



INTERNATIONAL SYMPOSIUM 2026

INSIGHTS FROM LARGE-SCALE
ASSESSMENT AND EVALUATION
IN EDUCATION: RETHINKING
EDUCATIONAL FUTURES

Date: Thursday, 12th November 2026

Time: 9:00am to 4:00pm

Venue: NIE1-01-09, Conference Room

WELCOME

On behalf of the Organising Committee, we warmly welcome you to our international symposium “Insights from Large-Scale Assessment and Evaluation in Education: Rethinking Educational Futures.”

This symposium brings together researchers and education experts from across the Asia-Pacific region to exchange insights into the role of large-scale assessment and evaluation in understanding educational achievement, student well-being, engagement, equity and opportunities to flourish.

Through the keynote presentations and scholarly dialogue, we hope to encourage meaningful regional collaboration, inspire new perspectives, partnerships and possibilities for shaping more inclusive and future-ready system.

Thank you for joining us. We wish you an engaging and fruitful symposium.

The Organising Committee
Centre for Assessment & Evaluation
NIE, NTU



PROGRAMME AT A GLANCE

8:30 – 9:00am	Registration
9:00 – 9:10am	Opening Remarks
9:10 – 9:50am	Keynote Address 1, Prof Frederick K.S. Leung
9:50 – 10:20am	Tea break
10:20 – 11:00am	Keynote Address 2, A/Prof Tan Cheng Yong
11:00 – 11:40am	Keynote Address 3, Prof Zhang Danhui
11:40 – 12:20pm	Keynote Address 4, Prof Jen Tsung-Hau
12:20 – 1:40pm	Lunch
1:40 – 2:20pm	Keynote Address 5, Prof Liou Pey-Yan
2:20 – 3:00pm	Keynote Address 6, A/Prof Nie Youyan
3:00 – 3:25pm	Tea Break
3:25 – 3:55pm	Panel discussion
3:55 – 4:00pm	Closing remarks

KEYNOTE SPEAKERS

SPEAKER 1



Prof Frederick K.S. Leung
Professor and Emeritus Professor
Beijing Normal University,
The University of Hong Kong

Biography

Frederick K.S. Leung, BBS, is Professor at the College of Education for the Future, Beijing Normal University and Emeritus Professor at the University of Hong Kong (HKU), and was President of International Commission on Mathematical Instruction 2021-2024. Professor Leung was conferred a Changjiang Scholar by the Ministry of Education, China, and an Honorary membership by International Association for the Evaluation of Academic Achievement. He received World Outstanding Chinese Award in 2015, Hans Freudenthal Medal for 2013, and Senior Fulbright Scholarship in 2002. Professor Leung's major research interests are in mathematics teaching, learning and assessment; comparison of mathematics education in different countries, and in the influence of culture on mathematics teaching and learning. He served as Principal Investigator for the Hong Kong component of major large-scale international projects, including TIMSS and PISA. Professor Leung was Dean of the Faculty of Education, and Dean of the Graduate School at HKU.

Have International Large-Scale Assessments (ILSAs) served their purpose?

In the past three decades, international large-scale assessments (ILSAs) such as TIMSS and PISA have attracted much attention, and overshadowed other educational issues, among policy makers, the education community and the public. But discussions on ILSA results often do not do justice to the espoused intents of these international studies or the nature of the methodology adopted by these studies, leading to dubious interpretations. In this presentation, both the strengths of ILSAs and the limitations posed by the nature and the methodology of these studies are discussed. What should and should not be learned by various stakeholders from these studies are then discussed, and examples of how the results may be utilized to examine meaningful questions on educational policies and practices are presented. It is argued that care must be taken in interpreting the ranking of countries, asserting causal relations between background variables and achievement, and drawing conclusions about teacher attributes. The presentation will end with a cautionary note against the use of ILSA data to advocate or implement drastic changes in educational policies and practices without due consideration of the nature and limitations of these studies and the vast contextual and cultural differences of the countries concerned.

Biography

Cheng Yong Tan is Associate Professor at the Faculty of Education, The University of Hong Kong (HKU) with research expertise in home and school influences on child development. He is ranked among the top 2% most cited scientists worldwide by Stanford/Elsevier since 2023. He has won numerous awards, including *Educational Review's* Article of the Year Award 2018 and HKU Research Output Prize 2022 for article published in *Educational Management Administration Leadership*. His articles, 'Academic benefits from parental involvement are stratified by parental socioeconomic status: A meta-analysis' and 'Typology of habitus in education: Findings from a review of qualitative studies' have been ranked by SciVal/Scopus as among the top 10 most representative studies published 2020-2026 for parental involvement and Bourdieu's cultural capital theory respectively. He has published in leading journals including *Educational Research Review*, *Educational Psychology Review*, *Review of Educational Research*, *Computers in Human Behavior*, and *American Educational Research Journal*.



A/Prof Tan Cheng Yong

Associate Professor
Faculty of Education
The University of Hong Kong

Back to Basic: The Comprehensiveness of PISA Data and Its Analytical Versatility in Research on Home and School Influences on Student Outcomes

The presentation examines the comprehensiveness of PISA data and the versatility it has for researchers investigating home and school influences on student achievement and child development using examples from studies involving Singapore, Hong Kong, and other education systems. The breadth of PISA data encompasses a wide range of variables, multiple respondent sources, data from the same education system over time, comparative data from different education systems, and contextual data at different levels. The presentation also explore the different advanced analytical approaches for PISA data, including item-centered, person-centered, and meta-analysis. Lastly, it discusses the limitations of using PISA data in research and the potential for research involving PISA data to inform policy and practice.

SPEAKER 2



Prof Zhang Danhui

Professor
Collaborative Innovation Center of
Assessment for Basic Education
Quality,
Beijing Normal University

SPEAKER 3

Biography

Zhang, Danhui is a Professor at the Collaborative Innovation Center of Assessment for Basic Education Quality, Beijing Normal University. Her primary research interests include large-scale assessment, educational and psychological measurement & statistics, learning analytics, and data mining. Since 2014, she has served as Director of the Data Department at the Collaborative Innovation Center of Assessment for Basic Education Quality, where she has full responsibility for data management and analysis for the national basic education quality assessment. She has extensive practical experience in large-scale international and domestic educational assessment projects, including sampling design, database management, data cleaning, and data analysis. She has served as Principal Investigator for multiple national research projects funded by the National Natural Science Foundation of China, the National Office for Education Sciences Planning, and the Ministry of Education's Humanities and Social Sciences Research Fund. She has published over 70 academic articles.

From Benchmarking to Breakthrough: How China Transforms Large-Scale Assessment Evidence into Educational Reform

Since Shanghai's top-ranking participation in PISA 2009, China has charted a distinctive pathway in which international assessments serve not as external benchmarks but as a catalyst for domestically driven educational improvement—selectively adapted and implemented by Chinese experts across research, policy, and schools. PISA data have informed evidence-based policies on resource allocation, educational equity, learning efficiency, classroom practices, and the paradox of high STEM performance with low career interest, each triggering targeted responses. Drawing on such international experiences, China has also developed its own indigenous assessments, including the National Assessment of Education Quality (launched in 2007 and formalised as an annual national monitoring project in 2015). The core contribution of China's experience is its institutionalised feedback loop—comprehensive assessment to identify challenges, data-driven diagnosis to locate leverage points, pilot interventions to test solutions, and longitudinal tracking to validate outcomes—demonstrating how a centralised system can use large-scale assessments to advance reform goals. This talk argues that China's evolution from a passive ranking participant to an active contributor in educational assessment offers valuable insights for global education governance, particularly regarding the conditions under which both international and national assessments can genuinely foster systemic change.

Biography

Tsung-Hau Jen is an educational assessment researcher whose work connects psychometrics, international large-scale assessment, science education, and policy evaluation. His research uses PISA, TIMSS, national longitudinal studies, and mixed methods to evaluate curriculum reform, test and refine educational theory, diagnose equity-related problems, and inform policy and practice. His recent methodological work traces a progression from cross-sectional and repeated cross-sectional analyses to longitudinal modelling of achievement mobility and educational inequality.



Prof Jen Tsung-Hau

Associate Research Fellow and Director
Research and Development Division,
Science Education Center,
National Taiwan Normal University

SPEAKER 4

Beyond International Rankings: Using Large-Scale Assessment Data to Evaluate and Inform Education in Taiwan

International large-scale assessments such as PISA, TIMSS, and PIRLS offer opportunities that extend well beyond international comparisons. Drawing on a series of studies in Taiwan, this keynote illustrates how large-scale assessment data can contribute to educational research and decision-making in three interconnected areas. First, they can support curriculum and system evaluation, as demonstrated by research using PISA 2018 and 2022 to examine early changes associated with Taiwan's competency-based curriculum reform. Second, they can facilitate theory testing and refinement by examining how social relationships, motivational beliefs, socioeconomic resources, and prior achievement shape learning outcomes and educational trajectories. This line of research has progressed from cross-sectional analyses to longitudinal investigations of achievement mobility, path dependence, and inequality. Third, large-scale data can support policy evaluation and policy-relevant diagnosis, including the reassessment of reading achievement trends, the examination of mode effects and digital equity in computer-based assessment, and the identification of cognitive and experiential mechanisms underlying urban-remote disparities in science learning. Across these applications, methodological validity and educational equity remain central concerns. The keynote highlights how integrating cross-sectional, repeated cross-sectional, and longitudinal evidence can strengthen connections among assessment, theory, policy, and practice.

Biography

Pey-Yan Liou is a Professor in the Department of Education at Korea University. Her research focuses on examining the contributions of psychological constructs to students' engagement and learning using data from international large-scale student assessments. Having conducted research in the United States, Taiwan, and Korea, she is particularly interested in cross-cultural perspectives on teaching, learning, and educational development in East Asia. Her work has been published in leading journals, including *Journal of Research in Science Teaching*, *Science Education*, and *Computers & Education*. She has served on the editorial boards of the *International Journal of Science Education*, the *International Journal of Science and Mathematics Education*, the *Journal of Experimental Education*, *Journal of Youth and Adolescence*, and the *Journal of Research in Science Teaching*.

SPEAKER 5



Prof Liou Pey-Yan

Professor
Department of Education,
Korea University

Learning Across Borders: What International Large-Scale Assessments Tell Us About Students, Classrooms, and National Contexts in Korea and Beyond

Drawing on a series of studies using international large-scale assessment (ILSA) data, this presentation examines what these assessments reveal about Korean students' motivation, learning, and educational experiences. The presentation begins by discussing the distinctive patterns of achievement and motivation among Korean and East Asian students from a comparative perspective. It then explores findings from Korean-focused studies on classroom environments, motivational beliefs, civic learning, parental support, and academic achievement. Particular attention is given to the role of contextual factors and how relationships commonly observed in Western educational research may operate differently in Korea. Finally, the presentation reflects on several methodological opportunities and challenges associated with the use of ILSA data, offering practical considerations for researchers interested in conducting secondary analyses of international assessment datasets.



A/Prof Nie Youyan
Associate Professor
Psychology and Child & Human
Department
National Institute of Education,
Nanyang Technological University

SPEAKER 6

Biography

Nie Youyan is an Associate Professor in the Psychology and Child & Human Development Academic Group at the National Institute of Education, Nanyang Technological University, Singapore. She adopts a psychological perspective to investigate contemporary educational issues using national and international large-scale assessment data, particularly the Programme for International Student Assessment (PISA) and Singapore's Core Research Projects. Drawing on major motivational theories, her research examines pressing educational issues, including the consequences of academic competition, the complex relationship between effort and ability, and how person-environment interactions influence learning and well-being. Her work bridges research, policy, and practice by translating evidence from large-scale assessments into actionable insights for educators

Achievement, Anxiety and Thriving: Rethinking Future Learning Through Large-Scale Assessments

Academic achievement remains a central educational goal, even in the era of artificial intelligence. Yet the growing emphasis on academic performance has also intensified learning anxiety and raised important questions about how education can better support students' overall development. Drawing on evidence from large-scale national (Singapore) and international assessments, this presentation explores the key factors associated with students' academic achievement, anxiety, and well-being. These findings provide a foundation for rethinking future learning and for exploring how learning environments can better support both academic excellence and human flourishing. The presentation concludes by considering how education systems can prepare learners not only to achieve but also to thrive in a rapidly changing world.

CENTRE FOR ASSESSMENT & EVALUATION

About us

Serving as one of the five NIE's strategic growth areas, the Centre for Assessment & Evaluation (CAE) is a one-stop hub and catalyst for research and teaching in Assessment and Evaluation (A&E), with the aim of encouraging greater growth in these two areas.

Vision

A lighthouse that promotes thought leadership, knowledge production, expertise and collaborations among multiple stakeholders to navigate the complexities of A&E in the context of future ready education.

Our Goals

The CAE was established to develop new knowledge, expertise, collaborations and thought leadership in the areas of Assessment and Evaluation. This is achieved through three key areas: Research, Teaching and Outreach.

For more information, please visit us at:



CAE website
<https://www.ntu.edu.sg/nie/centre-for-assessment-evaluation>



LIFE@NIESG
website
<https://lifeniesg.nie.edu.sg/>

Acknowledgments and Contact Details

We sincerely thank everyone who has contributed to the planning and success of this symposium. Also, to our keynote speakers, participants and support staff who make this event successful.

We look forward to continued dialogue and collaboration in shaping the future of education.

Contact Us

Centre for Assessment & Evaluation

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