

**Kwok Cheung CHEUNG, Ph.D. 張國祥**

**College Master:** Moon Chun Memorial College

**Professor:** Education

**Chief Advisor:** Educational Testing and Assessment Research Centre

**National Project Manager (Six cycles: PISA 2009 - PISA 2025):** Macau-PISA Centre

**Principal Investigator (TIMSS 2023):** Macau-PISA Centre

**Principal Investigator (PIRLS 2024):** Macau-PISA Centre

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## PROFESSIONAL QUALIFICATIONS

### Education

- Doctor of Philosophy (Science Education), University of London, London, UK [1987 - 89]
- Master of Education (Testing, Measurement and Evaluation), University of Hong Kong, Hong Kong, China [1984]
- Advanced Diploma in Education (Mathematics Education), University of Hong Kong, Hong Kong, China [1983]
- Certificate of Education (Mathematics Education), University of Hong Kong, Hong Kong, China [1981 - 82]
- Bachelor of Science, University of Hong Kong, Hong Kong, China (Major in Mathematics; Minor in Computer Science) [1977 - 1980]

### PhD & MEd Dissertation

- Cheung, K.C. (1989). *Product and process modeling for science achievement at the sixth form level in Hong Kong*. Unpublished PhD Thesis, Centre for Educational Studies, King's College, University of London, London, UK.

- Cheung, K.C. (1984). *The validity of the student attitude scales in the Second IEA Science Study*. Unpublished MEd Dissertation, Faculty of Education, University of Hong Kong, Hong Kong, China.

### **Awards & Scholarships**

- Outstanding Monograph/Book Achievement Award (Third Prize) in the Areas of Language, Education and the Arts, The 6<sup>th</sup> Outstanding Achievement Awards for Macao Research in Humanities and Social Sciences, awarded by Macau Foundation and Social Sciences in China Press (First Author; Monograph/book co-authored with Paper co-authored with P.S. Sit, S.K. Mak, and M.K. Jeong) [2022]
- Excellent Achievement Award in the Areas of Language, Education and the Arts, The 6<sup>th</sup> Outstanding Achievement Awards for Macao Research in Humanities and Social Sciences, awarded by Macau Foundation and Social Sciences in China Press (Second Author; Paper co-authored with S.K. Mak, M.K. Jeong, and P.S. Sit) [2022]
- UM Faculty Service Award [2017-2020]
- Master's Thesis Supervision of Sou Wa Kit, who studied in the Curriculum and Instruction programme: Young Researcher Award (Social Sciences) from the International Institute of Macau [2020]
- Outstanding Achievement Award (Third Prize) in the Areas of Language, Education and the Arts, The 5<sup>th</sup> Outstanding Achievement Awards for Macao Research in Humanities and Social Sciences, awarded by Macau Foundation and Social Sciences in China Press (First Author; Paper co-authored with S.K. Mak, P.S. Sit and K.C. Soh) [2019]
- Excellent Monograph/Book Award in the Areas of Language, Education and the Arts, The 5<sup>th</sup> Outstanding Achievement Awards for Macao Research in Humanities and Social Sciences, awarded by Macau Foundation and Social Sciences in China Press (First Author; Monograph/book co-authored with P.S. Sit, S.K. Mak, and M.K. Jeong) [2019]
- Best Paper Award, The 2017 Global Chinese Conference on Educational Information and Assessment & Chinese Association of Psychological Testing Annual Conference (paper co-authored with S.L. Jin, and P.S. Sit) [2017]
- Best Paper Award, The 2015 Global Chinese Conference on Educational Information and Assessment & Chinese Association of Psychological Testing Annual Conference (paper co-authored with M.K. Jeong, P.S. Sit and S.K. Mak) [2015]
- Excellent Research Paper Award in the Areas of Language, Education and the Arts, The 4<sup>th</sup> Outstanding Achievement Awards

for Macao Research in Humanities and Social Sciences (paper co-authored with M.K. Jeong, P.S. Sit and S.K. Mak) [2015]

- Doctoral Dissertation Supervision of Chan Keng Lim, who was the first PhD graduate of FED of UM: First Prize (Psychology and Education Area) of Cheng Chi University Humanity and Social Sciences Doctoral Dissertation Prize [2013]
- UM Academic Staff Award (Teaching, Research and Services) [2011]
- UM Faculty Service Award [2007-2009]
- K.C. Wong Foundation Visiting Scholar [2004]
- UM Best Teaching Award [2003/04]
- UM Excellent Research Award [2001]
- IEA Bruce H. Choppin Memorial Award (Outstanding PhD Thesis) [1990]
- Commonwealth Academic Staff Scholarship [1987-89]
- Li Po Chun Charitable Trust Fund Scholarship [1973-1977]

#### **Visiting Fellowships:**

- Clare Hall, University of Cambridge, U.K. (Organized by DSES of Macao Government) [2019]
- University of Coimbra, Portugal (Organized by DSES of Macao Government) [2018]
- Institute of International Education, University of Stockholm, Sweden (Invited by Emeritus Professor Ingemar Fägerlind) [1988]
- University of Hamburg, Germany (Invited by Professor T.N. Postlewaithe) [1988]
- Science and Mathematics Education Centre, The Curtin University of Technology, Perth, Australia (Invited by Professor Barry Fraser) [1986]

## **PROFESSIONAL APPOINTMENTS AND SERVICES**

#### **Teaching and Research Appointments**

- Professor, Faculty of Education, University of Macau, Macao, China [2/2024 – present]
- Director, Educational Testing and Assessment Research Centre, University of Macau, Macao, China [9/2006 – 6/2024]

- Full Professor (Curriculum & Instruction), Faculty of Education, University of Macau, Macao, China [1/2006 – 1/2024]
- National Project Manager, Macao-China PISA Study [9/2006 - present]
- Officer, University of Macau - Beijing Normal University Joint Research Centre [3/2021 – present]
- Senior Research Fellow, Institute of Advanced Studies in Humanities and Social Sciences, University of Macau [9/2021 - present]
- Associate Professor, Faculty of Education, University of Macau, Macao, China [3/1998 - 1/2006]
- Assistant Professor, Faculty of Education, University of Macau, Macao, China [9/1992 - 3/1998]
- Assistant Professor (Educational Research/ Psychological Measurement), Centre of Applied Research in Education/ Division of Psychological Studies, National Institute of Education, Nanyang Technological University, Singapore [7/91 - 8/92]
- Assistant Professor (Educational Research/ Mathematics Education), Educational Research Unit, Institute of Education, Singapore [9/89 - 6/91]
- Lecturer (Testing, Measurement and Evaluation/ Mathematics Education), Faculty of Education, University of Hong Kong, Hong Kong, China [9/87 - 8/89]
- Assistant Lecturer (Testing, Measurement and Evaluation/ Mathematics Education), Faculty of Education, University of Hong Kong, Hong Kong, China [2/86-8/87]
- Lecturer (Computer Science), Vocational Training Council, Hong Kong, China [9/85 - 2/86]
- Research Officer (IEA International Science Study), Faculty of Education, University of Hong Kong, Hong Kong, China [9/83 - 8/85]
- Part-time Lecturer (Mathematics), Adult Education Section, Education Department, Hong Kong, China [9/82 - 8/85]
- Graduate Master (Mathematics & Integrated Science), Po Chiu College, Hong Kong, China [9/81 - 8/83]
- Research Assistant (IEA International Mathematics Study), School of Education, University of Hong Kong, Hong Kong, China [8/80 - 9/81]

**Other Administrative Appointments at University of Macau, Macao, China**

- Chief Advisor, Educational Testing and Assessment Research Centre, University of Macau, Macao, China [7/2024 – 7/2026]
- College Master, Moon Chun Memorial College, University of Macau, Macao, China [2/2024 – present]
- Interim College Master, Moon Chun Memorial College, University of Macau, Macao, China [7/2022 – 01/2024]
- Officer, University of Macau – Beijing Normal University Joint Research Centre for Monitoring of Basic Education Quality (澳門大學-北京師範大學基礎教育質量監測聯合研究中心 [2/2021 - present]
- Senior Fellow, Pearl Jubilee College, University of Macau, Macao, China [9/2013 – 8/2022]
- Convener, Master of Education (Curriculum & Instruction), University of Macau, Macao, China [9/2008 – 12/2022]
- FED representative, Future Studies and Placement Advisory Committee [8/2014 – 2016]
- Resident Fellow, Pearl Jubilee College, University of Macau, Macao, China [9/2010 - 8/2013]
- Residence Officer/Warden, Student Hostel, University of Macau, Macao, China [9/1992 - 8/2010]
- Acting Director, Educational Research Centre, University of Macau, Macao, China [10/2007 - 3/2008]
- Dean, Faculty of Education, University of Macau, Macao, China [9/1995 - 8/1999]
- Associate Dean, Faculty of Education, University of Macau, Macao, China [6/1995 - 9/1995]

### **External Examination of PhD Dissertation**

- Jinxin Zhu: Predisposing, enabling, and reinforcing factors for Hong Kong primary students' self-regulated learning: The contributions of interest and prior achievement in mathematics, feedback, and personal best goal orientation, Hong Kong Institute of Education, Hong Kong, China [2015].
- Calvin Wilkinson: A Philosophy for the powerful learning of mathematics, Flinders University, Australia [2015].
- Tim Leung: The effects of instruction of creative invention on student's situational interest in physics lesson, The Chinese University of Hong Kong, China [2012].
- Mooi Lee Choo: Modeling the development of affective and cognitive processes in computer programming and their interrelationships, National Institute of Education, Nanyang Technological University, Singapore [1997].

- Trevor Johnson: A multilevel model of Year 12 science achievement in Australia, School of Education, Faculty of Education, Humanities, Law and Theology, The Flinders University of South Australia, Australia [1995].
- Deidra Young: Gender differences in science achievement: Secondary analysis of data from the Second International Science Study, Science and Mathematics Education Centre, The Curtin University of Technology, Australia [1991].

### **Major Committee Work at University of Macau, Macao, China**

- Academic Board Member, Institute of Advanced Studies in Humanities and Social Sciences, University of Macau, Macao, China [3/2020 - present]
- Member, Research Committee, University of Macau [8/2019 - 2020]
- Member, Gifted Education Committee, University of Macau [8/2018 - 2020]
- Chairman, Library Committee, University of Macau [8/2018 - 7/2020]
- Chairman, Supervisory Committee of Affiliated School of University of Macau [8/2012 - present]
- Member, Future Studies and Placement Advisory Committee of the University of Macau [8/2014 – 6/2024]
- Member, Faculty-level Academic Staff Promotion Advisory Committee of the University of Macau [9/2009 – 6/2024]
- Member, Recruitment Committee for academic staff in FED of the University of Macau [9/2000 – 6/2024]
- Member, Senate of the University of Macau [9/1995 - 8/2014]
- Member, University-level Academic Staff Promotion Advisory Committee of the University of Macau [9/2012 - 8/2014]
- Chairman, Management Committee of Affiliated School of University of Macau [9/2006 - 7/2012]
- Member and Vice-chairman, Publishing Advisory Committee of the University of Macau [9/2006 - 9/2011]
- Member, Panel for Chair Professorship in FED of the University of Macau [12/2010]
- Chairman, Academic Council of Faculty of Education of the University of Macau [9/1995 - 8/1999; 9/2001 - 8/2010]

- Member, Recruitment Committee for the recruitment of Vice-Rector (Academic Affairs) and Vice-Rector (Research) of the University of Macau [1/2008 - 6/2008]
- Member, University Council of the University of Macau [9/2006 - 8/2008]

### **Membership and Professional Services**

- The Education University of Hong Kong's Master of Social Sciences in Psychology Programme for academic years [2018-2022] (External Examiner)
- The 2019 & 2020 Item Banking Project of National Reading Assessment, Basic Education Quality Monitoring Centre, Ministry of Education of China (Item Development Expert)
- Building of Talented Professionals for the Monitoring of Educational Standards jointly by Beijing Normal University and University of Macau at MOE's Collaborative Innovation Center of Assessment toward Basic Education Quality during 26/5/2019 – 2/6/2019 [Program organizer and Leading Teacher of FED's postgraduate students]
- International Conference of Advances in STEM Education and Workshop on Coding, Physical Computing and Computational Thinking during 18-20 December 2019 (Program Committee Member)
- Macao Government Non-tertiary Education Mid- to Long-term Ten-Year (2021-2030) Planning Committee [2019-2020] (Consultative Expert)
- The 2019 Chinese National Language Assessment, Collaborative Innovation Center of Assessment toward Basic Education Quality, Beijing Normal University, China (Core Consultative Committee Member)
- Mainland China-PISA 2018, Basic Education Quality Monitoring Centre, Ministry of Education of China (Consultative Expert)
- Doctor of Education Program in the Specialization Area of Educational Measurement and Assessment for Education University of Hong Kong, Hong Kong, China (External Reviewer)
- The 2016-17 Program Area Accreditation (PAA) of Education University of Hong Kong, Hong Kong, China (Mock Panel Member)
- The Education University of Hong Kong UGC Funding Scheme for T&L Related Proposals (2016-19 Triennium) Proposals (External Reviewer)

- The 2017 Chinese National Science Assessment, Collaborative Innovation Center of Assessment toward Basic Education Quality, Beijing Normal University, China (Core Consultative Committee Member)
- Association of North America Higher Education International (Member)
- The Educational Statistics and Measurement Subdivision of Chinese Society of Education (Management Committee Member)
- American Educational Research Association (Member)
- European Association for Research on Learning and Instruction (Member)
- International Group for Mathematical Creativity and Giftedness (Member)
- Steering Committee, Partnership for Improvement in Learning and Teaching Project, Chinese University of Hong Kong, Hong Kong, China (Member)
- Macao Social Sciences Society, Macao, China (Management Committee Member)
- Macao Mathematics Education Research Society, Macao, China (Consultant)
- Academic Affairs Committee of Affiliated School of Macau, Macao, China (Member)
- Instructional Design Award, Bureau of Education and Youth Affairs, Macao Government, Macao, China (Member of Evaluation Panel)
- Comprehensive School Evaluation, Bureau of Education and Youth Affairs, Macao Government, Macao, China (Member of Evaluation Panel: Mathematics)
- Technology for Education and Learning Conference, organized by International Association of Science and Technology for Development, Beijing, China (International Program Committee Member) [2011]
- Technical support rendered to National Educational Examinations Authority of Ministry of Education of China for conducting PISA2009 in China [2009]
- Teacher Professional Development, Macau De Sao Jose College, Macao, China (Mathematics Subject Consultant) [2007 - 2008]
- Development of Learning Indicators for Early Childhood Education in Macao, Bureau of Education and Youth Affairs, Macao Government, Macao, China (Curriculum Consultant) [2007]



- 7<sup>th</sup> Global Chinese Conference on Computers in Education (7<sup>th</sup> GCCCE), Nanjing, China (Steering Committee Member; Program Committee Member) [2003]
- Basic Education Curriculum Development, Bureau of Education and Youth Affairs, Macao Government, Macao, China (Curriculum Consultant) [1995 - 1996]

## **PAST COURSES**

- The Evaluation of Mathematics Teaching and Learning (EDUC7176)
- Evaluation of Curriculum, Instruction & Student Performance (IMCN104, EDCI703, EDCI7103, EDUC7103)
- Intelligence and Creativity (IMCN125, IMEP002, EDCI753, EDUC7153)
- Theories of Curriculum and Instruction (Secondary Mathematics) (EDUC223, MAEB216, EDUC1022)
- Research in Mathematics Education (MAEB452)
- Elementary Mathematics Teaching and Research (MAEB421, EDUC2038)
- Educational Evaluation (BIKA113, BIPA113, DRPE207, PPEB350, EDUC3031)

## **RESEARCH AND PUBLICATIONS**

### **Research Areas**

- Curriculum and Instruction
- Educational Assessment
- Educational Evaluation
- Mathematics and Science Education
- Early Childhood Education
- Information, Communication and Technology Education

### **Research Projects**

- Progress in International Reading Literacy Study (PIRLS) [2024-2027] (Funded by DSEDJ of Macao Government for the Field Trial and Main Study test administration and data collection)

- Trends in International Mathematics and Science Study (TIMSS) [2023-2025] (Funded by DSEDJ of Macao Government for the Main Study test administration and data collection)
- Macao-PISA 2025 Scientific Literacy Study [2023 - 2026] (Funded by DSEDJ of Macao Government)
- Trends in International Mathematics and Science Study (TIMSS) [2022] (Funded by DSEDJ of Macao Government for the Field Trial test administration and data collection)
- Assessment of Academic Quality for Learning Project [2021-2023] (Funded by Pui Cheng and Choi Kou)
- Macao-PISA 2022 Mathematical Literacy and Creative Thinking Study [2019 - 2023] (Funded by DSEDJ of Macao Government)
- National Reading Item Bank Development Project [2019-2021] (Funded by National Assessment Centre for Education Quality, Ministry of Education, China)
- Development of tools for the mining and analysis of computerized interactive data in the assessment of scientific literacy of primary and secondary students in China – A strategic science and technology development project of Collaborative Innovation Center of Assessment toward Basic Education Quality, Beijing Normal University, China (Serve as High-end Foreign Expert of Beijing Normal University, i.e. 北京師範大學高端專家(外國/中國境外); Funded by Ministry of Science and Technology of China)
- Macao-PISA 2018 Reading Literacy Study [2016 - 2019] (Funded by DSEJ of Macao Government)
- Macao-PISA 2015 Scientific Literacy and Collaborative Problem-Solving Study [2013 - 2016] (Funded by DSEJ of Macao Government)
- Macao-PISA 2012 Mathematical Literacy Study [2010 - 2013] (Funded by DSEJ of Macao Government)
- Macao-PISA 2009 Reading Literacy Study [2007 - 2010] (Funded by DSEJ of Macao Government)
- Macao-PISA 2006 Scientific Literacy Study [2004 - 2007] (Funded by DSEJ of Macao Government)
- A survey of examinations and tests in use taken by senior secondary students in Macao, China [2006] (Funded by Research Committee of UM)

- Challenging mathematical problems in the classroom (ICMI-16 Study) [2006 - 2007]  
(Funded by Research Committee of UM)
- Development of multiple intelligences for babies in subsidized child care centers in Macao, China [2005 - 2006]  
(Funded by IAS of Macao Government)
- Realistic mathematics education and multiple intelligences inspired education: A study of mathematization in school mathematics (ICMI-15 Study) [2004 - 2005]  
(Funded by Research Committee of UM)
- New Chinese mathematics curriculum standards (English version for primary/ junior secondary/ senior secondary grades), Basic Education Curriculum Research Centre, China [2004 - 2006]  
(Funded by Basic Education Curriculum Research Centre, Capital Normal University, Ministry of Education, China)
- Brain-based Recommendations for Intellectual Development and Good Education: A self-rating Study (BRIDGE Study) [2003 - 2006]  
(Funded by individual participating schools)
- School-based Multiple Intelligences Learning Evaluation System (SMILES Study) [1999 - 2003]  
(Funded by individual participating schools)
- Development of school-based multiple intelligences textbooks and learning materials for kindergartens [1999 - 2006]  
(Funded by Crystal Educational Publishing, Hong Kong, China)
- Meaningful measurement of cognitive and psychological processes [1989 - 1992]  
(Funded by Center for Applied Research in Education, National Institute of Education, Singapore)
- School and Teacher Effectiveness in Singapore [1989 - 1992]  
(Funded by Center for Applied Research in Education, National Institute of Education, Singapore)
- IEA Second International Science Study (Hong Kong, China) [1983 - 1985]
- IEA Second International Mathematics Study (Hong Kong, China) [1980 - 1981]

### **Editorial Work for Academic Journals**

- Chinese/English Journal of Educational Measurement and Evaluation 教育測量與評估雙語季刊 (Editorial Board Member) [2020 – present] [Journal of NCME and BNU]

- EURASIA Journal of Mathematics, Science and Technology Education (Associate Editor) [2017 – present] [SSCI/SCOPUS Journal]
- Curriculum and Instruction Quarterly 課程與教學季刊 (Editorial Board Member) [2005 - present] [TSSCI Journal]
- Educational Psychology (Consulting Editor) [2017 – 2020] [SSCI Journal]
- Hong Kong Educational Research Journal 香港教育研究學報 (Editorial Consultant) [2000 - 2016]
- New Horizons in Education 教育曙光 (Editorial Consultant) [2001 - 2014]
- The International Electronic Journal of Mathematics Education (Editorial Board Member) [2006-2008]
- Exploration of Psychology 心理學探新 (Editorial Committee Member) [1999 - 2006] [CSSCI Journal]

### **Review Work for other Academic Journals**

- Asia Pacific Journal of Education [SSCI]
- Asia-Pacific Educational Researcher [SSCI]
- British Journal of Educational Technology [SSCI]
- Chinese Journal of Science Education [TSSCI]
- Cogent Education
- Contemporary Educational Research Quarterly [TSSCI]
- Early Child Development and Care
- Educational Psychology [SSCI]
- Educational Research Review
- Frontiers of Education in China
- International Journal of Science and Mathematics Education [SSCI]
- Learning and Individual Differences [SSCI]
- School Effectiveness and School Improvement: An International Journal of Research, Policy and Practice [SSCI]
- Social Indicators Research [SSCI]

### **Refereed Journal Articles**

- Zheng, J.Q., Cheung, K.C., Sit, P.S., Lam, C.C. (2025). Unfolding key factors of resilience in ICT cognitive-motivational engagement: Global evidence from machine learning techniques. *International Journal of Educational Research*, 131, 102607. [DOI:

<https://doi.org/10.1016/j.ijer.2025.102607>] [SSCI; SCOPUS; Web of Science; Google Scholar]

- Cheung, K.C., Sit, P.S., Zheng, J.Q., Lam, C.C., Mak, S.K., Jeong, M.K. (2024). A machine learning model of academic resilience in the times of the COVID-19 pandemic: Evidences drawn from 79 countries/economies in the PISA 2022 mathematics study. *British Journal of Educational Psychology*, 94(4), 1224-1244. [DOI: DOI: 10.1111/bjep.12715] [SSCI; SCOPUS; Web of Science; Google Scholar]
- Zheng, J.Q., Cheung, K.C., & Sit, P.S. (2024). A systematic review of academic resilience in East Asia: Evidence from the large-scale assessment research. *Psychology in the Schools*, 61(3), 1238-1254. [DOI: <https://doi.org/10.1002/pits.23109>] [SSCI; SCOPUS; Web of Science; Google Scholar]
- Zheng, J.Q., Cheung, K.C., & Sit, P.S. (2023). Identifying key features of resilient students in digital reading: Insights from a machine learning approach. *Education and Information Technologies*. [DOI: 10.1007/s10639-023-11908-0] [SSCI; SCOPUS; Web of Science; Google Scholar]
- Zheng, J.Q., Cheung, K.C., & Sit, P.S. (2023). The effects of perceptions toward interpersonal relationships on collaborative problem-solving competence: Comparing four ethnic Chinese communities assessed in PISA 2015. *The Asia-Pacific Education Researcher*. [DOI:10.1007/s40299-023-00744-y] [SSCI; SCOPUS; Web of Science; Google Scholar]
- Zheng, J.Q., Cheung, K.C., Sit, P.S. (2022). Insights from two decades of PISA-related studies in the new century: A systematic review. *Scandinavian Journal of Educational Research*. [DOI:10.1080/00313831.2022.2148273] [SSCI; SCOPUS; Web of Science; Google Scholar]
- 蔡登瑩、張國祥、薛寶嫦、楊文佳 (2022)。中國四省市學生之信息通信技術熟悉度對教育公平的影響。 *教育測量與評估雙語季刊*，3(3)，58-72。
- Jin, S.L., Fang, G.B., Cheung, K.C., & Sit, P.S. (2022). Factors associated with academic resilience in disadvantaged students: An analysis based on the PISA 2015 B-S-J-G (China) sample. *Frontiers in Psychology*. [DOI:10.3389/fpsyg.2022.846466] [SSCI; SCOPUS; Web of Science; Google Scholar]
- Cheung, K.C., Sit, P.S., Mak, S.K. & Jeong, M.K. (2022). Learner Characteristics Enhancing Academic Resilience: Analysis of Five High-Performing Chinese Economies in PISA 2012. *International*

*Journal of Education and Psychology in the Community*, 12(1&2), 89-111.

- 麥瑞琪、張國祥、薛寶嫦、楊文佳 (2022)。從學校氛圍視角分析華人地區學生 PISA 2018 閱讀素養的表現。 **課程與教學季刊**，25(4)，191-224。[TSSCI; Google Scholar; ISSN:1560-1277]
- 蘇華傑、張國祥、楊文佳、麥瑞琪 (2021)。以資料採擷的方式探索區分高低數學素養表現學生之因素——以澳門社經弱勢及優勢背景學生為例 (Using data mining to explore factors that distinguish between students with high and low mathematical literacy performance – an example with socio-economically disadvantaged and advantaged students in Macao)。 **教育測量與評估雙語季刊 (Chinese/English Journal of Educational Measurement and Evaluation)**，2(4)，15-26。[Google Scholar]
- Cheung, K.C., Sit, P.S., Mak, S.K. & Ieong, M.K. (2021). Secondary analysis of PISA data for grade level effect due to grade repetition on improvement in reading performance. *International Journal of Education and Psychology in the Community*, 11 (1&2), 180-194.
- Sit, P.S., Cheung, K.C., Ieong, M.K., & Mak, S.K. (2021). Students' frequent exposure to bullying: comparing between low-achieving students of Macao and Taiwan in PISA 2015 well-being study *Educational Psychology*. [DOI: 10.1080/01443410.2021.1876214] [SSCI; SCOPUS; Web of Science; Google Scholar; ISSN: 0144-3410]
- Marôco, J., Assunção, H., Harju-Luukkainen, H., Lin, S.W., Sit, P. S., Cheung, K.C., Maloa, B., Ilic, I.S., Smith, T.J., Juliana A.D.B. Campos, J.A.D.B. (2020). Predictors of academic efficacy and dropout intention in university students: Can engagement suppress burnout? *PLoS ONE*, 15(10): e0239816. [DOI:10.1371/journal.pone.0239816 ] [SSCI; SCOPUS; Web of Science; Google Scholar]
- Assunção, H., Lin, S.W., Sit, P.S., Cheung, K.C., Harju-Luukkainen, H., Smith, T., Maloa, B., Campos, J., Ilic, I.S., Esposito, G., Francesca, F.M., Marôco, J. (2020). University student engagement inventory (USEI): Transcultural validity evidence across four continents. *Frontiers in Psychology: Quantitative Psychology and Measurement*, 10, 1-12. [DOI:10.3389/fpsyg.2019.02796] [SSCI; SCOPUS; Web of Science; Google Scholar]
- 麥瑞琪、張國祥、楊文佳、薛寶嫦 (2020)。從澳門某所中學的科學教育實踐案例探討學校多元評量實施的過程。 **科學教育月刊**，28(special issue), 457-482。[TSSCI; ISSN:1021-3708]

- 麥瑞琪、張國祥、楊文佳、薛寶嫦 (2019)。PISA 2015 澳門學生科學素養性別差異分析。《測驗學刊》。66 (3), 249-284. [TSSCI; ISSN:1609-4905]
- Cheung, K.C., Mak, S.K., & Sit, P.S. (2018). Resolving the attitude-achievement paradox based on anchoring vignettes: Evidences from the PISA 2012 mathematics study. *Asia Pacific Education Review*, 19(3), pp. 389-399. [DOI: 10.1007/s12564-018-9526-9] [SSCI; SCOPUS; Web of Science; Google Scholar; ISSN:1598-1037]
- Sit, P. S., Cheong, W. C., & Cheung, K. C. (2017). Prediction of digital problem-solving performance of the low-achievers of a high-performing economy in PISA 2012: Perseverance, Openness and ICT use as quality education indicators. *Journal of Psychological and Educational Research*, 25(2), 18-38. [SCOPUS; Web of Science; Google Scholar; ISSN: 2247-1537]
- Mak, S.K., Cheung, K.C., Soh, K.C., Sit, P.S., & Jeong, M.K. (2017). An examination of student- and across-level mechanisms accounting for gender differences in reading performance: A multilevel analysis of reading engagement. *Educational Psychology*. 37(10), 1206-1221. [DOI: 10.1080/01443410.2016.1242712] [SSCI; SCOPUS; Web of Science; Google Scholar; ISSN:0144-3410]
- Jin, S.L., Cheung, K.C., & Sit, P.S. (2017). Task- and non-task-specific factors classifying problem-solving experts and novices: Comparing between students of the top ten high-performing Eastern and Western economies in PISA 2012. *Contemporary Educational Research Quarterly*, 25(3), 071-103. DOI : 10.6151/CERQ.2017.2503.03 [TSSCI; SCOPUS; Google Scholar; ISSN:1814-4810]
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## PRESENTATIONS

### Invited/Keynote Address

- Cheung, K. C. (2024, 10-11, December). *Future-oriented core-competences of students and their assessment: The case of PISA in the first quarter of the 21st century*. Invited speech presented at the 7th International Conference on Education and Monitoring (ICEEM), Beijing.
- Cheung, K. C. (2024, 1 October - 31 December). *Insightful best practice from strong performers of PISA 2022—the second top performing country/economy: Macao-China*. Keynote speech presented at Online EDUCA 2024, Thailand.
- Cheung, K. C. (2023, 19-20 September). *Competences fostered for junior secondary science education at the third decade of the 21st century: Perspectives from the PISA 2025 Study*. Keynote speech presented at World Conference on Science Literacy, Beijing, China.
- 張國祥 (2023, 5 月 20 日)。PISA: 測評內容與技術新進展。特

邀報告發表於「大規模教育測評技術及應用研討會」，北京師範大學、中國珠海。

- 薛寶嫦、張國祥 (2022, 12 月 20 日)。**PISA 2025 科學素養研究計畫之概念化**。特邀報告發表於「第三屆北京師範大學與澳門大學教育評估監測人才交流萬人計劃專案」，北京師範大學、中國珠海。
- 麥瑞琪、張國祥 (2022, 12 月 20 日)。**PISA 2022 數學素養測試結果的分析和彙報**。特邀報告發表於「第三屆北京師範大學與澳門大學教育評估監測人才交流萬人計劃專案」，北京師範大學、中國珠海。
- 楊文佳、張國祥 (2022, 12 月 20 日)。**TIMSS 2023 研究計畫之概念化**。特邀報告發表於「第三屆北京師範大學與澳門大學教育評估監測人才交流萬人計劃專案」，北京師範大學、中國珠海。
- Cheung, K.C. (2021, 16-17 November). *Education monitoring and evaluation in the context of evaluation reform: The Macao-PISA experience*. Invited speech presented at Beijing International Convention Centre, Beijing, China.
- 張國祥 (2021, 5 月 20 日)。**如何分析和回答有關平等、公平和學校教育效果的研究問題**。特邀報告發表於「第二屆北京師範大學與澳門大學教育評估監測人才交流萬人計劃專案」，北京師範大學、中國珠海。
- 張國祥 (2021, 5 月 19 日)。**PISA 2018 在國際上如何概念化和執行**。特邀報告發表於「第二屆北京師範大學與澳門大學教育評估監測人才交流萬人計劃專案」，北京師範大學、中國珠海。
- 張國祥 (2020, 12 月 7 日)。**包容社會下的全球素養研究**。特邀報告發表於「中國基礎教育質量監測協同創新中心 PISA 系列網上課程：21 世紀如何建構素養與幸福感並重的教育體系」，北京師範大學、中國北京。
- 張國祥 (2020, 12 月 5 日)。**運算思維在數理學科中的培養**。特邀報告發表於「中國基礎教育質量監測協同創新中心 PISA 系列網上課程：21 世紀如何建構素養與幸福感並重的教育體系」，北京師範大學、中國北京。
- 張國祥 (2020, 12 月 5 日)。**核心素養的培養與發展趨勢**。特邀報告發表於「中國基礎教育質量監測協同創新中心 PISA 系列網上課程：21 世紀如何建構素養與幸福感並重的教育體系」，北京師範大學、中國北京。

- 張國祥 (2019, 12 月 16 日)。 **PISA 2018 數碼化閱讀素養自適應測評特色**。特邀報告發表於「中國基礎教育質量監測協同創新中心短期課程」，北京師範大學、中國北京。
- 張國祥 (2019, 7 月 19 日)。 **培養新世紀 STEAM 專業人仕之三大核心素養**。特邀報告發表於「在新的時代要求下如何培養高素質人材」教學研討會，澳門鏡平學校、中國澳門。
- Cheung, K.C. (2019, 10-12 July). *Assessment of 21<sup>st</sup> century skills key to the fostering of STEAM professionals in the information age*. Keynote speech presented at International Conference on Open and Innovative Education, The Open University of Hong Kong, Hong Kong, China.
- 張國祥 (2018, 10 月 19 日)。 **PISA 2015 澳門學生科學素養性別差異分析**。特邀報告發表於第十三屆海峽兩岸心理與教育測驗學術研討會暨中國測驗學會年會，台中日月潭、中國台灣。
- 張國祥 (2018, 9 月 27 日)。 **運算思維對 21 世紀 STEM 教育的意義**。特邀報告發表於 第二屆 STEM 與科技創新教育高峰論壇，中國澳門。
- 張國祥 (2018, 7 月)。 **從 PISA 2015 幸福感視角探討粵港澳大灣區 ICT 課程的調整和優化**。特邀報告發表於第六屆中國南方教育高峰年會，中國廣州。
- Cheung, K.C. (2017, December). Important factors classifying high- and low-performing students in scientific literacy – The classification and regression tree approach. Invited paper presented at the 2015 Global Chinese Conference on Educational Information and Assessment & Chinese Association of Psychological Testing Annual Conference, Taichung, Taiwan, China.
- Cheung, K.C. (2017, June). *The effects of resilience in learning variables on mathematical literacy performance: A study of learning characteristics of the academic resilient and advantaged low achievers in Shanghai, Singapore, Hong Kong, Taiwan and Korea*. Invited paper presented at the Research Seminar delivered at the Department of Psychology of Education University of Hong Kong, Hong Kong, China.
- Cheung, K.C. (2017, June). *Academic resilient students in PISA 2012 high-performing economies*. Invited paper presented at the Research Forum “Analysis of PISA data: Issues, methodologies and findings” at Institute of Education, Chiao Tung University, Taiwan, China.
- Cheung, K.C. (2017, June). *A comparison of important factors classifying high- versus low-performing students in scientific*

*literacy amongst selected PISA 2015 economies. Invited paper presented at the Research Forum “Analysis of PISA data: Issues, methodologies and findings” at Institute of Education, Chiao Tung University, Taiwan, China.*

- 張國祥、薛寶嫦、楊文佳、麥瑞琪。(2016 年 5 月)。**學生經常地受到欺凌：澳門低表現生情況分析**。報告發表於 PISA2015 學生幸福感報告簡介會，中國澳門。
- 張國祥 (2016, 12 月)。**全球素養評核試題設計**。特邀報告發表於台中師範大學，台中、中國台灣。
- 張國祥 (2016, 12 月)。**PISA 2015 科學素養試題設計與澳門學生科學素養表現**。特邀報告發表於台灣師範大學，台北、中國台灣。
- 張國祥 (2016, 12 月)。**PISA2015 研究結果：澳門經驗分享**。特邀報告發表於交通大學，新竹、中國台灣。
- 張國祥 (2016, 7 月) **學習導向的學業品質監測：建立澳門當地優質校本課程的基石**。特邀報告發表於上海市教育委員會教學研究室所舉辦之「兩岸及香港、澳門地區教育品質綜合評價會議」，中國上海。
- 張國祥 (2015, 12 月)。**十年 PISA 測試結果對教育質量與公平政策的衝擊：以澳門學校留班政策為例**。特邀報告發表於台南大學，中國台灣。
- 張國祥 (2015, 11 月)。**從 PISA 視角審視澳門的留班問題**。特邀報告發表於澳門教育暨青年局「多元評核：促進學生學習成功」研討會，中國澳門。
- Cheung, K.C. (2015, December). *Resolving the attitudes-achievement paradox based on anchoring vignettes: Evidences from the PISA 2012*. Invited paper presented at the 2015 Global Chinese Conference on Educational Information and Assessment & Chinese Association of Psychological Testing Annual Conference, Taichung, Taiwan, China.
- Cheung, K.C. (2015, July). *A typology of student reading engagement: Preparing for response to intervention in the school curriculum*. Invited paper presented at the Sixth World Chinese School Librarians' Forum, Macao, China.
- Cheung, K.C. (2015, February). *The effects of self-regulatory learning variables on mathematical literacy performance: A study of learning characteristics of the academic resilient and advantaged low achievers in Shanghai, Singapore, Hong Kong, Taiwan and Korea*. Invited paper presented at Educational Resilience among

Asian Children in Challenging Family Environment, Asia Research Institute, National University of Singapore, Singapore.

- 張國祥 (2014, 10 月)。 *Lessons from PISA for Macao and Chinese-speaking economies*。特邀報告發表於「2014 教育高階論壇：核心素養的評量議題與教育發展」，台南、中國台灣。
- Cheung, K.C. (2012, May). *Conceptualization of the PISA mathematical literacy proficiency scale: A validation of its cognitive components*. Invited paper presented at the East Asia Forum on Mathematics Competence and their Assessment, East China Normal University, Shanghai, China.
- Cheung, K.C. (2009, October). *Using PISA to monitor mathematics education standards for the 15-year-old students in Macao*. Invited paper presented at the 10<sup>th</sup> International Conference on Education Research, Seoul National University, Korea.
- Cheung, K.C. & Sit, P.S. (2009, January). *The use of quality indicators for curricular reform: Macao's insights from PISA 2006 Study*. Invited paper presented at the International Conference on Global Issues and Trends in Educational Research, Measurement, Evaluation, Statistics, and Psychology, Nakornayok, Thailand.
- 張國祥 (2008, 11 月)。 *Caveats in the use of science education quality indicators to provide directions for basic science education curricular revision: An example on identifying scientific issues*。特邀報告發表於澳門大學主辦之 2008 年華人社會的課程與教學改進學術研討會，中國澳門。
- 張國祥 (2008, 10 月)。 *Improving school curriculum and teacher education based on the ten science education quality indicators identified in the PISA 2006 Study*。特邀報告發表於「2008 兩岸四地課程改革與教育發展」研討會，中國長沙。[Google Scholar]
- 張國祥、陳敬濂、薛寶嫦 (2008, 7 月)。澳門學校課程決定透析。特邀報告發表於第十屆兩岸三地課程理論研討會，中國香港。[載於朱嘉穎等(編)，**第十屆兩岸三地課程理論研討會論文集** (頁 205-215)。中國香港：香港中文大學。]
- Sit, P.S., & Cheung, K.C. (2008, April). *Key findings of the Macao-China PISA 2006 Scientific Literacy Study*. Invited paper presented at the International Conference on PISA 2006: The Performance of Education Systems in Countries and Regions, jointly convened by the autonomous province of Trento and the OECD at Trento, Italy. [Google Scholar]
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