage international leaders and organizations for a global exchange of experiences and ideas on learning and technology. We believe the conference will provide an exciting platform for educators, researchers, consultants, training managers, policy makers, curriculum developers, and entrepreneurs to rigorously share and discuss research findings, explore stimulating ideas and move on to bigger and better things to take learners into the new century.

The conference attracted an initial submission of 742 proposals. Each submission was subjected to a peer review process. A total of 284 papers have been scheduled for presentation at the Conference. These papers represent research and best practices from 64 countries located in various regions and cover several exciting topics that includes open education, virtual and distance education and other innovative approaches to teaching and learning. From the accepted papers, 4 papers were selected as outstanding papers for this conference. This Conference attempts to bring together multiple perspectives in the format of full and brief papers, best practices, panels, roundtables, showcases, posters and virtual presentations.

Apart from the accepted papers, the Conference includes four keynote presentations from Anuwar Ali, President/Vice Chancellor of Open University Malaysia; Asha Kanwar, Vice President of Commonwealth of Learning, Canada; Jerome Glen, Executive Director of the Millennium Project, USA and James Taylor, Professor of University of Southern Queensland, Australia. In addition, the conference brings you eight invited speeches from eminent scholars and innovators from Australia, Canada, India, Switzerland and USA. These keynote and invited speeches should provoke your mind and perhaps bring you new ideas for action as we move forward in learning and technology.

The Asia Pacific region has the largest number of learners studying through distance education including e-learning. Many countries in the region are actively adopting ICT to widen access to and improve education and training in various sectors including primary and secondary schools, higher education, workplace training and non-formal education. The *Global Learn Asia Pacific* 2010 and this conference series will provide a wonderful environment conducive to thinking, studying, challenging and sharing the region's experiences and knowledge among participants and will continue to grow and evolve as the region leads ICT-enhanced education and training.

We look forward to meeting you during this exciting inaugural AACE conference in the Asia Pacific. If you have any questions about the conference schedule, events, or process, just ask any committee member or AACE conference staff. Also, there is always support staff on duty at the conference reception area to help answer your questions. That is what makes AACE conferences so great, the networking and the great people!

Finally, we hope you will find opportunities to make new friends as well as find research partners and project collaborators but most importantly, take time out to enjoy the sights, culture and food in Penang. We, as Co-Chairs, would like to thank all the AACE staff and volunteers on the various committees who have worked countless hours preparing the Conference. We would also like to thank colleagues who have organised past AACE conferences for their strong support and wonderful advice to help ensure an excellent conference experience.

*Terima kasih.* Thank you.

Global Learn Asia Pacific 2010 Program Chairs

*Zoraini Wati Abas, Open University Malaysia*

*Insung Jung, International Christian University, Japan*

*Joseph Luca, Edith Cowan University, Australia*