08:30-09:00	Registration	Outside Area of D1-LP-02
08:30-10:45	Local School Visit	Ma On Shan Ling Liang Primary School Chinese YMCA College

Keynote Speech 4

09:00-09:40	**Keynote Speech 4** *Is There Any Use of Teacher Education? Implications from Teacher Effectiveness and Experience* Professor Zhenguo YUAN ***Language:** Putonghua, supplement with English Simultaneous Interpretation and English Power Point Slide	D1-LP-04
09:40-10:00	**Morning Tea Break**	Outside area of D1-LP-08

HKERA Featured Sympoisum 1

10:00-11:30	*What should be the Future Education in the Digital Era* **Chair:** Professor Siu-Cheung KONG, The Education University of Hong Kong, Hong Kong **Speakers:** Professor Tak-Wai CHAN, National Central University, Taiwan Principal Tsz Wing CHU, Baptist Rainbow Primary School, Hong Kong Ms. Shu Cao MO, Minerva Schools at KGI **Language:** English **Abstract:** The advocacy of paradigm shift to learner-centered learning together with the advancement of digital technology for educational purposes entail a necessary change in the educational landscape in the 21st century. Future education in the digital era is envisioned to prepare learners for a quality process of self-directed learning, of which learners appropriately select and use digital technology to support their knowledge construction and peer interaction in their personalized processes of subject learning and skills development without time and location constraints. To realize such educational goal, the existing school systems need to make well-planned changes related to the school buildings, school structure, school curriculum and pedagogy. This symposium aims to discuss the critical issues for holistically reviewing and transforming the existing school systems to realize future education in the digital era.	D1-LP-04

WERA Workshop 2   D3-G-03

Time	Abstract	Presenter(s)
The Role Of Opportunity To Learn (OTL) In Cross-National Studies		**D3-G-03**
10:00-13:00	**Abstract:** Cross-national statistical analyses in education often lack measures of Opportunity to Learn (OTL) and as a result produce biased estimates of the effects they are studying. This is a serious problem whether done at the cross-country level or within country. This workshop looks at the history of OTL and how it is currently being measured in TIMSS and PISA. Analyses showing the potential biasing effect related to the absence of OTL will be presented. **Organization and Goals:** This three-hour course is organized in three parts. Part I will be an overview of the history of OTL in international studies. Part II will be a presentation by three international scholars known for their accomplishments in international research both related to TIMSS and PISA. Each of the scholars will present results related to OTL in PISA and TIMSS as well as discuss the relationship	**Dr. William SCHMIDT** University Distinguished Professor Director, Center for the Study of Curriculum Policy Michigan State University, USA **Dr. Frederick LEUNG** Kintoy Professor in Mathematics Education Chair Professor Chairman of Faculty Board, Faculty of Education Division of Mathematics and Science Education

of OTL to performance in 16 countries who participated in both TIMSS and PISA. Finally, Part III will be an extended discussion of the two roles that OTL plays in international research—as predictor and control variables.	University of Hong Kong Hong Kong, China **Dr. Leland COGAN** Senior Research Associate Center for the Study of Curriculum Policy Michigan State University, USA

Parallel Session 2.1 · 10:00-11:30

HKERA International Conference Paper Presentation · 10:00-11:30

Early Childhood Education · D1-LP-08

2.1A - 1 - 1036	Personal and Contextual Factors Associated with Growth in Preschool Teachers' Sense of Self-Efficacy		English

Author(s)

Antje VON SUCHODOLETZ, New York University Abu Dhabi, United Arab Emirates
Faiza JAMIL, Clemson University,
Ross LARSEN, Brigham Young University,
Bridget HAMRE, University of Virginia,

Teacher self-efficacy is often defined as teachers' beliefs in their ability to successfully take the steps to accomplish a teaching-related task and to positively influence student outcomes. Social-cognitive theory posits that self-efficacy beliefs are based on four context-specific sources of information. Because classrooms differ in the extent and types of feedback they provide, and individuals vary in how they process information, teachers' characteristics and features of the classroom contribute to teachers' sense of efficacy. Despite the extant literature on teacher self-efficacy, however, there has been limited research on the development of in-service teacher self-efficacy across multiple school years. Addressing this gap, the current longitudinal study investigated (a) how teachers' self-efficacy changes over time and (b) how teacher- and classroom-level factors relate to these changes. We used a publicly available data set from a multi-phase teacher professional development intervention. A sample of 341 preschool teachers recruited from ten sites in eight states in the United States were included in the analyses. Teacher self-efficacy was measured using the Teachers' Sense of Efficacy Scale – Short Form (Tschannen-Moran & Woolfolk Hoy, 2001). Latent growth curve models indicated that self-efficacy increased across the 3-year study period. However, professional development conditions teachers were assigned to in the intervention study differentially predicted growth. In addition, teacher ratings of children's behavior problems had a negative effect on self-efficacy. Together, findings highlight the possibility for change in in-service teachers' self-efficacy and underscore the importance of supporting the development of self-efficacy beliefs.

Early Childhood Education · D1-LP-08

2.1A - 2 - 1090	TEACHERS' VIEWS OF HOME VISITS IN EARLY INTERVENTION		English

Author(s)

Feyza OZKAN YILDIZ, Turkey
Hilal KARAKUS, Turkey
Berrin AKMAN, Hacettepe University, Turkey

The purpose of this study is to determine teachers' views of home visits in early intervention. If the teacher engaged in early intervention cooperates with parents by paying home visits periodically, he/she can get to know the child and their parents better, identify the causes of problems, if any, and support the child's development at the highest level.

Case study, which is a qualitative research method, was used. The study group consists of 25 teachers working at pre-school educational establishments in Ankara who were chosen through convenience sampling. Data were collected via semi-structured interview form developed to determine pre-school teachers' views of home visits in early intervention. They were subjected to descriptive analysis. Most of the participating teachers stated that they had received no early intervention course; early intervention mainly means preventing the emergence of a problem; and early intervention must primarily be for pre-school children and children with special needs. It was found out that most of the teachers pay home visits and do this once a semester. In general, they pay home visits to see the living conditions of children and their parents. Based on the teachers' statements, principal reasons for not paying home visits are transportation problems, time problems, security problems, home visits not adopted in educational establishments, and finding home visits unnecessary. According to the teachers, the most important reason for home visits in early intervention is to get to know children and their parents, and these visits bring various benefits to parents, teachers, and children.

Early Childhood Education		D1-LP-08
2.1A - 3 - 2247	Performance Analysis of Nuri-policy in Korea	English

Author(s)	**Yunjin LEE**, South Korea **Jihyun KIM**, South Korea **Minkyung LEE**, South Korea

This study is to develop performance index of Nuri-policy which was imposed in year 2012 and now turning fifth year of enforcement. The performance indicator is developed based on BSC(Balanced scorecard) model and diagnosed the current level of Nuri-policy and proposed a policy plan. Total of twenty nine key performance index(KPI) was developed. Among theses, nine indexes were achieved, twelve indexes were partially achieved, eight indexes did not. The main results of the study are as follows. After the Nuri-policy, the number of children receiving the fund increased, parents' satisfaction were high, teachers' labor condition, Nuri-curriculum were improved. However, the extra fee that parents pay who are using kindergarten and childcare-center is increasing and the gap of extra fee between the institutions were high. Also, teachers thought Nuri-curriculum is difference in teachers' labor condition also high among the institutions. Nuri-curriculum was established as the government planed, and following the government's guideline after the enforcement. However, time of discussion between interested parties in the introduction of Nuri-policy was insufficient. Legal system of Nuri-policy and parent's right of selecting the institution, sufficiency of finances, expansion of Nuri-policy fund .remain as a urgent problem.

Policy proposal based on the results of this study are 1) reduction of fee disparity between the institutions-increase of public institution in city area 2) standardization of teacher level between the institutions 3) expansion of Nuri-policy fund 4) modification of Nuri-policy legislation.

Social Science Education		D2-LP-08
2.1B - 1 - 1080	跨境學童就學經驗對香港歸屬感影響的研究	廣東話

Author(s)	陳潔華, 香港教育大學, 香港 楊姝焱, 香港中文大學, 香港

香港自上世紀九十年代末，跨境學童的現象已出現，但自 2007 年開始，其數量顯著增加。例如 2015/16 學年約有二萬八千多位跨境學童，當中一半是小學生。跨境學童是指擁有香港永久居民身份，但在深圳居住，而每天需要通過海關往香港上學的學生群體。這群學童是香港未來的生力軍，但他們這種往返過關的上學經驗，會否影響他們的學習和對香港產生歸屬感，實在值得關注。然而，現有的研究較少探討跨境學童的就學經驗和香港歸屬感。本研究於 2012 年 10 月至 12 月期間，向北區六所有較高跨境學童比率的小學發出問卷，成功向 428 名跨境學童進行調查，並對所得資料進行系統性分析。多元線性回歸結果表明，在香港參加課外活動、同本地同學和其他跨境同學建立良好關係的被訪學童對香港歸屬感有積極影響。相反，返學時間越長、英文水準較低、年齡越大才跨境的被訪學童對香港歸屬感呈現負相關。另外，學童的性別、家庭收入、父母的教育程度以及父母是否為香港人與學童的香港歸屬感卻無顯著相關性。依據研究結果，本研究將提出增加跨境兒童正面就學經驗的建議。

Social Science Education		D2-LP-08
2.1B - 2 - 1095	由「問責」到「提升」——試卷分析於自主學習的行動研究	廣東話

Author(s)	卓健民, 華南師範大學, 中國 譚慧樂

在應試背景下，教師如何讓學習者轉變對考試的觀念，學會自主學習？爲了探究這個問題，研究者通過比較與反思四名高中生在引導下自主學習的發展歷程，發現試卷分析在自主學習過程中發揮著重要的反饋與前饋作用。參與學生通過試卷分析經歷「評判自我」、「歸納問題」、「聚斂目標」三個循環發展階段，逐步轉變對學習與考試的觀念，增進對自我的瞭解。實踐者把上述研究經驗與原則實施於高中課堂，取得了初步成效。通過試卷分析，學習者的學習目標更爲明確，動機、策略與成績水平取得較大提升，對考試的觀念發生明顯轉變。

Education Leadership and Management		D2-LP-08
2.1B - 3 - 3399	學術錦標賽制：中國學術增長的動力機制與激勵邏輯	廣東話

Author(s)	陈先哲, 華南師範大學, 中國

進入 21 世紀以來，中國學術產量長期保持高速增長，其動力機制主要來自何方？曾對中國經濟增長做出有力解釋的錦標賽制理論為此提供了一種可能的解釋視角。中國學術治理模式採用了多重"委託－代理"機制，符合錦標賽制的技術前提，因而具有典型的學術錦標賽制特徵中國學術錦標賽制的激勵邏輯在於通過信念共識和利益聯結，將國家宏觀目標，大學組織中觀目標和學術人員微觀目標三者統一起來，產生強激勵並推動學術高速增長。

Secondary School Education	D2-LP-10
2.1C - 1 - 1060 Mathematics anxiety vs Mathematics self efficacy: An introduction to an effective self-designed mathematics board game	English

Author(s)	**Ting Hei TSE,** Hong Kong Shue Yan University, Hong Kong **De Hui Ruth ZHOU,** Hong Kong Shue Yan University, Hong Kong

Many Hong Kong secondary school students suffer from Mathematics anxiety. They experience the learned helplessness, possess low self-esteem and develop fear of mathematics. In exams, they turn to attribute positive outcome to external events and negative outcome to their inefficacy and inability in mathematics. This study reports how two consecutive workshops with a set of self-designed board game can create new mathematic learning experiences for a group of secondary students by promoting their self-efficacy and intrinsic motivation in mathematics. Five Form 2 students took part in this workshop dealing with mensuration, basic geometry, algebraic expressions and percentage problem. The intended small size of the group is to maintain sufficient attention to each student. During the process, optimal challenge was attended in the mathematics question item design to ensure a positive learning experience with verbally acknowledgement of their progress. Sufficient cue cards were given to accompany their journey to challenge of more difficult questions, which went in line with a psychological experience of building up their competence and self-confidence. In addition, social modelling effect in a group learning environment helped participants to reduce their stress when they tackle the mathematical problems together as a group. A puzzle (i.e. a letter) was given to them after spontaneously taking the challenge and successfully answering the questions. Therapeutic empowerment for arranging the puzzle game in the wordings "CONFIDENCE" underlines their process and effort to strive for their own confidence. The results of pre and post measures of Mathematics problem-solving test, self-efficacy questionnaire and subjective evaluation questionnaire confirmed the effectiveness of the workshops with the self-designed mathematic board games.

Keywords: mathematics anxiety, self-efficacy, optimal challenge, intrinsic motivation, social modelling

Secondary School Education	D2-LP-10
2.1C - 2 - 1111 Developing Secondary School Students' Metacognitive Abilities: A Comparison of Hong Kong, Singapore and UK Mathematics Textbooks	English

Author(s)	**Chak Him FUNG,** The Education University of Hong Kong, Hong Kong **Chi Keung LEUNG,** The Education University of Hong Kong, Hong Kong

What is learning and how could the learning in mathematics be enhanced has fallen into debate for many years. Singapore rank number one in both TIMSS and PISA in 2015. What are the insights we could earned from such competition? Regarding to the facts that Singapore is one of the first countries in implementing the metacognition into their mathematics curriculum in 1990s (Chan & Leung, 2013), metacognition may possible be the answer we are searching for.

There is no doubt that textbooks take a very important role in this. White & Mesa (2014) indicated that lecturer rely highly on textbook in their teaching especially the tasks assigned. However, researches with textbooks related to mathematical content and researches on their potential in developing metacognitive knowledge are limited (Mesa, 2004; Mesa, 2010). Especially, comparisons between metacognitive strategies among textbooks in different countries are very limited. Thus the following questions are proposed to be investigated.

1. Does mathematics textbook emphasis enough metacognitive strategies in enhancing students' metacognition?
2. Does the pattern of using metacognitive strategies in mathematics textbooks different among countries/cities?

The assessment is divided as seven categories: think aloud, questioning, self-questioning, error detection, group activity, alternative strategies and reflection. It is identical to those suggested by Chan and Leung (2013).

Result shows that think aloud is the most popular strategy used in textbooks among Singapore, British and Hong Kong. However, other strategies weight about only 20% in total. It is suggested that more metacognitive ingredients could be added in textbooks in enhancing students' metacognition.

Reference

陳小蘭和梁志強（2013）：比較香港和新加坡小學數學課程中後設認知的培養，《數學教育期刊》，46，40-59。

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Secondary School Education	D2-LP-10
2.1C - 3 - 2268 Career education in middle school and its effect on career and social development	English

Author(s) | **Hui Jung CHU,** Korea Research Institute for Vocational Education and Training, South Korea

The Free Semester Program (FSP) was introduced to middle schools in Korea in 2013 to give students more opportunities to explore their career path and to prepare them better for the future world of works. During the semester, students do not take paper exams instead they take parts in career exploration activities frequently for example, job shadowing, work experience or career talks. The purpose of this study is to provide empirical evidence of career education in Korea and its impact on middle school students' skills and outcomes. The main research questions of the study were as followings: Does work related experience improve educational outcomes and social outcomes?; What difference can it make to educational as well as social outcomes? Why do they make an impact? The present study surveyed 3,000 students in the FSP about their career maturity attitude, school adjustment and happiness and took an analysis of the Pre-test-post-test control group design(PPD). The PPD analyses indicated that students who were given work related experience in the FSP were significantly higher in career maturity attitude, school adjustment and happiness. After completing the FSP, participants have shown a statistically significant growth of career maturity and happiness. The control group students not in the FSP have also reported increase in career maturity but not statistically significant. This study identified career education intervention has successfully supported secondary school students in Korea and the study results could inform policy makers, educators and parents to develop career education programs.

Special Education Needs	B4-LP-01
2.1D - 1 - 2284 MICROFINANCE TECHNOLOGY NC II: A PROPOSED PROGRAM FOR MARGINALIZED CITIZENS OF MANILA	English

Author(s) | **Virginia BERGANIO,** UNIVERSIDAD DE MANILA, Philippines
Leticia MARQUEZ, UNIVERSIDAD DE MANILA, Philippines

Human resource is one of the key factors in national development, especially for the City of Manila in which its population is fast increasing due to unabated migration of people from the country side to look for better economic opportunity. It is coupled with the ever increasing Manila youth and adult population (part of the total workforce) who are unemployed due to lack of the appropriate working knowledge and vocational and technical skills needed by the business and industry sectors. The main thrust is to implement effectively its educational direction. The primary objective of this study was to develop a program on Microfinance Technology NC II. This course is designed to provide basic knowledge; skills and desirable attitudes for the marginalized citizens of Manila who would like to become a Microfinance Loan Officer and be competent to interact with clients in providing microfinance loan and other services for start-up or expansion of a small or micro enterprise. Assessment shall focus on the core units of competency. The basic and common units shall be integrated or assessed concurrently with the core units. It should be based in the collection of evidence of the performance of work to the industry required standards. Successful candidates shall be awarded a National Certificate signed by the TESDA Director General.
Keywords: marginalized citizens, microfinance, microfinance technology

Special Education Needs	B4-LP-01
2.1D - 2 - 2313 Understanding on How Tailored Curriculum Affects Students with Learning Difficulties in Learning Mathematics	English

Author(s) | **Dichen WANG,** The Education University of Hong Kong, Hong Kong
Chung Yee POON, The Education University of Hong Kong, Hong Kong
Chun-ip FUNG, The Education University of Hong Kong, Hong Kong

In Hong Kong, students with learning difficulties (LD) are studying with mixed-ability students in an inclusive but examination directed setting. Teaching instructions are often ineffective for a certain proportion of LD students due to the quick pace of instruction progress aiming at regular classes and LD students' relatively low cognitive processing speed during learning. To address this problem, the aim of this study is to understand how curriculum tailoring could affect LD students' learning mathematics.

A two-year intervention was conducted on a group of 10 primary school students (7-8 years of age) with LD, in which mathematics curriculum was tailored to buy time for the LD students acquiring a complete learning experience in mathematics. Interventions are carried out with special attention to whether curriculum tailoring in mathematics education could cope with the phenomenon of LD students' achievement delay and how students' LD could be catered for at a curriculum design level. Qualitative data was collected for analyzing students' performance, which includes students' learning records, class observations, and interviews with seven parents.

The findings show that most of the students with LD under the tailored curriculum have a positive attitude towards mathematics, have confidence in learning, and could exhibit some structural understanding of mathematical principles.

Special Education Needs		B4-LP-01
2.1D - 3 - 3360	Instruction strategies used for design of inquiry learning for ID students	English

Author(s)	**Theodore LEE,** The Education University of Hong Kong, Hong Kong **Wing Mui Winnie SO**, The Education University of Hong Kong, Hong Kong **Tammy CHAN**

Enhancing the cognitive ability of low ability students has been an important issue in teaching and learning.   Inquiry learning has been proposed as one of the effective ways in raising the cognitive ability of students.   However, people argue that students with intellectual disabilities lack the cognitive ability to benefit from inquiry learning and there is limited research in this area.

In inquiry learning, both the content and procedural knowledge are critical, but delivering the knowledge that fosters the inquiry process is challenging, particularly for ID students.   This study draws on 10 lesson designs on inquiry learning, developed by a group of special school teachers who participated in a project of an adapted primary subject curriculum for ID students in Hong Kong.

Based on the Curriculum Decision Making Model, this study identified the instruction strategies used in lesson planning.   Findings show that both adaptation and augmentation strategies were applied by teachers in their lesson planning for presentation and representation of learning contents, and to facilitate development of students' learning strategies and metacognitive skills.   These strategies are examined with the framework of Cognitive Load Theory to determine how these strategies facilitate ID students' inquiry process.

The study concludes with strong evidence from teachers' lesson designs that the adaptation and augmentation strategies can positively help to manage the cognitive load of the ID students, enabling them to acquire the knowledge for the inquiry learning.

Education Leadership and Management		D1-LP-07
2.1E - 1 - 3343	Principals' Knowledge Leadership for School Strategic Planning: A Case Study in Hong Kong	English
Author(s)	**Jun HU,** The Education University of Hong Kong, Hong Kong	

Aims:

This paper was intended to explore the leadership practices of principals for knowledge management (KM) in the school context, and the influence of KM on the strategic planning (SP) capacity of school organizations to provide quality education for effectively coping with the challenges from education reforms.
Methodology:

A single-case study was conducted in a secondary school in Hong Kong. The school participated in a two-year QEF project for applying KM concepts and mechanism. In-depth interviews were conducted with the school principal, middle managers, and front-line teachers to investigate the leadership practices of the principal to implement KM in the school, and the influence of KM on the school's SP capacity for providing quality education.
Results:

Setting school direction for KM, developing teachers' skills and awareness for KM, creating supporting conditions and infrastructures for KM, aligning KM with the school's teaching and learning process, and building external coalitions for KM were found as the principal leadership practices for school KM. These practices could support the school in adopting the codification and personalization KM strategies and facilitate the acquisition, storage, and sharing of knowledge in the school. KM could help the school to effectively acquire, store, and share the knowledge for strategic analysis, choice, and implementation in the SP process, improving the school's SP capacity for providing quality education.
Conclusion:

Principal leadership has significant effect on the successful implementation of KM in the school context, which in turn plays an essential role on the school's SP capacity for providing quality education.

Education Leadership and Management		D1-LP-07
2.1E - 2 - 3345	Reform practices in upper secondary education in Denmark	English
Author(s)	**Ane QVORTRUP**, Denmark	

Since the 1990s, the Danish education systems have undergone extensive reforms that strive for constant change and improvement. Upper secondary education has lived a remarkable protected life, but within a period of ten years, it has undergone three very ambitious reforms, which extend beyond organizational structures into the work of teachers and the way teaching is planned and executed (Raae 2008; Zeuner et al 2007, 2008, 2010). This makes upper secondary education in Denmark an interesting case for understanding and reflecting the results and effects of reform work. The paper presents a longitudinal and comparative project based on a mixed methods design with 36 schools in a panel study and 16 case study schools on the questions: What do the schools do in order to realise the reforms, what does this mean to the school practices and what are the results and effects of this? The questions are answered with reference to quantitative and qualitative data from surveys, interviews with school boards, principals, teachers and students. The paper suggests that while theories on implementation often operate with different phases – i.e. origin, assumption, implementation and result (Levin 2001) – to understand the results and effects of the ambitious and complex reforms we need a number of models picturing both competing and conflictual reform elements and the complex interaction between on the one hand national and transnational policy levels and on the other hand organisational and situational practices.

Education Leadership and Management			D1-LP-07
2.1E - 3 - 3397	School leadership and teachers' comfort level in using Information and Communications Technology (ICT) to enhance geographical learning: The case of lower secondary geography in Singapore		English
Author(s)	**Hua'an ZHANG,** National Institute of Education, Nanyang Technological University, Singapore		

What has been known is the prime importance of school leaders in determining the success, rate, and scale of technological integration (Flanagan & Jacobsen, 2003). Yet, what has been relatively silent is the performances of school leaders in bringing about an effective and successful ICT reform across the teaching and learning of subjects. This research explores how school leaders influence geography teachers' comfort level in using ICT to enhance geographical learning. Through surveys and interviews with 10 practising geography teachers, this paper finds that there are five types of geography learning found in a typical ICT-enabled lower secondary geography lesson: 'Spatial observation', 'spatial investigation', 'spatial reasoning', 'spatial scaling' and 'spatial simulation'. The findings reveal that transformational leadership in the humanities department is most beneficial to teachers specialising in the teaching of lower secondary geography, and middle managers (e.g. head of department/ subject head) play a more instrumental role than senior managers (e.g. principal/ vice-principal) in enhancing their teachers' comfort level in using ICT.

Unfortunately, this study also finds that Geography teachers are most comfortable delivering only ICT-enabled lessons that involve 'spatial observation' – and school leaders are largely responsible for shaping these tendencies. This paper suggests that there are multiple contributing reasons: First, middle managers do not articulate any clear specific goals of using ICT to geography teachers. Second, geography teachers are not able to identify the ICT goals set by the school leadership. Third, there are apparent goals-conflict between senior managers and geography teachers in the use of ICT.

HKERA International Conference Symposium			D1-LP-06
2.1F- SY1001	Using video cases and online discussion to develop classroom management skills in initial teacher education programmes		English
Chair	**Angela Wong,** National Institute of Education, Singapore		
Author(s)	(1) **Angela Wong,** National Institute of Education, Singapore (2) **Yiong Hwee Teo,** National Institute of Education, Singapore (3) **Wangyal Tsering,** National Institute of Education, Singapore		

Traditionally, teaching Classroom Management to student teachers in Singapore involved the use of text-based cases. Feedback revealed that they were not sufficiently stimulating and authentic enough. This study investigated the use of video cases of Singapore classroom scenarios and asynchronous online discussion (AOD) to give student teachers the opportunity to collaboratively analyse, reflect and develop multiple perspectives of their classroom management practices. It compensated the inability to place student teachers in different classroom situations before their practicum and eventual school deployment. The 128 participants of this study were Postgraduate Diploma in Education (PGDE) student teachers who were doing a core module in classroom management.

This research study produced eight videos cases and an online discussion platform that allowed the use of sentence opener scaffolds to prompt participants to think and discuss classroom management issues from multiple perspectives. Data was collected using online survey, the online discussion log and interviews of 12 participants. Findings showed that student teachers perceived the use of video cases very positively and felt that the online discussion helped them look at classroom management issues from multiple perspectives and made them aware of multiple ways of resolving these issues.

The three-paper symposium will elaborate on the following aspects of the study: a) study background and conceptualization; b) video case production, AOD platform development and study implementation, and c) study findings, implications and future directions.

HKERA International Conference Workshop		D3-LP-06
2.1G - 1066	Engage 'n' Educate - Engaging learning approaches for at-risk and low-income students	English

Author(s)	**Zafirah Haron,** Literacy Initiative For Equity (LIFE) SG, Singapore **Rury Nurziana OMAR,** Literacy Initiative For Equity (LIFE) SG, Singapore **Rasyidah Abu,** Literacy Initiative For Equity (LIFE) SG, Singapore **Syaza Irfani Shafie,** Literacy Initiative For Equity (LIFE) SG, Singapore **Aydan Aiman Lee,** Literacy Initiative For Equity (LIFE) SG, Singapore

20 pre-school and primary school students from low-income and at-risk households have been introduced to various approaches such as active learning, cooperative learning, and self-evaluation. The aim is to help the children have a positive attitude towards education, and learn ways to channel negative emotions and energy in a healthy and fun manner. The focus is on engaging essential needs to develop cognitive abilities and social skills through healthy and fun activities.

For control purposes, the programme started on a traditional teacher-centred approach before moving on to other approaches. The activities are carefully thought out to complement the kindergarten and primary school curriculum. Students' progress is observed and recorded continuously. The results have been positive, with significant improvements in the children's behaviours, attitudes, literacy skills, and social-emotional competencies reported.

Now in Phase 6, a new programme called Engage 'n' Educate has been created to stimulate interest of the children in various fields such as Science, Technology, Art, and many more. The activities are designed to develop three key areas: Self-directed Learning and Initiative, Presentation and Social Skills, Creativity and Innovation. Some of the more significant results of this phase are: increased engagement and participation of all students; observed development of leadership skills in older students; improved presentation skills especially in younger and/or "shy" students.

LIFE will continue finding ways to help children who are usually left behind have opportunities and achieve a fair chance at success. This workshop hopes to raise awareness and inspire other educators to do the same.

WERA Focal Meeting Paper Presentation			10:00-11:30
Reference Code	**Presentation Title**	**Abstract**	**Chair / Presenter(s) / Author(s)**
Global Views on Place and People for Equitable Education			**D3-LP-10**
2.1H	**Chair: Geovana Mendonça LUNARDI MENDES,** Santa Catarina State University, Brazil, geolunardi@gmail.com		
2.1H - 1 - 160	Kant's, Husserl's and Nishida's Conceptualizations of Place	This paper examines the philosophy of place with a worldwide and comparative perspective. Whereas traditional ontology and epistemology are primarily based on mind body dualism, the traditional way of knowing is challenged by a recent cross-cultural trend on reconceptualization of Cartesian dualism. This research presents three different understandings of place from Kantian, Husserlian, and Nishida's perspectives. It starts with Kant's critique on subject-object division. Although Kant examines the noumenonal and phenomenonal aspects of place within a whole, he conceptualizes place as a priori and independent from the cognitive subject. Husserl discusses place in terms of a horizon where noesis and noema are related. However, the manifestation and unification of phenomena still depends on consciousness. Whereas both Kant and Husserl adopt Aristotelian subject logic, Nishida proposes predicate logic. He uses the term of basho to refer to a place of both being and absolute nothingness that envelops the oppositional nothing. Rather than understanding the world from the eyes of an all-known subject, Nishida explains being from a relational perspective as contextual existence. It is within the basho where possibilities are acknowledged and co-existence is enabled. By examining the three different understandings of place, the author proposes a paradigm change in reconsidering ontology and epistemology. This paper also has implications for qualitative researchers.	**Zitong WEI,** China Women's University, China, ziwei@imail.iu.edu
2.1H - 2 – 79	Some Findings of Research on	This paper aims to introduce the process and implementation of the Child-Friendly Kindergarten	**Jamsrandorj BATDELGER**, Mongolian

	Implementation of Child-Friendly Kindergarten's Conception in Mongolia	(CFKG) conception in Mongolia. The study team developed and pre-tested guidelines assessing for CFKG. Recognizing the inherently interactive and integrated nature of the CFKG concept is critical to creating overall child-friendly learning environments. It is also proving to be a challenge on how best to determine where, when, and how limited resources should be applied dimension by dimension and cumulatively in order to ensure the best results, as well as the degree to which these results are truly making the kindergarten child-friendly and ensuring the rights of children to a basic education of good quality. The study was carried out in two phases. Phase one was concerned with gathering and documenting a case study on Mongolia's experience with child-friendly kindergartens, thereby highlighting strengths, weaknesses, successes and challenges. The second phase is concerned with analysis of strategic issues and innovating self assessment tool that acceptable to all practitioners in early childhood education. Two national regional states, 7 zones and 21 child-friendly schools were covered by the study. The selection of sample Child Friendly Kindergarten facilities was based on a simple random sampling method to allow for equal chance of representation and thus avoid any possible bias. There are many approaches to child development, such as biogenetic, socio-genetic, psychogenetic or holistic and so on. From the perspective of the ecological system's theory, there are complex factors, having effect on the child's development and it is impossible to single out one major factor. This leads us to take a comprehensive or holistic approach to child development issue. The concept of the dynamic relationship between the child's development and the immediate environment in which the child grows up makes it necessary for us to take a holistic approach, looking at the kindergarten service as well as the child's family and immediate surroundings. Therefore, a child-friendly kindergarten should take a holistic approach to children's development issues. This also applies to the self-assessment.	National University of Education, Mongolia, jdelger0806@gmail.com; **Batkhuyag TURTOGTOKH**, Mongolian National University of Education, Mongolia; turuu9605@gmail.com
2.1H - 3 - 14	Community and Parental Engagement with Language Education Policy for Immigrant Children in Canada	Language education policy research puts little emphasis on parental agency. The parents of English as an Additional Language (EAL) are often excluded from school decision-making processes whereas White middle-class parents are more strategic in intervening in their children's schools (Lareau, 2003). This study explored how immigrant parents of a community coalition advocated for higher quality and more equitable EAL policies and practices in Alberta. The study takes policy as discursive practice and examines how policy is experienced and constructed locally by parents (Dagenais, 2013). It focuses on eight components of EAL policy: visibility, designation of responsibility, eligibility, duration, placement, programming, assessment and reporting, and funding (Kouritzin, 2013). Data for the study were collected through policy documentation, interviews with 25 immigrant parents from 17 countries, and 2 focus groups with parents and policy-makers. Results reveal that from the parents' perspectives, there were systemic inequities, including EAL funding reduction, the lack of accountability, the replacement of qualified EAL teachers with assistants, and inadequate EAL programming. These inequities resulted in high dropout rates of EAL students and the creation of a permanent underclass. Members of the coalition utilized a range of strategies to influence policy. They organized demonstrations, hosted public forums, and collaborated with other immigrant settlement organizations.	**Yan GUO**, University of Calgary, Canada, yanguo@ucalgary.ca

2.1I	Chair: Sari A LINDBLOM-YLÄNNE, University of Helsinki, Helsinki, Finland, sari.lindblom@helsinki.fi		
2.1I - 1 - 121	Assessing Generic Skills of Higher Education Students in an International Context	International assessments in higher education are especially challenging because differences across countries (e.g., educational systems, SES) increase the complexity of testing (Blömeke, Zlatkin-Troitschanskaia, Kuhn, & Fege, 2013; Wollack, 1997). This becomes even more challenging when using performance-based assessments which are becoming more prominent in assessment programs (Kahl, 2008; Penfield & Lam, 2000). Educational institutions across the world are being challenged to improve instruction so that tomorrow's workforce will have the knowledge and skills necessary to meet the demands of modern careers, while contributing to the global economy. Employers now seek individuals who are able to think critically and communicate effectively in order to meet the requirements of the new knowledge economy (Hart Research Associates, 2006; Levy & Murname, 2004). Therefore, the skills taught in higher education are changing; less emphasis is placed on content-specific knowledge and more is placed on generic skills such as: analytic reasoning, problem solving, and written communication. This study presents the methodology used for developing an international assessment of generic skills of higher education students from countries in North and South America and Europe. Specifically, the authors will discuss the translation and adaption, administration, scorer training, scoring, and student results in an international context.	**Doris ZAHNER**, Council for Aid to Education, USA, dzahner@cae.org; **Roger BENJAMIN**, Council for Aid to Education, USA, rbenjamin@cae.org
2.1I - 2 - 113	Dropout in higher education: We need a more comprehensive framework	In this study, I examine theoretical and empirical scholarship on the phenomenon of post-secondary drop out. I propose a more comprehensive framework to analyze drop out in higher education. Using document analysis, I found that most empirical studies investigating dropout in higher education have been framed using Tinto's (1987) model, which – among other things – theorizes that dropout is a longitudinal process of interactions between an individual with given attributes, such as intentions, commitments and interaction with other members of the academic and social system of the institution. Now almost three decades old, this model is not comprehensive enough in explaining today's internationalized campus. Therefore, I propose that there are three extra factors that need to be taken into consideration due to the changing nature of higher education. These are: students' language socialization processes, gender differences and cultural diversity. By adding those factors, we take graduate students, minority students and international students into account, which might help us reach a more comprehensive understanding of dropout in higher education on campuses today.	**Yan GAO**, University of Victoria, Canada, gladys7gy@gmail.com
2.1I - 3 - 145	Study Abroad Learning Outcomes: Thinking Strategically, Promoting Intentionally, Assessing Confidently	More than ever, postsecondary students in the United States are pursuing study abroad opportunities, with an estimated 3% growth in participation just between 2013-14 and 2014-15 (IIE, 2016). With increased participation comes increased interest in the value of international education. Some studies have shown academic, personal, and professional gains for study abroad participants, but absent from the literature is an examination into the institutional discourse about expected learning outcomes. This study explores the explicit and implicit learning objectives that U.S. institutions of higher education communicate to students and other educational stakeholders on their official study abroad websites. This study identifies and analyzes textual content about study abroad learning objectives from the websites of 17 U.S. institutions. A combination of an emergent coding approach and a theory-driven approach is used to code the anticipated learning outcomes and to categorize them into three broad expected learning outcome domains: knowledge/cognitive outcomes, attitude/affective	**Emily STEWART**, University of California, USA, estewart@eap.ucop.edu; **Yeana LAM**, University of California, USA, ylam@eap.ucop.edu

		outcomes, and skills/behavioral outcomes. Additionally, the location of the individual codes on the website are noted to determine the explicitness and intended audience of the expected outcomes. Preliminary findings suggest that all institutions utilize implicit language about learning outcomes on their study abroad websites. Among the emergent learning objectives are global and cultural learning; discipline skill or knowledge, especially in a new or global perspective; broadened perspective; self-understanding in a new context; broadened involvement; professional preparation; language skills; and intercultural interaction skills. Implications for the development and communication of explicit intended learning outcomes are discussed.	
2.1I - 4 - 168	Design for Effective Cross-cultural Online Education: An Example of an Online Orientation Program	Literature indicates the importance of instructional design to promote cross-cultural online education (McLoughlin, 2001). The challenges of cross-cultural online learning include providing flexible and learner-centered design and ensuring cultural portability of learning materials and activities to support the diversity of learner needs and backgrounds in terms of their experience and skills. This paper presents a fully online orientation program which applies an effective cross-cultural instructional design to provide purposeful community-building activities for newly admitted online students in a fully online Masters degree program. The culturally inclusive features include preparation for students to effectively practice technology and to learn in a community, support with social orientation, and help establish a connection among the community members. A total of 72 students (77%) from four cohort programs from Fall 2015 to Spring 2017 completed the online orientation on time while 16 (17%) partially attended and 5 (5%) were absent. The analytics of students' usage indicates the effectiveness of this online orientation, in terms of their readiness for the future study, regardless of their diverse backgrounds, online learning experiences, and skills. Students' exit journals revealed that the design features were effective, thanks to features such as easy navigation, flexibility, well-organized daily activities, and technological preparation for the study in the future. The majority of participants shared that they were concerned about starting a fully online program but felt more confident and looked forward to their online learning after completing the orientation.	**Ying-Ying KUO**, George Mason University, USA, ykuo3@gmu.edu; **Anne-Marie BALZANO**, George Mason University, USA, alohse@gmu.edu

Gender Equality from an International Perspective   **D2-LP-04**

2.1J	**Chair:** Francis GODWYLL, University of West Florida, USA; fgodwyll@uwf.edu		
2.1J - 1 - 108	Storying women in engineering in the UK. Challenging societal gendered stereotypical roles	Many scholars have investigated the issue of the lack of women in STEM, and specifically, in engineering, from different angles, exploring the role of the education system, gender and career choices, with a range of both quantitative and qualitative methodologies. However, change does not take place as expected. Society is missing the benefits of many talented women in these important career fields, while many competent and capable women are missing the professional positions that engineering careers offer. The under-representation of women in engineering is directly linked to global competitiveness and therefore, it is detrimental for the economy. From an ethical perspective, it fails to meet the historical goal of achieving gender equality in all walks of life, including equality in pay rates. This study presents an investigation of the life stories of women professional engineers who made it through the process of undertaking an (unusual) career choice, in a traditionally very male-dominated career field. My interest and motivation to undertake this research study stems from my will to gain a better understanding of the resources to which people draw on to overcome societal, cultural and	**Michela INSENGA**, Edge Hill University, United Kingdom, insengam@edgehill.ac.uk

		personal stereotypes, conscious and unconscious biases and preconceptions (set by "others") of what we are "supposed to be", on the base of our gender, ethnic origin, socio-cultural-economic background, birth privilege. My aim is that of gaining a good grasp of how my participants drew on their resources to overcome conscious and unconscious biases to make courageous choices and to bring changes in their lives.	
2.1J - 2 - 192	The experiences of female principals: Negotiating challenges and obstacles in the workplace	Gender bias towards South African female principals remains a problem and compelling issue. The South African Constitution addresses gender equality, yet women still do not experience equal rights in practice. Using a theory of postcolonialism, this study highlights the experience of three Black South African female principals. The project involves semi-structured interviews. The results provide a significant contribution to the small body of literature around Black female principals' experiences in South Africa. Themes emerged providing a deeper understanding of their experiences, challenges and successes, which relate to social capital, family, religion, community, career, and discrimination.	**Raj MESTRY**, University of Johannesburg, South Africa, rajm@uj.ac.za; **Michele SCHMIDT**, Simon Fraser University, Canada, mschmidt@sfu.ca; **Pierre DU PLESSIS**, University of Johannesburg, South Africa, pierredp@uj.ac.za
2.1J - 3 - 209	Gender and Science: An International Comparison	In this quantitative study, researchers examined the 2015 Programme for International Student Assessment (PISA) to explore gender differences in science interest and affect in over 50 countries. They conducted descriptive statistics and independent samples t-tests of the variables related to enjoyment of science, interest in broad science topics, science self-efficacy, and science activities. The research is grounded in prior empirical studies that support home, school, and cultural factors regarding the different levels of interest and participation in science, technology, engineering, and mathematics (STEM) between girls and boys. Researchers sought to understand which countries have the least differences by gender. In addition to independent samples t-tests using gender as a grouping variable within countries, researchers conducted descriptive statistics to explore between-country differences. They found that in many countries, female students tended to have less enjoyment of science and interest in science activities, lower levels of science self-efficacy, and fewer science activities. In some countries however, female students scored significantly higher than male students in these areas. For each variable, there were also countries in which the scores of female and male students did not differ significantly. Future research should explore the cultural factors that may be support girls' science interest and affect; these factors might correspond with the between-country differences noted in the present study.	**Cassidy PUCKETT**, Emory University, USA, Cassidy.puckett@emory.edu; **S. Marshall PERRY**, Saint Mary's College of California, USA, smp21@stmarys-ca.edu; **Italo ROSSi**, Saint Mary's College of California, USA, ifr1@stmarys-ca.edu; **Melisssa HARKER**, Saint Mary's College of California, USA, mkh3@stmarys-ca.edu

WERA Focal Meeting Symposium

Reference Code	Presentation Title	Presenter(s) / Author(s)	Chair/Discussant(s)
International Perspectives on Crafting Engagement in Science			**D2-LP-05**
2.1L - 23	Engaging Students in Optimal Learning Environments	**Barbara SCHNEIDER**, Michigan State University, USA, bschneid@msu.edu; **Katariina SALMELA-ARO**, University of Helsinki, Finland, katariina.salmela-aro@helsinki.fi; **Jari LAVONEN**, University of Helsinki, Finland, jari.lavonen@helsinki.fi; **Joseph KRAJCIK**, Michigan State University, USA, krajcik@msu.edu	<u>**Chair & Discussant:**</u> **Stéphan VINCENT-LANCRIN**, Organisation for Economic Co-operation and Development (OECD), Stephan.VINCENT-LANCRIN@oecd.org
	Developing and Measuring Optimal Learning Environments	**Joseph KRAJCIK**, Michigan State University, USA, krajcik@msu.edu; **Jari LAVONEN**, University of Helsinki, Finland, jari.lavonen@helsinki.fi; **Deborah PEEK-BROWN**, Michigan State University, USA, dpbrown@msu.edu; **Israel TOUITOU**, Michigan State University, USA, touitou@msu.edu; **Tom BIELIK**, Michigan State University, US, tbielik@msu.edu; **Kellie FINNIE**, Michigan State University, US, cunni338@msu.edu; **Kalle JUUTI**, University of Helsinki, Finland, kalle.juuti@helsinki.fi	
	Enhancing Imagination and Problem-Solving in Science	**Christopher KLAGER**, Michigan State University, US, klagerch@msu.edu; **Janna INKINEN**, University of Helsinki, Finland, janna.inkinen@helsinki.fi;	

Abstract

Student engagement and achievement in science is a major concern for the international science education and research community; when students lack motivation to engage in science learning, students do not pursue STEM careers, making them less competitive in the global economy. International declining student interest in STEM, which resulted in the new Finnish (Finnish National Core Curriculum) and U.S. science standards (Next Generation of Science Standards [NGSS]), elevates the importance of an instructional intervention which promotes secondary school science education reform, teacher professional development, and international collaboration among researchers, teachers, and policy makers to meet this challenge. The intervention we are employing to affect student engagement is Project-Based Learning (PBL), an instructional methodology that teaches students NGSS-based science content while engaging them in problem solving, collaborative interactions, agency, model building, and analytic design   (Krajcik and Shin, 2014). Implementation of PBL also promotes engagement of teachers with science learning and instruction, as they collaborate to create, disseminate, and revise units for their students with the help of professional science experts. We measure engagement based on an optimal learning moment theoretical paradigm (Schneider et. al, 2016) using similar sampling, instruments, and analysis with collaborating researchers in the US and Finland. Optimal learning moments (OLMs) are measured with the experience sampling method (ESM), which allows students to respond to questions about how they are feeling, what they are thinking, and what they are doing in the classroom in real-time as compared to traditionally delayed single questionnaire responses. During 2016-17, 321 students participated in the study, producing 1,291 responses. Results show that when students worked in the laboratory as part of their PBL experience, it positively affected their situational engagement. Additionally, PBL experiences significantly increased imagination (treatment = 0.124, $p<.05$), and analyzing different points of view (treatment = 0.146, $p<.01$). PBL also increased students beliefs that science was important to their future in both the US and Finland. This symposium aims to review the overall PIRE study and report results from two different countries. The first paper provides an overview of the study, the second paper describes effects on engagement from Finland and the US, the third paper discusses effects of creativity and critical thinking on engagement from Finland and the US, and the last paper describes a deep analysis of the drivers of OLMs and how they relate to other social and emotional feelings during science classes.

References

Krajcik, J.S. & Shin, N., (2014). Project-based learning. In Sawyer, R. K. (Ed.), Cambridge Handbook of the Learning Sciences, 2nd Edition. New York: Cambridge, pages 275 - 297.

Schneider, B., Krajcik, J., Lavonen, J., Salmela-Aro, K., Broda, M., Spicer, J., Bruner, J., Moeller, J., Linnansaari, J., Juuti, K. and Viljaranta, J. (2016), Investigating optimal learning moments in U.S. and Finnish science classes. J Res Sci Teach, 53: 400–421.

*This is a large international team of faculty, post-doctoral fellows, and graduate students. The following papers include work by all members of our team including: Barbara Schneider, Joseph Krajcik, Jari Lavonen, Katariina Salmela-Aro, Tom Bielik, Deborah Peek-Brown, Kellie Finnie, Christopher Klager, Janna Inkinen, Kalle Juuti, Jason Burns, Israel Touitou, Katja Upadyaya, Jukka Marjanen, Janica Vinni-Laakso, Richard Chester, and Lindsey Young. Authors listed on papers have taken major responsibility for those papers.

Epistemic Quality for Equitable Learning in Mathematics, P.E. and Language in School*		D1-LP-03	
2.1M - 3	Epistemic Quality for Inclusive and Equitable Quality Mathematics Education for All	**Brian HUDSON**, University of Sussex, UK, b.g.hudson@sussex.ac.uk	**Chair:** **Brian HUDSON**, University of Sussex, UK, b.g.hudson@sussex.ac.uk **Discussant: Nelofer Halai,** Aga Khan University, Pakistan, nelofer.halai@aku.edu
	Understanding Equitable Learning in Relation to Epistemic Quality through Studying a Dance Lesson in France	**Monique LOQUET**, University of Rennes 2, France, monique.loquet@univ-rennes2.fr; **Brian HUDSON,** University of Sussex, UK, b.g.hudson@sussex.ac.uk (co-presenter)	
	High Epistemic Quality for Equitable Access to High Quality Language Learning in a Primary Classroom in Germany	**Anke WEGNER**, University of Trier, wegner@uni-trier.de; **Meinert MEYER**, University of Hamburg, meinert.meyer@onlinehome.de	

Abstract

This symposium arises from the Joint Action in Didactics in Europe (JADE) project which has cross-curricular foci on mathematics, physical education and first language teaching. The project was formed following discussion of Joint Action Theory in Didactics (JATD) (Ligozat, 2011; Sensevy, 2011) within Network 27: Didactics – Learning and Teaching of the European Educational Research Association (EERA) over a number of years. Our work is founded on the recognition that inequality is a core challenge that needs to be at the foreground of our thinking about didactics – learning and teaching (UNICEF/UNESCO, 2013). In particular, our thinking is framed by the challenge of the United Nations Sustainable Development Goal Number 4 (United Nations, 2015) to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. However, the need to address this goal is not only at challenge at the global level but also at the national level for all contemporary societies and educational systems in an age of mass migration and increasing austerity in many countries of the world. We also recognise that many students have experiences of defiance, contempt and humiliation and even degradation (Stojanov, 2011) that hinder the development of their self-identity and autonomy. Accordingly, we are particularly interested in better understanding the conditions in which everyday teaching practices and classroom interaction produce equitable access to high quality education, i.e. equal preconditions and chances of autonomous participation and success. With regard to ensuring inclusive and equitable access to quality education, we argue that it is necessary to consider the epistemic quality of what students come to know, understand and be able to do (Hudson et al., 2015; Hudson, 2016; Loquet, 2016; Oduro and Hudson, 2016). Accordingly, our main research question asks what are the necessary conditions for ensuring inclusive and equitable quality education.   The emphasis we place on quality education brings a focus on the didactic system and within this frame we focus on the following four aspects: (i) the epistemic quality of content, (ii) the quality of teacher-student(s) interaction, (iii) the quality of instruction as a creative process and (iv) the democratic quality of schooling and instruction. Our methodological approach is based upon studies conducted in three countries (Scotland, France and Germany) in relation to three specific subjects (mathematics, physical education and language learning). The aim is to analyse different examples of epistemic quality in classroom activities and to compare findings within a shared theoretical framework. In doing so we have adopted a primarily qualitative approach to data collection, analysis and interpretation using a case study approach (Stake, 1995). This process was initiated in relation to the findings of a project in Scotland on Developing Mathematical Thinking in the Primary Classroom (2010-12). It was continued in November 2015 when the research team as a whole observed a PE lesson with a class in a college in Rennes and was advanced further in March 2017 when the team observed a German language lesson at a primary school in Frankfurt/Main.

*Part of the WERA International Research Network (IRN): 'Didactics – Learning and Teaching'

WERA South-to-South Symposium			D1-LP-03
Reference Code	**Presentation Title**	**Presenter(s) / Author(s)**	**Chair/Discussant(s)**
11:30-13:00	A Global South Perspective on Education Research	**Global South Panel**: **Ernest Kofi DAVIS**, University of Cape Coast, Ghana, ekdavis@ucc.edu.gh **Ruth ALUKO**, University of Pretoria, South Africa, ruth.aluko@up.ac.za **Jo LAMPERT**, La Trobe University, Australia, j.lampert@latrobe.edu.au **Carolina Guzmán VALENZUELA**, University of Chile, Chile, carolina.guzman@ciae.uchile.cl; **Geovana Mendonça LUNARDI MENDES,** Santa Catarina State University, Brazil, geolunardi@gmail.com **Siphiwe MTHIYANE**, University of Witwatersrand, South Africa, siphiwe.mthiyane@wits.ac.za	**Chair:** **Liesel EBERSÖHN** University of Pretoria South Africa liesel.ebersohn@up.ac.za **Discussant:** **Brian HUDSON**, University of Sussex, UK, b.g.hudson@sussex.ac.uk (Discussant)

Abstract

The purpose of the symposium is to create a discursive space around education research issues common to Global South contexts. A premise of the symposium is that these Global South spaces share characteristics because of similar postcolonial histories. The contextual and geopolitical similarities encompass both risk factors that serve as barriers that constrain education (with inequality foremost amongst these), as well as protective resources that provide opportunities to enable education (socio-cultural capital, multilingualism, agricultural activities and mineral wealth). A main emphasis that will direct conversation during the symposium will be to share evidence of innovative solutions where education intervention has contributed to positive learning, wellbeing and development outcomes for students, teachers, and/or school-communities.

Panel members include scholars who have formed part of inquiry based in Global South education settings. The format of this symposium will be that of questions posed by the chair to a panel of presenters to address and then discuss together with attendees. Questions may include issues of: challenging contexts and access to schools; quality education for performance and throughput given challenging contexts; a contextually responsive curriculum regarding (i) socio-cultural diversity, (ii) multilingualism, as well as (iii) limited resources to support teaching and learning; school-climate that enables socio-emotional care, support, hope and aspiration within students and teachers; teacher training and professional development; school-community partnerships; school leadership given resource constraints.

Parallel Session 2.2	11:30-13:00
HERA International Conference Paper Presentation	**11:30-13:00**

Secondary School Education	D3-LP-06
2.2A - 2 - 2201	A study of mobile phone using behaviors among Hong Kong adolescents	English

Author(s)	**Joseph WU,** City University of Hong Kong, Hong Kong **C.K. Aaron SIU,** University of Hong Kong, Hong Kong

Mobile phone has once been an expensive technological device that would be affordable for only a few. Today, with a substantial decrease in the cost of hardware procurement (the mobile phone and its accessories) and network connection (perhaps due to a keen competition among service providers arising from the open policy of the government), it becomes almost an indispensable belonging for many Hong Kong people. Many secondary schools in Hong Kong nowadays are making use of this new technology in various processes of teaching and learning. Though smart use of this new technology can bring in a number of benefits to our students (e.g. boosting up learning motivation, enhancing students' engagement in the learning process), maladaptive use of it might lead to undesirable consequences on its users (e.g. impaired physical and/or psychological functioning, poor academic performance, poor relationships with peers and/or family members). Using a self-report measuring instrument of problematic mobile phone use (the Problematic Cellular Phone Use Questionnaire, Yen et al., 2009) and collecting data with a sample of senior secondary students, prevalence of problematic mobile phone among this sample of school adolescents were examined. Comparison between prevalence of problematic mobile phone use among the present sample of respondents with previous studies adopting the same measuring instrument could shed some light on severity of this emerging type of technology-related dependence among school adolescents. Moreover, correlates of problematic mobile phone use were also examined. Implications for identifying who may be benefited from and who are likely to be suffered from this new technological device are discussed.

Secondary School Education	D3-LP-06
2.2A - 3 - 1158	Predictors of Test Anxiety for Students in Asia Countries: Results from PISA2015	English

Author(s)	**Mo Ching Magdalena MOK,** The Education University of Hong Kong, Hong Kong **Jinxin ZHU,** The Education University of Hong Kong, Hong Kong **Bor-Chen KUO,** National Taichung University of Education, Taiwan

Background: Most students have experienced feelings of anxiety and fear of failure before tests. Test anxiety can sometimes help students to perform at their best but excessive anxiety can adversely affect academic performance. Prolonged anxiety has been reported to be associated with poor mental health.

Aims: This study aimed to identify predictors of test anxiety of students in Asia countries. The study examined potential predictors of test anxiety including students' control and value cognitions such as their academic self efficacy, learning motivation, value of science, as well as students' experiences at school including students' sense of alienation, classroom discipline, teachers' fairness, their teaching approaches, and the provision of learning feedback.

Method: The sample of this study comprised 53,976 (26,967 male; 49.96%) students from China, Hong Kong Japan, Korea, Macau, Singapore, Taiwan, and Thailand who participated at the PISA 2015 study. Multi-group multilevel structural equation modelling (SEM) was undertaken using MPLUS (version 7.2) to identify stress predictors among the students.

Results: Initial analyses found that students from Asia had high academic performance internationally but they also suffered much higher level of test anxiety as compared to their counter parts in the West. There was good fit between the data and the multi-group multilevel SEM model. Females had significantly higher stress than males had across all participating Asia countries. After controlling for student gender, alienation at school and the feeling of unfair teachers were significant stressors for all Asia countries in the study whereas self-efficacy tended to alleviate test anxiety.

Secondary School Education		D3-LP-06
2.2A - 3 - 1054	Students' Learning Interests and Creativity in Taiwan	English

Author(s)	**Yilu LEE,** National Changhua University of Education, Taiwan **Yuchien SU,** National Changhua University of Education, Taiwan **Chihhung WANG,** National Changhua University of Education, Taiwan

Creativity is both knowledge and ability that is studied by originality and fluency (Guilford, 1950). Learning interests referrs to a person trends to show possible preference to particular subjects, events, or ideas, which is produced by interactions between the individual or the situation of the environment.

If it can inspire student's learning interests to keep students in the learning state in class, and, in term, it is likely to enhance their creativity as well.

Therefore, this study explored how learning interests associated with creativity for Taiwanese junior high school students.

Data were collected from 7 junior high schools, 750 randomly recruited participants aged between 12 and 15. Multiple linear regression analyses were used to realize the effect of learning interests on students' creativity.

Accordingly, study results showed that: 1. There are correlation between students' learning interest and creativity. 2. Learning interests can positively predict creativity.

Possible educational implications from results indicated that teachers should adopt various instructional methods to guide students' learning,   transfer principles, implementing curriculum contents to meet students' life experiences, and provide successful experiences. Thereafter, students' creativity increment can be expected.

Social Science Education		B4-LP-01
2.2B - 1 - 1047	Entrepreneurship Education: The missing links of STEM education in Hong Kong	English

Author(s)	**Chun Sing HO,** The Education University of Hong Kong & HKFYG Lee Shau Kee College, Hong Kong

Purpose:

This paper aims at review the rationale of STEM education in business subjects prospective. STEM (Science, Technology, Engineering and Mathematics) education is a new trend in the Asia-Pacific region in the recent years, such as Singapore and Japan. Through studying others countries experience, it discuss the missing link of STEM education in Hong Kong.

Methodology:

First of all, it describes the purpose of STEM education and recent development in Hong Kong secondary school by reviewing HKSAR STEM education report.

Second, there are two STEM education sample schools from western country and Singapore. It discusses the purpose of promoting entrepreneurial STEM education in these countries.

Finally, compare with others countries, it try to identify the missing link between business education and STEM education by reviewing Hong Kong's entrepreneurial education.

Result:

Although entrepreneurial education is mature and supported by professional parties in Hong Kong, there is a gap for business subjects to enhance the effectiveness of STEM education by integrating entrepreneurial education into STEM education, especially in secondary level.

Conclusion and discussion:

It is necessary to provide authentic learning for students from private and public sector commitment. Cross subject collaboration for professional development should also developed at secondary school. It aims at not only accommodating the purpose of Hong Kong STEM education, but also enhance teachers' collaboration and students' cross subject integration competence in problem solving with various stakeholders' support.

Social Science Education		B4-LP-01
2.2B - 2 - 2235	The influence of religious education on Hong Kong & Taiwanese students' civic and social values development	English

| **Author(s)** | **Hin Wah Chris CHEUNG,** The Education University of Hong Kong, Hong Kong
Kerry J KENNEDY, The Education University of Hong Kong, Hong Kong
MING TAK HUI, The Education University of Hong Kong, Hong Kong
Chi Hung LEUNG, The Education University of Hong Kong, Hong Kong |

The major characteristic of religious education is to equip students with a set of values with reference to its religious doctrines. Vermeer (2010) pointed out that religious education may influence students with some basic democratic values like equality, tolerance and non-discrimination. Various Western literature highlights the influence of religion on students' civic and social values development (see Grundel and Maliepaard, 2012; Pike, 2008; Vermeer, 2010; Gates 2006). However, the study of this topic in Chinese contexts is quite limited (Zhai & Woodberry, 2011; Cheung et al., 2016).

Hong Kong and Taiwan are part of East Asia with similar set of values (Cho & Kim, 2013; Karsten et al., 2002). Religious bodies like Buddhist organizations and Christian churches play a significant role in both Hong Kong and Taiwan education development (Cheung et al., 2016; Zhai & Woodberry, 2011). They operate various secondary and primary schools. Religious education is part of their curriculum and makes these schools different from secular schools. This paper aims to explore the influence of religion on secondary students' civic and social values development in both societies.

By making use of the focus group interview, this study collected data from schools with four different types of religious background, including Buddhism, Catholicism, Protestantism and Atheism (no religious affiliation) and making comparison between Hong Kong and Taiwanese students. The findings provide a better understanding about the influence of religion on Chinese students' citizenship development in both societies but the results differ from those found in Western studies. The implications of these results for theory building and policy are discussed.

Social Science Education		B4-LP-01
2.2B - 3 - 2256	AN ASSESSMENT OF SENIOR HIGH SCHOOLS ACCOUNTING TEACHERS' PEDAGOGICAL STRATEGIES IN LESSON PLANNING	English

| **Author(s)** | **Leticia BOSU,** UNIVERSITY OF CAPE COAST, Ghana |

This study aimed at assessing the pedagogical strategies that Accounting teachers incorporated into their lesson plans in selected Senior High Schools (SHSs) in the Central and Brong Ahafo Regions of Ghana. The convergent parallel mixed method was employed for the study. Multistage sampling technique was used in selecting 60 Senior High Schools out of which 81 Accounting teachers and 482 students participated in the study. Of the 81 teachers, 12 were purposively observed and interviewed. The study revealed that Accounting teachers incorporated appropriate pedagogical strategies in planning lesson introduction, by stating clear objectives. Interestingly, these teachers did not write comprehensive lesson notes but had skeletal plans that guided their teaching. In addition, Accounting teachers did not plan to use appropriate Teaching Learning Resources (TLRs) to enhance teaching and learning of Accounting. Most of the lesson plans, however, did not seem to reflect on concepts that help build students' confidence in interpreting the concepts and principles of Financial and Cost Accounting. It is recommended that in the preparation of Accounting teachers, particularly in the Universities, emphasis should be placed on the use of TLRs in the planning of Accounting lessons. Supervisors should also ensure that the teacher knows the content, and has developed the appropriate pedagogical skills to teach Accounting.
Key words: Accounting, Accounting Teachers, Lesson Planning, Pedagogical Strategies, Teaching Learning Resources,

Education Leadership and Management		D2-LP-07
2.2C - 1 - 1142	Impact of the "Voluntary Optimisation of Class Structure Scheme" on Principal Leadership and Teacher Job Satisfaction in Hong Kong Secondary Schools.	English

| **Author(s)** | **Wai Keung Charis WONG,** The Education University of Hong Kong, Hong Kong
Yuet Mui Celeste YUEN, The Education University of Hong Kong, Hong Kong
Tai Hoi Theodore LEE, The Education University of Hong Kong, Hong Kong |

The last decade has witnessed a sharp decrease of school-aged children in the East-Asia and Pacific regions. In some affected districts in Hong Kong, for example, the insufficient student enrolment has brought to school closure. Teacher job satisfaction and principal leadership approaches have been greatly affected. In response to the situation, the Education Bureau of Hong Kong launched the Voluntary Optimisation of Class Structure Scheme (hereafter the Scheme) to cushion the shock and to lower the risk of secondary school closures. There are 220 schools participate in the Scheme involving around 12,000 principals and teachers. The Scheme has direct implications on the number of class structure and teacher career advancement. The negative impacts of the Scheme on teacher job satisfaction has since been widely discussed. Yet, there has no parallel research attention been given to this situation. This doctoral study is the first of its kind to conduct a systematic investigation into the impact of the Scheme on teacher job satisfaction looking at both the individual and contextual factors. Mixed methods include semi-structured interviews and questionnaire survey were employed. Multiple Regression analyses were performed to examine the impacts of the Scheme on principal leadership and teacher job satisfaction. Additionally, the predictive factors of principal leadership for teacher job satisfaction were determined. Based on the empirical data, this presentation will discuss the obstacles and success factors of the implementation of Scheme for teacher job satisfaction. Recommendations will be made for addressing the problem in terms of principal leadership and policy enactment.

Education Leadership and Management		D2-LP-07
2.2C - 2 - 2309	Teachers' Theory of Action in School Reform: A Case Study of School as Learning Community in Japan	English
Author(s)	**Yuta SUZUKI,** Tokyo Institute of Technology, Japan	

The aim of this study it to illuminate teachers' theory of action in school reform, based on a case study of school as learning community in Japan.

Donald A. Schön and Joseph P. McDonald explored theory of action in school reform (Schön and McDonald, 1998). They defined theory-of-action as an analytical tool that aims to help practitioners reflect upon and make explicit the knowledge that shapes what they do. Schön and McDonald emphasized that the theory-of-action approach was a tool that helped them inquire into and learn from their own practice.

School-as-learning-community is one of the theoretical strategy of school reform in Japan (Sato, 2008). Japanese teachers and educational administrators have made efforts to construct school as learning community through trial and error for 20 years.

This study examines teachers' theory of action in school reform, tracing a development of teachers' journals that led the school as learning community in Japan. Publication of teachers' journal is one of the unique professional culture in Japan: the journal is an arena where they discuss problems of school reform.

This study tries to provide suggestions to deepen our understandings of teachers' theory of action in school reform.

Education Leadership and Management		D2-LP-07
2.2C - 3 - 3374	Teacher Leadership: Effectiveness and Challenges	English
Author(s)	**Hairon SALLEH,** National institute of Education, Nanyang Technological University, Singapore	

Teacher leadership in the Singapore education has grown in importance over the last decade, and its significance has recently been given a boost by the education minister. Furthermore, greater clarity has also been given to role of teacher leaders especially the formal roles such as Senior Teachers (STs), Lead Teachers (LTs), Master Teachers (MTTs) and Principle Master Teachers (PMTs). Essentially four main roles have been identified by the education ministry: (1) teaching and learning, (2) mentoring, (3) professional conversations, and (4) professional ethos. Besides these formal teacher leadership roles, there are also informal teacher leadership roles such as Subject Reps, Level Reps and Level Coordinators. The growing interest in teacher leaders, at least in the local context, however does not commensurate with the studies that seek to corroborate or validate its significance in terms of the specificities of its practice and impact. Narrowing this gap would thus be vital to further understand the teacher leadership concept or construct. For example, it would be of great interest to understand how teacher leaders work in harmony or synergy with other teacher leaders, middle leaders (e.g., department heads), and senior leaders (e.g., vice-principals and principals) bearing in mind that it is an offshoot of distributed leadership. This paper reports on findings based on qualitative data of five primary schools in Singapore to understand the synergistic practices of teacher leaders, and its effectiveness and challenges.

Higher and Teacher Education		D3-LP-15
2.2H - 1 - 2287	Designing and Delivering Inviting Online Education	English
Author(s)	**Michael K. BARBOUR**, Touro University, California, United States **Lisa PALACOIS**, Touro University, California, United States **Peter WONG**, Hong Kong Education Bureau, Hong Kong **Jim O'CONNOR**, Touro University, California, United States	

Invitational education® is a theory of practice designed to create a total school environment that intentionally summons people in schools to realize their relatively boundless potential. Research has suggested invitational education® theory is a validated model to help students achieve academic and holistic success. However, in order for that model to have a meaningful impact teachers need to have an understanding of the theory and be able to apply it to their own practice. This session will explore an academically and culturally relevant graduate program in invitational education® that is delivered in an online asynchronous fashion.

The "purpose of online learning is to engage the learner in meaningful ways in order to achieve deep, authentic and applicable learning" (Northcote, 2008, p. 676). In order to engage students, course content will be hosted in a learning management system to intentionally invite students into a positive experience. Faculty will also utilize social media tools to provide students interactive personal and social experiences. Presenters will explore how a non-profit, multi-national university targeting teachers who are already teaching in invitational education® school, is able to intentionally invite international students into a positive experience using an asynchronous learning platform.

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Higher and Teacher Education	D3-LP-15

2.2H - 2 - 3398	The Power of Creativity-generating Intellectual Styles: A Book Launch and Discussion	English

Author(s)	Li-Fang ZHANG, University of Hong Kong, Hong Kong

Intellectual styles refer to individuals' preferred ways of using their abilities.   In this talk, the presenter will introduce her two-decade research on the nature of intellectual styles.   Particularly, she will underscore her new book The Value of Intellectual Styles (Zhang, September 2017; Cambridge University Press). The presenter will introduce the motivation for the book by highlighting the major challenges the field of styles has been confronted with in its eight-decade history. She will share her principal contributions to the advancement of the field and present the key arguments in her book. By critically considering findings from hundreds of international studies undertaken over eight decades, the presenter reveals that the creativity-generating Type I intellectual styles are generally superior to the norm-conforming Type II styles in relation to a wide range of learning processes and developmental outcomes, work performance, physical and mental health, and many other domains of people's lives.   She further reveals that people explicitly and implicitly express their preference for Type I styles over Type II styles. Critics of the notion of intellectual styles have long complained about the lack of research evidence on the link between styles and outcomes. However, the studies reviewed in this book suggest that not only are intellectual styles strongly linked to human attributes and outcomes, but they are also associated with them in predictable ways. There is much practical value in cultivating diverse intellectual styles, especially the creativity-generating Type I styles, in both academic and nonacademic settings.

Social Science Education	D3-LP-15

2.2H - 3 - 1084	A Death Psycho-education Programme for Primary School Children	English

Author(s)	Wing Nam TANG, Hong Kong Shue Yan University, Hong Kong Dehui Ruth ZHOU, Hong Kong Shue Yan University, Hong Kong

Death is another side of life, which influence a person in their different life stage.   In Hong Kong, non-governmental organizations and universities do provide programmes in introducing death. However, the target participants of those experiential-learning programs and seminars are mostly adults or upper level students.   There is a lack of death education for young children. In addition, guilty feeling is a typical outcome of egocentricity of children who encounter death of their family members. In order to help young children deal with their emotions related to death, a story with death theme of a little mouse Jack was created with vivid illustration of colorful cartoon figures. An accompanying guideline is available for parents, counsellors or social workers to refer to when they interact with children in telling the story. This study reported a story-telling death psychoeducation session with eight children between the age of six to eight who have not experienced the loss of family members or relatives before. Smilansky Questionnaire for Examination of Development of Concept of Death and Participants' assessment were used to evaluate the effectiveness of the session. The empirical results supported the intervention in a positive way. The pre and the post results of the Smilansky Questionaire showed that the children demonstrated statistically better understanding of cessation and causality of death. Thus, we hopes to show this death psycho-education programme with wider public to promote the awareness of and share insight of death education with young children in Hong Kong community.

Keywords: death, psychoeducation, guilt, cessation, death causality, death irreversibility, death inevitability, death cessation

WERA Focal Meeting Paper Presentation	11:30-13:00

Reference Code	Presentation Title	Abstract	Presenter(s) / Author(s)
Global Education Research Agenda's of Inclusion to Address Inequality			B4-LP-05
2.2D	Chair: Kemal A BATMAN, Cyprus Educational Research Association (CERA), Cyprus, kemakbatman@yahoo.com or keab@kibriseab.org		
2.2D - 1 – 3	Spotlight on China: Chinese Education in the Globalized World	This paper explores the impact of globalization on China and the interactions of Chinese education with the globalized world. It examines how globalization unfolds on the ground in Chinese education through global flows of talents, information, and knowledge. Through a critical analysis of an emerging body of literature on this topic, four common themes emerge concerning the internationalization of Chinese education, student mobility and intercultural adaptation, cross-cultural teaching and learning, and transnational talent mobility. The paper analyzes patterns and trends of China's engagement with the globalized world as well as tensions between the global and local concerning national education sovereignty and the widening gap between brain gain and brain drain. China's successes and challenges will inform international researchers and educators about globalization and education in their own contexts	Shibao GUO, University of Calgary, Canada, guos@ucalgary.ca; Yan GUO, University of Calgary, Canada, yanguo@ucalgary.ca

		with possible implications for change.	
2.2D - 2 - 94	Migration status and social inclusion	Research on social equity and inclusion shows that individuals' social experiences are shaped by multiple intersecting social identities, such as race, gender, religion and migration status, the combination of which often leads to either empowerment or disempowerment. This presentation will report on the findings of a qualitative research that seeks to better understand how different social locations impact the integration of newcomer families in Western Canada, with special attention to host-other dynamics in professional and educational contexts. This research focuses on the comparison between two categories of migration status, the first one being the 'economic' category (professionals and skilled workers) and the second one being the 'humanitarian' category (refugees). This presentation contains a cross-cultural focus in that intersecting identities will be considered in the understanding of acculturation, with special attention to migrations status and education. These findings suggest the need to elucidate 'host-newcomer' relational and power dynamics, both at the micro and at the macro levels.	**Nathalie PIQUEMAL**, University of Manitoba, Canada, nathalie.piquemal@umanitoba.ca
2.2D - 3 - 151	The UCLA-UNIMINUTO Project: Higher Education in a Post-Conflict Colombia	As of August 2016, the Colombian civil conflict reached a ceasefire agreement between the government and rebels. Beginning in 1964, the conflict was the longest running in the Western hemisphere with a staggering toll of 220,000 dead, 25,000 disappeared, and 5.7 million peoples displaced (Renwick & Felter, 2017). Marking a new era of peacebuilding, the Ministry of National Education announced the goal of extensive, inclusive and high quality education at all levels of society. Thus, higher education is critically tasked with providing access to the entire population, particularly those under-served, under-represented, and disproportionately affected by the conflict. UNIMINUTO, the nation's largest institution serving over 102,000 people is uniquely positioned to meet such a task. The conceptual frame of mutual vulnerability as a humanizing pedagogical principle is applied to view the post-conflict society. Researchers at the University of California Los Angeles and UNIMINUTO are engaged in a longitudinal, mixed methods case study to examine which processes and conditions can result in (or inhibit) the outcomes of inclusive excellence. We present findings from document analysis, the first of three arms of the study. The overall guiding research question asks: How can UNIMINUTO, faced with major financial, political, and organizational challenges, fulfill the twin missions of education for all (social inclusion) and quality assurance (excellence) in the post-conflict era? The opportunity is present to capture a historical moment: the impact of higher education on peacebuilding, positioned squarely in a time of unparalleled access to information, and international in scope.	**Chantal JONES**, University of California Los Angela, USA, chantalj@ucla.edu; **Marelen CASTILLO**, UNIMINUTO, Colombia, mcastillo@uniminuto.edu; **Adrian HUERTA**, University of California lo Angela, USA, adrianhu@ucla.edu; **Carmen LUZ DE PRETELT**, University of California Los Angela, UNIMINUTO, Colombia; cldep1947@gmail.com; **Patricia MARTINEZ-BARRIOS**, pmartinezbarrios@gmail.com; **Walter ALLEN**, University of California Los Angela, USA, wallen@ucla.edu

2.2D - 4 - 22	Economic Barriers to Higher Education: Using Longitudinal Survey Data in Japan	While the number of universities and other post-secondary educational institutions has increased, the heavy financial burdens on these educational institutions have become a serious social issue. Many educational sociologists have shown that there is a lack of equal opportunities to access higher educational institutions based on socioeconomic backgrounds. However, such research has only pointed out the relationship between social origin and educational attainment, without indicating the differences in the courses students wish to take after their high school graduation. Even in societies where the financial burden of education was heavy, it was not evident that social or economic barriers actually influenced students' decisions when choosing a course or that these barriers prevented them from progressing to higher educational levels. This paper uses data collected in a nationwide survey in Japan. The survey was first conducted in 2012, with second-year high school students and their mothers as respondents. In 2016, a follow-up survey was conducted among the students' mothers. I determined which students had wanted to progress to higher educational institutions but were unable to achieve their goals and started working immediately after graduating from high school. I then used a logistic regression model to show that students whose household income was low were more likely to abandon their ideas of advancing to higher educational institutions, even when high school ranking, high school courses, and academic performance were controlled. I also considered other variables with regard to mothers' attitudes toward their children and the social and economic environments surrounding their households.	**Wataru NAKAZAWA**, Osaka University, Japan, wnakazawa@hus.osaka-u.ac.jp

2.2E	**Chair: Mustafa Yunus ERYAMAN**, Canakkale Onsekiz Mart University, Turkey, eryaman@comu.edu.tr		
2.2E - 1 -1	Analyzing the Mathematical Teacher Content Knowledge and Knowing-To Act from An International Perspective	The intent of the study was to analyze the relationship between the knowing-to act and the specific cognitive types of teacher mathematical content knowledge: the cognitive type 1 (knowledge of facts and procedures); the cognitive type 2 (knowledge of concepts and connections); and the cognitive type 3 (knowledge of models and generalizations). This analysis was done from an international perspective. "Knowing-to act" is the process where "knowledge [that] enables people to act creatively rather than merely react to stimuli with trained or habituated behavior" (Mason and Spence, 1999, p.136). This knowing was measured by the knowing-to act survey (KtAS). The measurement of middle school mathematical teachers' content knowledge was done by administering the teacher content knowledge survey (TCKS). Then, a correlational analysis was developed to seek any relationships among the teacher content knowledge cognitive types and teacher "knowing-to act". In addition, to delve deeper into this relationship, a case study was conducted. Observations and interview were implemented to explore the Knowing-to act of one mathematics teacher. Finding report that teachers have more possibility of "knowing-to act" when they possess knowledge of models and generalizations because this last type of knowledge involves certain factual and conceptual knowledge. This result was corroborated by the case study. This study provide awareness about the teacher knowledge that has an impact on teaching practice. And hopefully it impacts the mathematics teaching and learning process in middle schools.	**Presenter(s)/Author(s):** **Maria De los Angeles CRUZ QUINONES**, Universidad Autonoma de Ciudad Juarez, Mexico, titacq@hotmail.com; **Mourat TCHOSHANOV**, University of Texas at El Paso, USA, mouratt@utep.edu; **Maria Reyna CRUZ QUINONES**, Universidad Autonoma de Ciudad Juarez, Mexico, al123501@alumnos.uacj.mx; **Carlos PAEZ**, Navajo Technical University, USA, cpaez@navajotech.edu; **Sergio FLORES**, Universidad Autónoma de Cd. Juárez, Mexico, seflores@uacj.mx; **Hector PORTILLO**, Universidad Autónoma de Cd. Juárez, Mexico; hector.portillo@uacj.mx

2.2E - 2 - 204	In-Service Teachers Undertake a Science Inquiry Project: Challenges and Possibilities	Twelve in-service teachers enrolled in a science methods course of a M.Ed. program offered by a small private university in Pakistan, as part of their coursework were engaged in an inquiry project for the first time. In groups of three they were expected to undertake an investigation or develop a system where they broadly followed the five-step guideline of NRC (2000, p. 23). The teachers faced a number of challenges that included technical, pedagogical and subject-content related but were able to deal with them successfully with support and facilitation from the teacher educator.	**Nelofer HALAI**, Aga Khan University, Pakistan, nelofer.halai@aku.edu
2.2E - 3 - 165	A preliminary study of STEM dispositions among preservice teacher candidates in the United States of America (USA) and the People's Republic of China (PRC)	Data gathered from preservice teachers in the People's Republic of China (PRC) and the United States of America (USA) are used to compare dispositions toward science, technology, engineering and mathematics (STEM) among teacher candidates in two nations. Findings based on STEM Semantic Survey responses from n = 149 study participants at three universities indicate that STEM disposition profiles are similar in the two nations, although preservice educators from China may in general possess more positive dispositions toward science and engineering than their counterparts in the USA. Implications of these trends for motivating pupils toward considering a career in STEM are discussed. Additional research is needed to reconfirm these findings with a broader representation from the two nations.	**Gerald KNEZEK**, University of North Texas, USA, gknezek@gmail.com; **Rhonda CHRISTENSEN**, Institute for the Integration of Technology into Teaching and Learning, USA, rhonda.christensen@gmail.com

| 11:30-14:30 | **Lunch** | | Block D2 to D4 G/F |
| | **GACC Reception** | | Block D1 to D2 G/F |

Poster Session 2		**Block D2 to D4 G/F**	**11:30-14:30**
2 - 1006	An Investigation of Students' Uniform Identity, Classroom Cohesion, Collaborative Learning and Their Self-efficacy in Taiwan		English

Author(s)	**Hsu-Yao LIU,** National Sun Yat-sen University, Institute of Education, Taiwan, **Zuway-R HONG,** National Sun Yat-sen University, Taiwan **Ying-Yan LU,** National Sun Yat-sen University, Taiwan

The Taiwan Ministry of Education has been loosened the policy of students' wearing uniforms to schools in May 2016. From then on, students have more freedom to choice their style of clothing at school settings. This study aims to explore the relationships and gender difference on students' school uniforms identity, class cohesion, student collaborative learning and their self-efficacy. Four well-structured instruments including Uniform Identity scale, Class Cohesion scale, Student Collaborative Learning scale, and Self-efficacy scale were conducted to assess students' information. A convenient sampling selection was used to select a total of 216 vocational high school students from Kaohsiung city to participate this study. In addition, 16 students having the highest or the lowest total scores on the instruments were purposively selected to be elicited their deeper information to support its quantitative results. Independent t – test, one way ANOVA, Pearson correlation and theme content analyses were explored their relationships and possible reasons among the four potential variables. The essential findings were presented as the bellows: (1) There were gender differences on students' school uniforms identity, uniforms cognition, characteristics of school uniforms and class atmosphere；(2) Students' school uniforms identity had significant positive correlations with their class cohesion, collaborative learning and self-efficacy. This study adds empirical evidence and provides insights into how gender difference can be integrated in planning and implementing effective pedagogical strategies and policy aimed at increasing students' classroom cohesion, collaborative learning and self-efficacy.

2 - 1087	Play as a cultural phenomenon: Preliminary results from the project 'Formulating a system of indicators for assessing acknowledgement of the child's right to play'		English

Author(s)	**Gonzalo JOVER,** Universidad Complutense de Madrid, Spain

Aims:
Child play is a basic pedagogical principle and a right of childhood, although not always sufficiently recognised as such. To encourage greater recognition, professors at several Spanish universities are undertaking a research project whose aim is to design a system of indicators that can be used to assess the current status and evolution of the right to play in Spain. The project forms part of the actions of the Observatory of Child Play.
Methodology:
The project uses a mixed-methods approach that combines both quantitative and qualitative techniques. One data source is focus groups with different collectives linked to child play. Twenty-four focus groups have been carried out at different places around Spain, twelve with children and teenagers and another twelve with various collectives of adults: teachers, parents and experts in child play.
Results:
The poster will feature an analysis of the results of the focus groups done with children, currently in the process of preparation. The centreline of the analysis is the consideration of play as a cultural element on the basis of the theory of transitional phenomena developed by paediatrician and psychoanalyst Donald Woods Winnicott, and rev-visited more recently by Martha Nussbaum.
Conclusion:
By analysing the children's voices I hope to show that the wealth of child play transcends educational theories and practices that conceive it merely as a useful mechanism for psychological development.

2 - 1146	Energy education in northern and central Taiwan: A multi-year project		English

Author(s)	**Meichun WEN,** National Changhua University of Education, Taiwan **Liang-Rui CHEN,** National Changhua University of Education, Taiwan **Jong-Bi WEI,** National Changhua University of Education, Taiwan **Mei-Yu ZHANG,** National Hsin-Chu University of Education, Taiwan

The Ministry of Education of Taiwan has implemented a multi-year, nation-wide energy education program since 2014 and it is still in progress. The Central and Northern Taiwan Regional Center to facilitate the implementation of this program is located in our College of Engineering, and many educators from different colleges, even from different universities/schools, with different expertise joined together to devote their professions to elementary and secondary energy education. From 2014 to 2016, we developed two different modules, the wind power module and the solar energy module. Every module included an elementary curriculum, a junior-high school curriculum, and a senior-high school curriculum. These curricula were co-designed by engineers, science educators, and in-service teachers, and were actually implemented in classrooms to gain feedback from students and teachers for further revision of the teaching modules. These curricula aimed to promote energy education through DIY activities incorporated with

concept teaching. Our wind power module includes the making of a wind generator and the materials are gathered from everyday resources. Our second module, the solar energy one, utilizes blocks similar to Legos to build different solar-energy-driven equipment such as solar car and solar-tracking systems to help students gather and analyze data to conduct inquiry activities. We have trained hundreds of in-service seed teachers and involved thousands of K-12 students and their parents. We wish to share our experiences and our module with other educators around the world to promote the importance of energy education, and also to reflect and improve our program as well.

2 - 1173	Inequality in English Language Education: A case study of English-major students in China	English

Author(s)	**Zi YANG,** Faculty of Education, University of Cambridge, United Kingdom

This qualitative case study investigates how English education is influenced by one's socioeconomic status (SES) and geographic background and how the interplay between institutional context and individual habitus relate to inequality of education. English language education in China holds a very special place among all the subjects. It is neither an official nor an everyday language in mainland China, and to learn it requires huge linguistic input that is more available to people with certain social and economic resources. At the same time, English competence has unique symbolic value in China because it is closely associated with career prospects and life opportunities. Its special role provides the rationale for my study that the trajectories of English learning reflect and reinforce the social structures and categorization, and thus can be used as a window to explore educational inequality in mainland China.

Drawing on Bourdieu's framework of habitus, capital and field, the research provides a sociological perspective into English education in China. The findings revealed that English-learning trajectories were closely related to SES and geographic origins, as those privileged students largely enjoyed better resources and more opportunities. In addition, salient was a lack of cohesion between secondary schools and the university in terms of pedagogical practices and curriculum design in English education. It drew crucial implications on how to bridge the gap between advantaged and disadvantaged students in English education.

2 - 2209	Effect of happenstance or chances in vocational achievement processes -Career history in celebrities and ordinary workers-	English

Author(s)	**Eun Young SON,** Chungnam National University, South Korea **Yoo Sun CHOI,** Chungnam National University, South Korea **Hyun Joo KIM,** Chungnam National University, South Korea

In career education, traditional theories put emphasis on the unilinear processes, for instance, self-understanding, understanding of vocational circles, or career decision. But in this study, with the viewpoint of alternative theories that diversity as well as flexibility should be also concerned, we studied celebrities and ordinary workers' career history and planning and happenstance found in their lives. We formulated largely two study questions. First, what factors influenced vocational achievement in celebrities? Second, what drives influenced ordinary workers' career decision and fulfillment significantly? For this purpose, in the first research, we examined two celebrities, one man and one woman. We made a brief note about TV lectures dealing with their life history as a theme. Analyzing it consensual qualitative research(CQR), our research team with three persons went through validation processes for analysis. The second research deals with young workers (15 men and 15 women). We analyzed books dealing with male and female workers' interviews about their career experience and drew their lifetime themes going through the process of finding keywords and grasping meaning from them.

   The major findings are as follows. In celebrities, factors, task commitment/passion, patience, inner control/self-directedness, and challenging/self-efficacy are the main factors. It means that their career is influenced by happenstance factors more than planning. In young worker, the keywords appearing over five times out of their career decision drives are passion, challenging, sensitivity, continuance, and enjoying. It implies that they have certain directions for life but do not always move by planning. This study explored positively how either happenstance or chances would influence individuals' career decision and vocational achievement. This study is significant in that it has found what roles either happenstance or chances has in celebrities and ordinary young workers and also what career drives they have in their lives.
Keywords: happenstance, chances, career drives, vocational achievement processes, ordinary workers, consensual qualitative research(CQR)

2 - 2210	Research Analysis trend in Cognitive Behavior Therapy of Panic Disorder	English

Author(s)

Hong Yue GAO, Chungnam National University, South Korea
Hyun Joo KIM, Chungnam National University, South Korea
Eun Young SON, Chungnam National University, South Korea
Yoo Sun CHOI, Chungnam National University, South Korea

This study aims to examine research trend how research on cognitive behavioral therapy in domestic research on panic disorder has been progressing and to propose effective inter- vention to cure panic disorder in the future. This analysis targets 33 research papers in total appeared in domestic academic journal and graduate thesis from 1992 when the research on cognitive behavioral therapy began to publish to 2016. This study analyzed object of research, subject of research, method of research and experimental design focusing on therapeutic intervention and test tool used. The results of study are as below. First, the research which we can examine the therapeutic intervention as cognitive behavioral therapy to cure panic disorder has not been proceeded for recent several years. Second, we found out the fact that panic disorder develops from the age of 9 to 52 by analysis of population statistics and that range of average age of outbreaking disease is from 18 to 72. The important thing is that panic disorder occurred in children and teenagers, too. Third, analyzing subjects of research shows that there are great deal of researches on therapeutic outcome of cognitive behavioral therapy to cure panic disorder and that they are followed by plenty of researches on individuality of patients, while characteristic of therapists and training for them have not been studied. Fourth, as for method of research, there are large number of quantitative researches and they are mainly thesis using pre and post experimental design which examines changing aspect of pre and post therapy. Fifth, as for therapeutic method, traditional cognitive behavioral therapy utilizing PCT (Panic Control Treatment) has been used the most.   Based on these analysis results we proposed implication of the research and further study.
keyword: panic disorder, psychotherapy, cognitive behavioral therapy, research trend

2 - 2241	Needed Conversations: The NGO Education Partnership (NEP) as an Actor in Cambodian Education Governance	English

Author(s)

Annie RAPPEPORT, University of Maryland, United States

This paper is an analysis of the development and current role of the Nongovernmental Education Partnership (NEP) in Cambodia, with a focus on the critical importance of effective dialogue in development and civil society in education governance. The data analysis study is approached from a blended framework. It fuses the (Hirosato & Kitamura, 2009) frameworks for interaction among actors in the context of decentralization and "indigenizing" education reforms with (Olsson & Wohlgemuth, 2003) critical approach for understanding dialogue relationships. Questions used in the analysis are formed from the concepts in the combined framework and are used to analyze the dialogue and actor relationships in Cambodian education governance to deduce their effectiveness. The NEP is a relatively recent initiative created to involve civil society as a connector between the Cambodian government via the Ministry of Education and Youth Sports (MoEYS) and a federation of nongovernmental organizations (NGOs) focused on education development in Cambodia. The intent was to create a space for civil society to facilitate the needed dialogue for effective sector wide development in Cambodia. The analysis examines the hurdles faced by the initiative, the importance of leadership, management, and legitimization of the NEP. The conclusions are reached by taking a critical look using the blended frameworks to see where the NEP is aiding in the development dialogue process and where it can be improved.

2 - 2245	我為什麼願意改變？教師觀點下的幼兒園課程改革	普通話

Author(s)

陳翠, 台灣清華大學, 台灣

幼兒園課程改革的主體是教師，因教師是課程的施行者。然而，多數教師具有抗拒改變的傾向，這也是改革失敗的重要原因。教師是否願意改變很大程度上決定了課程改革能否成功。因此，本研究著眼於教師觀點下的課程改革，透過質性研究之深度訪談，對話公立和私立兩所幼兒園歷經課程改革的兩位教師，探究他們願意改變的原因。研究結果發現，教師愿意改变的原因有：專業的課程領導者、對領導者道德上的信服、互助的組織、优良课程的驱动、在群体决策中体会到自己的重要、來自於同事的壓力、对幼儿的责任、希望自我提升、合理的奖酬等。

2 - 2315	An Instructional Reform at Teacher Training Universities in Japan: Compiling Teacher Students' Paths to Learning	English

Author(s)

Kenji KUBO, Shimane University, Japan
Hideo MIYAKI, Yamaguchi University, Japan
Yuka NAKAI, Hiroshima University, Japan
Takashi YONEZAWA, Hiroshima University, Japan

The purpose of this study is to develop an effective model of Practical Seminar for Teaching Profession (PSTP) contributing to build a competence to continue learning of teacher students.
In Japan, teacher training universities are advancing the instructional reform toward quality assurance of pre-service teacher training to equip teacher students with the most basic competence as teachers. Under such circumstances, a new course, PSTP, was put in place from 2013 as a compilation of their learning in university. We have developed a model of PSTP to build an ability to continue learning for teacher

students and put it into practice at some universities. We developed the model with the view of Active Learning which consists of three steps: (1) interactive reflection, (2) improvement of practice competence or pursuit of concept, (3) self-reflection. For example, at the step 1, teacher students reflect on their learning interactively using portfolio and group works. We tested out the model at some universities, e.g. Hiroshima University. Then we examined its effectiveness and development potential through some interviews targeting at only those students who consented the concept and method of our research. As a result, the students' interactive reflections were encouraged by active learning, which built their competence to continue learning. In addition, we could find the possibility toward improvement of our model. Our findings are beneficial as a fundamental material to consider about how to build a competence to continue learning of teacher students.

2 - 2325	Exploring the relationships between peer feedback and achievement emotions among university students	English

Author(s)	**Lan YANG,** The Education University of Hong Kong, Hong Kong **Min YANG,** The Education University of Hong Kong, Hong Kong

Based on the control-value theory (Pekrun, 2006), feedback in education has been documented as one of important environmental factors that may largely influence students' achievement emotions (e.g., enjoyment, hope, anxiety, and boredom). However, the existing literature of feedback research focuses more on teacher feedback (Hattie & Timperley, 2007) rather than peer feedback. Recently, a growing body of studies argue that peer feedback, especially peer feedback provision from classmates would also be beneficial to student learning engagement and outcomes, apart from teacher feedback. However, key questions like: How effective students would perceive peer feedback in enhanced learning? How do they feel in learning-related achievement situations?, have not been explicitly tested in understanding the role of peer feedback in promoting learning. This pilot study aimed to test the relationships between students' perceived effectiveness of peer feedback in supporting their learning and their achievement emotions (i.e., enjoyment, hope, boredom, and anxiety) in learning situations. Participants were 48 undergraduate students in Hong Kong. These students came from two classes of a general education course in an academic year. The results showed significantly positive correlations between peer feedback and positive emotions, whereas negative correlations with negative emotions. This indicates an important role of effective peer feedback in affecting students' positive emotions. Implications and limitation of this pilot study are also discussed.

2 - 3346	The Operation model of small-scale organic farms and the feasibility of the New Agricultural Policy in Hong Kong	English

Author(s)	**Ho Yan CHENG,** The Education University of Hong Kong, Hong Kong **Chi Chiu CHEANG,** The Education University of Hong Kong, Hong Kong

The research presents a study of special small-scale organic farming in high-developed Hong Kong.   The research put emphasis on the spirit of organic farming and small-scale farming related sustainable agriculture.   Three interviews are conducted with the operators of small-scale organic farm. The operation model was investigated using the Business Model Canvas (BMC), which provides the common features and difficulties on operation of small-scale organic farm in Hong Kong.   The operation model enables the author to examine interrelated problems of agricultural development in Hong Kong: lack of training opportunities, lack of labor, non-agricultural use farmland, short lease team, limited-sized and segregation of farmland, lack of sales platform, weak competitiveness of local product. From the result of problems, the last part of this research discusses the feasibility of the New Agricultural Policy in addressing existing problems and eventually achieving sustainable development.   The paper investigated each four specific purposed measures: establishment of an Agricultural Park, establishment of a Sustainable Agricultural Development Fund, strengthening support for farmers, and promotion of other auxiliary activities related to agriculture.   The feasibility of the policy depends on the connection with the real context. To develop sustainable agriculture, the government policy should be based on the obvious target, clear direction, proper way and strong intensity.

2 - 3348	A study of popular science literacy of preservice science teachers	English

Author(s)	**CHING-SAN LAI,** National Taipei University of Education, Taiwan

The major purpose of this study is to explore the popular science literacy of preservice science teachers.   There were 43 preservice science teachers at a teachers college in Taiwan participated in this study. Popular science learning activities include science courses, education courses and courses of scientific communication.   Both qualitative and quantitative methods were use in this study.   The research instruments used in this study were questionnaires of learning.   The results were undergone by frequancy analysis.   The results of the study were summarized as following: students' feedback on popular science learning activities and popular science training are all positive and satisfied, students show the enthusiasm for participating the popular science learning activities and self-confidence, also showing that students can promote their popular science literacy.   These results indicated that popular science learning activities has significantly influence on preservice science teachers.

WERA Invited Symposium 1

D1-LP-07

Reference Code	Presentation Title	Presenter(s) / Author(s)	Chair/Discussant(s)
13:00-14:30	The Science of Measurement: Using Testing Standards to Increase Research Validity	**Joan HERMAN** (Presenter) UCLA/CRESST USA	**Chair:** **Felice J. LEVINE,** American Educational Research Association**,** USA**,** flevine@aera.net **Discussants:** **Motlalepule Ruth MAMPANE,** University of Pretoria, South Africa, ruth.mampane@up.ac.za **Juergen SEIFRIED,** University of Mannheim, Germany, seifried@bwl.uni-mannheim.de **Wing Mui Winnie SO,** Education University of Hong Kong, Hong Kong, wiso@ied.edu.hk

Abstract

Across the world there is interest in innovation, reform, and educational change to help more students achieve the capabilities they need to be successful in life and work in the 21st century. Yet, how do we know if these efforts are working if we do not have sound assessments for measuring their effects?   How will our research support better theory, practice and/or policy if our measures are flawed? There has been substantial attention in recent years to increasing the rigor of scientific design and sophisticated data analysis methodologies, but less to assuring the quality of research and policy measures, a potentially fatal flaw in the validity of research findings. This symposium reviews research on the quality of research and policy measures and presents the *Standards for Educational and Psychological Testing* as a key resource for strengthening practice. Validity and fairness standards are highlighted. Symposium discussants present their perspectives on the quality of measures within their purview and thoughts about the need and strategies for standards-based practice.

Parallel Session 2.3

13:00-14:30

HKERA International Conference Paper Presentation

13:00-14:30

Curriculum Instruction Assessment and Policy

B3-P-03

2.3A - 1 - 1093	Vocational Education or General Education: Evidence from China Family Panel Studies (CFPS) of 2010 and 2012		English

Author(s)	**Xiao-Qing WANG,** Graduate School of Education, Peking University, China
	Wei LU, China Institute for Educational Finance Research, China
	Wei-fang MIN, Peking University, China
	Wei HA, Peking University, China

Using data of China Family Panel Studies (CFPS) of 2010 and 2012, we examine the effects of graduating with secondary technical and vocational education (TVET) degrees on the employment status, annual income and occupational prestige. In the absence of reasonable quasi-experimental design and valid instrumental variables, we attempt to address the selection bias in three ways: 1) in addition to a large set of covariates, we also control for student's cognitive ability, which is often missing in cross-sectional studies; 2) we limit the comparison to individual who completed three-year college degrees but with secondary TVET and general high school degrees as these two groups are more homogeneous in their unobserved characteristics such as innate ability, family backgrounds, motivation and career aspiration; 3) we further compare the employment outcomes of high school and secondary TVET graduates who experienced retrenchment caused by the exogenous restructuring of State-Owned Enterprises since the mid-1990s. The results show that 1) even if cognitive ability is under control, TVET graduates still outperform high school graduates in terms of employment status and occupational prestige for those enrolling in TVET before 1997; 2) secondary TVET graduates with three-year college degrees fare just the same as those high school graduates in the employment status, income and occupational prestige; 3) when hit by arguably exogenous policy shock, the two groups show no discernable difference in the chances of reemployment and income. To summarize our findings, once selection bias are taken into consideration, there is little difference between TVET and general education.

Curriculum Instruction Assessment and Policy	B3-P-03
2.3A - 2 - 1144 A problem-based STEM curriculum for senior high students in Taiwan	English

Author(s)	**Meichun WEN,** National Changhua University of Education, Taiwan **Yu-Sheng CHANG,** National Changhua University of Education, Taiwan

In the new Twelve-Year Compulsory Education Curriculum Guidelines for Science Learning Areas, which will be implemented in 2018 in Taiwan, senior high school students will be required to take a four-credit-hour course named "science inquiry and practices" which focused on integrated science-related subjects, cross-disciplinary thinking abilities, and problem solving skills. We designed a problem-based, STEM-oriented curriculum and evaluated the effect of this curriculum on students' problem-solving abilities and attitudes. This curriculum was designed as a selected course called "Future Engineering Lab", and there were 40 tenth and eleventh graders enrolled voluntarily. We planned our 32-hour, two-cycle study based on STEM issues, in which problem-solving tasks were given to student groups and they needed to design their own experiments to solve the tasks. Under the design of action research method, the first cycle included two half-day lessons and a half-day task to assess students' problem solving abilities. After the first cycle, we found that some parts, but not all of their attitudes and abilities improved. Therefore, we revised our second cycle according to the data gathered from the first cycle. The second cycle included three half-day lessons and a second task. Data showed that students' problem solving abilities increased over time as well as their problem-based STEM task scores. Overall, this curriculum was helpful to increase students' problem-solving abilities for all students, while male students tended to show more increase in the second stage. Attitudes toward problem-solving remained high throughout the activities. The discussion of results and implications will be provided.

Curriculum Instruction Assessment and Policy	B3-P-03
2.3A - 3 - 2207 A Latent Class Analysis of Critical Thinking Skills	English

Author(s)	**Boon Wee CHUA,** Ministry of Education, Singapore, Singapore

Critical thinking is a core 21st century competency necessary for the globalised world we live in. It is nowadays conceptualised as having both a cognitive and an affective aspect. In this study, a latent class analysis (LCA) of the critical thinking skills of adolescents was examined. The research questions addressed in the study were: (i) What is the appropriate number of latent classes that could be identified from the data? (ii) What are the characteristics of the latent classes identified in the solution? and (iii) Is the solution invariant across groups? An instrument modelled after the Watson-Glaser Critical Thinking Appraisal (WGCTA) was piloted with 200 adolescents before it was administered to 1,000 adolescents.   The five dimensions of critical thinking assessed were: recognition of assumptions, evaluation of arguments, deduction, interpretation of information and inference. Selection of the appropriate number of latent classes was based on multiple fit indices: deviance statistics, Akaike information criteria (AIC) and Bayesian information criteria (BIC). Results showed that the deviance and AIC values decreased with increase in number of classes, suggesting that the more latent classes were added, the better. However, the BIC values started to increase with the four-class model. Further analysis of the three- and four-class solutions showed that only the three-class model was invariant in both the item-response probabilities and class prevalence for the groups examined.

Keywords: critical thinking, latent class analysis, item-response probabilities, class prevalence

Secondary School Education	D4-LP-05
2.3B - 1 - 1135 Investigating Modelling Strategies through Teaching Periodic Law of Elements	English

Author(s)	**Wanyang WANG,** Beijing Normal University, China **Lei WANG,** Beijing Normal University, China

In order to develope students' higher-order thinking skills and promote them applying the knowledge of Periodic Law without any hints , we need detail the thinking process of solving problems with Periodic Law and help students construct a thinking model of the Periodic Law . We chose two classes from different secondary schools to execute distinct instructional strategies of constructing model of Periodic Law ,and we want to find out whether the both strategies are effective. We developed "position-structure-nature" model with meticulous designed tasks based on chemistry disciplinary competence, one experimental class executed completely open-ended tasks and the other experimental class used half-open tasks.We designed a series of test instuments including multiple-choice questions and essay questions, which can evaluate students' performances in core ideas and practices of Periodic Law. We not only tested the students before and after the modelling-based teaching classes, but also tested another two classes of the two secondary schools with regular teaching.After gathering the data of pre-test and post-test，we analyzed the data through descriptive statistics and paired t-tests with SPSS20.0.According to the results of data analysis,both modelling strategies were effective.The number of students with higher-order thinking skills(who were able to apply the model under different circumstances) significantly raised in both experimental classes. Our findings provides a thinking model of the Periodic Law and suggests several effective modelling strategies of teaching the Periodic Law. Our study also highlights the benefits of analyzing students' perfomance and chemistry disciplinary competence ,not only can guide teaching but also provide the basis for evaluation.

Secondary School Education		D4-LP-05
2.3B - 2 - 1145	Chinese Students' Participation in Computer Tutoring for Additional Instruction and its Effect on Academic Achievement	English

| Author(s) | **Jinxin ZHU,** The Education University of Hong Kong, Hong Kong
Mo Ching Magdalena MOK, The Education University of Hong Kong, Hong Kong |

This study aimed to understand students' participation in the internet or computer tutoring for additional academic instructions and its association with their academic achievement. Secondary data from Programme for International Student Assessment (PISA) 2015 was used, focusing on a Chinese sample from Bejing, Jiangsu, Shanghai and Guangzhou. The sample comprised 6,425 Chinese students (mean age is 15.72 years) who had additional instructions during the current school year, with 3,144 (48.9%) girls and 3,281 (51.1%) boys. Multilevel regression was conducted to examine the factors related students' participation in the internet or computer tutoring for additional academic instructions, and multilevel structural equation modeling (SEM) was employed to examine the association between students' participation and their academic achievement, with the effects of student's gender, achievement motivation, home educational resources, and economic social and cultural status statistically controlled. Results of multilevel regression showed that use of information and communication technology (ICT) at school positively associated with students' participation in internet or computer tutoring with a programme or application for additional academic instruction; however, students' ICT interest, ICT self-efficacy, and ICT Autonomy are not significant predictors of their participation. Results of multilevel SEM showed that students' participation in internet or computer tutoring negatively associated with their academic achievement, although with low the effect size. These findings suggested that schools can be a place for the promotion of intelligent learning environment, while more studies are needed to provide effective internet or computer tutoring system for Chinese students who are learning in a teacher-centered teaching context.

Secondary School Education		D4-LP-05
2.3B - 3 - 2193	Preparation of technological skills for teachers in linked learning institutions from the framework for learning of the 21st century	English

| Author(s) | **Fabian A. ROJAS RAMIREZ,** California State University Long Beach, United States |

The context of this research is developed between three different action environments: the educational approach of Linked Learning, the Framework for Learning of the 21st century and the training of teachers. Linked learning is an approach aimed at raising the success of secondary education with the idea that education should be relevant to students, helping them to answer the question "Why do I need to know this?" and to make connections to the world of work. For this, it is necessary to train teachers with this vision and with the competencies described in a learning framework for the 21st century. The aim of this study is to know how the process of teacher training under the Model of Linked Learning, in particular, analyze their training in the technological skills needed to prepare students to meet the demands of the 21st century. Taking as an international reference the learning framework of the 21st century, they define a series of fundamental skills for learning and teaching and how this affects the training of teachers to help them develop their technological skills.
Methods
This study is a qualitative study that analyzes the training process of candidate teachers in the development of technological competencies, determining the level of knowledge and integration of the technologies of teacher educators and candidates for teachers.
Results and conclusion
This study is gathering more data for its analysis in the coming months, but some of the preliminary results show that there is a difference between teachers and candidates for teachers.

Primary School Education		B4-LP-01
2.3C - 1 - 1082	Make A Difference in PE Lesson: Using Low Organized Games to Enhance Physical Activity of School Children	English

| Author(s) | **Li ZHANG,** The Education University of Hong Kong, Hong Kong
Pui Yee CHEUNG, The Education University of Hong Kong, Hong Kong |

Aims: Physical Education (PE) lesson is an ideal occasion for children to participate in physical activity (PA). Previous study had indicated that children's PA level during PE lessons is greatly influenced by how the lesson is conducted, such as the subject matter and the mode of delivery. The present study designs a Low Organized Games (LOG) based PE class and examines the difference between a PE class conducted using LOG and sports-skill based PE class.
Methodology: Sixty children (age 7-9) from two primary schools in ChongQing, China were recruited as participants. They were randomly assigned to the experimental group (with LOG content) or control group (with normal sports-skill based PE class). LOG is physical activity designed with developmentally appropriate games which can be practiced in a simple format. Both groups of children participated in 40-minutes PE class lead by trained PE teachers twice a week for 12 weeks. Children's PA levels during PE class were measured by pedometers and steps counts were averaged for analysis.
Results: The ANOVA results indicated a significant difference [$F_{(2, 57)} = 365$, $p < 0.001$, $\eta2=0.928$]. on children's PA between experimental (steps count=3755, SD=230) and control group (steps count =2159, SD=227).
Conclusion: The use of LOG in PE class provides an alternative teaching content which can enhance children's PA level.

Primary School Education	B4-LP-01
2.3C - 2 - 2222 What explains learner poor performance in South Africa: A situated exploration	English

| **Author(s)** | **Labby RAMRATHAN,** University of KwaZulu-Natal, South Africa |

Learner poor performance is a global issue with varying responses to address this concern internationally.   In South Africa, despite the great strides made to improve the quality of school education through, for example, curriculum reforms, progressive teacher development policies and school leadership and governance, yet the learner performances in national benchmark tests and grade 12 results suggests that the majority of school learners are not performing as expected.   This paper explores the phenomenon of learner poor performance from the perspective of the situated realities of schooling to understand why, despite the great strides made in providing quality primary and secondary education, learners continue to perform poorly.   Data was produced through interviews with various stakeholders associated with purposively chosen 18 primary schools across three Provinces in South Africa.   The stakeholders included learners, teachers, school leadership, parents and community members.   It was found that the issues of school ethos, demands placed on learners and value of education, amongst others, were situational factors that contributed to learner poor performance.   Homework, for example, being a global phenomenon and that which is expected of school education, is the source of insidious violence against learners and a primary reason for learner poor performance.   This and other issues related to school education and learners' milieu are explored through Bourdieu's theoretical constructs of field, habitus and taken for granted norms to unearth the challenges that learners and communities face in respect of school education and its resultant explanation of learner poor performances.   The paper contributes to body of knowledge on school education, learner performance and quality education.

Primary School Education	B4-LP-01
2.3C - 3 - 2226 Developing Trustworthy Mathematic Attitudes Scales Using TIMSS-2011 from 5 Top-Performing Countries	English

| **Author(s)** | **Peiyan LIU,** University of Denver, United States |

Using eighth grade students' data from the International Mathematics and Science Study (TIMSS) 2011, the factor structure was investigated for the four scales of mathematic attitudes: the Students Confidence in Mathematics scale, the Students Engaged in Mathematics Lessons scale, the Students Like Learning Mathematics scale, and the Students Value Mathematics scale. Data from five top-performing East Asian countries were included in this analysis: Hong Kong SAR, Chinese Taipei, Japan, Republic of Korea, and Singapore. The results reveal that the four-factor structure was supported across all the countries and within each country. Also, measurement invariance was achieved across these countries. These results provide support for the validity of the scales as measures of student attitudes toward mathematics.

Higher and Teacher Education	D2-LP-07
2.3D - 1 - 1011 The development of beginning teachers' pedagogical knowledge and skills in teaching.	English

| **Author(s)** | **Doris CHOY,** National Institute of Education, Nanyang Technological University, Singapore
Foong Lin Angela WONG, National Institute of Education, Nanyang Technological University, Singapore |

Teacher education programmes prepare beginning teachers with adequate knowledge and skills for teaching (Cochran-Smith, 2006). As beginning teachers, studies have suggested that they should be equipped with the pedagogical principles that enable them to teach various content subjects and motivate students in class (Reynolds, 1995). However, Feiman-Nemser (2001) suggests that no matter how good teacher education could be, there are knowledge and skills that can only be learned when the beginning teachers step into their classrooms.

The purpose of this paper is to discuss the development of beginning teachers' pedagogical knowledge and skills in teaching in the Singapore context. The Pedagogical Knowledge and Skills in Teaching (PKST) survey was administered to 147 Primary and 206 Secondary school teachers upon completion of their teacher education programme and at the end of their third year of teaching. Data analysis showed that their pedagogical knowledge and skills increased significantly from the end of teacher education to the end of the third year of teaching in all six areas, such as Lesson Planning, Classroom Management, and Showing Care and Concern. The overall means of pedagogical knowledge increased significantly from 3.73 to 3.89 and skills increased from 3.56 to 3.81 in the 5-point Likert scale. Among all the areas, the biggest increase was shown for their skills in Classroom Management, which increased from 3.31 to 3.73. Further analysis showed that there were slight differences in the development of Primary and Secondary beginning teachers. The details of the comparisons will be discussed at the presentation.

Higher and Teacher Education		D2-LP-07
2.3D - 2 - 3363	A Narrative Inquiry of Complexity and Ambiguity in Teaching and Teacher Education	English
Author(s)	**Martina RIEDLER,** Canakkale Onsekiz Mart University, Turkey	

This multi-national study explores meanings, essences, practices and processes of educational change and growth in preservice teachers' understanding over time, through deliberation, dialogue, and performance in complex, ambiguous and diverse teaching and learning environments in US, Germany, and Turkey.

Using a narrative inquiry approach as research methodology led to explore how preservice teachers conceptualized teaching in complex and ambiguous situations through their personal experiences while locating the preservice teachers' understanding and preconception about notions of "complexity" and "good teaching" in diverse classrooms setting within the theoretical frameworks of "teacher education as a complex system" and "practical wisdom, pedagogical fitness and tact of teaching in teacher education."

The increasing interest towards complexity in teacher education has brought some challenging questions which this study aims to address:

What is complexity and ambiguity in teaching and teacher education? Do preservice teachers identify or experience complexity in classrooms? How do preservice teachers deal with diversity, complexity and ambiguity in their teaching practices? What kind of strategies do they develop to deal with complexity and ambiguity in diverse school settings? How do preservice teachers define and interpret Practical Wisdom, Pedagogical Fitness and Tact of Teaching to deal with complexity and ambiguity in culturally diverse classrooms?

The dialectical interplay between theory and practice (what the literature theorizes about "complexity" and "good teaching," what research participants bring as prior understanding, and what the actual realities of classroom setting are like) provided a frame to recognize how participants were thinking about teaching, and connections they constructed between their actual classroom experiences and course work.

Higher and Teacher Education		D2-LP-07
2.3D - 3 - 1102	Rater severity in peer- and self-evaluation	English
Author(s)	**Hui-Fang CHEN,** City University of Hong Kong, Hong Kong	

To become a lifelong learner, all college students should develop the ability to reflect their own strengths and weakness as well as to accurately evaluate other people's work for comparisons. Self- and peer-assessment have been developed for these purposes. However, controversial findings in self- and peer-evaluation have been reported and might suggest that student raters do not use the same way to evaluate performance, resulting in problematic inter- and intra-rater consistency. This study aimed to understand students' severity in self- and peer-evaluation when grading group projects. A total of 73 students enrolled in a general education course in a Hong Kong university joined in the study, and 37 of them provided valid data for two waves of data collections. The multifaceted Rasch measurement model was conducted to analyze two waves of data separately, in which the instructor served as the standard and the severity was fixed at zero. Results showed that students tended to be harsher when grading their own group project than grading other groups' in both waves of data. Findings suggested that the practice of "forgive others not yourself" seems to be stable in college students in Hong Kong. Further investigations on changes in students' severity in group projects after receiving feedbacks and the relationships between students' and teacher's evaluations are warranted.

Special Education Needs		D3-LP-15
2.3I - 1 - 1044	The Influence of Family Functioning on Self-determination of Students with and without Special Educational Needs	English
Author(s)	**Kuen Fung SIN,** Education University of Hong Kong, Hong Kong **Sanyin CHENG,** The Education University of Hong Kong,	

The present research aimed to explore how family functioning influenced self-determination among students with and without special educational needs. The Chinese version of the Self-Report Family Instrument and the American Institutes for Research (AIR) Self-Determination Scale were administered to 575 Hong Kong senior secondary school students without SEN and 106 with SEN in the present research. Results showed that the Chinese version of the Self-Report Family Instrument and the American Institutes for Research (AIR) Self-Determination Scale were reliable and valid among students with and without SEN. Furthermore, for students with SEN, family health significantly positively predicted self-determination. For students without SEN, family health significantly positively predicted self-determination, while family pathology significantly negatively predicted self-determination. Significance, limitations, and implications of the present research were discussed.

Special Education Needs			D3-LP-15
2.3l - 2 - 2259	Toward inclusive mathematics education: A case study of prospective elementary teachers		English

Author(s)	Paulo TAN, University of Tulsa, United States

A persistent problem in inclusive education is students with disabilities' lack of access to and achievement in rigorous and cognitively challenging mathematics. Students with disabilities are typically subjugated to rote and remedial forms of mathematics education in segregated settings. We assert that teacher educators, guided by disability studies in education concepts, can support prospective teachers' knowledge, dispositions, and skills to challenge oppressive practices and enact inclusive mathematics education. This case study explores prospective teachers' conversations during an equity-oriented mathematics lesson planning activity. Participants were part of a teacher preparation program that embedded elements of disability studies in education in its curriculum. We used a qualitative approach to analyze the conversations that took place as participants engaged in the lesson planning activity. The conversational content and focus during participants' engagement with the inclusive mathematics lesson planning tool centered on three themes (a) understanding and planning for difference, (b) fixing mathematics teaching and learning, and (c) seeking to better understand students. Evident within and across these three themes are participants' construction of students with disabilities as capable mathematics doers and thinkers. The outcomes of this study suggest that teacher educators, guided by disability studies in education concepts, can support prospective teachers' knowledge, dispositions, and skills to challenge oppressive practices and enact inclusive mathematics education.

Education Leadership and Management			D3-LP-15
2.3l - 3 - 1061	Policy Analysis of Educational Equity for Migrant Children in China: A Case Study in Beijing		English

Author(s)	Xia ZHAO, Beijing Normal University, China Shuiyun LIU, Beijing Normal University, China

This research analyzes the migrant children education (MCE) policies that have been implemented in China since the end of the 1990s. It seeks to find out whether these policies have brought the equal educational opportunities and conditions to migrant children as expected, and explores the reasons for its success and failure. In order to do this, Beijing, as one of the largest migration cities, was chosen as a case city to study. Secondary analysis and in-depth interviews were conducted to collect data. The empirical study shows that the MCE policies have pushed public schools to enroll migrant children, but the objective of providing educational opportunities equally for migrant children and local children has not been fully realized. Both the capabilities and motivation of the policy implementors were not as adequate as expected. The policy design and its implementing environment are further reflected. It is found that the MCE policies are quite ambitious under the current situations. The policy design is really vague and the local governments were given sufficient autonomy to design specific schemes and schedules according to their own capabilities and political commitment. Although the central government did not provide much support and pressures for the policy implementation, the local governments have made efforts to do so, deriving from the reciprocity between the central-and local governments.

Key words: MCE policies, migrant children, equal educational opportunities, policy implementation

WERA Focal Meeting Paper Presentation			13:00-14:30
Reference Code	**Presentation Title**	**Abstract**	**Presenter(s) / Author(s)**
Implications of Internationalization on Curriculum			**B4-LP-08**
2.3E	<u>Chair: Ibrahim Ahmad BAJUNID</u>, Malaysian Association for Education (MAE), Malaysia, iabajunid@hotmail.com		
2.3E - 1 - 109	Obstacles to Internationalizing American High School Literature Curriculum (109)	For over a hundred years, the course called World Literature has attempted to broaden American high school curriculum beyond British and American worldviews. In spite of these historical purposes and the interest in "global citizenship" articulated in many school mission statements, World Literature, in many high schools, remain un-international reviews of British and American literature, inadequate in an increasingly globalized world defined by increased political, economic, and cultural interactions between nations. While teacher preparation and a dearth of translations contribute to this problem, the experiences of high school teachers remain largely absent from discussion on internationalizing curriculum. This study presents a multiple case study of eight high school teachers of World Literature in Hawaiʻi. Using cosmopolitanism on the ground, a theory of cosmopolitanism that investigates cosmopolitanism in education, this study uses individual interviews and one focus group interview to find that (a) while some teachers prioritized global citizenship, a number of factors take priority over internationalizing curriculum, and (b) teachers did not equate global citizenship with internationalizing curriculum. The study goes beyond existing scholarship on cosmopolitanism to suggest (c) students' local identities should be privileged before international contexts, a counter-intuitive understanding of cosmopolitanism.	**Jacquelyn CHAPPEL**, Kapiolani Community College, USA, jacquelyn.chappel@gmail.com
2.3E - 2 – 112	One Piece Museum: A Taiwanese Museum-school Collaboration Program of Plaster Replicas from the Metropolitan Museum of Art, USA (112)	This paper examines strategies of curriculum development of a museum-school collaboration program, One Piece Museum, in which the Museum of National Taipei University of Education utilized plaster replicas of European medieval and Renaissance sculptures, gathered from the Metropolitan Museum of Art, to facilitate learning and instruction across multiple disciplines of seven schools in New Taipei City, Taiwan. As this program's coordinator, I conducted a participatory action research in order to answer these questions: in what way do museum professionals and teachers of this program collectively develop curriculum for each school? What and how students could learn through such a curriculum? This paper adopt Arjun Appadurai's (1990) theory of five dimensions of global cultural flow to better understand the meaning behind the process of gathering these plaster replicas. In terms of curriculum development and students' learning, we found that two strategies of cultural analogy, concerned with students' identity construction and learning about stories of plaster replicas (i.e. treasures of Western civilization) and corresponding elements of Taiwanese society and history, were most helpful in terms of cultivating students as global citizens and Taiwanese ones. These strategies are especially critical for the less advanced societies because very often people of the less advanced may sacrifice their subjectivity for learning about cultural objects from the more advanced.	**Chien-Chen KUNG**, National Taipei University, Taiwan, cck102007@hotmail.com
2.3E - 3 - 47	Learning outcomes of short-term study abroad courses and longitudinal impacts on students: Case study (47)	The faculty-led short-term study abroad (SSA) program is a novel pedagogical format in higher education, and empirical evidence on students' learning outcomes is still scarce. Substantial attention has been given to students' foreign language competence and intercultural understanding, but more investigation from a broader perspective is necessary to provide	**Yusuke SAKURAI**, The University of Tokyo, Japan, sakurai@g.ecc.u-tokyo.ac.jp

		additional insights. Moreover, the longitudinal impacts of SSA courses on students' learning and development have not been extensively researched. Therefore, using an interpretative phenomenological analysis approach, this study undertook interview-based investigation of students' perceptions of the learning outcomes and longitudinal impacts of SSA courses on their development. The study consisted of two rounds of interviews with Japanese undergraduate students who had taken part in an SSA. The results presented four major categories of learning outcomes: global perspective, academic knowledge, personal development, and generic skill. Many accounts of leaning outcomes in the first interviews were consistent with prior findings. In the second-wave interviews, the students often highlighted the development of their peer networks, both global and local, via online communication platforms and even international travel. Academic knowledge which they gained during the course was sometimes mentioned in the second interviews, but it was not often recounted as influential on their longitudinal development. This study also contributed to the knowledge that relational development may have the most salient longitudinal impacts on students. This paper emphasises the necessity of refining the structure of SSA learning goals and considering how these courses can be more beneficial for students.	
2.3E - 4 - 194	Using Conversation Analysis to Improve Trust in an International School	Collegial trust is important when developing school curriculum. However, a transient international school faculty makes trust difficult to establish due to insufficient time. The researcher questioned, "How can trust be developed from a single conversation?" He investigated this question using a protocol driven professional conversation. In this case study, seven teachers participated a Fine Tuning Protocol (FTP) and their aim was to support and critique a colleague's curriculum unit. This FTP session was videoed and transcribed using Conversational Analysis (CA) methods. The CA data was coded to determine categories and findings were triangulated with participant interviews to establish themes. These findings were connected to trust by the Facets of Trust conceptual framework (Tschanen Moren, 2009, 2014). Conclusion from this analysis indicated that a conversation can grow trust through "artificial benevolence" created by protocol conditions and facilitator's directions. Furthermore, conversational style may be a consideration when facilitating protocol driven discussions.	**Ng MARLON**, Education University of Hong Kong, Hong Kong, s1111025@s.eduhk.hk

Literacy in Immigrant and Refugee Students			B3-LP-05
2.3F	**Chair: Joanna MADALIŃSKA-MICHALAK**, University of Warsaw, Poland, j.madalinska@uw.edu.pl,		
2.3F - 1 - 143	Acculturative and Linguistic Experiences of Syrian Refugees in the U.S.: Preliminary Findings	According to the United Nations High Commission for Refugees (UNHCR), there are over 65 million forcibly displaced people worldwide (UNHCR, 2016). the total number of refugees from all nations continues to increase with Syrian refugees being among the top ten groups entering the United States (Migration Policy Institute, 2016). The U.S. received 10,000 Syrian refugees in 2016 alone with little known about their acculturation and language learning experiences, struggles, and other needs. This presentation highlights preliminary findings from a mixed method research study conducted in various parts of the U.S. and examines factors related to the adjustment of these refugees.	**Amany HABIB**, University of West Florida, USA, ahabib@uwf.edu; **William EVANS**, University of West Florida, USA, wevans@uwf.edu
2.3F - 2 - 153	Family language policies in relation to the heritage language maintenance among transnational U.S. Korean families in the era of globalization	Although most immigrant youth of today in the U.S. are able to maintain close transnational ties with their country of origin due to globalization and digital technologies, assimilationist views toward language hinder the continued development of transnational youth's heritage language that is not English. Especially within the U.S. Korean immigrant community, language shift to English has accelerated at a faster rate than any other immigrant group (Shin, 2005). Korean immigrant families in the U.S. have maintained strong transnational ties to Korea, often traveling back and forth. I will explore transnational Korean families' language policies in relation to the heritage language maintenance through these research questions using qualitative research method; (1) What do Korean transnational family language policies look like? (2) What are relationships between family language policies and heritage language maintenance? I found out that Korean families build their own home language policies and maintain their heritage language in different ways. Although most of them are interested in heritage language, their language policies are not reflected on macro level compared to their English education. However, their efforts are limited in a dominant level despite of their willingness to maintain heritage language. However, their family language policies have been supported by their digital transnational ties such as Korean media, social network service(SNS), and transnational messenger service. When transnational youth use these transnational mediums, these give more motivation to maintain heritage language. This research can allow us to understand transnational Korean families' language policies and find a way to maintain heritage language effectively.	**Hyesun KIM**, University of Utah, USA, aruwa97@gmail.com
2.3F - 3 - 81	Connecting the two language solitudes: English and French college teachers' collaborative efforts to support allophone students' bilingual learning	The presentation describes some findings of a three-year collaborative research project with three French and English L2 (ESL) teachers who offer "remedial" classes designed to support underachieved students' bilingual learning before entering the regular pre-university college program (or known as Cégep in Quebec, Canada). The study seeks to explore how purposeful curricular collaborations between French and ESL teachers, in using plurilingual and multiliteracies pedagogies, facilitate allophone immigrant students (who speak neither French nor English at home) in learning both official languages (Castellotti & Moore, 2010; Cummins & Early, 2011). First year's data revealed some fundamental differences in the French and English teachers' views toward language and literacy. We used Janks' (2010) interdependent model of literacy orientations (i.e., access, design, domination, and diversity) to identify different curricular foci in both subjects. We found an imbalance weighted towards access in the French remedial classes; disproportionate efforts were put in students' mastery of the language features and grammatical accuracy. While English classes were more inclusive of students' diverse	**Sunny Man Chu LAU**, Bishop's University, Canada, sunny.lau@ubishops.ca; slau@ubishops.ca

languages and backgrounds (i.e., diversity), they often lacked clear scaffolding and explicit language learning goals (i.e., access). The bimonthly research meetings allowed us to review ongoing data in light of current literature and to share some best practices and identify areas for improvement pertaining to these two literacy orientations. I will also report some attempts to include the focuses on domination (i.e., critical explorations of power relations and dominate values embedded in texts under study) and design (i.e., inclusion of multimodal resources for meaning making).

International Multimodal Pedagogies for Critical Learning		B2-LP-13
2.3G	**Chair: Charles L. SLATER,** California State University Long Beach, USA, Charles.Slater@csulb.edu	
2.3G - 1 - 114	Digital storytelling supporting students' learning towards active knowledge creation and 21st century skills	The presentation describes how Digital storytelling (DST) was implemented in Chinese and Finnish classes and how this pedagogical method supported students' Math learning and also promoted 21st century skills. Digital stories are student-generated videos that can consist of single or multiple events in curriculum-related topics or other themes for students' learning. Students worked in groups when designing videos, inquired knowledge for their topics, filmed, edited and shared their videos with other peer groups. They also gave feedback and comments to others' presentations. Students were 10-11 years old students in 5th grade in both countries. Students evaluated their learning and working processes in pre- and post-questionnaires. They also reported their daily-based learning experiences. Researchers observed and interviewed students and teachers. Based on the study, learning with the DST method guided students towards active knowledge creation. They learned new knowledge about math but also how math relates to everyday life. They acquired new ICT skills and in addition, how to find new information from books or the Internet. Students also learned how to work in groups with their classmates and how to work together for producing new ideas. Students' assessed that it was fun to do tasks that relate to DST and that they worked very hard during the lessons in different phases of the DST processes. Teachers highly agreed with students' experiences and praised students' increased motivation and engagement in their learning. The findings of the study are very encouraging that DST can provide students with 21st century skills	**Hannele NIEMI**, University of Helsinki, Finland, hannele.niemi@helsinki.fi; **Jenny NIU**, University of Helsinki, Finland, shuanghongjenny.niu@helsinki.fi; **Marianna VIVITSOU**, University of Helsinki, Finland, marianna.vivitsou@helsinki.fi
2.3G - 2 - 106	New Literacies and Global Education: Video Production in Teacher Education as a Critical Digital Literacy Practice	This paper reports on the results from a two-year, funded qualitative inquiry into video production as a critical digital literacy practice in teacher education. Critical digital literacy is defined as the knowledge, skills, and dispositions that enable one to critically read and create multimedial texts. This study considers how video production can be integrated into elementary teacher education to engage difference and critical perspectives across the elementary school curriculum. It also examines the degree to which hands-on experiences making videos as part of a collaborative curriculum design project creates opportunities for teachers to expand their notion of literacy beyond print texts toward New Literacies perspectives. At the same time, teacher candidates learn about the potential of video production and online sharing as a rich site for intercultural exchange. Findings indicate student teachers find video making much easier, enjoyable, and motivating than first imagined. They view the multimodal nature of video as a powerful new pathway to literacy for all learners, especially those struggling with traditional literacy skills in their first or foreign language. Participants suggest video production opens up new pedagogical and intercultural possibilities, including the potential to interact with classrooms around the globe. The next stage in this research looks at how Canadian student teachers might develop	**Diane Watt**, University of Ottawa, Canada, dwatt@uottawa.ca

		global perspectives through curriculum design projects involving video, in collaboration with teacher candidates in other countries.	
2.3G - 3 - 52	Impact of Innovative Pedagogical Interventions for Deep Learning: A Case Study of an Intercultural Module in a Non-traditional Tertiary Classroom	This paper critically analyses how visible teaching and deep learning are achieved through the use of innovative pedagogical interventions in a nontraditional classroom module within a residential college in an Asian university (Hattie, 2012). The module offered students an inter-disciplinary and interactive platform that connected community development and intercultural theories to grounded practices through classroom discussions and field visits. A multimodal method of inquiry was used to explore the concepts and issues related to community development, particularly in marginalised communities, including women and migrant workers, in India and Singapore. Moving beyond the traditional classroom model, students immersed in a cross-cultural setting, expanded their intellectual horizons and broadened their cultural understanding through the use of engagement with culture and continual reflection on intercultural experiences (Paige & Vande Berg, 2012). Grounded in empirical evidence from students' work – reflective learning journals, module blog, photo reflection essays and structured debriefs – the study systematically analysed the impact of the innovative pedagogical practices on the learning outcomes through a mixed method case study research design. The paper also discusses the results of the survey analysis of the students' feedback at different stages of the module. The findings highlight how visible teaching, using deliberate interventions, has positively impacted deep learning, especially in broadening of perspectives to critically assess community development issues, developing a deeper intercultural understanding, and shifting of mindsets. It demonstrates how intentional pedagogical interventions inform best practices in teaching and learning in the contemporary educational landscape for diverse learning communities.	**Soon Fen WONG**, National University of Singapore, Singapore, rc3wsf@nus.edu.sg; **Kankana MUKHOPADHYAY**, National University of Singapore, Singapore, kankana.m@nus.edu.sg
2.3G - 4 - 29	A Longitudinal Study of Children's Multiliteracy Practices in Out-of-School Settings	Research has shown that children are engaging with multiliteracy practices outside of school. Digital devices are commonplace in contemporary children's lives at home: for play, entertainment, learning, and communication. Rapid changes in technology inevitably impact children's literacy practices at home and in school. Few longitudinal comparative multiliteracy studies have followed children from preschool to elementary school age. This longitudinal study builds on findings from my doctoral research, a comparative study of 11 Canadian and Australian preschool children's multiliteracy practices at home and in out-of-school settings. The preschoolers who participated in my doctoral study are now in elementary school (aged 8 to 10). This follow-up study aims to document and analyze the ways in which children from diverse cultural and socioeconomic backgrounds engage in multiliteracy practices in out-of-school settings. Data sources include informal interviews with children and parents, field notes, and artifacts and documentation of children's various home literacy practices. The study is informed by complexity thinking and Green's three-dimensional model of literacy. Preliminary findings suggest that elementary-aged children have clear distinctions and separations between home and school literacy practices.	**Suzanna WONG**, University of Alberta, Canada, suzannaw@ualberta.ca
2.3G - 5 - 202	Learning Environmental Protection Issues by Visual Art	Visual art needs to learn in the social environment of its life, Social issues have the characteristics with relevance, controversial and exploratory that conform to the education orientation of visual arts. Select social issues that are suitable for attention may become an important channel to realize the function of visual arts education. By selecting topic-based teaching program that linking students' life, in line with the trend of the times and the needs of	**Jinghan CAO**, Zhejiang Normal University, China, 415597245@qq.com; **Danxu XU**, Zhejiang Normal University, China, 596738616@qq.com

		students, into the new form of contemporary art and interviews students with meaningful learning in an interdisciplinary way. While students learn the art knowledge, strengthen links with the community, observing life from the perspective of the visual arts, caring social, thinking and expressing their views on the issues, so as to foster creativity and critical thinking.	

Keynote Speech 5

14:30-15:10	**Keynote Speech 5** *Re-Forming, Re-Imaging, Re-Newing: Transforming Teaching and Learning for the 31st Century and Beyond* Professor A. Lin GOODWIN	C-LP-11
15:10-15:30	HKERA Annual General Meeting	C-LP-11
	Afternoon Tea Break	Outside area of D1-LP-08

HKERA Featured Sympoisum 2

15:30--17:00	*The Waste Management and Recycling Education in Taiwan* **Chair:** Professor Chi-kin John LEE, The Education University of Hong Kong, Hong Kong **Speakers:** Professor Tzu-chau CHANG, National Taiwan Normal University, Taiwan Professor Chi-kin John LEE, The Education University of Hong Kong, Hong Kong **Language:** English **Abstract:** Taiwan has implemented waste management and recycling education in schools since 1980s. Its great achievement has been recognized by higher recycle rate among other developed nations of the world reported by Wall Street Journal in 2016. This paper reviews the projects and policies of Environmental Education to investigate their impacts on school waste management and recycling education in Taiwan. These influential projects include Green School Partnership Network Project, Sustainable Campus Project, Environmental Protection School Award, and National Environmental Education Award, and the important policies are 1-9 grade National Curriculum Framework, Environmental Education Act, and 1-12 grade National Curriculum Framework. In addition these projects and policies in school settings, two crucial policies for societies, to keep trash off the ground and organize trash pick-up times and locations in 1996, and the Per Bag Trash Collection Fee Policy in 2000, are reviewed too. The study finds the development of waste management and recycling education consists of stages: school yard cleaning activities, garbage classification and recycling, environmental management of school, curriculum and teaching, and practical practices in daily lives. The recycling education was initiated by dealing with daily issue of garbage disposal, responded to global environmental protection trend, built a comprehensive project of garbage disposal project, developed teaching modules, infused into school curriculum framework, and finally implemented in daily life. Based on the reviews and discussions, the study concludes a set of elements of waste management and recycling education of schools: relevant to daily life and achievable goals; following a global trend of environmental education; systematic operation and whole school approach; infusing into school curriculum and learning; and thinking about responsibility and sustainable development. The study also proposes a strategy for waste management and recycling education in schools, which consists of offering incentives such as reducing costs of waste disposal, encouraging learning by doing through activities, building networks to share and promote recycling education, infusing into school curriculum, and recognition with national Environmental Education Awards for systemic operation and whole school approach of recycling education. Key Words: Recycling Education, Environmental Education, Environmental Education Act, Green School Partnership Network, Sustainable Campus Project	D1-LP-03

WERA Invited Symposium			B3-P-12
Reference Code	**Presentation Title**	**Presenter(s) / Author(s)**	**Chair/Discussant(s)**
15:30-17:00	Making Accessible Longitudinal Administrative Data Worldwide—Working Guidelines to Support Data Producers and Users	**Felice J. LEVINE,** American Education Research Association (AERA), USA (Presenter: Setting the Stage -Opportunities and Challenges in Fostering Data Access and Use) **Stéphan VINCENT-LANCRIN,** Organisation for Economic Co-operation and Development, France (Presenter: Potential Guidelines as a Framework- Expanding Data Access Aligned with Secure Use)	**Chair:** **Carolyn D. HERRINGTON,** Florida State University, USA, CHerrington@FSU.EDU **Discussants:** **Mustafa Yunus ERYAMAN**, Canakkale Onsekiz Mart University, Turkey, eryaman@comu.edu.tr **Wataru NAKAZAWA ,** Osaka University, Japan, wnakazawa@hus.osaka-u.ac.jp **Barbara SCHNEIDER,** Michigan State University, USA, bschneid@msu.edu;

In recent years, education leaders and scholars in many countries have recognized that longitudinal administrative data systems provide an opportunity to advance knowledge about education and learning from early education through the workforce. The quality of these information systems is improving, and the technology is available to provide for safe and secure access and use. This symposium presents draft international guidelines jointly being developed by the Organisation for Economic Co-operation and Development (OECD) and the American Educational Research Association (AERA). The guidelines and a forthcoming report build upon a conference of 40 data providers and users from 13 countries. This symposium is part of a further effort to address the opportunities and challenges and share principles and standards for use of longitudinal administrative systems. The aim of the symposium is not just to present this work but to encourage feedback worldwide so that the final product will be of maximum benefit and use to diverse stakeholders.

Parallel Session 2.4	15:30-17:00
HKERA International Conference Paper Presentation	**15:30-17:00**
Higher and Teacher Education	D4-G-05B

2.4A - 1 - 2206	Orienting Beginning Teachers' Critical Thinking in Solving Real-Life Classroom Management Cases		English
Author(s)	**Gwendoline QUEK,** National Institute of Education, Singapore **Qiyun WANG,** National Institute of Education, Nanyang Technological University, Singapore		

Beginning teachers were generally unprepared to solve classroom management problems given their limited classroom teaching experience, limited encounters with classroom management issues and limited classroom interaction with diverse students in the formal school context. Moreover, classroom management is itself an ill-defined and ill-structured problem from literature (Choi & Lee, 2009). To explore the teachers' critical thinking for classroom management, this paper explores 22 teachers' engagement in critical thinking in solving online classroom management cases. These teachers deliberated on classroom cases and learnt from multiple perspectives by paying attention to their peers' contribution, evaluating their ideas and reflecting on their decision-making.   An online case-based learning (CBL) was designed as an instructional strategy to engage teachers in initial self-directed analysis of cases and collaborative construction of possible solutions with peers.   Their online scripts were coded qualitatively using Perkins and Murphy's model (2006).   This coding framework was adapted for the current online learning environment (i.e. Wikis) that was facilitated by the researcher. These teachers' engagement types in critical thinking were mainly Clarification, Assessment, and Inference, which indicated low, middle, high mental notes respectively. Finding also showed that there was a consistent trend for teachers to discuss frequently at a low mental mode-clarification but not at the high mental mode- making inference that could reflect the teacher's classroom management knowledge base and readiness to solve problems instead of being more inclined towards clarifying a problem with their peers. To better support the beginning teachers' engagement in critical thinking, further work   in the instructional design of CBL would   be needed to enhance its features to promote teachers' higher mental mode in problem solving.

Higher and Teacher Education		D4-G-05B
2.4A - 2 - 1096	The Effects of Different Types of Supports on Attitudes towards and Participations in Volunteering Activities	English

Author(s)	**Saetbyul KIM,** Seoul National University, South Korea, South Korea **Seonyoung LEE,** Seoul National University, South Korea, South Korea **Jongho SHIN,** South Korea

This research tried to examine how a social factor such as one's perceived 'social supports', and 'supports towards volunteering activities', affect his or her attitudes towards and participations in volunteer works. Although many positive impacts of volunteering activities on one's personal development, self-related constructs, social relationships and etc. have been identified through various researches, the question of how they can be fostered has not been sufficiently answered yet. This study suggests that individuals' volunteering activities can be promoted through 'supports' gained from their interactions with others in the sphere of social relationships, and that the level of engagement varies by different ranges of these supports.

The survey, involving 420 university students in Korea, revealed that individuals' perceived supports towards volunteering activities have strong influence on both their attitudes towards and participations in volunteer works, whereas social supports can only affect their attitudes. The results indicate that the degree to which individuals are influenced depends on the types of supports.

The detailed analysis of statistical results revealed that social supports from parents and significant third persons (e.g. lovers, mentors and etc.) were strong influential factors, whereas social supports from friends did not show any positive correlations. The analysis also showed that supports towards volunteering activities from parents and friends were all statistically relevant to individuals' attitudes towards volunteering activities and especially when these supports were given by people tied to volunteer activities such as volunteer managers, recipients, and fellow volunteers, the correlations were stronger, leading to participations in volunteering activities.

Higher and Teacher Education		D4-G-05B
2.4A - 3 - 3358	Designing a Pedagogical Corpus to Support Continuous Development of EFL Teachers' English for Teaching Purposes	English

Author(s)	**Lu-Chun LIN,** National Chiao Tung University, Taiwan

Traditional teacher education for English as a foreign language (EFL) teachers often focuses on developing pre-service teachers' knowledge and competence related to English linguistics and pedagogy. One neglected area is EFL teachers' need for continuous language development in English, whether it is English for general purpose or English for the specific pedagogic purpose. Previous research has demonstrated that both professional preparation and language proficiency are key components of quality and effective language teacher education. Inspired by Widdowson's (2003) and Braun's (2007) call for "pedagogic mediation of corpora", the present study drew on corpus- and discourse-based approaches to design a multimedia corpus that is pedagogically relevant and viable to support K-12 EFL teachers' continuous and autonomous English and professional development.

Classroom discourse of collected online ELT videos were transcribed, analyzed, and pedagogically annotated to construct an English-for-teaching corpus is being constructed. The primary goal is to provide an open access to this multimedia ELT corpus which demonstrates core English-language skills for teaching and supports K-12 EFL teachers' continuous and autonomous language and professional development. This presentation will focus on the most prevalent classroom discourse, i.e. teacher questioning and feedback to students' responses, to demonstrate how teacher questioning is woven into language instruction and how it might influence subsequent student responses. We believe that "condensed exposure" (Gabrielatos, 2005, p.10) afforded in the pedagogical corpus will heighten teachers' awareness of classroom language patterns and increase the amount of teacher English input. By providing EFL teachers with corpus-informed professional support in their classroom discourse, teachers will be able to form a new understanding of the nature of EFL teaching and learning, be more aware of a variety of options that could promote students' learning, and be better prepared to engage students in the active learning process.

Curriculum Instruction Assessment and Policy		D4-G-05A
2.4B - 1 - 1132	The Construction of Curriculum Under the Culture Governance	English

Author(s)	**Yahui CHANG,** Shaanxi Normal University, China

In the process of urbanization, the urban cultural adaptation of new citizens' children is not only a social problem, but also has a deep influence on the reform of schooling. Facing this problem, teacher education programs around the country are seeking to address the problem. The teacher education programs are responding to challenged through recognizing that the school curriculum is a culture symbol that is not only the means of governing the social order but also the product of urban cultures that are trying to reconstruct the cultural principles and values of community as new populations move into the cities. In China, the sense of collective belonging and values of society embodied in urban life become central in the governing principles of the curriculum of what is called in China, "land-lost farmers".

This paper is to discuss research done in middle school of S province. It entails analysis of a survey on the students who attend this school to consider the rural areas and cultural values of the farming community from which they have moved from. The survey is to identify family education style and the structure of teaching staff in terms of potential conflict or harmony of communal values. After that, the school curriculum is examined and its revision that is introduced to teaching staff and the teachers' training are studied. The intent is to make "Subprime socialization" as the focus. Further the efforts for collaboration are examined that involved integrating central concepts in the teacher education curriculum: "collaboration" as the tenet of family upbringing refactoring, compiling "civil reading" as the local curriculum that shape the cultural character of education. Further, the subprime socialization analysis will also be related to recruiting new teachers. The effect of the revision in teacher education course will also be examined. The research is to explore the path proposed in teacher education for the urban cultural adaptation of new citizens' children as their life taste and ways of consumption are being reshaped. The research related to how to build a support system of education for "the land-lost farmer".

Curriculum Instruction Assessment and Policy		D4-G-05A
2.4B - 2 - 2203	Other Learning Experiences (OLE) in the New Senior Secondary Curriculum: A Survey Study investigating the impact of OLE on students' approaches to learning in Hong Kong schools	English
Author(s)	**Yam Wing Stephen YIP,** The Education University of Hong Kong, Hong Kong	

The New Senior Secondary (NSS) curriculum was launched among Hong Kong schools in 2009-10 school year. Under the NSS Curriculum framework, Other Learning Experiences (OLE), which requires students to participate in five areas of OLE, namely Moral and Civic Education, Community Service, Career-related Experiences, Aesthetic Development and Physical Development, is one of the three major components that complement the study of the four core subjects and 2-3 elective subjects for the whole person development of students. The study, mainly employing surveys together with mixed methods, aims to explore the impact of OLE, as a key curriculum component in the NSS curriculum, on students' approaches to learning. In 2010-11, two case study schools, with different features of OLE and with differing background characteristics were selected for a survey on students' approaches to learning over two school years. The survey, namely 'Studying at School Inventory' (SASI) of 352 S4 students provides evidence of the impact of OLE with regard to learning approaches such as enhancing deep learning and effort. Although the results could not of themselves provide a warrant for a generalizable positive impact of OLE on students' approaches to learning and learning habits, it is reasonable to conclude that OLE has had a positive influence as indicated in policy documents, at the two case schools and in certain school contexts (e.g. year group, school culture, OLE leadership) and with regard to specific OLE component contexts (e.g. activity type, student motivation, pedagogy). The study illuminates the further study of OLE.

Curriculum Instruction Assessment and Policy		D4-G-05A
2.4B - 3 - 2216	A Sequential Higher-Order Latent Structur Model for Hierarchical Attributes in Cognitive Diagnosis	English
Author(s)	**Peida ZHAN,** Beijing Normal University, China **Hong JIAO,** University of Maryland, College Park, United States	

This paper proposed a sequential higher-order latent structure model (LSM) for hierarchical attributes. Unlike the regular higher-order LSM, by taking the sequential process/model into account, the proposed LSM is able to account for different attribute hierarchies and simultaneously retains the advantages of the higher-order latent structure. The feasibility of the proposed LSM is examined using simulated data. An empirical example was used to illustrate the applications and advantages of the proposed LSM.

Education Leadership and Management		D4-LP-05
2.4C - 1 - 3382	城乡教师流动改革的多维审视与路向选择	普通話
Author(s)	于海波, 东北师范大学, 中國	

城乡教师流动是促进城乡教育均衡发展的重要改革措施。20 年来，改革实践积累了丰富的经验，理论研究也取得了丰硕的成果。为了实践和理论质量的进一步提升，有必要对城乡教师流动改革进行深层的追问和反思，而方法论、价值论和"教育学立场"为我们的反思提供了恰切的视角和丰富的启示。

Education Leadership and Management		D4-LP-05
2.4C - 2 - 3385	臺灣華語文教育機構評鑑機制執行現況之分析	普通話
Author(s)	許宗仁, 國立臺灣師範大學, Taiwan	

華語文教育有別於傳統中文教育，主要服務對象為母語非中文之人士，臺灣於 2013 年起藉由推動「邁向華語文教育產業輸出大國八年計畫(2013-2020)」方案，建構華語文教育品質管理機制，以確保教育品質及因應全球市場遽增之需求。爰此，本研究旨在探討臺灣華語文教育機構之評鑑機制及其實施情形，主要透過文件分析法，並輔以文獻探討，首先闡述臺灣華語文教育機構現況，其次說明華語文教育機構之評鑑機制與實施現況，接著分析可能遭遇之問題，最後提出可行之解決方案，以期對臺灣華語文教育機構評鑑機制有一整體性之瞭解。

Curriculum Instruction Assessment and Policy		D4-LP-05
2.4C - 3 - 3364	实践导向课程的设置与专业学位研究生培养目标的实现——以文物与博物馆硕士专业学位为例	普通話
Author(s)	徐玉珍, 复旦大学高等教育研究所, China	

国内学者一致认同专业性与职业性是专业学位研究生教育的基本特性，应体现在学生培养的各环节。然而专业性、职业性与人才培养目标实现之间的关系缺乏实证考察。本文聚焦于课程设置，分析 2014 年全国 28 个文物与博物馆专业硕士学位授权点的实践导向类课程设置和学生就业结果。分析结果表明文博专业硕士学位点的实践导向类课程设置可分为高专业性—高职业性、高专业性—低职业性、低专业性—低职业性三大类型。能提供高专业性-高职业性的实践类课程的学位授予点仅为少数，但更有利于培养面向市场需求的高层次、专业型人才，毕业生对口就业率最高。

HKERA International Conference Symposium		D1-LP-07
2.4E - SY1004	Race and Policing in the USA: A Local Model for a National Problem	English
Chair	**Sheryl Davis,** San Francisco Human Rights Commission, United States	
Author(s)	(4) **Sneh Rao,** San Francisco Human Rights Commission, United States (5) **Lisa De La Rue,** Univeristy of San Francisco (6) **De'Anthony Jones,** Collective Impact	

In light of recent police shootings of unarmed African American men and boys across the US, a national conversation on race and policing has taken shape. Federal, state and local governments have begun working with communities of color in order to address concerns around racial bias in policing. This symposium will explore this national conversation through a local model in San Francisco. The model consists of a partnership between the San Francisco Human Rights Commission, Police Department, University of San Francisco, and Collective Impact, a non-profit serving low-income youth.

For too many youth, social barriers impede their ability to access and fully participate in the educational process. This is especially true for African American boys and girls, who are not only challenged with navigating structural barriers, but these structural barriers are often accompanied by safety concerns, including unpredictable interactions with law enforcement. While these realities are not new, the approaches we take to supporting our young people have evolved. The present symposium will examine a community and university partnership. Participants will discuss challenges and successes in developing programs that support the academic and social and emotional needs of African American youth in the San Francisco Bay Area.

WERA Focal Meeting Paper Presentation			15:30-17:00
Reference Code	**Presentation Title**	**Abstract**	**Presenter(s) / Author(s)**
Global Citizenship: Method and Epistemology			**D3-P-05**
2.4G	**Chair: Ingrid Gogolin,** Universität Hamburg, Germany, Gogolin@uni-hamburg.de		
2.4G - 1 - 182	World Happiness and the Equalization of Socio-Economic Systems: Infrastructures to Create and Sustain Hope and Justice within Eastern and Western Paradigms	This paper presents a pedagogy of happiness from a critical postmodern perspective, and it examines how [un]happiness is influenced by social, political, historical, and economic systems within Western and Eastern paradigms. We question whether social justice creates opportunities for happiness, and how the constitutional pursuit of happiness guarantees its effectiveness and applicability. Subsequently, should education promote curricular and pedagogical programs that facilitate the foundational means of happiness and how to live healthier lives? Hence, this theoretical, mini-quantitative and qualitative pilot case study analyzes the influences of sustainable socioeconomic structures, indicating that happiness is subjective, whereas unhappiness is objective. This study analyzes how the fulfillment of basic existential needs and access to quality education can guarantee critical, authentic, and hopeful opportunities for a happier and heathier life. Sustainable social systems that are reinforced by well-educated and empowered citizens are integral to the development of healthier democracy and are the underpinning infrastructures for happiness to flourish and thrive. Fundamentally, quality education through a pedagogy of happiness and social justice can ensure and facilitate authentic opportunities for constructive student outcomes. It is by promoting a fair playing field for all citizens that justice and happiness will prevail. Ultimately healthier societies are a natural consequence of social justice.	**Roxanne RODRIGUEZ**, University of Texas, USA, rrodriguez16@miners.utep.edu; **Cesar ROSSATTO,** University of Texas, USA, crossatto@utep.edu
2.4G - 2 - 57	Global Citizenship Education in "hard spaces": ethics, methodologies, and sensitivities	Departing from my work on sensitivities and around Holliday's (1999) small cultures, and rooted in a reconsideration of de Sousa Santos concept of epistemologies of the South (2012), I will present preliminary reflections on grounded theory around Global Citizenship Education (GCE) work in hard spaces (a concept problematized in the paper) in the Global South, based on research being conducted for a larger book project. In four years of teaching the core PhD	**Lauren MISIASZEK**, Beijing Normal University, China, limisiaszek@gmail.com

		course, Comparative Education Research Methodologies, to international students in China, I have not seen work that confronts, responds to, and/or resonates with the realities of my students' and my research contexts, nor responds to how they can do work on GCE in those contexts (which they and I are doing). The study is rooted in critical and feminist methodological and analytical frameworks and based on case studies of students/academics/practitioners doing GCE research in these contexts (country contexts will be anonymous due to sensitivity). Findings show 1) the need for new ways to more "authentically" come to GCE from within these spaces; 2) the doubt for researchers around UNESCO's undoubtedly and purposefully aspirational learning outcomes; 3) the role of performativity in these discourses. The work addresses major gaps in GCE and Comparative Education literature, contributing to the discourse on the politics of equity and inclusion in GCE research, particularly of GCE researchers in hard contexts, which is fundamental for the future of "authentic," complex GCE work that combats theoretical and practical "blindness" (de Sousa Santos, 2012, p. 49)	
2.4G - 3 - 46	Digital recourses for teaching citizenship education - an analysis of international policy framework	Digitalisation has brought about new conditions for citizenship education of young people globally. Competing discourses represent digitalisation of education as both risk and celebration. Research about digital technologies in educational settings is reproducing an efficiency discourse and is not largely concerned with social issues such as citizenship education. Despite the fact that one of the main goals of education globally is to foster young people for democracy, the prerequisites and conditions for citizenship education set by digitalisation still needs deeper investigation by research. Frameworks for teachers' ICT competencies by organisations such as OECD and UNESCO function as policy documents, pointing out directions for teachers work and for countries policy development concerning ICT in education The aim of this study is to contribute with knowledge about the ways in which digital resources are related to teaching of citizenship education in such international frameworks for digital education. The theoretical departure is curriculum theory and discourse analysis is the methodological approach. The frameworks analyzed are: UNESCO ICT Competency Framework for Teachers (2011) and the OECD framework DigComp 2.0: The Digital Competence Framework for Citizens (2016) with supplement Proposal for a European Framework for the Digital Competence of Educators (DigCompEdu) (2007). Preliminary results indicate that several competing discourses are at work within the frameworks, constructing digital resources in different ways: as means within a lived democracy and as means for transmitting democratic knowledge, values and attitudes.	**Eva HULTIN**, Dalarna University, Sweden, ehu@du.se; **Matilda WIKLUND**, Örebro university, Sweden, matilda.wiklund@oru.se
2.4G - 4 - 54	Problematizing "Development": Comparative, Ecopedagogical Analysis of Education for Sustainable Development (ESD)	Education for Sustainable Development (ESD) emerged from Environmental Education (EE) models to focus teaching on how actions in the name of "development" negatively affect our environment and, in turn, negatively affects societies (socio-environmental) for students to understand how development needs to not cause current or future socio-environmental oppressions. However, ESD models have been increasingly taken over by the "development" framing of ESD within neoliberal economic models, rather than within economic justice models. Development is often taught non-contextually, singularly framed as Western development largely intensified by globalization from above. This article provides a critical analysis of reinventing environmental pedagogies for transformation with inclusivity of all the world's diverse societies and the balance for the rest of nature beyond humans. Rooted in critical theories and popular education movements in Latin American, through reinvention of Freirean Pedagogy, ecopedagogy is transformative teaching in which educators dialectically problem-pose the	**Gregery MISIASZEK**, Beijing Normal University (BNU), China, gmisiaszek@gmail.com

		politics of socio-environmental connections through local, global, and biocentric lenses. Ecopedagogues center the problem-posing questions "What is?", "For who?", and "Who defines?" how we teach what is "development" and its "sustainability". From two research projects' results, I argue the need for ecopedagogies within and upon environmental pedagogies for transformative praxis to save the planet.	
Teacher Education: World-Wide Comparison of Training Programs			**D3-P-01**
2.4H	<u>**Chair: Rosemarie MICHAELS,**</u> Dominican University of California, USA, rosemarie.michaels@dominican.edu		
2.4H - 1 - 138	Educating Teachers in USA and Finland: A Descriptive Look at Two Teacher Training Programs	In the United States, urban teacher residence (UTR) programs have emerged as an innovation for recruiting, preparing and retaining teachers for high-need urban schools. How to provide high quality education for all students has been a focal point in this discussion, especially how to prepare teachers for high-need urban schools. This is due to the fact that teachers in these areas are generally less experienced and have a higher turnover (see Ingersoll et al. 2012), while needing to serve a highly diverse student population. While UTR programs are seen as successful, there is no study conducted on how they compare with high-quality teacher training programs in other countries. In this study we closely examine two such programs: an UTR program at the University of California Los Angeles and the teacher training program at the University of Helsinki, Finland. Finland is chosen because based on international rankings, Finland is seen as a leader in K–12 education and the high quality teacher training program has been considered as the driving forces in this success (OECD 2017, Schwab 2017). With the help of content analysis, we examine similarities and differences of the steering documents of both programs, and answer following questions: How does the mission statement of the programs differ? How do the objectives of the programs as well as course contents differ? A table describing the similarities and differences is presented. The paper concludes with a broader discussion on steering documents regards to teacher preparation.	**Jia WANG**, University of California, USA, jwang@cresst.org; **Heidi HARJU-LUUKKAINEN,** University of Helsinki, Finland, heidi.harju@helsinki.fi
2.4H - 2 - 30	Comparative research on teachers' knowledge creation work activities: Multi-group structural equation modeling between Korea and U.S.	The current study revealed that transformational leadership, teachers' work engagement, and teachers' knowledge creation were significant antecedents of organizational knowledge creation, regardless of cultural orientations. Determining the factors which impede or promote dynamic knowledge creation is an important area of research (Van den Hooff & Ridder, 2004). Literature suggests that an innovative work climate (e.g., supportive learning culture) is the most influential determinant of knowledge creation (Sveiby & Simons, 2002). Several studies (e.g. Smith, Collins, & Clark, 2005; Somech & Drach-Zahavy, 2013) examining industrial organizations and academic institutions have found that an innovative climate plays a pivotal role in organizational performance and individual behaviors (e.g., productivity, job satisfaction, creativity, and innovation). One of the interesting findings from the current study was that the influence of a supportive learning culture was stronger for the U.S. group than the South Korean group. One of the possible interpretations may come from Hofstede's (1980) dimensions of national cultures. For example, U.S. society is defined as an indulgent, masculine society, whereas South Korea is considered a restraint and feminine society. In Korean society, it is a virtue to control one's desires and take care of other people' needs first. In this cultural context, pursuing monetary compensation or rewards and enjoying gratification may be seen as wrong; therefore, Korean teachers hold themselves back from using such opportunities even though those opportunities are provided by culture.	**Ji Hoon SONG**, HanYang University, Korea, psu.jihoonsong@gmail.com; **Jeon-Yi LEE**, HanYang University, Korea, jeonyilee@hanyang.ac.kr; **Yun Jeong RO**, HanYang University, Korea; **Jooho PARK**, HanYang University, Korea; **Yeong-mo JEONG**, Hanyang University, st5067@hanmail.net

| 2.4H - 3 - 80 | Japanese Teachers' Professional Development in the Nurturing Ground of Shokuin Shitsu | Sustaining beginning teachers has been one of the greatest challenges in countries such as the United State of America, Australia, and United Kingdom (Ingersoll, 2003; Killeavy, 2006; Manuel, 2003). In contrast, countries such as Japan has hardly any teachers leaving the profession: Only 1.35% of first-year teachers left the profession in 2006 (MEXT, 2008). Prior research suggested that one of the possible contributing factors to beginning teacher sustainment lies in Japan's teachers' room (shokuin shitsu), as they are nurtured daily at school sites in their professional growth to become a more competent teacher (Author, 2016). This presentation furthers the questions on professional development for non-beginning teachers: What are the required professional development activities for mid-career and veteran teachers in Japan? What is the role of the teachers' room for these experienced teachers as it pertains to their professional growth? Extensive literature review was conducted from government sources, including a case study prefecture on teacher professional development policies. In addition, data were collected from eight participants with substantial years of teaching experience in their professional career at junior high schools in Japan through interviews and observations, using Grounded theory method. The findings from this study indicated shokuin shitsu played a critical role not only for beginning teachers but for mid-career and veteran teachers' professional development. | **Ruth AHN**, California State Polytechnic University, USA, ruthahn@cpp.edu; **YASUKO SHIMOJIMA**, Tokyo Gakugei University, twiga_yasuko@yahoo.co.jp |
| 2.4H - 4 - 33 | Developing professional learning communities in International Baccalaureate (IB) schools in China: Challenges and opportunities | China is one of the forerunners in the worldwide expansion of International Baccalaureate (IB) schools. Improving student achievement through advanced school autonomy in IB school has been a need among China. The academic demands that the program puts higher requirements on both teachers and students. Under such circumstances, school leaders will face the difficult dilemma of consistency and continuity in running international schools like IB programs. There is an obvious gap between Mainland China professional development and the requirement of teachers in IB. With the widespread acknowledgment of the power of professional development, the norm in IB schools w to lead and develop a professional learning community (PLC) which provide a job environment with collective, shared values among teaching staff. Students' academic achievement and school autonomy are positively impacted by well-developed PLCs. Yet, few studies showed the positive relationship between IBDP and PLCs in China. This study aimed at exploring challenges and strategies in developing PLCs at four IBDP schools mainly in southern China. Analysis of teacher candidates' written reflections, coordinators and principals focused group interviews and classroom observations indicated students learning outcome and school cultural context has been well-developed by PLCs. Based on this study, we propose five dimensions for further research on developing PLC, namely, shared and supportive leadership, support conditions, collective learning and application, shared value and vision, and shared personal practice, positively affect teachers' commitment to students. | **Hui YUAN**, The Education University of Hong Kong, China, s1110876@s.eduhk.hk; **James KO**, The Education University of Hong Kong, China, jamesko@eduhk.hk |

Laying the Foundations for a Global Learning Equity Network			**D1-LP-06**
2.4K - 2	The foundations of GLEN: Developing a shared language	**Anne PARFITT**, Bath Spa University, United Kingdom, a.parfitt@bathspa.ac.uk; **Kate REYNOLDS,** Bath Spa University, United Kingdom, k.reynolds@bathspa.ac.uk	<u>Chair & Discussant:</u> **Kate REYNOLDS,** Bath Spa University, United Kingdom, k.reynolds@bathspa.ac.uk
	Linking teacher education with equity education: The case of the Education University of Hong Kong	**Celeste Y.M. YUEN**, the Education University of Hong Kong, Hong Kong, cymyuen@eduhk.hk; **Sylvia Y.F. TANG**, the Education University of Hong Kong, Hong, Kong, stang@eduhk.hk	
	Learning to teach for equity: How context mediates preservice teacher learning	**Jane ABBISS**, University of Canterbury, New Zealand, jane.abbiss@canterbury.ac.nz; **Letitia FICKEL**, University of Canterbury, New Zealand, letitia.fickel@canterbury.ac.nz	
	Building on the foundations: The next steps in the collaborative work of GLEN	**Jess HARRIS**, University of Newcastle, Australia, jess.harris@newcastle.edu.au; **John FISCHETTI,** University of Newcastle, Australia, j.fischetti@newcastle.edu.au	

Abstract

A substantial goal of teacher education research has been to engage in collaborative learning and develop a knowledge base around evidence of effective practice from around the globe. The fields of comparative and international education have long grappled with the challenges associated with such learning and the 'transfer' or 'borrowing' of ideas between contexts. Work in these fields illustrates how crucial the development of a deep understanding of the social, cultural, and political contexts in which educational policies and practices are situated is in order to share best practice more broadly. In this symposium, we report on the foundational work that has been undertaken to underpin the collaborative work of the Global Learning Equity Network (GLEN). Housed in the School of Education at the University of Newcastle, GLEN is developing a global set of frameworks to guide teacher educators in reframing their programmes around an international set of evidence-based principles. The premise is the interconnection of learning with the imperative of equity. The five proposed frameworks are simple questions to guide the development of new models of teacher preparation, including

- Where do children live?
- How and when do children learn?
- What should children know and be able to do as a result of schooling?
- Why is equity such a vital component of the common good?
- Who am I as a learning and equity leader?

Each has an emerging knowledge base to guide its development and, while the issues are currently addressed in international programmes of teacher education, the best practice evidence that is used in framing them is scattered. International collaborations by GLEN members will develop these frameworks into multiple domains. The aim of GLEN is to transform the models of teacher education to be part of a complete rethink about learning, teaching, schooling and leading change in light of the amazing knowledge base that now exists about human capacity. This process requires detailed understanding and careful navigation of the unique contexts and settings for each programme to understand how international institutions can rethink models of teacher education guided by the best practice and research in the world. Using detailed narratives from each setting to illustrate programme requirements, regulations and policy contexts, the four papers in this symposium show how researchers from Australia, England, Hong Kong and New Zealand have worked to develop and share rich contextual awareness of their approaches to initial teacher education. We argue that these understandings are pre-requisite for meaningful comparisons and the development of a global knowledge base about initial teacher education. We describe how working with this approach can provide a foundation for ongoing, effective collaborative work across institutional and national settings to support the sharing of practices to improve quality and equity in teacher education.

Parallel Session 2.5	17:00-18:30
HKERA International Conference Paper Presentation	**17:00-18:30**

Social Science Education	D3-LP-06
2.5A - 1 - 2227	Elite High Status Schools in Globalizing Circumstances: A Multi-Sited Global Ethnography of Schools in Barbados	English

Author(s)	**Cameron MCCARTHY,** University of Illinois at Urbana-Champaign, United States

My presentation will direct attention to a critical but neglected concern in the area of globalization studies: that is, the role of schooling—in this case elite secondary schools in the former British colony of Barbados—in transnational class formation and the preparation of highly-mobile school youth for globalizing futures. Specifically, I will report on some of the early findings related to a 5-year, multi-sited ethnographic study of two Barbadian elite secondary grammar schools (Old Cloisters and Ardent Arbors) and the way they are preparing young people for globalizing futures. Based on early findings derived from semi-structured interviews, document analysis, and policy evaluation, the central organizing claim of my research (at this early stage) is that the reproduction of transnational elites in the Barbadian schools is a complex and deeply conflicted process. As the post-independence Barbadian educational system strikes out a path of indigenization and national ownership of education away from a British colonial inheritance, it must contend with the powerful crosscurrents of the policy imperatives and pressures of NAFTA-defined globalization and the real existing circumstance that Barbadian young people are culturally orienting to the United States and Canada, immigrating in large numbers to pursue their professional futures in North America. The schools, Old Cloisters and Ardent Arbors (the former, an historically all-boys school going back to the 18th century and the latter, an all-girls school going back to the early 19th century) register this enormous transformative tension in the curricular choices of the student body versus official efforts at these schools to uphold illustrious school pasts and the indigenizing present. This institutional effort to uphold the past and the nationalist indigenizing present sharply conflicts with the revolution of rising expectations and ebullient global imaginations of school youth and their perception of the expanded professional options and opportunities that exceed the material capacity of Barbados' society and economy stimulated as they are by recruiting institutions from the United States and Canada that annually visit these secondary schools in the island peddling exotic job futures to Barbadian high school students.

Science and Environmental Technology	D3-LP-06
2.5A - 2 - 1125	An unconventional learning experience on environmental education in secondary school - a case study in Hong Kong	English

Author(s)	**Cheang CHI CHIU,** The Education University of Hong Kong, Hong Kong **Wu PUI YEE,** The Education University of Hong Kong, Hong Kong

Self-Contained Underwater Breathing Apparatus (SCUBA) diving is always regarded as a risky activity to be conducted as an extra-curricular activity in the schools of Hong Kong. However, it provides a golden opportunity for students to experience the marine nature and serves as an excellent pedagogical tool of field based learning on the environmental education. The presentation will report a case study of an international school in Hong Kong on how they utilize SCUBA diving as a tool to enhance their students' knowledge about ocean and to foster the pro-environmental attitude. The teachers of the school have developed a tailor-made curriculum using problem-based approach, articulating with the discussion of current local environmental issues on marine conservation. The students have been forming a team to join the annual global citizen-scientist programme, Reef Check, to contribute their effort in revealing the health of coral community system in Hong Kong. A mixed research method, which includes semi-structured interviews of teachers, current students and alumni, and the self-administered questionnaire for them, was adopted in the study to evaluate the ocean literacy and pro-environmental attitude of the students and the effectiveness of the programme. The difficulties faced by both the teachers and the students throughout the implementation period of the programme will be reported. The opportunity and the challenge to run such a programme in the local school will be discussed, which would provide significant insights to other local schools conducting similar field-based learning and teaching activities.

Higher and Teacher Education	D3-LP-06
2.5A - 3 - 1178	Acculturative strategies and career decision making of nonlocal Chinese	English

Author(s)	**Raysen CHEUNG**, Hong Kong Shue Yan University, Hong Kong **Qiuping JIN**, City University of Hong Kong , Hong Kong

This study serves as the first attempt to examine the impact of acculturative strategies on different aspects of career decision making of mainland students studying in universities in Hong Kong. Methodology 145 mainland students in one of the UGC-funded universities in HK were invited to take part into the study. They completed a questionnaire asking about their acculturative strategies, career decision making self-efficacy, career exploration and commitment. Three hierarchical regressions were performed to examine the impact of acculturative strategies on the three aspects of career decision making respectively. Results After controlling for gender, age and year of study, acculturative strategies significantly accounted for 30.4% of the variance in career decision making self-efficacy, with integration ($\beta= .28$, $p<. 01$)and marginalization ($\beta = -.30$, $p<. 01$)strategy being the significant predictors. They also significantly accounted for 18.3% of the variance in career exploration, with integration strategy being the significant predictor ($\beta= .40$, $p<. 01$). Finally, they significantly accounted for 3% of the variance in career commitment, with marginalization strategy being the significant predictor ($\beta = -.26$, $p<. 05$). Conclusion The results suggested that acculturative strategies impact various aspects of career decision making for non-local Chinese university students in HK. Different strategies, however, had different impact. It seemed that integration and marginalization strategy had more impact than the other two strategies. Also, different aspects of decision making were also impacted differently by the strategies. Decision making self-efficacy and exploration seemed to be more proximal outcome of strategies while commitment more distal. Implications of the results for career guidance and counseling for non-local students in Hong Kong will be discussed.

Higher and Teacher Education		D4-G-05B
2.5B - 1 - 1077	高等教育融入终身教育之路径探讨	普通話

Author(s)　郑宏，厦门大学教师发展中心，中国

摘要内容：联合国教科文组织发布的《教育 2030 行动框架》，明确了"全纳、公平、有质量和终身学习"的教育发展愿景，本文的目的在于探讨中国高等教育融入终身教育的方式，通过查阅分析文献发现，美国非传统意义上的学生已经超过传统的 18-22 岁的大学生，芬兰、俄罗斯高校的终身教育人数很多，因此得出以下结论：1.招生的申请制将逐渐取代考试选拔；2.学习年限将不再有明确的限定；3.网络教学、MOOC、SPOC 和混合式学习将取代传统的教学方法；4.校友可以长期甚至终身享受大学的服务。总之，高等教育要与终身学习接轨，亟需大学的理念、体制、教学、科研、课程等都进行重大的变革。

主要研究方法：文献法；

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Higher and Teacher Education		D4-G-05B
2.5B - 2 - 1078	应试教育的印记：重点大学学生自主学习策略的实证案例研究	普通話

Author(s)　牛新春，复旦大学，中国

高考作为中国大陆大学选拔最重要标准的一个严重后果是中学应试教育，学生缺乏自主学习能力的培养。基于部委直属 X 大学学生学业记录和跟踪调研，本研究考察应试教育的印记是否体现在学生的学习策略使用并影响其学业表现及城乡差异？差异比较和回归分析确认应试教育的印记在城乡学生中的体现，但在农村学生中更为明显。学生更重视复习备考策略而忽视平时学习，更多使用重复性策略而疏于整理消化和自我监测。即使考虑了家庭背景和中学学业准备，整理消化和自我监测学习策略的使用是学生学业表现以及农村学生表现劣势的显著影响因素。

Higher and Teacher Education		D4-G-05B
2.5B - 3 - 3390	教学反思：师范生教学实践知识习得的有效途径	普通話

Author(s)　张秀莲，广东第二师范学院，中國
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本文研究了将化学师范专业的《中学综合实践活动》、《化学教学技能训练》等系列课程改革为"反思性实践"课程，通过个人教学实践、同课异构、师生共同点评等教学改革环节，使师范生掌握各种反思的思维和方法，从反思中发现自己的问题，并能找到原因和改进的策略，对问题或现象背后的原因进行综合分析，通过持续的反思，积累个人化教学实践知识，将师范生培养成为反思型教师，提升了职前教育专业发展的针对性和实效性。

Secondary School Education		D3-P-05
2.5C - 1 - 1174	A Study on the Influence of Project-based Learning on Chemical Learning Motivation	English

Author(s)　**Yanlin BI,** Beijing Normal University, China
Lei WANG, Beijing Normal University, China
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Project-based learning(PBL) has the following characteristics: based on real issues and situation, students play an active role in learning and solving problems, and they do group work, all they above characteristics help PBL improve students' chemistry learning motivation. Accordingly, whether different teaching strategies have different effects on improving learning motivation can be a question to study, and if the answer is yes, the next question would be what kind of teaching strategies based on PBL has the better effects on improving learning motivation. This paper want to   discuss the mechanism of PBL

affecting learning motivation, and desire to find the better teaching strategies to improve students' learning motivation based on PBL. To solve these problems, we surveyed an experiment research on demand. Total 100 high school students participated in this study, we implemented project-based teaching with different teaching strategies, and use the Likert scale to measure the level of students' learning motivation before and after PBL. Through the comparative analysis of the average level of all the 100 students' learning motivation and the independent T test before and after PBL, the learning motivation of the project is improved.   Comparing the mean value of the motivation level and the independent T test before and after the different teaching strategies, this paper summarizes the effective teaching strategies in PBL on the promotion of students' learning motivation, that is contacting PBL issues and tasks closely with our real life, and giving students' more self-thinking and independently solving problem opportunities.

Secondary School Education		D3-P-05
2.5C - 2 - 2199	Analysis on the Current Situation of Responsibility Ethics Education to the Middle School Students in China	English

Author(s)	**Na SU,** Shanghai Academy of Education Sciences, China **Shan YU PING**

At present, responsibility education is lack of the spirit of "ethics responsibility" which emphasizes on taking responsibilities for the consequences. To know the current situation of the ethics responsibility education for middle school students, the researchers designed a set of questionnaires based on the education realities and the principles of responsibility. With this set of questionnaires, this research collected data from East China, Central China and West China. The findings are as below. Firstly, middle school students have a high level in terms of responsibility. Their awareness and behavior in responsibility are improving year by year. However, there are significant differences on the students' level of responsibility, the choice of responsibility education ways in schools and the choice in improving the sense of responsibility among middle school students, high school students and teachers. This inspires us that we should regard the students as the agent in responsibility education and emphasis should be placed on the students' realities and their abilities of acceptance. Secondly, the internal consistency reliability of the seven dimensions of ethics responsibility is between .8-0.9. Middle school students' responsibility-undertaking shows an apparent trend of "individual interest". However as they grow older, their awareness of taking responsibility for the country, the society and the community improves and their cognitive level of "future" responsibility and their entrance pressure shows negative correlation.

Thirdly, there is significant difference on the ways of ethics responsibility education and the choices of them between the middle school students and their teachers. This reflects that the moral education is inappropriate. Teachers are still trying to improve the students' moral principles and moral ideal in the ways that are beyond the students' actual ability. The right way for most of the students is to improve their moral principles with practice and activities.

Secondary School Education		D3-P-05
2.5C - 3 - 1112	Analysis of classroom interaction in Task-Based Language Teaching ---A case study in Mainland China	English

Author(s)	**Jinmiao LU,** The Education University of Hong Kong, Hong Kong

Task-Based Language Teaching has been introduced into China for almost seventeen years since 2001. The curriculum reform also conducted a task-based syllabus in middle school English teaching. But as an Anglo-American teaching method, the implementation of TBLT and Task-based interaction in Mainland China's secondary schools show some typical characters influenced by Chinese examination oriented education background. This paper aims to find out the typical features of Task-based interaction own to mainland and discover the underlying reasons behind this phenomenon. The final purpose is to provide some adaptations of applying TBLT and Task-based interaction in mainland's secondary English teaching classroom.

The methodologies used in this research are interviews with six expert English teachers in Shenzhen Senior High School Group, and classroom observation of their teaching process as well as following interviews with the teachers and students.

This research finds out that there are mainly four features of mainland's conducting Task-based interaction in secondary school's English teaching, considering its target, time spent in implementing, interaction pattern, and effectiveness. The underlying reason leading to these special features of Task-based interaction in mainland's secondary school English teaching is the final examination. The system of Senior High School entrance examination influences teachers' professional evaluation, as well as the examination content for middle school students.

Language and Literacy		D3-P-01
2.5D - 1 - 1154	French as a language of identity formation in Hong Kong	English

Author(s)	**Lorraine DE BEAUFORT,** The University of Hong Kong, Hong Kong

Keywords: identity; language learning; additional languages; French learning.
There is a great deal of research literature that treats language learning as a process of identity formation, but relatively few studies have investigated so-called additional languages (commonly referred to as L3

or 'third languages'), particularly in the Hong Kong context. This study explores the relationship between the study of French, and additional language in Hong Kong, and identity formation.

A narrative inquiry approach is taken in this study as it gives access to 'lived experience' and thus offers the possibility to grasp the influence of context on the individual across time and space. The findings from interviews and other data reveal the way learning an additional language involves complex interactions between self and society. In particular the data shows that additional language learning involves heightened intercultural awareness, an awareness which is brought to bear upon the learner's own culture in order to deal with its impositions. In this way, French learning can be seen a process of identity repositioning and a practice of self- formation (Hennig 2010).

The pedagogical implications of the study include the importance of taking the learner's viewpoint and acknowledging the important connections between language learning and identity, as well as recognizing the multilingual realities of the learners and the 'glocal' context of learning. The study thus adds to previous studies of identity by noting that under conditions of superdiversity (Vertovec 2007), language learning needs to be reconceptualized away from monolingual norms and conventionally-defined linguistic competence.

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Language and Literacy		D3-P-01
2.5D - 2 - 2195	Second chance learning and the incarcerated adult learner: narrating hope in a South African prison	English
Author(s)	**Doria DANIELS,** Stellenbosch University, South Africa	

Criminal activity is viewed by law abiding citizens as a negative externality associated with vast social costs to family and society. In South Africa the imprisonment rates for men   is highest in their early twenties to thirties. This is a period in the life course when they should be gainfully employed and   leading productive family lives, not be absent from their family's lives and a financial burden on the state resources. It is thus not surprising that incarcerated adults are engaged with as if they are undeserving of respect, trust and educational opportunity.   Society's unwillingness to support basic educational opportunities for prisons populations, could, however be facilitating their continued dependency on welfare and could be detrimental to their re-entry into society once they have served out their sentences.

Not enough is known about the role that second chance educational opportunities play in the prison sector. In the presentation I share the findings of a study that investigated efficacy within a South African Adult Education and Training Centre that operates from a medium security prison.   Through the narratives of educators, adult learners and administrators, the potentialities of education are explored. I view narratives, like stories, as structures within which life events are plotted. Narratives are frameworks within which the meaning of selected life events that participants talk about can be dialogically explored. The three stories that I present offer key insights into the transformative nature of education, and opportunities that exist in the correctional services sector for inmates to accumulate social and cultural capital for when they leave prison.

Language and Literacy		D3-P-01
2.5D - 3 - 2291	Integrating the Language Arts (LA) electives in the New Senior Secondary (NSS) English Language Curriculum in Hong Kong: one teacher's personal theory	English
Author(s)	**Anisa CHEUNG,** The University of Hong Kong, Hong Kong	

In the recent decade, secondary school teachers in Hong Kong need to cope with the changes brought with the New Senior Secondary (NSS) curriculum. Introducing Language Arts (LA) elective modules is one of the changes in the NSS English Language Curriculum which aims to enhance students' access to the literary elements of language learning as well as expose students to the creative and imaginative appeal of language. Similar as previous curriculum innovations in Hong Kong, researchers are keen to know what teachers understand by LA and how well they have incorporated this approach into their English language teaching. This exploratory study seeks to answer these questions in respect of one teacher, who claims to integrate LA in her lessons. This is done by uncovering her perceptions towards the integrating of LA, adopting Zembylas' (2005) three levels (i.e. intrapersonal, interpersonal, and intergroup) of teacher emotion to derive a framework of teacher cognition. Access to the teachers' views and practices of LA integration was gained through open-ended interviews, lesson observations, post-lesson interviews and documentary analysis. This study establishes that the teacher's personal theory is an amalgam of many features of teaching literary texts learnt in her university education and her teaching experience. Her approach of integrating LA has shown the influence of students' reactions, teaching context and the exam-oriented education system The framework used in this study for representing the teachers' personal theory of LA integration is also assessed and considered suitable for wider use.

Curriculum Instruction Assessment and Policy		D2-LP-13
2.5E - 1 - 1131	Detection of DIF for College English Achievement Test in China	English
Author(s)	**Hyung Ran KIM,** Pusan National University, South Korea **Lili ZHANG,** Pusan National University, South Korea **Suk Woo KIM,** Pusan National University, South Korea	

The purpose of this study is to improve test fairness through item analysis based on differential item functioning(DIF). With the focal group of male and human major students and the reference group of female

and nature major students, this study adopts the Raju method based on the item response theory (IRT) to extract the DIF. This paper concludes the result differs when different analysis approaches are adopted the result differs and presents a model suitable for the large scale academic achievement evaluation. As a result of this study, it will be possible to improve the fairness of the test by examining the interpretation according to the student's background characteristic.

Curriculum Instruction Assessment and Policy		D2-LP-13
2.5E - 2 - 1161	Learning experience of the first cohort under the reform of undergraduate education in Hong Kong	English
Author(s)	**Yue ZHAO,** The University of Hong Kong, Hong Kong	

Hong Kong has undertaken a curriculum reform shifting towards broad-based curriculum, well-rounded education, student-focused learning and outcome-based approach to student learning, and transformed from a three-year British university system to the four-year American university system.   With a nuanced look at the impact of the curriculum reform, the present study examined learning experience of the first four-year undergraduate cohort under the curriculum reform in a Hong Kong university.   A longitudinal pretest and posttest design was adopted to track individual students in the same cohort who took a Student Learning Experience Questionnaire (SLEQ) twice, once when they were in their freshman year and again in their senior year.   SLEQ, as an assessment tool, is designed to measure students' perceptions of learning environment and learning outcomes in higher education, and has been demonstrated sound reliability and validity evidence.   An item response theory scoring approach was employed to capture students' self-reported learning gains, and this approach was found to offer greater ability to capture learning outcomes gains over the conventional summative scoring method (Zhao, Huen & Chan, 2016). Furthermore, the first four-year cohort under the curriculum reform was compared to their counterparts, the last cohort of the previous three-year undergraduate curriculum, in terms of their learning experience. Similarities and differences of learning experiences between the two groups were investigated.   The findings facilitate the understanding of student learning and offer evidence-based insights for enhancing student learning and refining the four-year curriculum under the curriculum reform.

Curriculum Instruction Assessment and Policy		D2-LP-13
2.5E - 3 - 2221	Ontario, Canada's Educational Policy Layers: Research and Effects	English
Author(s)	**Sue WINTON,** York University, Canada	

Extensive education policy reform has occurred in most industrialized nations, as governments attempt to improve systems outcomes by issuing more (and often more prescriptive) policy (Clarke, 2013). In many jurisdictions this has resulted in "policy layers": assemblages of related or unrelated policy that attempt to direct practice in schools (Pinto, 2015). Since the election of a Liberal party government in 2003 in Ontario, Canada, schools have been bombarded with prescriptive policy layers (Pinto, 2015). In the proposed paper I identify Ontario's policy layers and synthesize existing research on their outcomes and effects (Ball, 1993). To identify research I searched online repositories of research (e.g., Canadian Business and Current Affairs), the Internet, and websites of the Ontario Ministry of Education and think thanks in Canada. For each research text I identified who conducted and funded the research, its theoretical framework and methodological approach, and findings. My preliminary analysis has yielded 4 key findings. First, there is limited research overall on the effects of policy changes introduced in Ontario since 2003.   Second, most existing research examines single policies and does not consider the effects of cumulative policy layers. Third, many university-based researchers highlight how Ontario policies reflect values and goals of the private sector (e.g., competition, individual responsibility, consumerism), while government-sponsored research examines if and how policies have impacted student achievement.   Finally, research conducted by non-governmental organizations contributes unique knowledge on policy effects.

Primary School Education		B4-LP-07
2.5M - 1 - 1046	Elementary school students' perceptions and experiences of learning with e-textbooks in the classroom	English
Author(s)	**Wing Mui Winnie SO,** The Education University of Hong Kong, Hong Kong **Yu CHEN,** The Education University of Hong Kong, Hong Kong	

The introduction of e-textbooks in elementary schools has attracted growing attention. However, whether the adoption of e-textbooks can bring meaningful learning experience and educational learning environment for elementary school learners is a concern for educators. This study explored elementary school students' perceptions and experiences of learning with a newly designed e-textbook named

"Interactive General Studies" via iPads in the science classroom. A total of 15 pupils from 3 Hong Kong elementary schools were interviewed about their views on the usefulness and usability of the e-textbook after they learned it using a cognitive walkthrough technique. Results showed that the majority of the students preferred to use the e-textbook for it better facilitated students' interactions and collaborations and promoted their self-learning and self-assessment. Nevertheless, some indicated that they could not really learn about relevant science concepts through merely doing activities in the e-textbook without teachers' explanations. Some others reported that they encountered difficulties in using drawing, note-taking, or syncing tools, which may affect the effectiveness of the e-textbook on their learning. It is suggested that teachers may more directly scaffold students to discuss key science concepts while doing activities in the e-textbook. Moreover, teachers may provide explicit instruction for students to adopt the use of those tools to promote more effective use of e-textbooks for learning.

Early Childhood Education		B4-LP-07
2.5M - 2 - 1153	Analysis of the Influence of Job Embeddedness on Burnout through the Medium of Job Satisfaction and Organizational Commitment	English
Author(s)	**Jungyoun HA,** Suncheon Jeil College, South Korea **Sungnam PARK,** Suncheon Jeil College, South Korea **Soo Kyoung LEE,** Chungbuk National University, South Korea **Jinhwa KIM,** Suncheon Jeil College, South Korea **Jeonghyeon HAN,** Chungbuk Regional Council for HRD, South Korea	

The purpose of this study was to examine the structural relationships and influences of job embeddedness, job satisfaction, organizational commitment and burnout in childcare teachers who worked in daycare centers. The subjects in this study were 364 selected teachers who worked in daycare centers in South Jeolla Province. Structural equation modeling was used to analyze the collected data to determine the structural relationships and influences of the variables. Statistical packages SPSS 18.0 and AMOS 18.0 were employed to test the model of the study.

The findings of the study were as follows: First, the job embedded- ness of the childcare teachers exerted a positive influence on job satisfaction and served to bolster organizational commitment, but that had no direct impact on burnout. Second, the job satisfaction of the daycare teachers exercised a negative influence on burnout, whereas organizational commitment didn't affect burnout in a significant way. Third, as for the mediating effects of organizational commitment on the relationship between job embeddedness and burnout, organizational commitment produced no direct and indirect effects. So the variable turned out to have no mediating effects.

Given the findings of the study, how to improve the job embeddedness of childcare teachers should be considered in detail to boost their job satisfaction and organizational commitment. As higher job satisfaction led to less burnout in the childcare teachers, it's suggested in this study that necessary legal and institutional measures should be taken to improve work environments to ensure the job stability of childcare teachers as childcare experts.

Secondary School Education		B4-LP-07
2.5M – 3- 3400	Enhancing positive achievement emotions and academic performance: Cross-cultural evidence from Germany and China	English
Author(s)	**YANG, Lan,** The Education University of Hong Kong, Hong Kong **Wu, Xiaoying,** The Education University of Hong Kong, Hong Kong	

A growing body of studies have found that achievement emotions are associated with a wide range of students' learning outcomes. From a comparative perspective, there is a lack of a review on examining key features of interventions that have been used for promoting the targeted facet(s) of emotions across cultures. The present study reviewed and compared these features of published intervention studies conducted in Germany and China. The control-value model of achievement emotions was used as a theoretical framework to guide this review. The findings of this review shed light on understanding key features of effective interventions to enhance students' positive emotions. Sociocultural factors that may influence intervention effects are also discussed in relation to the control-value theoretical framework of achievement emotions.

HKERA International Conference Workshop		D4-LP-05
2.5G - 3334	Introduction to Phenomenology in Education	English
Author(s)	**Yin Yin,** University of Alberta, Canada **Erika Goble,** NorQuest College, Canada	

This workshop introduces participants to the Phenomenology of Practice in education as it is developed by Dr. Max van Manen at the University of Alberta, Canada. Phenomenology of Practice is a form of human science inquiry originated from continental philosophy. Its purpose is to explore and describe phenomena as they are experienced in everyday life and before they are theorized, conceptualized, abstracted, or explained. Workshop participants will learn key phenomenological concepts (e.g., lived experience, the reductio, the vocatio, etc.), as well as to recognize the value of doing phenomenological research on teaching and learning. Participants will also explore various phenomenological practices, including: constructing phenomenological questions; locating and using experiential material; and reflecting phenomenologically using different techniques.

In order for participants to gain a practical understanding of Phenomenology of Practice, they will engage in various hands-on activities including: constructing their own phenomenological questions; identifying sources of lived experience descriptions; conducting mock phenomenological interviews; engaging in phenomenological analysis using different reflective ; and identifying the key structure of phenomenological texts.

By the conclusion of this workshop, participants will be able to: (1)Construct their own phenomenological questions; (2)Differentiate and describe the relationship between phenomenological philosophy and phenomenology as a practice-based research methodology; (3)Identify lived experience descriptions (LEDs), and articulate the importance of lived experience for hermeneutic phenomenological inquiry; (4)Identify various reflective methods; and (5)Articulate the unique features of phenomenological research compared to other qualitative research approaches and its implications for educational practice.

WERA Focal Meeting Paper Presentation — 17:00-18:30

Reference Code	Presentation Title	Abstract	Presenter(s) / Author(s)
Policy, Management and Participation in Education World-Wide			**B4-LP-13**
2.5G	**Chair: Pak-Tee NG,** National Institute of Education, Singapore		
2.5G - 1 - 123	Understanding Community Education through Social and Human Capital Theories: Assessment of US and Scottish National Models for Youth	This paper deconstructs the policy framework of national community education programs for youth in the US and Scotland. Specifically, it aimed to understand human and social capital theories in policies regarding outcomes for youth. Using case studies, the research draws primarily from government documents and interviews with policy leaders and program administrators. It found that both US and Scottish governments had similar aims, and theories were reflected analogously. However, programs differed on implementation of goals and administrators' perceptions of policy translated at the community level. Ultimately, neoliberal conceptions of social and human capital theories were key in understanding public policy for community education; these programs steer and impact the goals of community education and youth work practices.	**Melissa MONCRIEFFE**, The University of Edinburgh, USA, melmon02@hotmail.com
2.5G - 2 - 111	'Hidden-Curriculum': Private Agendas Migration into the Public Policy Sphere, Carried by Individual Policy Agents	At the theoretical backdrop of this paper are the last decade's transformations in the concept of "public education policy". Multiplicity of policy analysis perspectives analyze the sources and implications of these alterations in the educational public domain. A reoccurring theme in this literature highlights the interactions between various policy agents on their local-global axis and/ or socio-cultural contexts, as a key for understanding this phenomenon. Our research focuses on a less common angle of this policy practice, in order to enhance our understanding: The migration of private agency agendas into the public sphere, carried and appropriated by the individual agent, while crossing boundaries from private sector to public office. The research question is – how formerly private agency agendas are reflected in public policy artifacts that are manufactured by the currently-public actor's practice? Using empirical qualitative data from three Israeli cases that share this plot we found that there is a high degree of similarity in four levels of policy representations: values, concepts, symbols and modes of operations. Two conclusions are discussed: The sustainability and durability of privately originated agendas during the private-public sphere migration; and the significance of the individual agent as a policy-voice carrier and policy-practice appropriator.	**Yael KAFRI,** Tel Aviv University, Israel, yaelkafri@gmail.com; **Gadi BIALIK,** Tel Aviv University, Israel, bialikga@tauex.tau.ac.il
2.5G - 3 - 64	Parental Participation System in School Administration in Japan: Comparison with England and Germany	The authority or legitimacy of administration and contents of public education exists in parents rather than the state. In Japan although there had not been a system for parents to participate in school, School-running Consultative Bodies (SCBs) was established in 2004, which makes parents board members, decide fundamental school policy and express their view on school administration. This research explores the direction SCB system should go compared with systems in England and Germany by treating laws, regulations and guidance documents in	**Kosuke KASAI**, Aichi Prefectural University, Japan, k-kasai@ews.aichi-pu.ac.jp

		England, those in Germany, where each Land has different ones, and those in Japan, whereas empirical data and literature are supplementarily referred. The author clarifies the contrast between England and Germany model. In German, parents' rights are guaranteed by the Constitution not only as individual rights but also as collective rights. Teachers can discuss and respond to these requests from parents including curriculum in Schulkonferenz. Government lays out parental participation system and participation procedures. In contrast, in England, SGB cannot discuss school curriculum, nor discuss with teachers. SGB hold headteacher accountable for SGB, and SGB itself have to be accountable for central government (Ofsted). SGB is thus the system for realising efficiency of school administration, school improvement, and accountability, not parental right to participate. This research then argues Japanese system is closer to England model because SCB in Japan functions for school improvement. The author thus concludes Japan should adopt Germany model.	
2.5G - 3 – 203	Total quality management (TQM) practices applied in education institutions: A systematic review of literature	Total quality management implementation approach has shown great prominence in management of education institutions through application of its practices to enhance quality of education and performance at the same time enabling education institutions to survive in the global competition amidst stringent budgets. The purpose of this paper is to present a systematic literature review to identify major total quality management practices used in education institution. The aim was to provide education institutions with reliable evidence for informing their selection of total quality management practices for quality performance improvement. A research strategy was performed on selected published papers between 1996 to 2016. This study used a systematic review of the literature contained in the three appropriate databases ERIC, Science Direct and emerald insight. Ten peer-reviewed research papers were identified through a screening process and were fully reviewed for the study. An analysis of the literature identified that top management commitment; continuous improvement and customer focus are the major total quality management practices used in education institutions. This study was limited by three data bases and search engines used and by the restricted number of keywords used in searching these sources. This systematic review of literature shows a gap in the existing research in that most Total quality management researchers put more consideration to higher education and secondary education and less to primary education with regards to total quality management practices. This study used a systematic literature review to identify TQM practices used in education institutions and identified that there is still gap in research on TQM practices in primary education.	**Edward KIGOZI,** Education University of HongKong, Hong Kong, s1119886@s.eduhk.hk; **James KO**, Education University of Hong Kong, Hong Kong, jamesko@eduhk.hk

Multilingualism and Literacy: World-Wide Teacher Instructional Practices	**B3-P-12**

2.5H	Chair: Patricia A. ALEXANDER, University of Maryland, USA		
2.5H - 1 - 25	The Pivotal and Peripheral Roles of Bilingual Classroom Assistants in Sweden	This presentation will highlight findings from a qualitative study of the ways in which the individual roles and ideologies of four Arabic and Somali bilingual classroom assistants at an elementary school in Sweden both mirror and challenge larger discourses about language, education and social integration. Data were analyzed using the theoretical constructs of positioning (Bucholtz and Hall 2005) and language ideology (Blackledge 2009; Jaffe 2009). As schools seek solutions to instructional dilemmas inherent in the simultaneous inclusion of newcomer immigrant and refugee students in principal language-medium classrooms and the promotion of bilingualism, this research sheds light on how bilingual classroom assistants take up their roles as mediators of language and culture within this dynamic.	**Liv T. DAVILA**, University of Illinois at Urbana-Champaign, USA, livtd@illinois.edu; **Nihad BUNAR,** Stockholm University, Sweden, nihad.bunar@buv.su.se

2.5H - 2 - 86	Envisioning the Possible: Exploring the Negotiations of Literacy Teacher Educators with a Critical Stance	This study examines the critical practices and pedagogies of literacy teacher educators (LTEs) from four countries: U.K., Australia, Canada, and U.S.A. In this qualitative research study, three semi-structured interviews were conducted with each participant over a three-year period. Using a critical literacy framework (Lewison, Harste, & Leland, 2008), we examine ways in which teacher educators enact a dimension of the framework, Focusing on Sociopolitical Issues. This dimension of critical literacy considers the ways in which sociopolitical systems, language, and power relationships are "intertwined and inseparable from our teaching" (Lewison et al., 2002, p. 383). This paper reports on the ways the literacy teacher educators negotiated critical literacy practices in their courses: using tension as a resource; exploring the policies and politics of teacher education, and unpacking government initiatives, standards, and educational reform. Recognizing teaching as a political act, the LTEs problematized issues around teaching and learning in the current teacher education climate with their student teachers. They recognized the mandated curriculum was a source of tension for student teachers; on one hand, in their academic courses, they understood literacy practices as broad and expansive, and on the other hand they experienced the mandated curriculum as increasingly prescriptive during their practice teaching placements. The LTEs worked to expand student teachers' views on literacy and schooling; however, it is unreasonable to believe a single course should shift student teachers' conceptions. LTEs require more support from colleagues and their institution to ensure student teachers are immersed in a program with a consistent philosophy.	**Pooja DHARAMSHI**, Simon Fraser University, Canada, pooja_dharamshi@sfu.ca; **Clare KOSNIK,** OISE/University of Toronto, Canada
2.5H - 3 - 43	Teaching Students or Teaching Subjects?: Cross-Cultural Analysis of Teachers of Language Minority Students in Japan and the U.S.	This paper explores teacher beliefs by delineating the work of teachers in Japan who are assigned to teach JSL (Japanese as a second language) unexpectedly and without the endorsement, and making a cross-cultural comparison with ESL (English as a second language) teachers in the U.S. A qualitative and comparative analysis of the data reveals that JSL teachers believe in students' language development through content areas, while ESL teachers focus on teaching language itself. JSL teachers further assist JSL students in other school-related matters. JSL teachers believe that infrequent one-on-one instructions are better than frequent group instructions for the students' language development, while ESL teachers believe the opposite. JSL teachers frequently interact with other JSL teachers and the students' mainstream teachers, while ESL teachers' interactions with other ESL teachers and the mainstream teachers are relatively low. In JSL teachers' view, teaching is not to teach subjects, but to nurture a growth of a student, and what they teach are tools, not objects of teaching. They evolve as professional teachers as they teach, and JSL teaching is a process to becoming professional teachers. ESL teachers view themselves as language specialists. Teaching is to disseminate their specialized knowledge and skills, thus what they teach are the objects of their teaching. In a way, they become professional teachers when they get certified.	**Yukari Takimoto AMOS,** Central Washington University, USA, cjbyukari@hotmail.com

WERA Focal Meeting Symposium

Reference Code	Presentation Title	Presenter(s) / Author(s)	Chair/Discussant(s)
Educational Equity and Chinese Communities Across International Contexts: From Primary to Tertiary Education in Canada, Hong Kong, the USA, and Mainland China			D1-LP-06
2.5K - 7	Toward social justice and equity in the internationalization of Canadian higher education: The gap between policy and Chinese international students' experiences	**Shibao GUO,** University of Calgary, guos@ucalgary.ca; Yan Guo, University of Calgary, yanguo@ucalgary.ca	**Chair:** **Kelly CHAN**, Middlesex University, United Kingdom, kc1012@mdx.ac.uk
	Engaging second language teachers to enact critical literacy in Hong Kong schools: Negotiating the tensions between theory, politics and practice	**Cheri CHAN,** University of Hong Kong, Hong Kong, China, yycheri@hku.hk	**Discussant:** **Benjamin Benji CHANG**, The Education University of Hong Kong, Hong Kong, benji@eduhk.hk
	Floating children in mainland China rebounding from social discrimination: A sociology of resilience	**Michael MU**, Queensland University of Technology, Australia, m.mu@qut.edu.au	
	Voices of protest: Hong Kong student-teachers' activism and teacher education for social justice	**Margaret M. LO**, University of Hong Kong, Hong Kong, China, mmlo@hku.hk	
	Students and teachers of Chinese heritage in the USA and Hong Kong: Issues of diversity, achievement, and educational equity	**Benjamin Benji CHANG**, The Education University of Hong Kong, Hong Kong, benji@eduhk.hk	

Abstract

As the People's Republic of China continues to develop a dominant position on the world stage, 'Chinese' educational systems and students have also garnered significant attention. While mainland China's successes have been noted for the last 15 years or so, the academic achievements of Chinese populations around the globe have been observed for some three decades in countries like the US, Taiwan, Singapore, and Hong Kong. Whether lauded as the 'Model Minority' or 'the Chinese Learner,' students and teachers of Chinese heritage have often been held up as examples to emulate in schools. Despite their popular uptake, these representations of Chinese academic success have been critiqued as culturally essentialist and their unitary view of 'the Chinese' is seen as problematic across the board, from who is considered 'Chinese,' to the over-emphasis on high-stakes exams, to underserved communities that do not fit within the 'successful Chinese' narrative.

This symposium of international scholars from Australia, the US, Canada, and Hong Kong seeks to address some of the oversights and blind-spots within educational research on students and teachers from Chinese backgrounds. The five papers of the symposium draw from a rich corpus of qualitative and quantitative data that span a wide-range of participants (e.g. primary and secondary youth, administration, pre-service and in-service teachers, higher education), and international contexts of Canada, mainland China, Hong Kong, Taiwan, and the United States. While the symposium utilizes diverse conceptual frames (e.g. critical literacy, cultural capital, sociocultural learning, critical psychoanalysis), they share an application of sociological lenses when considering factors of culture, class, language, identity, and agency. In addition, all of the papers have a strong concern for issues of educational inequity, including how they are fostered and perpetuated, and how they can be addressed via curriculum, pedagogy, policy, social activism, and teacher education. In addition to being international and transnational in scope, and examining issues of praxis, this symposium tackles some of the most urgent issues of research on Chinese educational communities, including 'left-behind' children in mainland China, the Umbrella Movement student protests in Hong Kong, the 'Model Minority' and high-stakes testing in the US, and international students of Chinese heritage around the globe. Taken together, the five papers present an eclectic and rigorous look at the immensely diverse communities that are often labeled under static and monolithic conceptualizations of 'the Chinese.' Ultimately this symposium seeks to contribute to the international literature on educational equity and social justice, and more dynamic understandings of the experiences of educators and students from Chinese backgrounds.

Building a Worldwide Science of Learning and Development		**D1-LP-07**
2.5L- 14	Malleability, Plasticity, and Individuality: How Relationships and Contexts Drive Learning and Development	**David OSHER,** American Institutes for Research, USA, dosher@air.org; **Juliette BERG,** American Institutes for Research, USA, jberg@air.org; **Pamela CANTOR,** Turnaround for Children, USA, PACantorMD@tfcusa.org; **Todd ROSE,** Harvard University Graduate School of Education, USA, todd_rose@gse.harvard.edu.	<u>Chair:</u> **David OSHER,** American Institutes for Research, USA, dosher@air.org; **Discussant: Felice J. LEVINE,** American Education Research Association (AERA), USA, flevine@aera.net
	The Australian Science of Learning Research Centre – Improving Learning Outcomes through Research Translation	**Annemaree CARROLL**, University of Queensland, Australia, a.carroll@uq.edu.au; **Julie BOWER,** School of Education, The University of Queensland, j.cuskelly@uq.edu.au	
	Exploring the Gaps Between How Preschool Children Learn and How they are Taught in Low- and Middle-Income Countries in sub-Saharan Africa and Asia	**Elizabeth Spier**, American Institutes for Research, USA, espier@air.org; **Frederik LEENKNECHT,** Center for the Science of Student Learning, f.leenknecht@hotmail.com; **Fangyi HUANG,** American Institutes for Research, USA, fhuang@air.org	

Abstract:

This symposium builds upon the Science of Learning and Development project (SOLD), which synthesized knowledge about human development and the effects of context on that development. This knowledge includes how the complex relations between our genes, biology, and physiological systems and physical and social environments, as well as how these are interpreted and internalized—all of which vary across time, place, and among individuals –affect how individuals express and fulfill their genetic potential. It views development as a cascade of changes over time that emerge through increasingly novel and complex transactions between individuals and their social and physical contexts, and that is affected by neural malleability and plasticity, resilience, and the interconnectedness of individuals with their social and physical contexts.

This research project reviewed secondary literatures in neurobiology, child and youth development, developmental science, resilience, and the learning sciences. The methodology included systematically gathering and reporting findings from correlational, longitudinal, and causal studies that showed consistency across sources. The approach did not rely solely on causal evidence; it triangulated findings across multiple sources. The research included soliciting and reviewing recommendations for critical works from experts in each of the sciences covered in the review; conducting a search of systematic reviews, meta-analyses, peer-reviewed literature reviews, and handbook chapters that synthesized the latest research, and supplementing these papers with empirical and theoretical studies to nuance and validate our findings. The sources selected either synthesized an area of research with an established body of knowledge or presented findings that have been reproduced in multiple studies. The first draft of the paper was sent to relevant content from Australia, China, South Africa, and the United States to vet findings and ensure consistency with the evidence presented in the paper. The findings were included in a technical paper and in articles under review in Applied Developmental Science, where they will be accompanied by commentaries by internationally recognized experts.

The symposium will include papers, a discussant, and then a discussion with the audience aimed at further validating the findings of the study.   The first paper will synthesize the findings of the SOLD project and apply them to the United States and Western Europe based upon a study of whole child education in eight Western European Countries, Canada and the U. S. It will also describe on effort to involved researchers and practitioners in developing a translational research agenda on the Science of Learning and Development. The second paper will be an overview of the work of the Science of Learning Research Centre in Queensland, Australia and will provide examples of how the Centre is engaging with educators and researchers to translate research into practice. The third paper will examine how current models of preprimary education in low- and middle-income countries in sub-Saharan Africa and Asia typically mirror education for older children, yet are not consistent with what we know about the neurobiology of young

children's learning and development. The paper will also explore more age-appropriate models of preprimary education in use in low-resource settings.