

## IRN Update 2017

The IRN “Theory into Practice of Educational Assessment and Measurement” built on the organisational structure of Assessment Research Centre (ARC) of The Education University of Hong Kong, and extended the network to scholars from cities/countries in the Asia-Pacific region (e.g. Jiaying, Macau, Taiwan, Singapore, Indonesia, Thailand and Australia) to states/countries in USA, Europe (e.g. Britain, Lithuania, Poland), Turkey and Africa (e.g. Zimbabwe). Through the collaboration with research network partners, the IRN has produced fruitful outcomes:

### *Research Programmes*

Research programmes of the IRN cover diversified topics, committed to advance research methodology (e.g. the project “New Item Response Theory Models for Rater Errors”), develop effective assessment tools/platforms for schools (e.g. the projects “Kinect-Enhanced Conductor Training for Children with Special Learning Needs” and “Auto-scoring of Chinese Composition: E-Writing and Assessment Exercise”), explore factors which influence teaching and learning, and provide constructive suggestions for improving education (e.g. the project “‘Big Data’ for School Improvement: Identifying and Analyzing Multiple Data Sources to Support Schools as Learning Communities”).

Key findings of the research programmes provide new perspectives and insights for the modification of existing theoretical frameworks and practices. Here are some examples: existing instruments (e.g. PIMRS, MRAI-R) were validated; frameworks and models were constructed and/or consolidated for better teaching and learning (e.g. conceptual framework for double marking systems in higher education and model of teaching strategies for preschool teachers to engage young children with autism spectrum disorder); prevailing phenomena/ problems (e.g. problematic internet use among adolescents) were identified and explored; attitudes, behaviors and effects (e.g. ingratiation tendency and career development of students) were assessed; and new models/theories/model applications were proposed (e.g. personal best goal). These discoveries contribute much to the literatures, practitioner training, and policy advancement, and create remarkable impacts on academic, professional and policy areas.

### *Publications*

The outputs generated from research programmes are widely disseminated to local and international researchers, postgraduate students, schools and education policy makers. More than **112 articles** have been published in international journals such as *Frontiers in Psychology*, *International Journal of Comparative Education and Development*, *Journal of Health Psychology*, *Journal of Educational Measurement and Applied Psychological Measurement* during 2013 and 2017. For details, please refer to Appendix A.

**124 papers** have been presented at international conferences such as International Meeting of the Psychometric Society (IMPS), Cited International Conference, IEEE International Conference on Applied System Innovation (IEEE ICASI), 20th Global Chinese Conference on Computers in Education (GCCCE) and annual meeting of the National Council on Measurement in Education (NCME). For details, please refer to Appendix B.

### *Academic Visits*

Research knowledge of IRN members has been fostered by the visits of academics from different countries and of different expertise. Below are some of the academic visits in recent years:

- Prof. Ming Ming CHIU, (former) Purdue University, USA (big data)
- Prof. Shu-ying CHEN, National Chung Cheng University, Taiwan (computerised adaptive testing)
- Dr. Brent Michael DUCKOR, San José State University, USA
- Prof. Bryony HOSKINS, University of Roehampton, UK (open classroom climate)
- Prof. Bor-Chen KUO, National Taichung University of Education, Taiwan (computerised adaptive testing, kinetic chain assessment)
- Prof. Yasunori MORISHIMA, International Christian University, Japan (language testing)

- Dr. Richard SMITH, USA (Rasch model)

### *Conferences/Workshops/Seminars*

During 2013 and 2017, ARC has continued to promote psychometrics and assessment in and beyond the Asia Pacific region. From 12 to 14 October 2013, invited Professor Muthen and his team were invited to give a three-day short-course on “Latent Variable Modeling Using Mplus”. The short-course attracted **360 scholars and students from 18 countries/regions** over the world. Two Assessment Conferences were organised in 2013 and 2014 respectively to provide opportunities for academics, researchers and practitioners to collaborate and exchange ideas. The two events both attracted over **200 participants**.

To further increase the impact of our research findings and expand the beneficiaries, more than **115 knowledge transfer activities** were delivered to **over 10,000 people** during 2013 and 2017. The workshops and seminars taught hands-on skills of using assessment tools and interpreting the analysis results; offered practical advice for applying theory into classroom; and introduced the most up-to-date knowledge of assessment and measurement to local principals, teachers, undergraduate and postgraduate students. Topics include school assessment culture, self-directed learning, quality feedback, structural equation modeling, Winsteps, computerized adaptive testing, etc.

### *Platform Establishment*

With the technical support provided by National Taichung University of Education and Hong Kong Institute of Vocational Education as well as the expertise of Chinese composition, Cantonese Opera movements, choral conducting, etc., the following platforms were established during the recent years:

- Auto-scoring system of Chinese composition
- Computerised Kinetic Chain Assessment & Learning System of Cantonese Opera
- Kinect-Enhanced Conductor Training System
- Mobile application platform for collecting and grading students' Chinese essays

Best regards,

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